NoRTEC

Northern Rural Training and Employment Consortium (NoRTEC)

Regional Labor Market Profile and Industry/Sector Analysis

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Executive Summary

The purpose of this Regional Labor Market Profile and Industry/Sector Analysis is to provide the Northern Rural Training and Employment Consortium (NoRTEC) region with data to inform strategic decisions designed to strengthen communities across the region through a strong and collaborative workforce development network. Ultimately, the data will be used to:

- Develop sector partnerships within the priority industry sectors
- Identify and promote career pathways
- Identify and promote the most in-demand occupations that can also inform career guidance and coaching
- Help the workforce development board prioritize and focus on common sectors
- Guide efforts in concert with economic development within the region

The report includes both quantitative and qualitative data regarding past, current and projected economic trends for the region's 11 counties: Butte, Del Norte, Lassen, Modoc, Nevada, Plumas, Shasta, Sierra, Siskiyou, Tehama, and Trinity counties.

Data examined include age and race trends and projections; income and poverty; human capital and labor force; unemployment; commuting patterns; employment by industry; employment by occupation; industry and occupation connections; and industry sectors. Priority was placed on the identification of industry sectors that: are growing, are economically vital to the region, include occupations with a wide variety of entry-level educational requirements, and pay a relatively higher wage compared to other industries.

Data were gathered from a variety of public and proprietary data sources and a survey of nearly 300 regional employers. Input sessions with each of the counties were held in May 2016 to validate and supplement the quantitative data. Participants within the county and community participants included key stakeholders, service providers, and employers.

Based on an analysis of the quantitative and qualitative information gathered, the following section outlines the key findings, including strengths and challenges within the region, as well as recommended industry sectors to emphasize for purposes of workforce planning and resource allocation.

Key Findings

The overall strengths and challenges within the region fall into three overarching themes:

Theme 1: Rurality

Strength: The region possesses a high quality of life for those who value the rural lifestyle that the region offers. During the input sessions, it was mentioned time and time again that the region's unique lifestyle may be a valuable tool for business recruitment. The overall rural setting is the foundation for many of the region's industry strengths.

Challenge: Because of the vast, rural nature of the region, there are infrastructure gaps such as access to high speed internet. This will impact both business and talent attraction. Housing is a challenge within the region. In some cases, there is a lack of rental properties, which is challenging for areas with a large seasonal workforce. In other areas, the available housing is so expensive that it is difficult to attract entry-level workers. However, the most significant challenge the region faces is an aging, flat-growth population. This will put a significant strain on workforce availability over the next several years.

Key Points:

- Important employment sectors within the region include: Government; Agriculture; and Tourism. These tend to be significant employment sectors in rural areas across the nation.
- The region's population marginally grew by 1.3% as compared to the rest of the state, which grew by 9.3%. Population growth is projected to remain flat through 2020. In fact, the working age population, defined as 20-64, is projected to decrease, partly due to retirements and flat population growth. This will put a strain on existing employers.
- The region is less racially diverse than California and the US, although minority populations are growing in size and share of the region's population.
- Due to the presence of the Agriculture sector within many of the counties, seasonal and migrant farmworkers comprise a large portion of the workforce. Because many of these jobs are seasonal or temporary, the monthly employment and unemployment within the region varies greatly.
- Historically, the Government sector, which includes education, state and federal government, has employed the most workers. However, the Health Care sector has demonstrated the most significant growth and is projected to dominate future employment growth.
- Across all regional input sessions, attendees recognized that the NoRTEC region possesses a high quality of life that should be marketed as part of an overall talent attraction effort.
- While participants within the input sessions noted the high-quality of life present within the region, many of the survey respondents also indicated challenges with recruiting employees to a rural region. This indicates that future job candidates will likely be those who prefer a rural lifestyle.

Theme 2: Educational Attainment

Strength: The region has a higher percentage of those within its population who have some college and/or an Associate's degree or higher. This percentage is significantly higher than the rest of the state, the US and other comparison communities. This presents opportunities for upskilling, and the current level of educational attainment within the region matches well with in-demand jobs.

Challenge: Unfortunately, jobs that are available for the current educational attainment level within the region do not always pay well. Also, workers who have some college and choose to finish their studies may not be pursuing fields that lead to current in demand occupations.

Key Points

- Many in-demand jobs tend to be entry-level rungs on the career ladder. For example, 13 of the 20 occupations with the greatest number of projected openings pay median wages between $10.00 and $15.00. Of the 20 occupations, just two require education beyond an Associate's degree.
- Top jobs within the region, by largest share of employment, tend to be within the food service/tourism industry. However, several Health Care industry occupations, including Registered Nurses, pay higher-than-average wages and are expected to have a relatively high number of annual openings over the next 5 years.
- The overall median household income within the region is lower, while the poverty rate tends to be higher as compared to the rest of the state and nation.
- Based on survey results, the most significant challenges for employers within the region are (1) to find qualified candidates to hire, generally speaking, and (2) to find prospects to fill high-skill positions. Finding employees with necessary soft skills was also indicated as a significant workforce challenge.

Theme 3: Geography

Strength: The presence of the two border states of Oregon and Nevada present opportunities for cross-border collaboration, while the vast size of the region also presents opportunities for in-region collaboration.

Challenge: It is time and resource intensive to work across states with a diversified approach to problem solving.

Key Points:

- While the NoRTEC region is geographically large and diverse, input sessions showed a willingness and enthusiasm for various organizations to work together for the "common good."
- Because the region is geographically vast, lacks a large population center, is sparsely populated overall, and borders two states, commuting patterns for the NoRTEC region are unlike many other workforce regions in the country. Del Norte, Siskiyou, and Modoc Counties border southern Oregon and exchange commuters with counties across state lines. The same is the case with Nevada, Lassen, and Sierra and Plumas Counties. All four border Nevada, and workers from each county cross the border to Reno for employment. These unique commuting conditions lead to a need for cross-state collaboration for more impactful workforce development strategies.
- Although counties throughout the NoRTEC region share similarities in industry sectors, occupations, and business needs, input session participants in counties along the Oregon and Nevada borders often identified more strongly with communities in these states than with other parts of the NoRTEC region.

Opportunities and Needs

An analysis of the quantitative and qualitative data as well as the strengths and challenges presented above yielded several clear opportunities and needs for the NoRTEC region.

- While entrepreneurship and small business development are not industry sectors and can occur within any private industry, they were mentioned as an opportunity and need in nearly every input session and are a recommended focus for NoRTEC.
- An entrepreneurship and small business strategy could fill in some of the service gaps that exist in the smaller, more isolated communities and could engage those workers not suited to a typical nine-to-five job.
- There is a need for greater youth engagement for talent retention and to provide youth with work experience.
- While the NoRTEC region is vast, there is the need for sustained engagement of partners across the 11 counties. There are also opportunities to engage with organizations across state lines in order to take advantage of the interstate workforce that commutes across state lines.
- A focus on better broadband and housing infrastructure will help with workforce attraction. Research indicates that the Information Technology (IT) sector is an emerging opportunity; however, for it to be successful throughout the entire region, it will be necessary to provide a more robust broadband infrastructure.
- The region should focus on priority sectors for workforce development. Identifying priority sectors can create a common focus among partners and guide efforts with regional economic development. It is also a way to identify and promote the most in-demand occupations within the region, while also informing career guidance and coaching.

Recommendations

Recommended priority sectors for the NoRTEC region include: Health Care, Manufacturing, Information Technology (IT), Agriculture, and Tourism. These recommendations are based on an analysis of employment trends within each of the 11 counties and the region as a whole. Generally, these sectors meet a combination of the following criteria:

- High historical employment growth
- Projected growth through 2020
- Employ a disproportionately high number of employees within the region
- Provide employment opportunities with relatively higher wages
- Provide employment opportunities with career pathways

Each sector is present to some degree within each of the 11 NoRTEC counties; however, some sectors are a better fit for certain counties than for others. These variances are outlined below.

Health Care

Recommended for the region and particularly for: Butte, Del Norte, Lassen, Nevada, Plumas, Shasta, Sierra, Siskiyou, Tehama and Trinity Counties, as it is either a major employer or is projected to experience significant growth.

