



Northern Rural Training and
Employment Consortium (NoRTEC)

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Butte County Labor Market Profile and Industry Sector Analysis

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July 2019

Prepared for:

NoRTEC Workforce Development Board

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TABLE OF CONTENTS

Introduction	1
Executive Summary.....	1
Economic Impact of 2018 Forest Fires.....	4
Demographic & Labor Force Characteristics	6
Total Population.....	6
Race/Ethnicity	7
Educational Attainment	7
Income	8
Commuting.....	8
Special Populations	10
Human Capital.....	13
Labor Force	13
Labor Force Participation Rate.....	13
Industry Sector Analysis	15
Industry Mix	16
Key Industries.....	19
Occupation Analysis	20
Occupational Groups	20
Broad Occupation Mix	21
Top Occupations by Employment.....	22
Education & Training Requirements for High Demand Jobs	23
Industry and Occupation Connections.....	25
Detailed Industry Analysis.....	26
Appendix	36
Data Sources and Glossary of Key Terms.....	36
Industry Sector Definitions	38

INTRODUCTION

The following is a labor market and industry/sector profile for Butte County, California. This is an update to a prior version of County Labor Market Profiles that were completed in the summer of 2017, which were completed using 2016 labor market data. Though 2019 is the calendar year during which this report is produced, 2018 labor market data represent the latest full calendar year of data available from federal statistical agencies, and hence are the data used in this report.



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, the U.S. Bureau of Labor Statistics, and various other state sources.

EXECUTIVE SUMMARY

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

Key Changes since 2016

- Due to the Camp Fire in November 2018, Butte County and its residents experienced a drastic loss of life, property and income. At the same time, spending on suppression and recovery efforts has helped buoy the economy. TPMA estimates that in the first six months following the Camp Fire, Butte County has seen a net positive economic effect, increasing employment by 0.6%, earnings by 1.8% and economic output by 0.7%.
- The Camp Fire has resulted in significant population shifts within Butte County. Between January 2018 and January 2019, the population of Paradise decreased by over 21,000 while the population of Chico increased by over 19,000. These shifts have imposed intense pressure on infrastructure, educational services, housing availability and social services within Butte County.
- The long-term impacts of the Camp Fire on Butte County are hard to predict and will unfold over subsequent years. Early figures indicate that many affected by the Camp Fire have temporarily concentrated in Chico. As insurance payments are released and further government spending is injected, the Town of Paradise will slowly be rebuilt but its future size and economic composition are yet to be determined.
- Since the 2016 version of this report was released, the Butte County economy has continued to expand at an average annual rate of 2.1%. The highest growth sectors include Healthcare & Social Assistance; Retail Trade; and Government (including higher education). In combination, these sectors added over 2,500 jobs, nearly two-thirds of the county's net new job growth. Meanwhile, certain high-paying sectors performed poorly in terms of job growth, namely, Information; Finance & Insurance; and Professional, Scientific & Technical Services, which all decreased in employment over the past two years.

- Between 2016 and 2018, Butte County's population increased slightly by 1.8% (+4,065 in numeric terms). The highest growth age groups included those ages 70 to 74 years, and those 25 to 29 years. The highest growth race/ethnicity groups included White Hispanics and White, Non-Hispanics.

Social and Demographic Highlights

- Population growth in Butte County slightly trails rates for California and the United States. Over the prior ten years, population increased 5.3% for Butte County compared to 8.9% for the state and 7.9% for the nation. Within Butte County several population cohorts have increased in size including people 55 years and older, those Under 5, and those aged 20 to 34 years. Meanwhile, population decreased for people aged 5 to 19 and those aged 35 through 54 years.
- In terms of race/ethnicity, White is the predominant cohort (71.7% of the population in 2018). However, the Hispanic population is a significant minority, 16.7% of the population, which also grew over 30% over the prior ten years.
- As to be expected as the host of a major state university, Butte County compares well to national and state benchmarks in terms of the proportion of the population with a Bachelor's degree or higher. The single category where Butte County excels is "Some College" (29.7% of the population), indicating a large opportunity for local educational providers to provide services to non-traditional college aged students who have not completed a degree.
- Commuting patterns indicate that Butte County is a slight net exporter of commuters. Those leaving the county for work tend to drive to Sacramento County and Sutter County. Whereas those in-commuting tend to originate from Sutter County and Glenn County. Interestingly, there is a large number of in-commuters who are employed in Food Preparation and Serving Related occupations, possibly indicating the challenge of affordable housing in Butte County.
- Income levels in Butte County are moderate, which results in a considerable need for social services. Median household income in Glenn County is just over \$44,000/year and 21.3% of the population is in poverty. In 2018, there were 2,177 justice-involved individuals in Butte County. And in 2017, 13.7% of the county population received CalFresh.
- As of December 2018, 104,320 individuals participated in the Butte County labor force, of these, 98,586 were employed and 5,734 were unemployed. Unemployment rates in Butte County tend to be higher than the state of California, in general, and the same is true off the latest rates (5.0% for Butte County and 4.2% for California).

Industry & Occupation Highlights

- Butte County's largest industry sectors include Healthcare & Social Assistance; Government (including higher education); Retail Trade; and Accommodation & Food Services. Despite being smaller in employment, Agriculture, Forestry, Fishing & Hunting, is also important to Butte County, employing more than three times the national per capital average of workers.
- Significant industries adding the most jobs in Butte County over the past five years include Healthcare & Social Assistance (+3,192 jobs); Government (including higher education) (+1,774); Retail Trade (+1,454); and Construction (+1,405).
- Individual (4-digit NAICS Code) industries with strong growth prospects for the county include: Individual and Family Services; Electronic Shopping and Mail-Order Houses; Education and Hospitals (State Government); and General Medical and Surgical Hospitals.
- Noteworthy occupational categories with above average wages and growth in Butte County include: Healthcare Practitioners and Technical Occupations; Education, Training, and Library Occupations¹; Management Occupations; and Installation, Maintenance, and Repair Occupations.

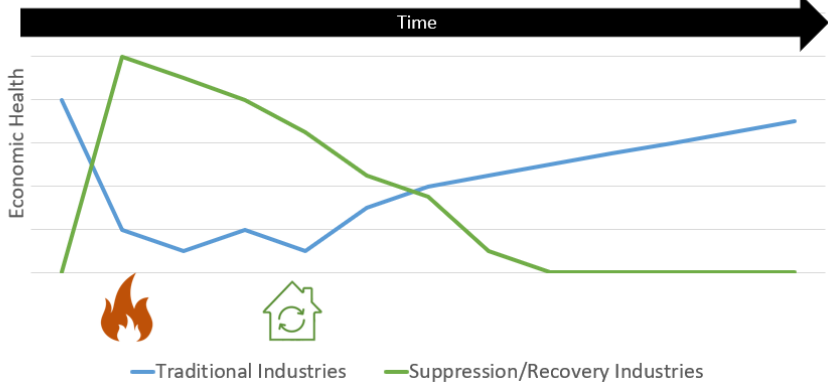
¹ Please note that this categorization primarily includes educational professionals (preschool through post-secondary). The library component composes a small proportion of the total.

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, which are drawn from in the following summary.

The Camp Fire wrought incalculable damage upon the residents and families of the Town of Paradise. The statistics only begin to tell the story, including the 18,800 structures destroyed and 86 lives lost. Also, within the past twelve-months, as any resident of Chico can attest, the housing dislocations and economic turmoil of the Camp Fire has created an economic windfall for certain industries including hotels and restaurants, to name a few. The unexpected consequence of this turmoil, is that Butte County is receiving a temporary boost in cashflow due to fire suppression and recovery spending.

GENERAL FOREST FIRE EIA TIMELINE



The following are a few pertinent points of information that relate likely effects on Butte County.

- Over the past five years, employment in Butte County tends to spike in quarter four and fall in quarter one of the subsequent year. For example, employment decreased 4.2% in quarter one of 2018.² Since the Camp Fire occurred in quarter four of 2018, seasonal up-swings and down-swings in employment were likely further accentuated for the end of 2018 and beginning of 2019.
- Long-term community borne costs are much more significant than short-term suppression costs. One study estimates that long-term costs equate to 65% of the full cost of fire suppression and recovery. Long-term costs include issues such as property loss, ecosystem restoration, energy and utilities repairs, etc.³ Butte county is very much still in the recovery phase with numerous non-profit and federal agencies at work on fire recovery and remediation.

² LEHD, Quarterly Workforce Indicators.

³ Headwaters Economics, <https://headwaterseconomics.org/wp-content/uploads/full-wildfire-costs-report.pdf>

- Both the Forest Service and Cal Fire spend a significant amount of money on fire suppression. These funds typically buoy regional economies while local businesses are shuttered and in the process of determining if they will re-open. The degree of Forest Service contracts that go to local vendors varies greatly case-to-case, ranging from 0% to 39%, with an average of 9%. Early research indicates that Butte County received a large degree of federal and state spending but federal contracts more commonly went to contractors in Sacramento and Sutter counties.
- Butte County was the core location of a forest fire, so short-term positive economic impacts are likely to be higher than other counties in the NoRTEC region. According to recent research, on average, employment increases by 1.5% and wages by 0.9% in counties where large wildfires occur, in the quarter when it occurs.⁴ Those benefits diminish over time but, as noted, the recovery spending in Butte County which is still ongoing is continuing to provide a boost for the region.
- As a result of the Camp Fire, roughly \$15.0 billion in insurance claims have been filed, of which \$8.6 billion have been claimed. Over the next several years, home and business owners will make critical decisions about whether to rebuild their properties in Butte County or relocate elsewhere. In the short-term, the loss of property tax revenue is substantial equal to over \$2 billion across the entire fire-affected region.⁵
- The Camp Fire has resulted in significant population shifts within and around Butte County. Between January 2018 and January 2019, the population of Paradise decreased by 21,892 individuals, while the population of Chico increased by 19,250. Likewise, the Town of Paradise lost 87% of its housing units. These shifts have imposed intense pressure on infrastructure, educational services, housing availability and social services within Butte County.⁶
- In total, in the first six months following the Camp Fire, Butte County has seen a net positive economic effect, increasing employment by 0.6%, earnings by 1.8% and economic output by 0.7%.
 - Industry sectors with a net gain in employment in the short term include Agriculture, Forestry Fishing & Hunting (+2,820); and Government (+325). Sectors with the greatest loss in employment include Health Care & Social Assistance (-439) and Educational Services (-381).

⁴ Ecosystem Workforce Program, Institute for a Sustainable Environment, University of Oregon,

⁵ Robert Eyler, PhD, Economic Forensics & Analytics, "The North State Counties: Paths to Economic Resilience." Chico, California, May 9, 2019

⁶ Ibid.

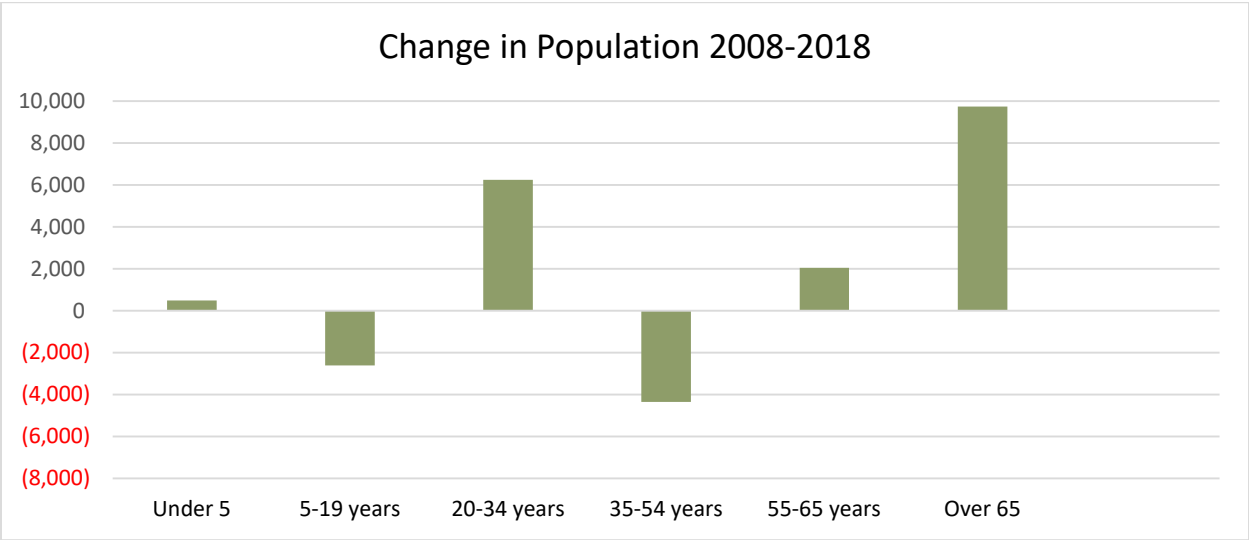
DEMOGRAPHIC & LABOR FORCE CHARACTERISTICS

Total Population

Butte County is located at the southern end of the NoRTEC region, along the western slope of the Sierra Nevada Mountains. The largest city is Chico. The population in Butte County increased from 219,004 to 230,572 over the past ten years.⁷ This represents a 5.3% increase, which is lower than the state’s growth rate of 8.9% and the national growth rate of 7.9%. Looking forward from 2018, the region’s population is projected to continue to increase 5.9% over the next five years. The majority of this growth will be among 35-54 years old and those older than age 65.

In general, Butte County has an aging population. Over the past ten years, the population of people 55 years and older increased. Those ages 5 through 19 and 35 through 54 decreased. The aging population is a concern for the economy as it will impact the availability of labor over the next decade. However, it should be noted that those ages 20 to 34 increased by 12.9% between 2008 and 2018, which shows some growth of a younger workforce, however it is projected to dip by 2.5% over the next five years.

Age	2008 Population	2018 Population	Change 2008-2018	% Change 2008-2018	Projected Change 2018-2023	% Projected Change 2018-2023
Under 5	12,411	12,906	495	4.0%	1,239	10.0%
5-19	44,036	41,419	(2,617)	(5.9%)	926	2.2%
20-34	48,363	54,613	6,249	12.9%	(1,368)	(2.5%)
35-54	53,761	49,415	(4,345)	(8.1%)	2,157	4.4%
55-64	27,367	29,409	2,042	7.5%	(2,212)	(7.5%)
Over 65	33,065	42,810	9,745	29.5%	5,749	13.4%
Total	219,004	230,572	11,568	5.3%	13,651	5.9%



⁷ EMSI Analyst, 2019.2.

Race/Ethnicity

The population of the region is predominately White, with 71.7% identifying as White in 2018, followed by 16.7% identifying as Hispanic. The top three fastest growing race/ethnicity groups in the county are Hispanic, Two or More Races, and Asian, while the White population decreased slightly over the past ten years⁸

Race/Ethnicity	2018 Population	Change 2008-2018	% Change 2008-2018
White	165,338	(1,785)	(1.0%)
Hispanic	38,427	8,886	30.1%
Asian	10,843	1,889	24.0%
Two or More Races	8,420	1,731	26.0%
American Indian or Alaskan Native	3,529	96	3.0%
Black	3,545	464	15.0%
Native Hawaiian or Pacific Islander	470	75	19.0%

Educational Attainment

Compared to the NoRTEC region, Butte County has a higher percentage of those with a bachelor’s degree or higher. However, the county trails the state and national averages in the proportion of the population with a Bachelors’ degree or higher. The single category where Butte County exceeds the state and nation by the largest degree is “Some College,” indicating a large opportunity for local educational providers to provide services to non-traditional college aged students who have not completed a degree.

Education Level	2018 Butte County Population	2018 Butte County Percent	2018 Percent NoRTEC	2018 Percent California	2018 Percent US
Less Than 9th Grade	9,327	6.1%	4.9%	11.8%	6.8%
9th Grade to 12th Grade	10,355	6.8%	6.9%	7.0%	6.9%
High School Diploma	35,043	23.1%	25.3%	20.8%	27.6%
Some College	45,107	29.7%	30.5%	21.4%	20.7%
Associate's Degree	14,029	9.2%	9.8%	7.6%	8.0%
Bachelor's Degree	25,003	16.5%	15.0%	19.9%	18.6%
Graduate Degree and Higher	13,130	8.6%	7.6%	11.6%	11.3%

⁸ The Hispanic population includes Hispanics in White, Black, Two or More Races, Asian, American Indian or Alaskan Native, Native Hawaiian, or Pacific Islander.

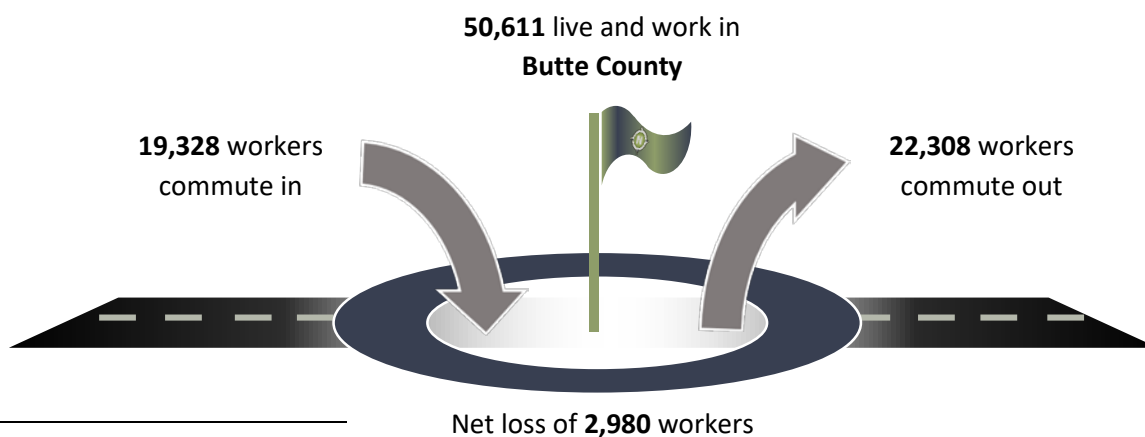
Income

Butte County has the third highest poverty rate in the NoRTEC region at 21.3%, which is higher than the state poverty rate of 15.8% and national rate of 15.1%.⁹ Butte County's Median Household Income (\$44,366) is the fifth highest amongst the 11 counties and is well below that of California and United States.

County	Median Household Income 2012-2016	Poverty Rate
Butte	\$44,366	21.3%
Del Norte	\$42,363	21.7%
Lassen	\$51,457	16.2%
Modoc	\$41,194	16.9%
Nevada	\$57,429	12.1%
Plumas	\$50,125	12.8%
Shasta	\$45,582	17.5%
Sierra	\$43,984	11.3%
Siskiyou	\$38,524	22.0%
Tehama	\$40,687	21.5%
Trinity	\$35,270	20.1%
California	\$63,783	15.8%
United States	\$55,322	15.1%

Commuting

In 2015, Butte County had over 19,000 workers commuting into the county and over 22,000 commuting out. This means that Butte County was a slight net exporter of commuters.¹⁰ However, the vast majority of Butte County workers (50,611) both lived and worked within the county. Of those commuting into Butte County, the largest number came from Sutter County (1,957; or 2.8% of Butte County's workforce); seconded by Glenn County (1,861, or 2.7% of the workforce). The top destinations for Butte County out-commuting workers were Sacramento County (2,298; 4.0% of the County's residents) and Sutter County (1,913; 2.6% of the workforce).



⁹ U.S. Census Bureau 2012-2016

¹⁰ U.S. Census Bureau, OnTheMap, 2015 (most recently available). <http://onthemap.ces.census.gov/>

In addition to looking at commuting data by total population, it is also helpful to examine commuter statistics by occupational classification. In the NoRTEC region there are many net in-commuters for food service and office support roles such as Food Preparation and Serving Related and Office & Administrative Support, (840 and 156 workers, respectively). The large degree of in-commuters in low-wage positions could be a signal of the challenge of affordable housing in Butte County.

Conversely, residents of Butte county who out-commute are employed in an array of both blue-collar and professional roles including Transportation & Material Moving (622 workers); Farming, Fishing & Forestry (370 workers); Management (259 workers); and Business & Financial (252 workers).