Recommended because: Health Care is the second largest sector, by total employment, within the 11-county region. It has added the greatest number of jobs since 2010 and is projected to add the most jobs, by far, through 2020. Seven of the top ten high-demand occupations are within the Health Care sector.

High-demand Health Care occupations include: Personal Care Aides, Home Health Aides, Registered Nurses, Nursing Assistants, Social and Human Service Assistants, and Licensed Practical and Licensed Vocational Nurses.

Each of these occupations is projected to add more than 150 jobs through 2020, with Personal Care Aides projected to add the most, at 1,734. Of these occupations, Registered Nurses earn the highest median wage of $37.56/hr and are required to have a minimum of an Associate's degree.[1] Licensed Practical and Licensed Vocation Nurses earn the next highest median wage of $23.66/hr and are required to have a postsecondary non-degree award. The other occupations, while paying a lower wage on average, require only a high school diploma or less and so can be good initial rungs on the Health Care career ladder for job seekers who lack postsecondary credentials.

Manufacturing

Recommended for the region and particularly for: Butte, Nevada, Plumas, Shasta, Siskiyou, Tehama, and Trinity Counties.

Recommended because: The Manufacturing sector experienced healthy employment growth of 5% between 2010 and 2015. Although Manufacturing is projected to experience a slight decline over the next five years, its status as a traded industry means manufacturing jobs added have a disproportionately high impact on the region's economy compared to jobs

[1] For all other occupations, minimum education requirement is provided here as a guideline only. Certain businesses may require higher levels of education for the same occupation. For example, registered nurses are required to have a Bachelor's degree in some markets throughout the country, depending on the availability of nurses with advanced credentials and the level of competition for these jobs.

in other many other industries. On average for each full-time manufacturing job created, 3.4 full-time jobs are created in nonmanufacturing industries.[2]

Key subsectors of Manufacturing fall within two categories: Wood Products and Food Processing. Specifically, they include: Sawmills and Wood Preservation; Other Wood Product Manufacturing; Beverage Manufacturing; Fruit and Vegetable Preserving and Specialty Food Manufacturing; Other Miscellaneous Manufacturing; and Bakeries and Tortilla Manufacturing. Of these, Other Wood Product Manufacturing and Bakeries and Tortilla Manufacturing have experienced the greatest growth. Other growing and emerging subsectors include Architectural and Structural Metals Manufacturing and Grain and Oilseed Milling.

High-demand Manufacturing occupations include: Bakers; Sewing Machine Operators; Welders, Cutters, Solderers, and Brazers; Food Batchmakers; Meat, Poultry, and Fish Cutters and Trimmers; and Industrial Machinery Mechanics.

Each occupation category is projected to add at least ten new jobs through 2020, with Bakers leading the way with 31 new jobs. Of these, Industry Machinery Mechanics earn the highest wage of $23.08/hr and must hold only a high school diploma.

Agriculture

***Recommended for the region and particularly for*:** Butte, Del Norte, Lassen, Modoc, Shasta, Siskiyou, and Tehama Counties, although this sector is present within each of the 11 counties.

Recommended because: The Agriculture sector experienced 10% employment growth between 2010 and 2015. Over the next five-year period it is projected to experience a slight decline. However, this is an important sector for the region, particularly within many of the rural counties. The vast majority of employment falls within the Crop Production and Support Activities for Crop Production subsectors. Together, these subsectors added over 600 new jobs between 2010 and 2015 and are projected to add another 100 through 2020.

High-demand Agriculture occupations include: Fishers and Related Fishing Workers; Farmworkers, Farm, Ranch, and Aquacultural Animals; Agricultural Equipment Operators; and Hunters and Trappers.

Each occupation category is projected to add between 13 and 25 new jobs through 2020. Wages within this sector tend to be somewhat lower, primarily between $13.00/hr and $18.00/hr, but most require less than a high school education for employment.

[2] Manufacturers Alliance for Productivity and Innovation

Tourism

Recommended for the region and for each county individually.

Recommended because: the Tourism sector spans several business categories including Hotels and Restaurants; Travel Agencies and Tour Operators; Arts, Entertainment and Recreation; and Sightseeing Transportation. The largest subsectors by employment within the region include Restaurants, Other Amusement and Recreation Industries (e.g. Golf Courses, Ski Resorts), and Traveler Accommodation. All are projected to grow through 2020.

High-demand Tourism occupations include: several within Restaurants and Food Preparation, such as Fast Food Workers; Cooks; Food Supervisors; Waiters and Waitresses; and Bartenders, as well as hospitality occupations such as Maids and Housekeeping Cleaners; and Hotel, Motel, and Resort Desk Clerks. While wages within these occupations tend to be low, most require a less than high school education and, like Agriculture, represent an opportunity for entry-level employment.

Information Technology (IT)

Recommended for the region and particularly for: the more populated counties within the NoRTEC region including Butte, Nevada, and Shasta Counties.

Recommended because: Although total employment is lower in IT than in other recommended industries, many IT occupations are in high demand and pay relatively higher wages. The industry provides strong career pathways and is an emerging sector within parts of the region.

High-demand IT occupations include: Software Developers, Applications; Computer User Support Specialists; Software Developers, Systems Software; Computer Systems Analysts; and Computer Programmers.

Each of these is projected add at least 15 new jobs through 2020. Overall wages within this sector tend to be relatively higher than those in other sectors, with many paying over $20.00/hr. However, many of these occupations also require a higher entry-level education than in-demand occupations in other priority sectors.

NoRTEC Region Labor Market Profile

Introduction

The following is a labor market and industry/sector profile for the NoRTEC Region (map at right)[3]. The quantitative data for the profile includes a geographic overview, demographic and labor force characteristics, industry analysis, occupation analysis, and labor force data and were sourced from Economic Modeling Specialists Int'l. (EMSI), the U.S. Census Bureau, and the U.S. Bureau of Labor Statistics.

Demographic and Labor Force Characteristics

Total Population

The NoRTEC region is located at the northern end of California and encompasses a large geographic region that is sparsely populated relative to other parts of California. The population in the region increased 1.3% over the past ten years, from 703,017 to 712,382 residents.[4] This growth is significantly slower than both the state (+9.3%) and the nation (+8.7%) over the same period.

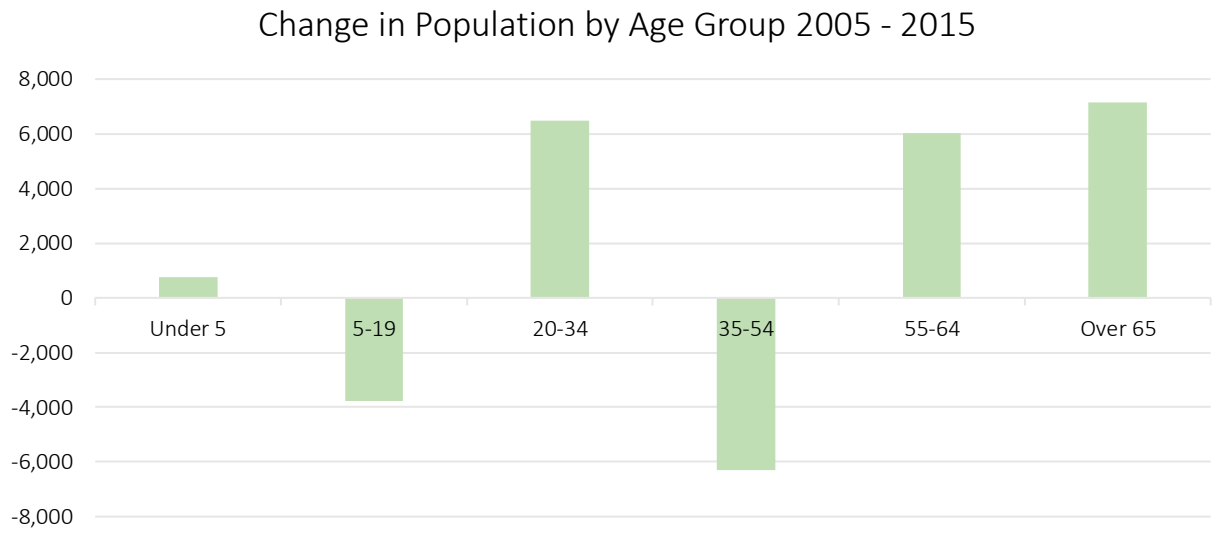
Although the region's population is projected to increase slightly over the next five years (+0.25%), growth is expected in the non-working age ranges of Under 5 and Over 65. This is a continuation of the trends of the previous ten years, which have seen an aging population in the NoRTEC region. Since 2005, more than three-quarters of the region's gross population growth is owed to residents over age 55. If cohorts are grouped into pre-working age (ages 0-19), working age (ages 20-64), and post-working age (over 65), only the post-working age category saw a net increase in population.[5]

The region's aging population is a concern as it impacts the availability of labor in this region over the next decade. It should be noted that the population for ages 20-34 increased 11% over the past ten years. However, the same age group is expected to decrease over the next five years.

Age Distribution

Age	2005 Population	2015 Population	Change (2005-2015)		Projected Change (2015-2020)	
Under 5	37,334	38,439	1,105	3.0%	2,798	7.3%
5-19	143,656	124,666	(18,990)	(13.2%)	-1,008	-0.8%
20-34	125,810	139,465	13,655	10.9%	-7,384	-5.3%
35-54	197,935	163,634	(34,301)	(17.3%)	-5,893	-3.6%
55-64	89,486	106,755	17,269	19.3%	-5,508	-5.2%
Over 65	108,796	139,423	30,627	28.2%	18,367	13.2%
Total	703,017	712,382	9,365	1.3%	1,382	0.2%

[3] Butte, Del Norte, Lassen, Modoc, Nevada, Plumas, Shasta, Sierra, Siskiyou, Tehama, and Trinity Counties
[4] EMSI Analyst 2016.1
[5] It is worth noting the working-age population held relatively flat, with a net loss of about 3,000 residents.



Comparisons of Population Projections

The NoRTEC region's combination of geographic magnitude and population sparsity makes it unique among regions in the United States. As a result, it is difficult to find comparable areas across the US. The Bend, Oregon, and Boise, Idaho, regions come closest, as they are large, multi-county regions, with rural populations in the western U.S.

While NoRTEC's aging population is mirrored across the state, nation, and comparison regions, these other regions are not facing similar declines in the working age population (age 20-64). This signals a need for talent retention and attraction for NoRTEC that is more significant than it is in other places.

Age	NoRTEC 2015-2020 Growth	Bend, OR[6] 2015-2020 Growth	Boise, ID MSA[7] 2015-2020 Growth	California 2015-2020 Growth	US 2015-2020 Growth
Under 5	7.3%	13.6%	15.4%	9.1%	7.7%
5-19	-0.8%	-1.1%	1.1%	-0.9%	-0.3%
20-34	-5.3%	2.2%	3.2%	0.8%	0.8%
35-54	-3.6%	3.2%	3.1%	-0.4%	-1.8%
55-64	-5.2%	0.4%	6.0%	6.7%	4.5%
Over 65	13.2%	23.2%	24.7%	17.0%	14.7%
Total	0.2%	6.3%	6.7%	3.5%	2.9%

[6] Bend, OR includes Crook, Deschutes, and Jefferson Counties.
[7] Boise, ID MSA includes Ada, Boise, Canyon, Gem, and Owyhee Counties

Race/Ethnicity

The population in the NoRTEC region is less diverse than that of the state as a whole and the U.S.; White, non-Hispanic residents comprise more than 76% of the NoRTEC population compared with 62% nationally and 38% statewide. However, since 2005, the fastest growing race/ethnicity groups in the region are those identifying as Hispanic; Native Hawaiian or Pacific Islander, non-Hispanic; and Asian, non-Hispanic, signaling increasing diversity in the region.[8]

Race/Ethnicity	2015 Population	------Change, 2005-2015------		% of Population	% of California Population	% of US Population
White, non-Hispanic	544,024	-23,307	-4.1%	76.4%	38.0%	61.6%
Hispanic	98,150	22,827	30.3%	13.8%	38.9%	17.6%
Asian, non-Hispanic	19,845	4,199	26.8%	2.8%	13.9%	5.4%
Two or More Races, non-Hispanic	23,301	4,748	25.6%	3.3%	2.7%	2.0%
American Indian or Alaskan Native, non-Hispanic	15,250	113	0.7%	2.1%	0.4%	0.7%
Black, non-Hispanic	10,495	494	4.9%	1.5%	5.7%	12.4%
Native Hawaiian or Pacific Islander, non-Hispanic	1,318	294	28.7%	0.2%	0.4%	0.2%

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

Educational Attainment

The NoRTEC region slightly outperforms the state and nation in terms of portion of the population with at least some postsecondary education. Nearly 62% of adults in the NoRTEC region have some college or an associate's, bachelor, or graduate degree, compared to 59.7% of California's adults and 57.5% nationwide. The NoRTEC region also significantly outperforms the state and the nation in portion of adults who have at least completed high school; more than 86% of NoRTEC adults have a high school diploma or equivalent or greater, compared to 80.7% statewide and 85.6% nationally.

Although employers in the NoRTEC region report difficulty finding qualified workers to fill open positions – conditions these researchers do not contest – the region is actually home to a significantly greater portion of adults who have started a postsecondary program or completed an associate's degree (40.2%) than the state (29.5%) or the nation (28.8%).

In other words, compared to the state and the nation, the NoRTEC region should relatively more competitive for jobs that require between high school and an Associate's degree.

These circumstances may also mean the NoRTEC region has significant opportunity to upskill workers. More than 30% of adults have some college but no degree, which is a far greater portion than in any other comparison geography. Some of these adults may have earned a short-term credential, but it is likely that many others are not fully benefiting from the education they have already obtained.

The region could also improve in its portion of highly educated adults. Compared with Bend, Boise, California, and the U.S., a smaller portion of NoRTEC adults hold at least a Bachelor's degree, although the region lags behind Bend and Boise by only about two percentage points in portion of residents with a graduate degree.

Educational Attainment

Education Level	2015 Population	2015 Percent	2015 Percent Bend, OR	2015 Percent Boise, ID	2015 Percent California	2015 Percent US
Less Than 9th Grade	25,107	5.1%	3.0%	4.9%	11.2%	6.6%
9th Grade to 12th Grade	41,563	8.4%	6.3%	5.6%	8.2%	7.7%
High School or Equiv.	123,442	24.9%	26.0%	25.3%	21.0%	28.1%
Some College, No Degree[9]	150,907	30.5%	27.2%	26.7%	21.7%	21.0%
Associate's Degree	48,136	9.7%	9.1%	8.1%	7.8%	7.8%
Bachelor's Degree	70,431	14.2%	18.9%	20.0%	19.3%	18.0%
Graduate Degree and Higher	35,567	7.2%	9.5%	9.4%	10.9%	10.7%

[9] Includes individuals who have earned a postsecondary credential of less than an associate's degree.