Occupation Group	Commuters
Food Preparation and Serving Related	840 in-commuters
Office and Administrative Support	156 in-commuters
Community and Social Service	146 in-commuters
Personal Care and Service	135 in-commuters
Building and Grounds Cleaning and Maintenance	105 in-commuters
Military-only	138 out-commuters
Life, Physical, and Social Science	140 out-commuters
Sales and Related	146 out-commuters
Installation, Maintenance, and Repair	186 out-commuters
Protective Service	203 out-commuters
Business and Financial Operations	252 out-commuters
Management	259 out-commuters
Farming, Fishing, and Forestry	370 out-commuters
Transportation and Material Moving	622 out-commuters

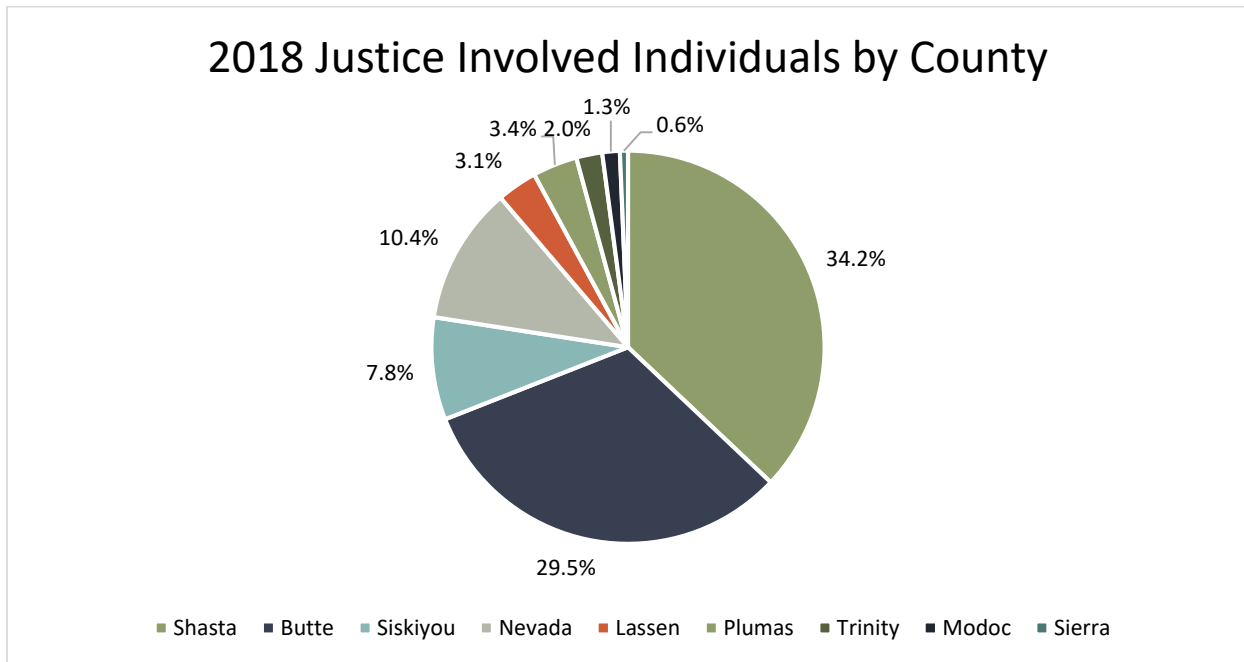
Special Populations

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.¹¹

The largest share of activity is from Shasta County (34.2%) followed by Butte County (29.5%). Butte County has a total of 2,177 justice-involved individuals, the majority of which are felony probations (1,339). In the NoRTEC region in 2018 there were a total of 5,891 individuals involved in felony probations, misdemeanor probations, or mandatory supervision.¹²



¹¹ Data for this section of the report are derived from the Chief Probation Officers of California, <https://www.cpoc.org/data>.

¹² The values for Tehama County, Del Norte, and Modoc (for Mandatory Supervision and PRCS) are left intentionally blank due to a lack of 2018 data.

County	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
Lassen	126	75	8	17	226
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

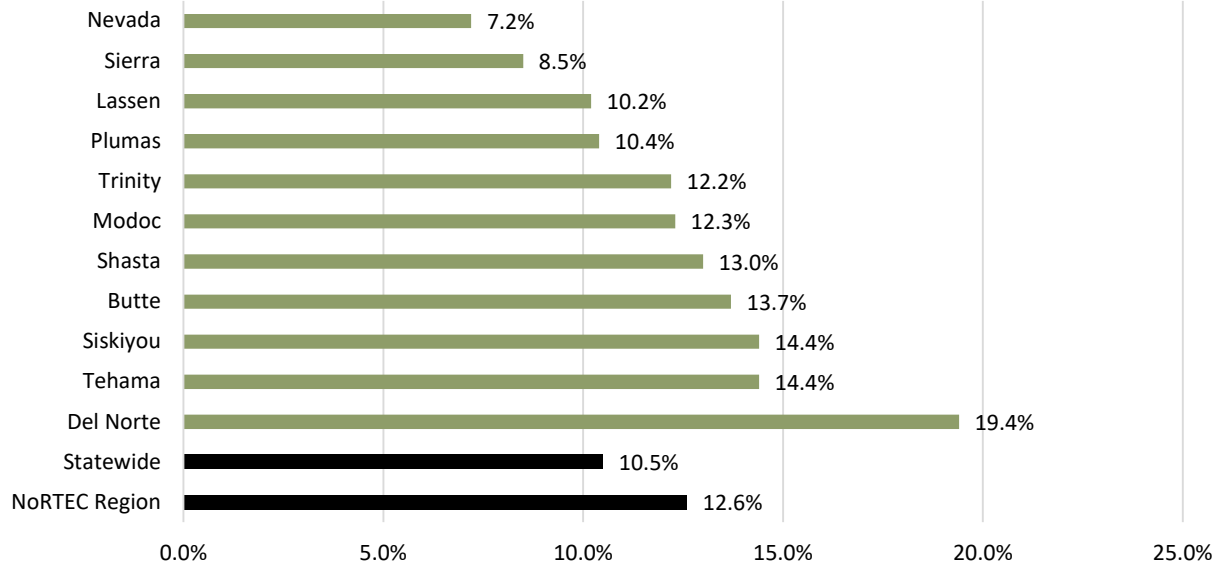
CalFresh Recipients

CalFresh, the California implementation of Supplemental Nutrition Assistance Program (SNAP), is utilized by 12.6% of NoRTEC area residents, slightly higher than the 10.5% of California’s overall who rely on CalFresh.¹³ In Butte County, 13.7% of individuals receive CalFresh, equivalent to 30,941 people in 2017. The County with the largest population receiving CalFresh benefits by proportion of population is Del Norte, followed by Siskiyou, and Tehama.

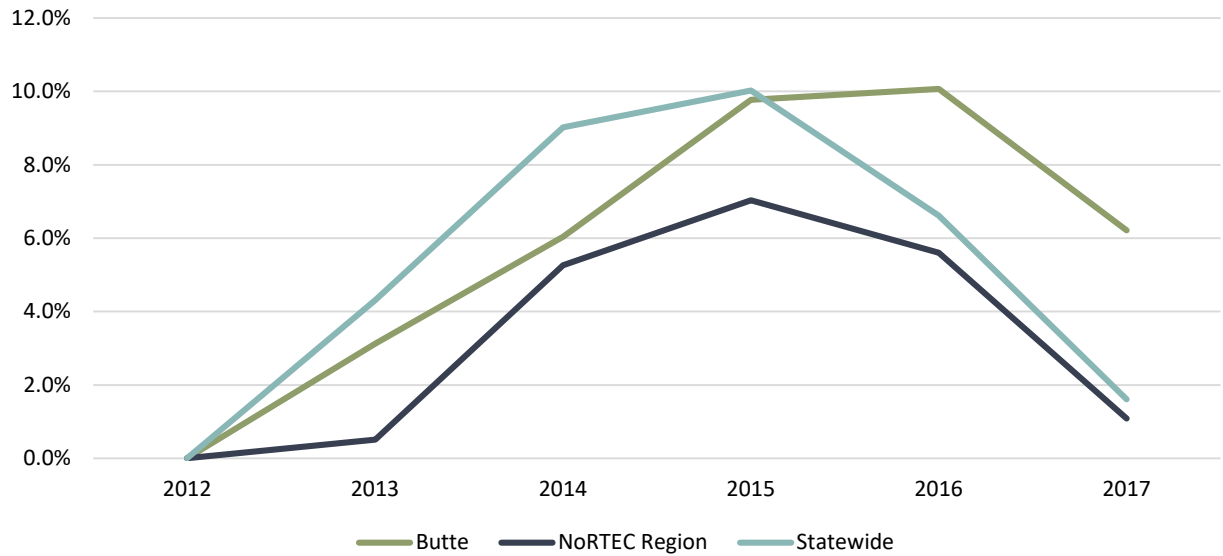
Between 2012 and 2015 the NoRTEC region experienced a rise in the number of individuals enrolled in CalFresh and then a considerable decrease between 2016 and 2017. Similarly, Butte County saw enrollment increases between 2012 and 2016. Enrollment in Butte County decreased by 3.5% in 2017 over 2016 enrollments.

¹³ 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



Cumulative 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 BUTTE COUNTY 1998-2018 ¹⁴		
Peaks	October 2018 (100,506)	December 2018 (98,586 – 2% lower)
Troughs	January 1998 (74,871)	December 2018 (98,586 – 32% higher)
December 2018	Employment: 98,586 Labor Force: 104,320 Unemployment rate: 5.5%	

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, 104,320 individuals participated in the Butte County labor force, of these, 98,586 were employed and 5,734 were unemployed. Over the last 20 years, employment in the county was at its highest in October 2018 and lowest in January 1998. As of July 2018, the unemployment rate was 5.2%, higher than the unemployment rate of California (4.1%) and the United States (3.9%).