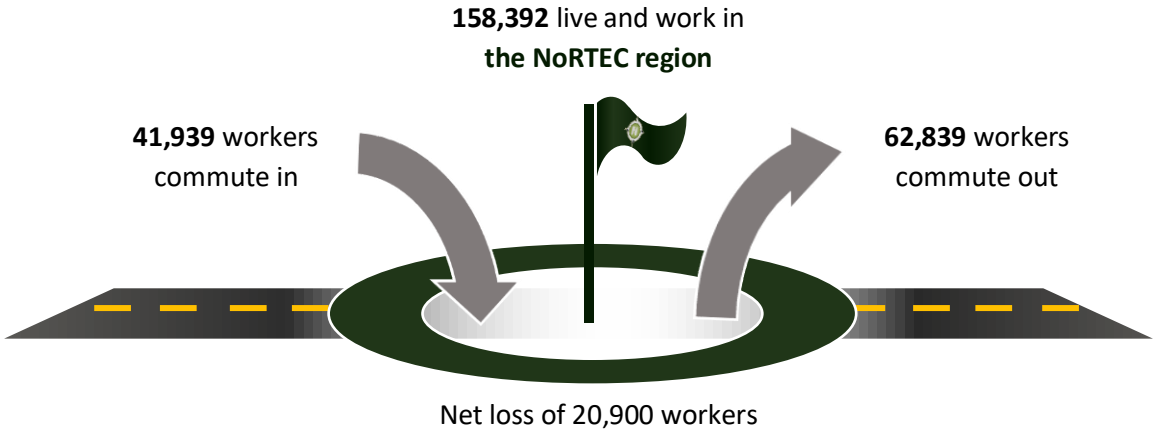
Income

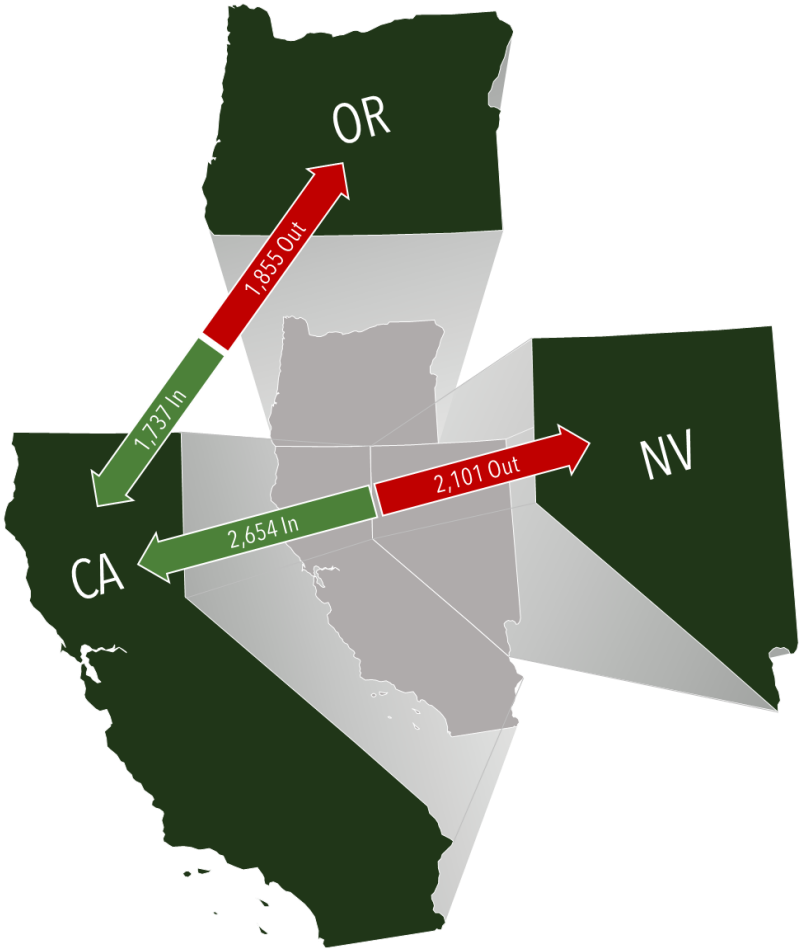
Household income throughout the NoRTEC region is a mixed story. Most counties have lower median incomes and higher poverty rates than both the state and the nation. Just one county, Nevada County, outperforms the nation in median income. Its poverty rate is the lowest in the region – lower by half or nearly half compared to several of the region's other counties – and is lower than the poverty rates of California and the U.S. overall. Three other counties – Plumas, Shasta, and Sierra – have lower poverty rates but also lower median incomes compared to the state and the nation.

	Median Household Income ('10-'14)	Poverty Rate
Butte	$43,165	21.9%
Del Norte	$39,302	22.4%
Lassen	$53,351	19.4%
Modoc	$38,560	20.2%
Nevada	$56,949	11.4%
Plumas	$48,032	14.0%
Shasta	$44,556	14.7%
Sierra	$43,107	13.8%
Siskiyou	$37,495	21.1%
Tehama	$42,369	18.2%
Trinity	$36,862	19.9%
California	$61,489	16.4%
United States	$53,482	14.8%

Commuting

In 2014, the NoRTEC region had nearly 42,000 workers commuting in and nearly 63,000 commuting out, making the region a net exporter of workers.[10] The region exchanges the most workers with Sacramento County, which sends 4,100 workers into the region and receives 9,300 commuters from the region, and Placer County, which sends 7,800 workers into the region and receives 9,300 workers from the region.





One of the unique aspects of the NoRTEC region is the commuting patterns between the region and the two bordering states of Oregon and Nevada.

Del Norte, Modoc and Siskiyou Counties border Oregon. As of 2014, 25% of in-commuters to these three counties come from Oregon, while 18% of out-commuters leave the three county region to go to Oregon. There is a relatively even exchange of workers with approximately 1,800 workers going in either direction.

Lassen, Nevada, Plumas, and Sierra Counties border Nevada. As of 2014, 18% of in-commuters to the four counties come from Nevada, while 9% of out-commuters leave the four county region to go to Nevada. More workers are coming into the region from Nevada (approximately 2,600) than are going to Nevada (approximately 2,100).

[10] U.S. Census Bureau, OnTheMap, 2014 (most recently available). http://onthemap.ces.census.gov/

Human Capital

Labor Force

Labor force includes both employed and the unemployed workers, excluding only those who have stopped looking for work (discouraged workers) and those who are voluntarily not in the labor force.

Employment in NoRTEC Region 1996-2016 [11]		
Peak	October 2006 (308,902)	January 2016 (282,516 – 9% lower)
Trough	January 1996 (239,511)	January 2016 (282,516 – 18% higher)
Jan 2016	Employment: 282,516 Labor Force: 306,207 Unemployment rate: 8.4%	

In January 2016, the NoRTEC region's labor force included more than 300,000 workers. Of these, 282,516 were employed and 23,691 were unemployed. Over the last 20 years, employment in the region was at its highest in October 2006 and lowest in January 1996. As of January 2016, the unemployment rate was 9.1%, higher than the unemployment rate of California (5.8%) and the United States 4.9%.

Labor Force Participation Rate

The labor force participation rate is a major indicator of the labor market. It represents the proportion of the population that is in the labor force. Labor force participation rates are affected by various factors, including demographic composition of the population as well as structural changes in the economy.

Labor Force Participation Rate

Labor force participation rate is sensitive to demographic change because the participation rates vary across age, gender, and race. In 2015, the national labor force participation rate for those 55-years-and-older was 39.9%, compared with a labor force participation rate of 80.7% for those between 25 and 54.

The national labor force participation rate has decreased since 2000, a trend that is expected to continue in the next decade. One of the major reasons for the decline is the aging of the baby-boomer generation. In 2000, baby boomers were the heart of the workforce, falling into the high participation rate group of 36-to-54 years old. However, as this large group of individuals began to retire, the effects were felt on the overall participation rate. 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 middle age groups.

Workers in older age brackets and those in retirement age, compose a considerable proportion of the region's population. The older worker population (55 years and older) in the region is estimated to be 122,177 in 2015.[12] A large number of these older workers are expected to retire in the next ten years.

[11] U.S. Bureau of Labor Statistics, 1996.1-2016.1. http://www.bls.gov/data/

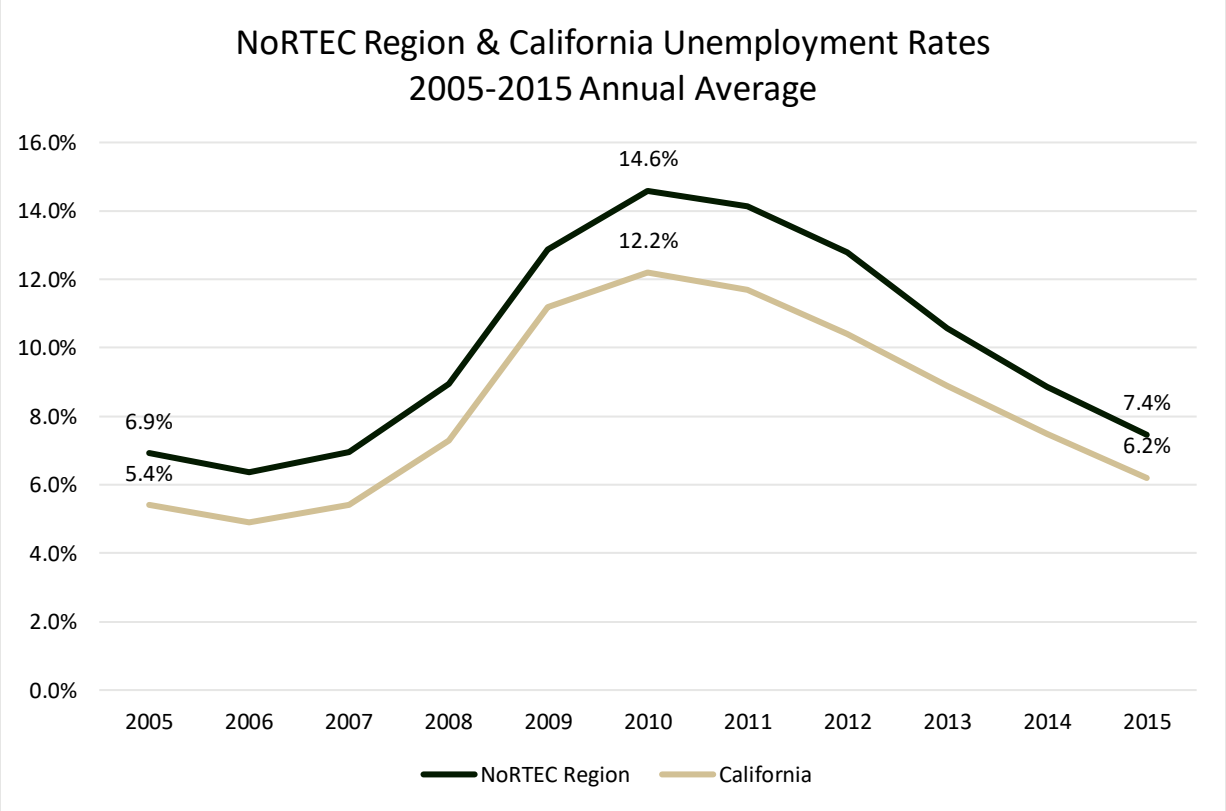
[12] The older worker population (55 years and older) in the region is estimated by multiplying the population of this age group by the corresponding labor force participation rate.

Labor Force Participation Rate by County[13]

The aging population within the region is contributing to the overall labor force participation rate. Out of a population of around 584,000 for those sixteen and older, approximately 310,000 or 53% are within the labor force. By contrast, the participation rates for both California and the United States are 10% higher. Within the NoRTEC region the county with the highest labor force participation rate is Nevada County (56.6%), while the county with the lowest rate is Lassen County (37.8%).

	Population 16+	In Labor Force	% in Labor Force
Butte	181,730	101,769	56.0%
Del Norte	22,687	9,914	43.7%
Lassen	28,848	10,905	37.8%
Modoc	7,633	4,015	52.6%
Nevada	82,966	46,959	56.6%
Plumas	16,325	8,718	53.4%
Shasta	144,420	77,409	53.6%
Sierra	2,579	1,295	50.2%
Siskiyou	36,265	18,967	52.3%
Tehama	49,632	26,851	54.1%
Trinity	11,487	5,387	46.9%
NoRTEC	584,572	312,187	53.4%
California	29,934,838	19,098,427	63.9%
United States	248,775,628	158,967,626	63.8%

[13] U.S. Census Bureau American Community Survey Five-Year Estimates 2010-2014.



As noted previously, individuals can be members of the labor force even if they are not currently employed. Those who are not employed but who are actively looking for work are classified by the U.S. Department of Labor as unemployed. Like participation rates, what is considered a normal unemployment rate varies from region to region based on demographics of each population. Generally speaking, unemployment tends to spike during recessions and following major layoffs or relocations, 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 rates are typically a signal that the supply of workers is not in balance with demand for workers.

The Bureau of Labor Statistics reports a precipitous decrease in unemployment in the region between 2010 and 2015. Over the period analyzed, the unemployment rate struck its peak in 2010 at 14.6%, and dipped to its lowest rate in 2006 at 6.4%. The unemployment rate for the state of California followed a similar trend as the region between 2010 and 2015, though the story is consistently more positive, as the state's rate is consistently 1.5 to 2 percentage points lower than the region. For California, the unemployment rate also hit its highest mark in 2010 (12.2%) and its lowest mark in 2006 (4.9%).

Industry Sector Analysis

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 the region is well suited to be competitive.

A chart and several tables are displayed related to industry data. Each of the figures data are in descending order according to 2015 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)
- Location quotient (LQ)

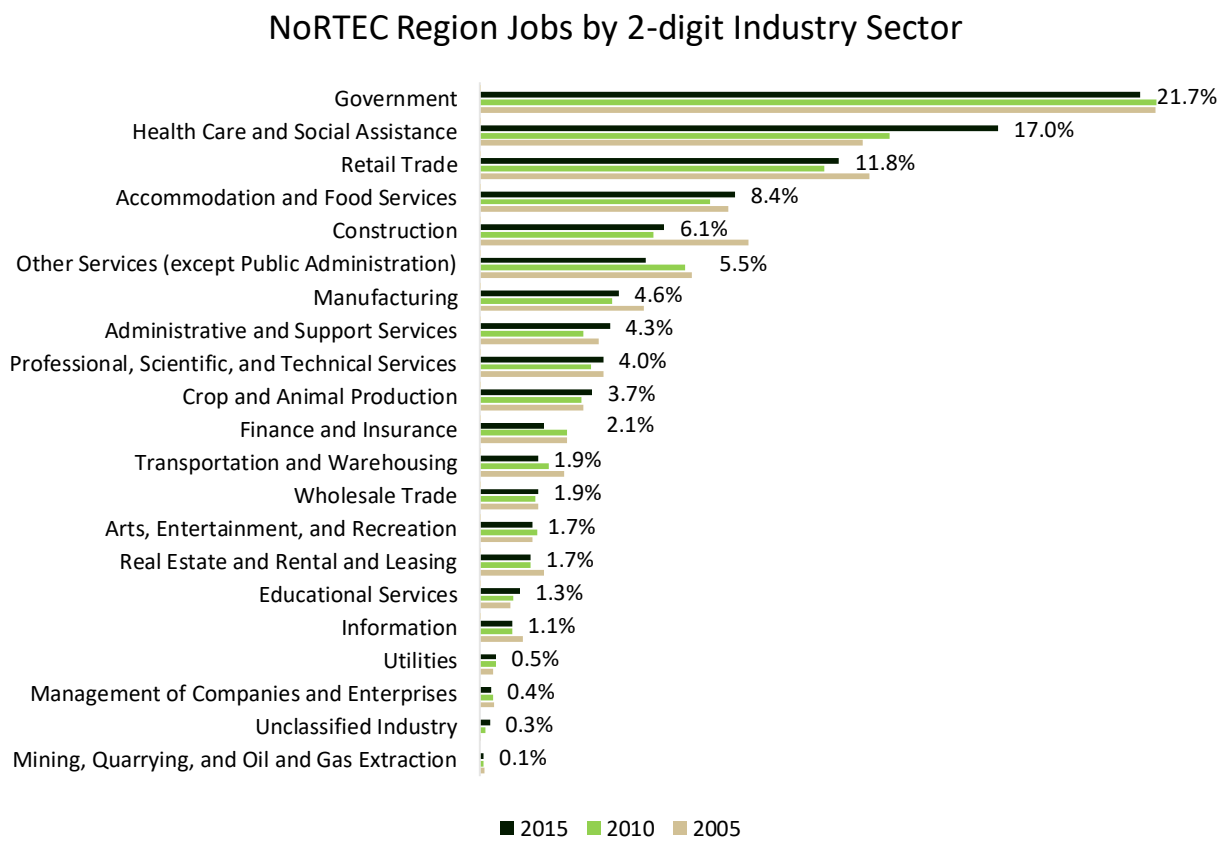
The competitive effect (CE) shows, statistically, the amount of job growth that occurred due to regional factors. CE is calculated by comparing regional growth to the national growth numbers and rate for each sector. In other words, a positive number indicates the region experienced more growth than was expected based on national industry performance.