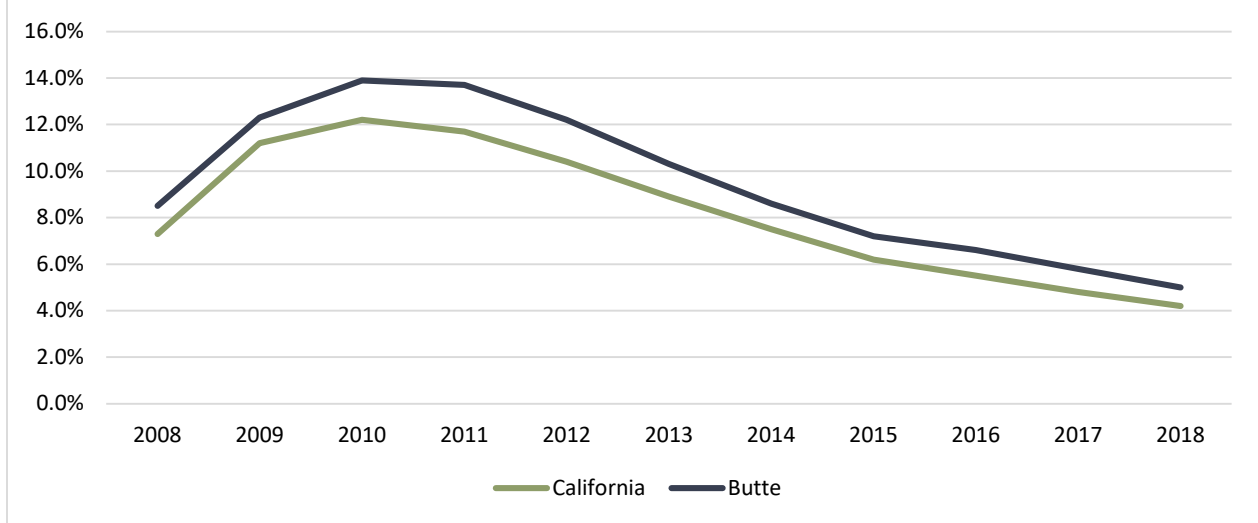
Labor Force Participation Rate

The labor force participation rate is sensitive to demographic changes because participation rates vary across age, gender, income and race/ethnicity.¹⁵ 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 Butte County’s population. The older worker population (55 to 64 years of age) was estimated to be 29,409 in 2018, which is equivalent to 12.8% of the county’s population.¹⁶ 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 42,810, equivalent to 18.6% of the county’s population.

¹⁴ U.S. Bureau of Labor Statistics, 1998.3-2018.3. <http://www.bls.gov/data/>
¹⁵ 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%).
¹⁶ The older worker population (55 years and older) in the county is estimated by multiplying the population of this age group by the corresponding labor force participation rate.

Butte County Unemployment Rates: 2008-2018 Annual Averages



Generally, labor 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.

The Bureau of Labor Statistics Labor reports a precipitous decrease in unemployment in Butte County between 2008 and 2018. Over the period analyzed, the unemployment rate struck its peak in 2010 at 13.9% and dipped to its lowest rate in January 2018 at 5.0%. The unemployment rate for the state of California followed a similar trend as Butte County between 2017 and 2018 though the story at the state level is more positive; the state's rate is consistently 1 to 2 percentage points lower than Butte County's. For California, the unemployment rate hit its highest mark in 2010 at 12.2% and its lowest mark in 2018 at 4.2%.

INDUSTRY SECTOR ANALYSIS

To this point, the analysis of Butte 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 Butte 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).

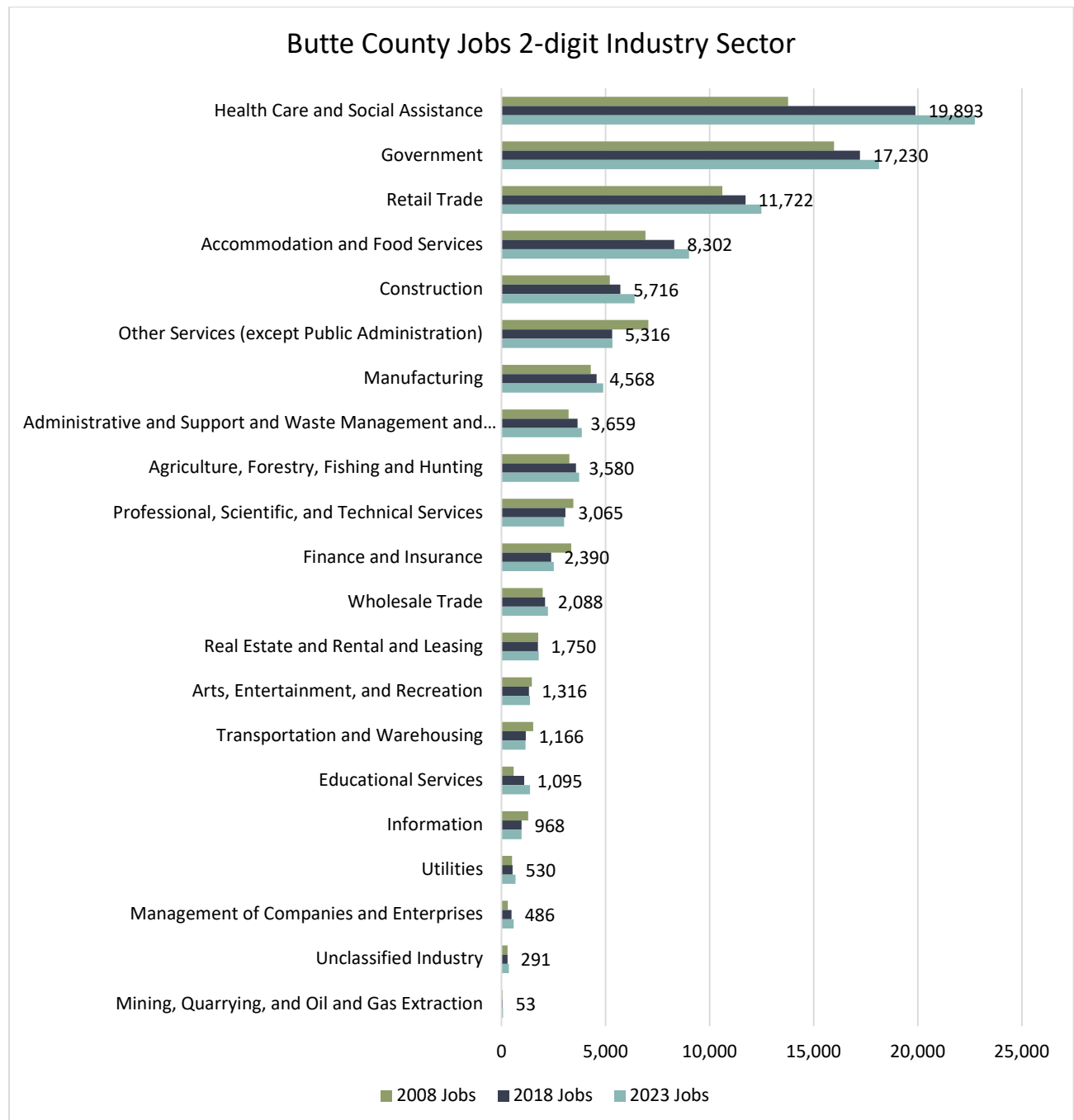
The *competitive effect* helps to determine the amount of job growth that occurred due to the county's competitive advantages as compared to the national growth in general and the national growth rate for each sector. In other words, a positive number indicates that the county experienced more growth 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.¹⁷

¹⁷ Data from this section are from Economic Modeling Specialists International (EMSI), 2019.2. Class of Worker.

Industry Mix

The broad industry sectors in the Butte County region employing the most workers are Healthcare and Social Assistance (19,893, 20.9% of all county employment); Government (17,230, 18.1%); Retail Trade (11,722, 12.3%); and Accommodation and Food Services (8,302, 8.7%). It is worth noting that these four industries grew in the past five years and are projected to grow again in the next five. In contrast, industries that lost a significant number of employees (at least 200) include Other Services (Except Public Administration); and Professional, Scientific, and Technical Services.





In terms of past growth, Healthcare and Social Assistance significantly outpaced other industries between 2013 and 2018, adding nearly 3,200 new jobs and contributing about one-third of Butte County's net new job growth. Distantly following Healthcare and Social Assistance were Retail Trade; Government; Construction; and Accommodation and Food Services.

Looking deeper into job change in the county, competitive effect reveals how many jobs were created or retained due uniquely to characteristics of Butte County. According to these data, again Healthcare and Social Assistance is the strongest (adding 506 jobs due to competitive effect). Others that performed better in Butte County than other regions in the United States include Agriculture, Forestry, Fishing, and Hunting; Utilities; Government; and Retail Trade. Looking at both location quotient scores and 2018 employment, the following industries are strongly concentrated in Butte County: Healthcare, Government, and Retail Trade.

Industry	2013 Jobs	2018 Jobs	Change 2013 - 2018	% Change 2013- 2018	Change 2018-2023	% Change 2018- 2023	LQ	Comp. Effect
Health Care and Social Assistance	16,701	19,893	3,192	19%	2,850	14%	1.65	506
Government	15,456	17,230	1,774	11%	906	5%	1.20	508
Retail Trade	10,268	11,722	1,454	14%	770	7%	1.22	480
Accommodation and Food Services	7,098	8,302	1,204	17%	710	9%	1.01	131
Construction	4,311	5,716	1,405	33%	685	12%	1.08	295
Other Services (except Public Administration)	5,382	5,316	(66)	(1%)	19	0%	1.17	(245)
Manufacturing	4,214	4,568	354	8%	314	7%	0.61	278
Administrative and Support and Waste Management and Remediation Services	3,800	3,659	(141)	(4%)	197	5%	0.62	(58)
Agriculture, Forestry, Fishing and Hunting	3,287	3,580	293	9%	147	4%	3.20	97
Professional, Scientific, and Technical Services	3,544	3,065	(479)	(14%)	(59)	(2%)	0.50	(328)
Finance and Insurance	1,761	2,390	629	36%	126	5%	0.62	13
Wholesale Trade	1,856	2,088	232	13%	149	7%	0.60	92
Real Estate and Rental and Leasing	1,640	1,750	110	7%	39	2%	1.09	(52)
Arts, Entertainment, and Recreation	1,173	1,316	143	12%	50	4%	0.80	(52)
Transportation and Warehousing	1,076	1,166	90	8%	(13)	(1%)	0.34	(113)
Educational Services	873	1,095	222	25%	272	25%	0.45	167
Information	1,088	968	(120)	(11%)	(7)	(1%)	0.55	(40)
Utilities	545	530	(15)	(3%)	145	27%	1.62	124
Management of Companies and Enterprises	353	486	133	38%	100	21%	0.36	69
Unclassified Industry	179	291	112	63%	59	20%	2.27	39
Mining, Quarrying, and Oil and Gas Extraction	35	53	18	51%	15	28%	0.13	12

Key Industries

The following table shows the 20 largest 4-digit North American Industrial Classification System (NAICS) industries in terms of employment in Butte County in 2018. Of the top 20 largest industries, 17 of them added employment between 2013 and 2018 and one experienced a triple-digit growth rate, Electronic Shopping and Mail-Order Houses. Among the largest employing industries, the highest projected growth is within Individual and Family Services, Electronic Shopping and Mail-Order Houses, and Restaurants and Other Eating Places.

Industry	2018 Jobs	Change 2013-2018	% Change 2013-2018	Projected Change 2018-2023	Projected % Change 2018-2023
Restaurants and Other Eating Places	7,113	1,078	18%	617	9%
Education and Hospitals (Local Government)	6,568	419	7%	265	4%
General Medical and Surgical Hospitals	6,025	802	15%	643	11%
Individual and Family Services	5,879	1,643	39%	1,597	27%
Local Government, Excluding Education and Hospitals	5,283	169	3%	107	2%
Education and Hospitals (State Government)	3,683	833	29%	403	11%
Crop Production	2,193	(37)	(2%)	39	2%
Grocery Stores	1,866	142	8%	71	4%
Services to Buildings and Dwellings	1,840	191	12%	152	8%
Electronic Shopping and Mail-Order Houses	1,581	979	163%	662	42%
Offices of Physicians	1,497	2	0%	11	1%
Building Equipment Contractors	1,210	452	60%	217	18%
Agencies, Brokerages, and Other Insurance Related Activities	1,180	588	99%	199	17%
Employment Services	1,163	112	11%	47	4%
Residential Building Construction	1,122	78	7%	32	3%
Nursing Care Facilities (Skilled Nursing Facilities)	1,099	(13)	(1%)	36	3%
Department Stores	1,068	(231)	(18%)	(96)	(9%)
Other Amusement and Recreation Industries	989	110	13%	19	2%
Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly	973	324	50%	335	34%
Support Activities for Crop Production	934	169	22%	31	3%

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

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

- Office and Administrative Support Occupations (12,690 jobs)
- Sales and Related Occupations (9,311 jobs)
- Food Preparation and Serving Related Occupations (9,290 jobs)
- Education, Training and Library Occupations (7,623 jobs)¹⁸

The median hourly earnings for all occupations range from \$11.40/hr. for Food Preparation and Serving Occupations to \$37.02/hr. for Healthcare Practitioners and Technical 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 Butte County has a strong concentration of workers (above an LQ of 1.25) include the following:

- Farming, Fishing and Forestry (3.69)
- Community and Social Service (1.92)
- Personal Care and Services (1.84)
- Education, Training, and Library (1.41)
- Healthcare Practitioners and Technical (1.23)

These are the occupation groups for which the region is highly specialized. For example, jobs in Farming, Fishing, and Forestry make up over three times more of the employment base than they do nationally. The concentration of workers in Community and Social Service, Personal Care and Services, Education, Training, and Library, and Healthcare Practitioners and Technical are also more prevalent within Butte County than the concentration of the United States overall.

¹⁸ Please note that this categorization primarily includes educational professionals (preschool through post-secondary). The library component composes a small proportion of the total.

Broad Occupation Mix

Occupation	2018 Employment	% of Total Employment	Median Hourly Earning	2018 Location Quotient
Office and Administrative Support Occupations	12,690	6.7%	\$16.01	0.92
Sales and Related Occupations	9,311	4.9%	\$13.55	0.99
Food Preparation and Serving Related Occupations	9,290	4.9%	\$11.40	1.17
Education, Training, and Library Occupations	7,623	4.0%	\$22.12	1.41
Personal Care and Service Occupations	7,503	3.9%	\$11.46	1.84
Healthcare Practitioners and Technical Occupations	6,463	3.4%	\$37.02	1.23
Management Occupations	4,966	2.6%	\$34.69	0.93
Construction and Extraction Occupations	4,592	2.4%	\$17.18	1.05
Production Occupations	4,079	2.1%	\$15.51	0.73
Transportation and Material Moving Occupations	3,898	2.0%	\$14.23	0.60
Building and Grounds Cleaning and Maintenance Occupations	3,637	1.9%	\$12.72	1.04
Installation, Maintenance, and Repair Occupations	3,273	1.7%	\$18.90	0.88
Community and Social Service Occupations	3,026	1.6%	\$20.33	1.92
Business and Financial Operations Occupations	2,833	1.5%	\$27.40	0.58
Healthcare Support Occupations	2,642	1.4%	\$15.27	1.02
Farming, Fishing, and Forestry Occupations	2,619	1.4%	\$12.19	3.69
Computer and Mathematical Occupations	1,551	0.8%	\$30.42	0.56
Arts, Design, Entertainment, Sports, and Media Occupations	1,460	0.8%	\$18.72	0.83
Protective Service Occupations	1,438	0.8%	\$28.05	0.68
Architecture and Engineering Occupations	818	0.4%	\$34.89	0.51
Life, Physical, and Social Science Occupations	748	0.4%	\$29.02	0.96
Legal Occupations	550	0.3%	\$36.78	0.70
Military-only occupations	171	0.1%	\$20.06	0.29

Top Occupations by Employment

The following table displays the top occupation by total employment for the slightly more specific group of 4-digit SOC Codes. Median hourly earnings for these occupations range from \$11.05 at the low end for Fast Food Counter Workers to \$40.59 at the high end for Registered Nurses. The greatest degree of growth is among Personal Care Aides, which increased 66% between 2013 and 2018; furthermore, this category is projected to increase another 23% over the next five years.

In Butte County, all of the top occupation groups have seen job growth in the last five years with the exception of Building Cleaning Workers and Nursing, Psychiatric, and Home Health Aides, which experienced losses. Additionally, all of these occupations are projected to grow in the next five years, with the exception of Cashiers. Occupational groups that indicate the most projected growth include Personal Care Aides; Nursing, Psychiatric, and Home Health Aides; and Registered Nurses. Generally, healthcare practitioners and educational occupations, including Registered Nurses; Elementary and Middle School Teachers, and Postsecondary Teachers, are some of the most intriguing occupations on the list because of their high number of projected openings and fairly high earnings.

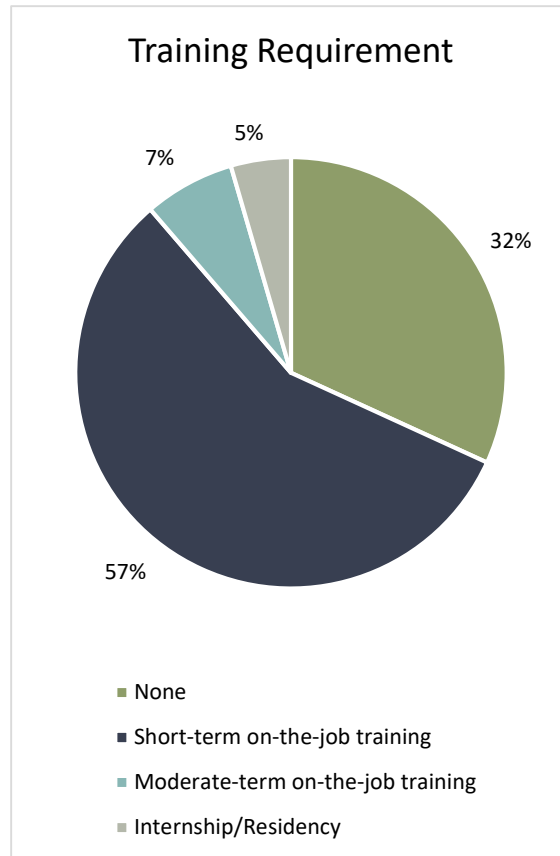
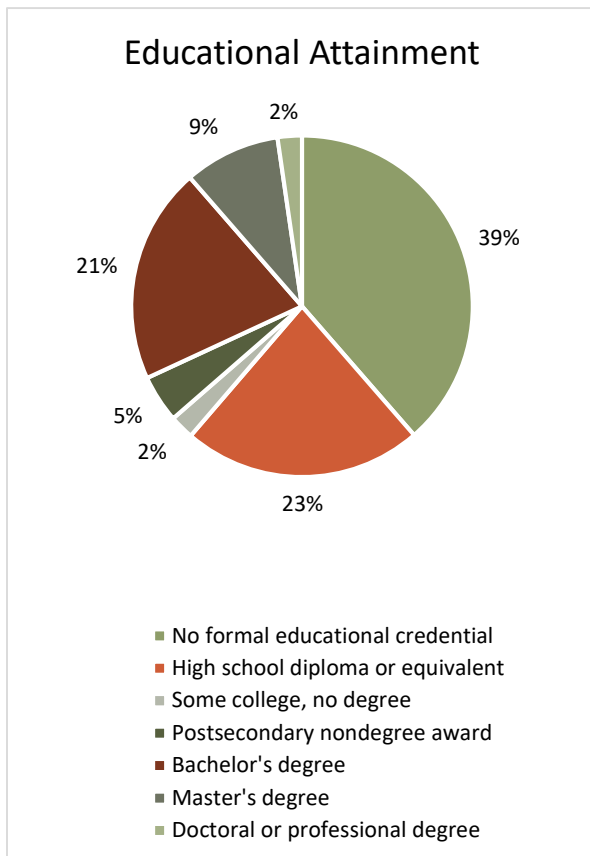
Occupation	2018 Employment	Change 2013-2018		Projected Change 2018-2023		Projected Annual Openings	Median Hourly Earnings
Personal Care Aides	4,508	1,793	66%	1,032	23%	909	\$11.33
Fast Food and Counter Workers	3,173	608	24%	352	11%	679	\$11.05
Retail Salespersons	2,572	28	1%	87	3%	392	\$12.06
Secretaries and Administrative Assistants	2,476	100	4%	62	3%	282	\$16.86
Registered Nurses	2,361	394	20%	333	14%	193	\$40.59
Cooks	2,350	317	16%	130	6%	365	\$11.50
Cashiers	2,313	66	3%	(27)	(1%)	429	\$11.55
Building Cleaning Workers	2,301	(67)	(3%)	133	6%	340	\$11.73
Elementary and Middle School Teachers	2,234	406	22%	165	7%	195	\$29.87
Miscellaneous Agricultural Workers	1,941	114	6%	58	3%	309	\$12.04
Office Clerks, General	1,720	85	5%	87	5%	222	\$14.41
Laborers and Material Movers, Hand	1,550	238	18%	172	11%	261	\$12.68
Teacher Assistants	1,438	205	17%	101	7%	170	\$14.07
Stock Clerks and Order Fillers	1,357	254	23%	81	6%	192	\$11.47
Waiters and Waitresses	1,326	131	11%	116	9%	282	\$11.39
Driver/Sales Workers and Truck Drivers	1,326	86	7%	65	5%	159	\$17.38
Miscellaneous Community and Social Service Specialists	1,238	128	12%	102	8%	167	\$17.80
Nursing, Psychiatric, and Home Health Aides	1,237	(91)	(7%)	267	22%	205	\$14.84

Occupation	2018 Employment	Change 2013-2018		Projected Change 2018-2023		Projected Annual Openings	Median Hourly Earnings
Health Practitioner Support Technologists and Technicians	1,233	269	28%	69	6%	112	\$25.52
Postsecondary Teachers	1,176	96	9%	82	7%	107	\$30.93

Education & Training Requirements for High Demand Jobs

Of all occupations, 27.3% require a high school diploma or equivalent. Among high demand jobs in Butte County, just under two-thirds (61.3%) typically require a high school diploma or less.¹⁹ Approximately 21% of these high demand jobs typically require at least a Bachelor’s degree. In terms of training and experience requirements, less than two-thirds of all jobs (64%) require some type of training, which is typically on-the-job training.