Location Quotient (LQ) measures the employment concentration of an industry in a region and helps to demonstrate what makes a particular region's economy unique. LQs greater than 1.0 mean industry-employment concentration in the region is greater than the national average. LQs above 1.25 generally indicate concentrations worth noting and also typically indicate that local demand for the products or services produced by that industry have been met. Above this threshold the industry is likely exporting products or services outside of the region. In other words these may be industries bringing money into the region, rather than circulating money already present within the region.[14]

[14] Data from this section are from Economic Modeling Specialists International (EMSI), 2016.1 Class of Worker.

Industry Mix

NoRTEC regional industry sectors with highest employment are Government (57,866, 21.7%); Health Care (45,356, 17.0%); Retail Trade (31,450, 11.8%); and Accommodation and Food Services (22,346, 8.4%).[15] The Government sector has been in decline over the past five years, while the Health Care sector has grown significantly. Other growing sectors include Accommodation and Food Services; Administrative and Support Services; Professional, Scientific, and Technical Services (includes IT); Crop and Animal Production (Agriculture); Wholesale Trade; and Educational Services.



Healthcare significantly outpaced other industries in historical employment growth between 2010 and 2015, adding over 9,000 new jobs and contributing over 80 percent of the region's net-new job growth. Distantly following Healthcare were Administrative and Support Services and Accommodation and Food Services.

Competitive effect reveals how many jobs were created or retained due to regional, versus national, factors. According to these data, again Healthcare is the strongest, adding 4,723 jobs due to competitive effect. Other sectors that grew due to regional factors include Administrative and Support Services; Agriculture; and Educational Services. Looking at both location quotient scores and 2015 employment, the following industries are strongly concentrated in the region: Agriculture; Unclassified Industry[16]; Government; and Healthcare.

[15] These industries are by 2-digit NAICS code. EMSI Analyst 2015.
[16] Unclassified Industry includes businesses that did not report a NAICS code. These tend to be new businesses.

Industry	2010 Jobs	2015 Jobs	Change in Jobs 2010 - 2015		Change in Jobs 2015 - 2020		Location Quotient	Comp. Effect
Government	59,239	57,866	(1,373)	(2%)	932	2%	1.40	(340)
Health Care	35,923	45,356	9,433	26%	5,953	13%	1.36	4,723
Retail Trade	30,158	31,450	1,292	4%	1,075	3%	1.13	(944)
Accommodation and Food Services	20,192	22,346	2,154	11%	1,230	6%	1.00	(1,070)
Construction	15,219	16,154	935	6%	(1,105)	(7%)	1.14	(583)
Other Services (except Public Administration)	17,959	14,560	(3,399)	(19%)	239	2%	1.14	(3,567)
Manufacturing	11,591	12,188	597	5%	(82)	(1%)	0.57	(129)
Administrative and Support and Waste Management and Remediation Services	9,047	11,379	2,332	26%	458	4%	0.68	745
Professional, Scientific, and Technical Services	9,764	10,803	1,039	11%	949	9%	0.64	(392)
Crop and Animal Production (Agriculture)	8,931	9,828	897	10%	(70)	(1%)	3.00	531
Finance and Insurance	7,677	5,581	(2,096)	(27%)	40	1%	0.52	(2,416)
Transportation and Warehousing	6,025	5,124	(901)	(15%)	(230)	(4%)	0.59	(1,661)
Wholesale Trade	4,888	5,123	235	5%	626	12%	0.50	(111)
Arts, Entertainment, and Recreation	5,055	4,583	(472)	(9%)	208	5%	1.03	(1,104)
Real Estate and Rental and Leasing	4,463	4,457	(6)	(0%)	30	1%	1.01	(292)
Educational Services	2,901	3,496	595	21%	553	16%	0.52	301
Information	2,820	2,843	23	1%	196	7%	0.57	(61)
Utilities	1,375	1,412	37	3%	90	6%	1.46	5
Management of Companies and Enterprises	1,187	1,015	(172)	(14%)	(166)	(16%)	0.27	(400)
Unclassified Industry	472	869	397	84%	23	3%	1.99	77
Mining, Quarrying, and Oil and Gas Extraction	300	341	41	14%	33	10%	0.27	4

Key Industries

The industry group (4-digit NAICS) level sheds light on specific drivers of economic growth. The following table shows the region's top 20 industry groups, by total employment, in 2015.[17] Of the top 20 largest industry groups, two groups within the Government Sector, Education and Hospitals and Local Government, employ the most people but both declined over the last five years. They are projected to add about 1,000 jobs combined.

Individual and Family Services, Restaurants and Other Eating Places, and Employment Services added the most jobs from 2010 to 2015. Among the top 20 industry groups, the highest number of projected positions is in Individual and Family Services, followed by Restaurants and Other Eating Places.

Industry	2015 Jobs	'10-'15 Change		Forecasted '15-'20 Change	
Education and Hospitals (Local Government)	22,073	(825)	(4%)	465	2%
Local Government, Excluding Education and Hospitals	18,221	(75)	(0%)	473	3%
Restaurants and Other Eating Places	17,890	2,152	14%	864	5%
Individual and Family Services	11,994	8,582	252%	3,758	31%
General Medical and Surgical Hospitals	10,485	764	8%	684	7%
State Government, Excluding Education and Hospitals	7,022	(192)	(3%)	(6)	(0%)
Federal Government, Civilian	6,167	(720)	(10%)	(129)	(2%)
Grocery Stores	5,741	(73)	(1%)	79	1%
Crop Production	5,271	569	12%	97	2%
Services to Buildings and Dwellings	5,016	698	16%	267	5%
Offices of Physicians	4,779	48	1%	(76)	(2%)
Residential Building Construction	4,007	(150)	(4%)	(491)	(12%)
Employment Services	3,551	1,236	53%	(134)	(4%)
Nursing Care Facilities (Skilled Nursing Facilities)	3,361	(8)	(0%)	535	16%
Other Amusement and Recreation Industries	3,357	(460)	(12%)	133	4%
Education and Hospitals (State Government)	3,208	414	15%	169	5%
Building Equipment Contractors	2,961	212	8%	(130)	(4%)
Department Stores	2,934	(542)	(16%)	31	1%
Automotive Repair and Maintenance	2,822	306	12%	180	6%
Building Material and Supplies Dealers	2,812	59	2%	(68)	(2%)

[17] These industries are by 4-digit NAICS code.

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, administrative support staff, lawyers, and many other occupational categories necessary for the industry's survival. As a workforce development board, NoRTEC's mission is to serve individual job seekers and businesses more specifically than serving as catalysts for industry-specific development. As such, it's important to understand the specific occupational roles that are required to keep local businesses flourishing.

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

The region's top occupation groups[18] by total number of jobs include:

- Office and Administrative Support (38,463 jobs)
- Sales and Related (26,955 jobs)
- Food Preparation and Serving Related (23,016 jobs)
- Education, Training, and Library (19,111 jobs)
- Healthcare Practitioners and Technical (16,033 jobs)

Median hourly earnings at this broad level of occupational classification range from $11.14/hour for Food Preparation and Serving Occupations to $40.10/hour for Healthcare Practitioners and Technical Occupations.

As noted in the industry analysis section, location quotient scores can indicate fields where the region has a strong competitive advantage over other regions in United States. Occupational groups with high LQs include:

- Farming, Fishing and Forestry (3.47)
- Life, Physical, and Social Science (2.23)
- Community and Social Service (1.42)
- Education, Training, and Library (1.26)
- Personal Care and Service (1.25)

These are the occupation groups for which the region is highly specialized. For example, jobs in Farming, Fishing, and Forestry make up 3.5x more of the employment base than they do nationally.

[18] Includes 23 major occupational groups at the 2-digic Standard Occupation Classification (SOC) code level

Broad Occupation Mix

Major Occupation Group	2015 Employment	% of Total Employment	Median Hourly Earning	2015 Location Quotient
Office and Administrative Support	38,463	14.42%	$16.61	0.95
Sales and Related	26,955	10.10%	$15.37	0.98
Food Preparation and Serving Related	23,016	8.63%	$11.14	1.04
Education, Training, and Library	19,111	7.16%	$24.05	1.26
Healthcare Practitioners and Technical	16,033	6.01%	$40.10	1.11
Construction and Extraction	14,655	5.49%	$20.13	1.23
Transportation and Material Moving	14,289	5.36%	$16.86	0.83
Management	14,174	5.31%	$35.83	0.99
Personal Care and Service	13,281	4.98%	$11.74	1.25
Building and Grounds Cleaning and Maintenance	12,028	4.51%	$13.08	1.18
Installation, Maintenance, and Repair	10,294	3.86%	$20.30	1.02
Production	10,129	3.80%	$17.69	0.63
Business and Financial Operations	8,365	3.14%	$28.66	0.64
Healthcare Support	8,022	3.01%	$15.28	1.08
Protective Service	7,655	2.87%	$29.86	1.28
Farming, Fishing, and Forestry	6,957	2.61%	$14.69	3.47
Community and Social Service	6,109	2.29%	$20.76	1.42
Life, Physical, and Social Science	4,815	1.80%	$23.41	2.23
Arts, Design, Entertainment, Sports, and Media	4,127	1.55%	$18.10	0.88
Computer and Mathematical	2,932	1.10%	$30.59	0.41
Architecture and Engineering	2,597	0.97%	$36.24	0.59
Legal	1,588	0.60%	$38.52	0.72
Military	1,175	0.44%	$17.17	0.33

Top Occupations – 4 Digit SOC Codes

The following table displays the top 20 occupations by total employment.[19] Median hourly earnings for these occupations range from $10.41 for Personal Care Aides to $42.89 for General and Operations Managers. Of the top 20 occupations, seven provide median hourly earnings above $15 per hour, which is reflected in the relatively low median household income data discussed earlier in this report.

The greatest degree of growth from 2010 to 2015 was among Personal Care Aides (+1,587, +59%); Fast Food and Counter Workers (+942, +15%); Nursing, Psychiatric, and Home Health Aides (+679, +24%); Registered Nurses (+586, +11%); and Cooks (+555, +12%).

It should be noted that all but four of the top 20 occupations have experienced growth in the last five years. All but one of these occupations (Driver/Sales Workers and Truck Drivers) are projected to remain stable or grow in the next five years. Occupations that have the most projected growth include Personal Care Aides (+39%) and Nursing, Psychiatric, and Home Health Aides (+23%).

Occupations with the strongest combination of job openings and relatively high earnings include healthcare practitioners (Registered Nurses, Healthcare Support) and sales occupations (Driver/Sales Workers and Truck Drivers; and First-Line Supervisors of Sales Workers).

Occupation	2015 Employment	Change, 2010-2015		Projected Change, 2015-2020		Annual Openings	Median Hourly Earnings
Cashiers	8,043	333	4%	151	2%	455	$11.56
Retail Salespersons	7,471	184	3%	326	4%	349	$12.57
Fast Food and Counter Workers	7,182	942	15%	622	9%	503	$10.48
Secretaries / Admin. Assistants	7,130	549	8%	302	4%	255	$17.18
Building Cleaning Workers	7,079	(1,001)	(12%)	325	5%	374	$12.28
Registered Nurses	6,012	586	11%	428	7%	271	$38.72
Office Clerks, General	5,799	540	10%	116	2%	276	$14.90
Laborers and Material Movers, Hand	5,255	470	10%	143	3%	305	$13.78
Driver/Sales Workers, Truck Drivers	5,217	(386)	(7%)	(51)	(1%)	209	$17.94
Cooks	5,062	555	12%	224	4%	243	$11.40
Miscellaneous Agricultural Workers	4,864	512	12%	43	1%	302	$12.70
Elementary/Middle School Teachers	4,700	(328)	(7%)	235	5%	175	$28.60
Personal Care Aides	4,267	1,587	59%	1,684	39%	384	$10.41
Misc. Healthcare Support	4,031	199	5%	99	2%	164	$16.76
Grounds Maintenance Workers	3,847	415	12%	133	3%	218	$13.08
Waiters and Waitresses	3,723	264	8%	76	2%	252	$10.59
General and Operations Managers	3,684	397	12%	184	5%	160	$42.89
First-Line Supervisors of Sales Workers	3,554	30	1%	45	1%	119	$17.61
Teacher Assistants	3,543	(22)	(1%)	131	4%	146	$13.15
Nursing, Psychiatric, Home Health Aides	3,465	679	24%	812	23%	246	$13.01

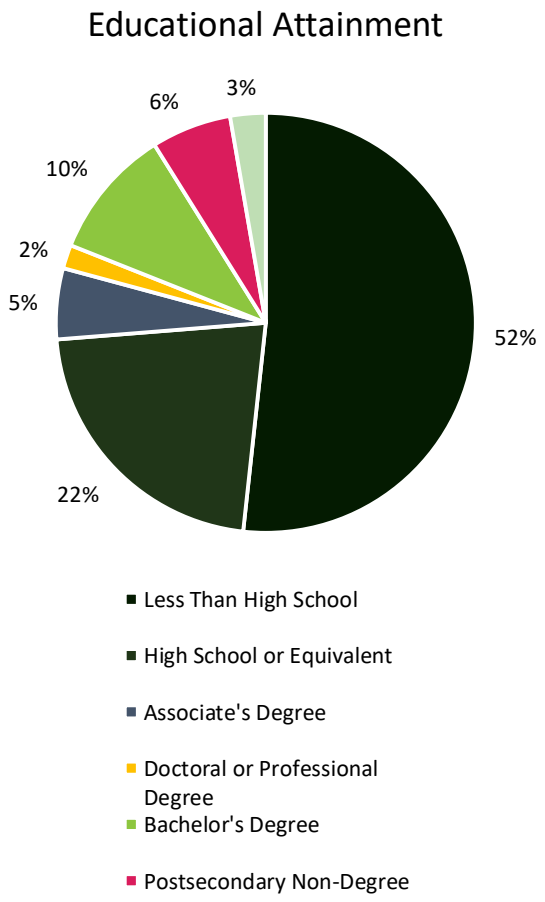
[19] Occupations are by 4-digit SOC code, called the "broad occupation" level.

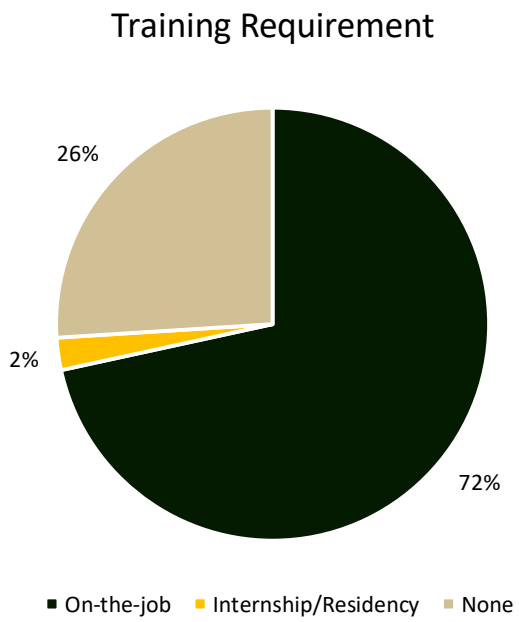
High Demand Jobs – Education and Training

According to the U.S. Bureau of Labor Statistics analysis of minimum education and training requirements,[20] about half (52%) of the region's high-demand jobs[21] require less than a high school diploma or equivalent. Additionally, almost three quarters of these jobs (72%) require some type of training, which is typically on-the-job training.

As noted in the labor market education section above, NoRTEC's residents are well suited to middle skill jobs that require between a high school diploma (or equivalent) and an Associate's degree. This fact, combined with the role of NoRTEC in linking job seekers to training that will produce stronger employment outcomes, suggests NoRTEC can have a significant impact on connecting job seekers with employment opportunities in high-demand occupations.

Many of the high demand jobs are within the health care sector. Personal Care Aids leads the way, adding nearly 1,700 jobs through 2020. Other high demand occupations in this sector include Home Health Aides (467 jobs); Registered Nurses (428 jobs); and Nursing Assistants (331 jobs).