Average hourly earnings range from \$11.03/hr. for Combined Food Preparation and Servicing Workers, Including Fast Food to \$44.59/hr. for Registered Nurses. A few growing occupations that pay high wages include: Postsecondary Teachers (\$30.93/hr.); Middle School Teachers, Except Special and Career/Technical Education (33.23/hr.); Elementary School Teachers, Except Special Education (\$26.25/hr.); Social and Human Service Assistants (\$16.84/hr.); and Home Health Aides (\$16.00/hr.). Of these occupations, two require a high school diploma or less.



¹⁹ A total of 20 occupations with the highest projected job growth from 2018 to 2023 are included in these two charts. These occupations are defined at the 5-digit SOC code level.

Description	2023 Jobs	Change 2018 - 2023	Annual Openings	Avg. Hourly Earnings	Typical Entry Level Education	Typical On-The-Job Training
Personal Care Aides	5,540	1,032	909	\$11.33	High school diploma or equivalent	Short-term on-the-job training
Combined Food Preparation and Serving Workers, Including Fast Food	3,412	336	653	\$11.03	No formal educational credential	Short-term on-the-job training
Registered Nurses	2,694	333	193	\$40.59	Bachelor's degree	None
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	1,481	146	209	\$12.23	No formal educational credential	Short-term on-the-job training
Nursing Assistants	1,123	143	145	\$14.48	Postsecondary nondegree award	None
Waiters and Waitresses	1,442	116	282	\$11.39	No formal educational credential	Short-term on-the-job training
Laborers and Freight, Stock, and Material Movers, Hand	1,016	116	153	\$13.44	No formal educational credential	Short-term on-the-job training
Home Health Aides	311	115	51	\$16.00	High school diploma or equivalent	Short-term on-the-job training
Teacher Assistants	1,539	101	170	\$14.07	Some college, no degree	None
Elementary School Teachers, Except Special Education	1,175	99	98	\$26.25	Bachelor's degree	None
Cooks, Restaurant	1,199	97	179	\$11.62	No formal educational credential	Moderate-term on-the-job training
Retail Salespersons	2,659	87	392	\$12.06	No formal educational credential	Short-term on-the-job training
Office Clerks, General	1,807	87	222	\$14.41	High school diploma or equivalent	Short-term on-the-job training
Postsecondary Teachers	1,258	82	107	\$30.93	Doctoral or professional degree	None
Stock Clerks and Order Fillers	1,438	81	192	\$11.47	High school diploma or equivalent	Short-term on-the-job training
Social and Human Service Assistants	959	72	121	\$16.84	High school diploma or equivalent	Short-term on-the-job training
Middle School Teachers, Except Special and Career/Technical Education	1,223	66	209	\$33.23	Bachelor's degree	None

Description	2023 Jobs	Change 2018 - 2023	Annual Openings	Avg. Hourly Earnings	Typical Entry Level Education	Typical On-The-Job Training
Medical Secretaries	632	49	74	\$16.15	High school diploma or equivalent	Moderate-term on-the-job training
Packers and Packagers, Hand	410	42	66	\$11.55	No formal educational credential	Short-term on-the-job training
Light Truck or Delivery Services Drivers	588	40	68	\$15.79	High school diploma or equivalent	Short-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 the region's key industries. Note that five of the top ten occupations are tied to the Health Care & Social Assistance industry.

Connection between Top Occupations and Key Industries	
Top Occupations	Key Industries
Personal Care Aides	<ul style="list-style-type: none"> Health Care & Social Assistance
Combined Food Preparation & Serving Workers, Including Fast Food	<ul style="list-style-type: none"> Accommodation and Food Services
Registered Nurses	<ul style="list-style-type: none"> Health Care and Social Assistance
Insurance Sales Agents	<ul style="list-style-type: none"> Finance and Insurance
Janitors & Cleaners, Except Maids & Housekeeping Cleaners	<ul style="list-style-type: none"> Government Administrative, Support, Waste Management, Remediation Services Health Care and Social Assistance Other Services (except Public Administration)
Postsecondary Teachers	<ul style="list-style-type: none"> Government
Customer Service Representatives	<ul style="list-style-type: none"> Retail Trade Finance & Insurance Administrative, Support, Waste Management, Remediation Services Health Care & Social Assistance
Laborers & Freight, Stock, & Material Movers, Hand	<ul style="list-style-type: none"> Retail Trade Administrative, Support, Waste Management, Remediation Services Transportation & Warehousing Wholesale Trade
Retail Salespersons	<ul style="list-style-type: none"> Retail Trade
Home Health Aides	<ul style="list-style-type: none"> Health Care & Social Assistance

DETAILED INDUSTRY ANALYSIS

The following section provides an in-depth look at 4-digit NAICS sectors that are important to the Butte County economy. These industry sectors include: Agriculture; Health Care; Information Technology (IT) Manufacturing; 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 vast majority of employment in this sector is found in the Crop Production industry, followed by Support Activities for Crop Production. Support Activities for Crop Production added the most, new jobs over the past five years and is projected to continue growing through 2023. Several other industries are also projected to grow marginally including: Crop Production; Support Activities for Forestry; and Animal Production. The industry paying the highest average wages is Support Activities for Forestry (\$64,142), while the industry paying the least is Support Activities for Animal Production (\$22,840).

Industry	2018 Jobs	'13-'18 Change	CE '13-18	'18-'23 Change	CE '18-23	'18 LQ	Average Earnings
Crop Production	2,193	(37)	17	39	37	4.63	\$50,693
Support Activities for Crop Production	934	169	112	31	(37)	3.21	\$52,657
Support Activities for Forestry	156	113	104	63	41	12.43	\$64,142
Animal Production	131	46	44	13	16	0.52	\$53,710
Logging	87	6	11	(8)	(1)	2.13	\$52,976
Support Activities for Animal Production	55	(11)	(17)	7	3	2.19	\$22,840
Fishing	12	2	3	0	1	0.71	\$35,626
Timber Tract Operations	<10	Insf. Data	1	Insf. Data	0	0.36	Insf. Data
Forest Nurseries and Gathering of Forest Products	<10	Insf. Data	5	Insf. Data	1	4.80	Insf. Data
Hunting and Trapping	<10	Insf. Data	1	Insf. Data	(1)	1.93	Insf. Data

Staffing Patterns for Agriculture

The largest single occupation within the Crop and Animal production industry is Miscellaneous Agricultural Workers. This occupation also grew the most over the past five years and is projected to add the most, new jobs over the next five years (41 jobs). The occupation that pays the highest median wages is First-Line Supervisors of Farming, Fishing, and Forestry Workers (34.73/hr.), while the occupation paying the least is Forest Conservation Workers (\$11.52/hr.).

Occupation	2018 Employment	Change 2013-2018		Projected Change 2018-2023		Median Hourly Earnings
Miscellaneous Agricultural Workers	1,730	45	3%	41	2%	\$12.04
Farmers, Ranchers, and Other Agricultural Managers	580	47	9%	29	5%	\$25.78
Graders and Sorters, Agricultural Products	156	15	11%	3	2%	\$11.55
Laborers and Material Movers, Hand	110	20	22%	10	9%	\$12.68
First-Line Supervisors of Farming, Fishing, and Forestry Workers	97	19	24%	11	11%	\$34.73
Driver/Sales Workers and Truck Drivers	89	2	2%	3	3%	\$17.38
Packaging and Filling Machine Operators and Tenders	48	21	78%	(1)	(2%)	\$14.91
Forest and Conservation Workers	44	23	110%	10	23%	\$11.52
Grounds Maintenance Workers	44	5	13%	5	11%	\$13.36
Logging Workers	42	7	20%	(2)	(5%)	\$23.12
Secretaries and Administrative Assistants	40	5	14%	(1)	(3%)	\$16.86
Bookkeeping, Accounting, and Auditing Clerks	31	1	3%	0	0%	\$18.70
Industrial Truck and Tractor Operators	25	4	19%	1	4%	\$19.78
Nonfarm Animal Caretakers	25	3	14%	1	4%	\$12.57
Miscellaneous Production Workers	23	7	44%	4	17%	\$13.39
Sales Representatives, Wholesale and Manufacturing	23	(1)	(4%)	0	0%	\$22.36
Heavy Vehicle and Mobile Equipment Service Technicians and Mechanics	23	3	15%	0	0%	\$24.88
Office Clerks, General	22	3	16%	(1)	(5%)	\$14.41
Maintenance and Repair Workers, General	21	3	17%	1	5%	\$16.93
Animal Trainers	20	4	25%	1	5%	\$11.81

Employment for Top Health Care Industries

The largest employing Health Care sectors in Butte County include General Medical and Surgical Hospitals (6,025 jobs), Individual and Family Services (5,879), Offices of Physicians (1,497), and Nursing Care Facilities (Skilled Nursing Facilities) (1,099). The two largest of these sectors (General Medical and Surgical Hospitals and Individual Family Services) also have high LQs (2.19 and 3.86, respectively). Over the past five years the most significant growth has been within these two sectors, and both are projected to continue growing over the next five years to 2023.

The individual industries within the Health Care & Social Assistance sector are a mix of high-paying and low-paying. The highest paying sector is Offices of Physicians (\$104,006), while the sector with the lowest average wages is Individual and Family Services (\$18,183). It is worth noting that Individual and Family Services is also one of the largest employing industries in the 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	6,025	802	496	643	359	2.19	\$82,290
Individual and Family Services	5,879	1,643	520	1,597	275	3.86	\$18,183
Offices of Physicians	1,497	2	(98)	11	(155)	0.96	\$104,006
Nursing Care Facilities (Skilled Nursing Facilities)	1,099	(13)	17	36	30	1.17	\$45,552
Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly	973	324	231	335	154	1.77	\$27,009
Offices of Dentists	745	(49)	(113)	(16)	(90)	1.29	\$62,466
Child Day Care Services	658	41	20	13	(3)	0.90	\$23,579
Outpatient Care Centers	640	141	(39)	161	19	1.13	\$64,679
Offices of Other Health Practitioners	560	81	(15)	23	(70)	0.92	\$46,415
Vocational Rehabilitation Services	401	161	162	(17)	(8)	2.00	\$27,046
Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	389	(38)	(69)	(50)	(95)	1.03	\$27,263
Specialty (except Psychiatric and Substance Abuse) Hospitals	311	Insf. Data	310	261	200	2.30	\$84,384
Home Health Care Services	271	(162)	(236)	(116)	(186)	0.30	\$40,012
Community Food and Housing, and Emergency and Other Relief Services	125	(34)	(61)	1	(12)	1.19	\$48,644
Other Ambulatory Health Care Services	119	(2)	(16)	(3)	(21)	0.60	\$64,900
Other Residential Care Facilities	100	(3)	(7)	(34)	(32)	1.03	\$37,742
Medical and Diagnostic Laboratories	100	(12)	(25)	6	(9)	0.59	\$55,637
Psychiatric and Substance Abuse Hospitals	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 Aids (4,391); Registered Nurses (2,232 jobs); Nursing, Psychiatric, and Home Health Aides (1,166); and Miscellaneous Healthcare Support Occupations (893). Three of the four occupations experienced strong growth over the past five years; however, Nursing, Psychiatric, and Home Health Aides experienced a decline of nearly 100 jobs. Personal Care Aids had the highest growth, adding 1,823 jobs. Over the next five years through 2023, it is also expected to add the highest number of jobs (1,057). Unfortunately, wages for Personal Care Aids are among the lowest median wages in this industry sector at \$11.33/hr. On the opposite end of the earnings scale, Physicians and Surgeons is the highest paid occupation (\$87.41/hr.).

Occupation	2018 Employment	Change 2013-2018		Projected Change 2018-2023		Median Hourly Earnings
Personal Care Aides	4,391	1,823	71%	1,057	24%	\$11.33
Registered Nurses	2,232	386	21%	325	15%	\$40.59
Nursing, Psychiatric, and Home Health Aides	1,166	(87)	(7%)	263	23%	\$14.84
Miscellaneous Healthcare Support Occupations	893	18	2%	62	7%	\$16.48
Health Practitioner Support Technologists and Technicians	876	233	36%	51	6%	\$25.52
Secretaries and Administrative Assistants	802	52	7%	58	7%	\$16.86
Miscellaneous Community and Social Service Specialists	698	53	8%	75	11%	\$17.80
Counselors	602	122	25%	49	8%	\$21.77
Building Cleaning Workers	561	18	3%	63	11%	\$11.73
Therapists	434	88	25%	74	17%	\$42.33
Childcare Workers	421	(39)	(8%)	(14)	(3%)	\$10.56
Licensed Practical and Licensed Vocational Nurses	372	2	1%	32	9%	\$26.29
Social Workers	303	12	4%	58	19%	\$25.25
Diagnostic Related Technologists and Technicians	292	47	19%	38	13%	\$40.87
Receptionists and Information Clerks	272	6	2%	20	7%	\$13.36
Physicians and Surgeons	242	(15)	(6%)	14	6%	\$87.41
Dental Hygienists	220	(12)	(5%)	(5)	(2%)	\$46.55
Office Clerks, General	213	(6)	(3%)	17	8%	\$14.41
Preschool and Kindergarten Teachers	200	31	18%	18	9%	\$12.61
First-Line Supervisors of Office and Administrative Support Workers	175	18	11%	11	6%	\$23.04

Employment for Top Information Technology (IT) Industries

The largest subsector by employment within this sector is Computer Systems Design and Related Services with 305 jobs. It is projected to lose over one-third of those jobs through 2023. Data Processing, Hosting, and Related Services experienced an increase in jobs between 2013 and 2018 (32 jobs) and is expected to increase in the next five years.

Data Processing, Hosting, and Related Services pay high wages above \$60,000 annually.

Industry	2018 Jobs	'13-'18 Change	CE '13-'18	'18-'23 Change	CE '18-'23	'18 LQ	Average Earnings
Computer Systems Design and Related Services	305	(179)	(285)	(71)	(113)	0.23	\$54,171
Data Processing, Hosting, and Related Services	108	32	13	40	29	0.55	\$67,254
Software Publishers	<10	Insf. Data	(124)	Insf. Data	(0)	0.00	Insf. Data

Staffing Patterns for Information Technology (IT)

Within this sector, the occupations with highest number of jobs include Software Developers and Programmers (117); Computer and Information Analysts (44); and Computer Support Specialists (44). All three have demonstrated and are projected to see sharp declines in employment. Wages within this sector tend to be high, with many paying greater than \$20.00/hr.

Occupation	2018 Employment	Change 2013-2018		Projected Change 2018-2023		Median Hourly Earnings
Software Developers and Programmers	117	(83)	(42%)	(10)	(9%)	\$43.12
Computer and Information Analysts	44	(28)	(39%)	(7)	(16%)	\$33.76
Computer Support Specialists	44	(20)	(31%)	(5)	(11%)	\$21.20
Miscellaneous Computer Occupations	17	5	42%	(2)	(12%)	\$20.85
Database and Systems Administrators and Network Architects	15	(16)	(52%)	(1)	(7%)	\$39.92
Customer Service Representatives	12	(4)	(25%)	1	8%	\$17.05
Miscellaneous Sales Representatives, Services	12	(6)	(33%)	0	0%	\$19.45

Employment for Top Manufacturing Industries

The top manufacturing employers are classified within the food and beverage industry. These sectors include Beverage Manufacturing (723 jobs); Fruit and Vegetable Preserving and Specialty Food Manufacturing (506); Agriculture, Construction, and Mining Machinery Manufacturing (441); and Grain and Oilseed Milling (415). These four also have a relatively high LQ. However, the sector with the highest LQ is Grain and Oilseed Milling (11.67). Over the past five years, Beverage Manufacturing and Agriculture, Construction, and Mining Machinery Manufacturing added the most employees (242 and 187, respectively). Much of the growth in Beverage Manufacturing was due to unique strengths within Butte County, as demonstrated by the large competitive effect. Both sectors are projected to grow over the next five years to 2023. Other growing sectors include Household and Institutional Furniture and Kitchen Cabinet Manufacturing; Grain and Oilseed Milling; and Boiler, Tank, and Shipping Container Manufacturing. Average earnings range from \$92,149 for Manufacturing and Reproducing Magnetic and Optical Media to \$35,685 for Printing and Related Support Activities.

Industry	2018 Jobs	'13-'18 Change	CE '13-'18	'18-'23 Change	CE '18-'23	'18 LQ	Average Earnings
Beverage Manufacturing	723	242	45	77	(1)	4.68	\$64,065
Fruit and Vegetable Preserving and Specialty Food Manufacturing	506	(45)	(44)	(13)	(16)	5.04	\$55,401
Agriculture, Construction, and Mining Machinery Manufacturing	441	187	224	99	74	3.53	\$63,910
Grain and Oilseed Milling	415	119	115	57	51	11.67	\$61,336
Other Miscellaneous Manufacturing	250	9	(9)	25	24	1.30	\$57,198
Plastics Product Manufacturing	157	(4)	(23)	(3)	(4)	0.45	\$55,120
Bakeries and Tortilla Manufacturing	155	(22)	(41)	(49)	(55)	0.80	\$36,143
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	154	50	39	14	14	0.98	\$49,980
Architectural and Structural Metals Manufacturing	150	(22)	(41)	(29)	(33)	0.66	\$55,057
Sawmills and Wood Preservation	146	69	63	65	62	2.57	\$63,249
Other Wood Product Manufacturing	146	(43)	(75)	(22)	(26)	1.00	\$49,361
Converted Paper Product Manufacturing	133	(69)	(68)	(18)	(16)	0.84	\$70,085
Printing and Related Support Activities	132	(1)	4	(11)	1	0.50	\$35,658
Boiler, Tank, and Shipping Container Manufacturing	125	37	41	17	15	2.34	\$54,466
Medical Equipment and Supplies Manufacturing	117	3	(0)	(17)	(2)	0.62	\$60,480
Manufacturing and Reproducing Magnetic and Optical Media	78	(20)	9	0	6	9.38	\$92,149
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	67	8	9	17	4	0.31	\$44,879
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	67	(28)	(31)	(3)	4	0.86	\$49,530
Industrial Machinery Manufacturing	52	5	1	17	2	0.75	\$45,899
Other Food Manufacturing	48	(73)	(103)	(7)	(6)	0.37	\$43,047

Staffing Patterns for Manufacturing

The occupational categories that employ the most individuals in the manufacturing sector include Packaging and Filling Machine Operators and Tenders (381 jobs) and Crushing, Grinding, Polishing, Mixing, and Blending Workers (240 jobs). Designers contributed the largest number of new jobs added within the manufacturing sector over the past five years (40 jobs), followed by Packaging and Filling Machine Operators and Tenders (39 jobs). Growth projections through 2023 are most significant with Woodworking Machine Setters, Operators (20 jobs) and Tenders and Laborers and Material Movers, Hand (14 jobs). Among the top 20 highest employing occupations, General and Operations Managers offers the highest wages (\$35.60/hr.), while Woodworking Machine Setters, Operators, and Tenders offers the lowest (\$11.44/hr.).

Occupation	2018 Employment	Change 2013-2018		Projected Change 2018-2023		Median Hourly Earnings
Packaging and Filling Machine Operators and Tenders	381	39	11%	10	3%	\$14.91
Crushing, Grinding, Polishing, Mixing, and Blending Workers	240	11	5%	2	1%	\$15.22
Miscellaneous Assemblers and Fabricators	202	1	0%	1	0%	\$14.01
Machine Tool Cutting Setters, Operators, and Tenders, Metal and Plastic	202	6	3%	(2)	(1%)	\$16.15
Laborers and Material Movers, Hand	189	(39)	(17%)	14	7%	\$12.68
Miscellaneous Food Processing Workers	181	27	18%	4	2%	\$12.95
Miscellaneous Production Workers	136	(32)	(19%)	6	4%	\$13.39
First-Line Supervisors of Production and Operating Workers	124	1	1%	11	9%	\$26.17
Cabinetmakers and Bench Carpenters	112	31	38%	4	4%	\$14.77
Welding, Soldering, and Brazing Workers	105	20	24%	12	11%	\$17.11
Sales Representatives, Wholesale and Manufacturing	97	(1)	(1%)	9	9%	\$22.36
Inspectors, Testers, Sorters, Samplers, and Weighers	96	2	2%	2	2%	\$15.13
Designers	90	40	80%	6	7%	\$18.13
Woodworking Machine Setters, Operators, and Tenders	90	26	41%	20	22%	\$11.44
Industrial Machinery Installation, Repair, and Maintenance Workers	88	3	4%	11	13%	\$18.75
Industrial Truck and Tractor Operators	71	(8)	(10%)	7	10%	\$19.78
General and Operations Managers	70	3	4%	7	10%	\$35.60
Driver/Sales Workers and Truck Drivers	70	(13)	(16%)	5	7%	\$17.38
Miscellaneous Managers	59	8	16%	3	5%	\$19.66
Models, Demonstrators, and Product Promoters	53	26	96%	4	8%	\$28.89

Employment for Top Tourism Industries²⁰

The vast majority of employment within this industry group is found within two subsectors: Restaurants and Other Eating Places (7,113); and Other Amusement and Recreation Industries (989). Over the past five years, Restaurants and Other Eating Places added over 1,000 jobs. The subsector of Restaurants and Other Eating Places is projected to add over 600 jobs through 2023. The sector with the highest average earnings is Other Support Services (\$57,965), while the sector with the lowest is Promoters of Performing Arts, Sports, and Similar Events (\$15,796).

Industry	2018 Jobs	'13-'18 Change	CE '13-'18	'18-'23 Change	CE '18-'23	'18 LQ	Average Earnings
Restaurants and Other Eating Places	7,113	1,078	241	617	75	1.13	\$21,345
Other Amusement and Recreation Industries	989	110	(46)	19	(65)	1.17	\$21,837
Drinking Places (Alcoholic Beverages)	536	104	64	45	48	2.28	\$18,817
Special Food Services	360	108	68	84	47	0.74	\$26,735
Traveler Accommodation	270	(49)	(75)	(45)	(54)	0.24	\$24,467
Independent Artists, Writers, and Performers	157	4	(8)	(1)	(7)	0.88	\$21,597
Other Support Services	87	65	63	24	19	0.46	\$57,965
Spectator Sports	52	3	(1)	10	6	0.46	\$15,110
Gambling Industries	39	18	20	9	7	0.52	\$28,960
Promoters of Performing Arts, Sports, and Similar Events	38	25	21	9	3	0.39	\$15,796
RV (Recreational Vehicle) Parks and Recreational Camps	22	11	9	9	7	0.53	\$26,757
Travel Arrangement and Reservation Services	20	6	4	(1)	(1)	0.14	\$27,648
Performing Arts Companies	20	9	8	6	5	0.22	\$20,913
Museums, Historical Sites, and Similar Institutions	15	(12)	(17)	0	(1)	0.15	\$23,716

²⁰ 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).

Staffing Patterns for Tourism

The majority of employment within this industry sector is found within four occupations that are within the food service industry: Fast Food and Counter Workers (2,642); Cooks (1,989); Waiters and Waitresses (1,199); and Supervisors of Food Preparation and Serving Workers (487). Fast Food and Counter Workers; and Cooks added the most jobs over the past five years (536 and 277, respectively) and are projected to be amongst the greatest job growths through 2023.

Within this industry sector, General and Operations Managers is the occupation paying the highest median wage at \$35.60/hr. The occupation with the lowest median earnings is Dishwashers at \$10.51/hr.

Occupation	2018 Employment	Change 2013-2018		Projected Change 2018-2023		Median Hourly Earnings
Fast Food and Counter Workers	2,642	536	25%	317	12%	\$11.05
Cooks	1,989	277	16%	99	5%	\$11.50
Waiters and Waitresses	1,199	110	10%	106	9%	\$11.39
Supervisors of Food Preparation and Serving Workers	487	73	18%	50	10%	\$12.89
Bartenders	385	59	18%	33	9%	\$12.68
Dishwashers	307	22	8%	19	6%	\$10.51
Recreation and Fitness Workers	249	32	15%	12	5%	\$14.01
Dining Room and Cafeteria Attendants and Bartender Helpers	235	27	13%	17	7%	\$11.30
Cashiers	206	35	20%	16	8%	\$11.55
Food Service Managers	176	17	11%	10	6%	\$20.77
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	165	26	19%	16	10%	\$11.23
Building Cleaning Workers	142	(23)	(14%)	(10)	(7%)	\$11.73
Miscellaneous Entertainment Attendants and Related Workers	125	22	21%	3	2%	\$11.24
Food Preparation Workers	125	(5)	(4%)	20	16%	\$11.71
Driver/Sales Workers and Truck Drivers	110	33	43%	7	6%	\$17.38
Hotel, Motel, and Resort Desk Clerks	72	(10)	(12%)	(11)	(15%)	\$11.55
Childcare Workers	69	5	8%	1	1%	\$10.56
Athletes, Coaches, Umpires, and Related Workers	66	10	18%	4	6%	\$14.94
General and Operations Managers	57	12	27%	5	9%	\$35.60
Musicians, Singers, and Related Workers	52	3	6%	1	2%	\$18.98

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), 2018.3 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" techniques²¹, *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.

²¹ 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
1120	Animal Production and Aquaculture
1131	Timber Tract Operations
1132	Forest Nurseries and Gathering of Forest Products
1133	Logging
1141	Fishing
1142	Hunting and Trapping
1151	Support Activities for Crop Production
1152	Support Activities for Animal Production
1153	Support Activities for Forestry

Health Care

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

Information Technology (IT)

NAICS	Description
5112	Software Publishers
5182	Data Processing, Hosting, and Related Services
5415	Computer Systems Design and Related Services

Manufacturing

NAICS	Description
3111	Animal Food Manufacturing
3112	Grain and Oilseed Milling
3113	Sugar and Confectionery Product Manufacturing
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing
3115	Dairy Product Manufacturing
3116	Animal Slaughtering and Processing
3117	Seafood Product Preparation and Packaging
3118	Bakeries and Tortilla Manufacturing
3119	Other Food Manufacturing
3121	Beverage Manufacturing
3122	Tobacco Manufacturing
3131	Fiber, Yarn, and Thread Mills
3132	Fabric Mills
3133	Textile and Fabric Finishing and Fabric Coating Mills
3141	Textile Furnishings Mills
3149	Other Textile Product Mills
3151	Apparel Knitting Mills
3152	Cut and Sew Apparel Manufacturing
3159	Apparel Accessories and Other Apparel Manufacturing
3161	Leather and Hide Tanning and Finishing
3162	Footwear Manufacturing
3169	Other Leather and Allied Product Manufacturing
3211	Sawmills and Wood Preservation
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing
3219	Other Wood Product Manufacturing
3221	Pulp, Paper, and Paperboard Mills
3222	Converted Paper Product Manufacturing
3231	Printing and Related Support Activities
3241	Petroleum and Coal Products Manufacturing
3251	Basic Chemical Manufacturing
3252	Resin, Synthetic Rubber, and Artificial and Synthetic Fibers and Filaments Manufacturing
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing
3254	Pharmaceutical and Medicine Manufacturing
3255	Paint, Coating, and Adhesive Manufacturing
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing
3259	Other Chemical Product and Preparation Manufacturing
3261	Plastics Product Manufacturing
3262	Rubber Product Manufacturing
3271	Clay Product and Refractory Manufacturing
3272	Glass and Glass Product Manufacturing
3273	Cement and Concrete Product Manufacturing
3274	Lime and Gypsum Product Manufacturing

NAICS	Description
3279	Other Nonmetallic Mineral Product Manufacturing
3311	Iron and Steel Mills and Ferroalloy Manufacturing
3312	Steel Product Manufacturing from Purchased Steel
3313	Alumina and Aluminum Production and Processing
3314	Nonferrous Metal (except Aluminum) Production and Processing
3315	Foundries
3321	Forging and Stamping
3322	Cutlery and Handtool Manufacturing
3323	Architectural and Structural Metals Manufacturing
3324	Boiler, Tank, and Shipping Container Manufacturing
3325	Hardware Manufacturing
3326	Spring and Wire Product Manufacturing
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing
3328	Coating, Engraving, Heat Treating, and Allied Activities
3329	Other Fabricated Metal Product Manufacturing

Tourism

NAICS	Description
4871	Scenic and Sightseeing Transportation, Land
4872	Scenic and Sightseeing Transportation, Water
4879	Scenic and Sightseeing Transportation, Other
5615	Travel Arrangement and Reservation Services
5619	Other Support Services
7111	Performing Arts Companies
7112	Spectator Sports
7113	Promoters of Performing Arts, Sports, and Similar Events
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures
7115	Independent Artists, Writers, and Performers
7121	Museums, Historical Sites, and Similar Institutions
7131	Amusement Parks and Arcades
7132	Gambling Industries
7139	Other Amusement and Recreation Industries
7211	Traveler Accommodation
7212	RV (Recreational Vehicle) Parks and Recreational Camps
7213	Rooming and Boarding Houses
7223	Special Food Services
7224	Drinking Places (Alcoholic Beverages)
7225	Restaurants and Other Eating Places