[20] Individual employers may require more education than BLS analysis suggests is required. For example, some employers may require high school completion even for jobs that BLS suggests could be performed with less education.
[21] A total of 35 occupations with the highest projected job growth from 2015 are included in this analysis - included on the next page. These occupations are with 5 digit SOC code. EMSI Analyst 2016.1

High Demand Jobs by Average Hourly Earnings

Description	2020 Jobs	2015-2020 Change	Annual Openings	Avg. Hourly Earnings	Key Sectors	Typical Entry Level Education	Typical On-The-Job Training
General and Operations Managers	3,868	184	108	$42.89	Health Care	Bachelor's degree	None
Registered Nurses	6,440	428	212	$38.72	Health Care	Associate's degree	None
Postsecondary Teachers	2,893	143	72	$35.58	Gov't	Doctoral or professional degree	None
Social and Community Service Managers	544	91	29	$32.46	Health Care	Bachelor's degree	None
Management Analysts	1,033	103	36	$28.08	Prof. Services	Bachelor's degree	None
Elementary School Teachers, Except Special Education	3,790	189	121	$27.94	Gov't	Bachelor's degree	Internship/residency
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	1,403	99	49	$27.83	Trans.; Mfg.	High school diploma or equivalent	Moderate-term on-the-job training
Market Research Analysts and Marketing Specialists	557	95	26	$27.09	Prof. Services	Bachelor's degree	None
Licensed Practical and Licensed Vocational Nurses	1,493	152	66	$23.87	Health Care	Postsecondary non-degree award	None
First-Line Supervisors of Office and Administrative Support Workers	2,616	123	87	$23.52	Health Care	High school diploma or equivalent	None
Sales Representatives, Services, All Other	923	97	44	$23.05	Prof. Services; Admin. & Support Services	High school diploma or equivalent	Short-term on-the-job training
Computer User Support Specialists	817	83	29	$22.55	Gov't	Some college, no degree	Moderate-term on-the-job training
Pharmacy Technicians	770	83	24	$18.80	Retail	High school diploma or equivalent	Moderate-term on-the-job training
Bookkeeping, Accounting, and Auditing Clerks	3,534	114	56	$17.17	Gov't; Health Care	High school diploma or equivalent	Moderate-term on-the-job training
Maintenance and Repair Workers, General	2,943	148	86	$17.17	Gov't	High school diploma or equivalent	Long-term on-the-job training

Description	2020 Jobs	2015-2020 Change	Annual Openings	Avg. Hourly Earnings	Key Sectors	Typical Entry Level Education	Typical On-The-Job Training
Customer Service Representatives	2,657	302	130	$16.83	Retail; Admin. & Support Services	High school diploma or equivalent	Short-term on-the-job training
Medical Secretaries	1,398	95	36	$16.17	Health Care	High school diploma or equivalent	Moderate-term on-the-job training
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	4,539	242	103	$15.77	Gov't; Health Care	High school diploma or equivalent	Short-term on-the-job training
Office Clerks, General	5,915	116	148	$14.90	Gov't; Health Care	High school diploma or equivalent	Short-term on-the-job training
First-Line Supervisors of Food Preparation and Serving Workers	1,708	128	73	$14.73	Tourism	High school diploma or equivalent	None
Laborers and Freight, Stock, and Material Movers, Hand	3,240	116	126	$14.56	Retail; Admin. & Support Services; Trans.; Mfg.	Less than high school	Short-term on-the-job training
Cooks, Institution and Cafeteria	825	82	32	$14.31	Health Care	Less than high school	Short-term on-the-job training
Social and Human Service Assistants	1,363	178	70	$14.26	Health Care	High school diploma or equivalent	Short-term on-the-job training
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	4,302	296	139	$13.58	Gov't; Admin. & Support Services	Less than high school	Short-term on-the-job training
Nursing Assistants	2,509	331	112	$13.58	Health Care	Postsecondary non-degree award	None
Recreation Workers	1,385	128	41	$13.28	Health Care	Bachelor's degree	None
Teacher Assistants	3,674	131	110	$13.15	Gov't; Health Care	Some college, no degree	None
Stock Clerks and Order Fillers	3,408	117	126	$12.68	Retail	Less than high school	Short-term on-the-job training

Description	2020 Jobs	2015-2020 Change	Annual Openings	Avg. Hourly Earnings	Key Sectors	Typical Entry Level Education	Typical On-The-Job Training
Landscaping and Groundskeeping Workers	3,588	119	123	$12.65	Admin. & Support Services	Less than high school	Short-term on-the-job training
Retail Salespersons	7,797	326	336	$12.57	Retail	Less than high school	Short-term on-the-job training
Cashiers	8,130	148	383	$11.56	Retail; Tourism	Less than high school	Short-term on-the-job training
Cooks, Restaurant	2,343	110	73	$11.40	Tourism	Less than high school	Moderate-term on-the-job training
Home Health Aides	1,591	467	122	$11.34	Health Care	Less than high school	Short-term on-the-job training
Combined Food Preparation and Serving Workers, Including Fast Food	6,688	588	367	$10.47	Tourism	Less than high school	Short-term on-the-job training
Personal Care Aides	5,951	1,684	382	$10.41	Health Care	Less than high school	Short-term on-the-job training

Job Postings Data

The following data come from Emsi's job posting analytics[22] of the top 35 in demand occupations, collected from de-duplicated, online job ads.

Job postings data, though valuable to understand near-real-time changes in the skills employers advertise as in-demand, are limited by the online nature of the data, the very real differences in the habits of posting job ads versus actually filling the position, and the abilities of employers to accurately convey the skills and certifications they seek. In other words, job postings data can underrepresent real occupational demand, especially in industries that hire through word of mouth, through low-tech means, or for businesses that post a single job ad but intend to hire many people for the same job (which sometimes occurs for fast food and retail service jobs). Job postings data can also overstate real occupational demand, in industries that "fish" for candidates by posting a greater number of differently worded job ads than they intend to fill.

It is important, then, to interpret the following data as a representation of employers' *stated* in-demand skills, *for those employers who post jobs online.* Unless otherwise stated, the timeframe for the data is August 2015 through August 2016.

Total Postings[23] by County

The vast majority of job postings for high-demand occupations in August 2016 were in Shasta, Butte, and Nevada Counties.

County Name	August 2016 Total Postings
Shasta County, CA	1,305
Butte County, CA	1,174
Nevada County, CA	552
Tehama County, CA	278
Siskiyou County, CA	207
Plumas County, CA	186
Lassen County, CA	165
Del Norte County, CA	127
Modoc County, CA	78
Trinity County, CA	51
Sierra County, CA	23

[22] Job postings are collected from various sources and processed/enriched by Careerbuilder to provide information such as standardized company name, occupation, skills, and geography. Emsi performs additional filtering and processing to improve compatibility with Emsi data. The number of postings listed represent total non-deduplicated postings; In other words, some postings are duplicated in multiple platforms and therefore could be counted more than one time.

Top Posted Occupations

The vast majority of job postings over the past year were for Registered Nurses, followed by Retail Salespersons, Cashiers, Customer Service Representatives, Stock Clerks and Order Fillers, First-Line Supervisors of Food Preparation and Serving Workers, and First-Line Supervisors of Office and Administrative Support Workers.

Occupation (SOC)	Unique (Aug 2015 - Aug 2016)	Avg. Hourly Earnings[24]	Typical Entry Level Education	Key Sectors
Registered Nurses	15,676	$38.72	Associate's degree	Health Care
Retail Salespersons	5,379	$12.57	Less than high school	Retail
Cashiers	2,862	$11.56	Less than high school	Retail; Tourism
Customer Service Representatives	2,587	$16.83	High school diploma or equivalent	Retail; Admin & Support Services
Stock Clerks and Order Fillers	2,405	$12.68	Less than high school	Retail
First-Line Supervisors of Food Preparation and Serving Workers	2,160	$14.73	High school diploma or equivalent	Tourism
First-Line Supervisors of Office and Administrative Support Workers	2,103	$23.52	High school diploma or equivalent	Health Care
Laborers and Freight, Stock, and Material Movers, Hand	1,649	$14.56	Less than high school	Retail; Admin. & Support Services; Trans.; Mfg.
Combined Food Preparation and Serving Workers, Including Fast Food	1,361	$10.47	Less than high school	Tourism
Personal Care Aides	1,268	$10.41	Less than high school	Health Care
Pharmacy Technicians	1,180	$18.80	High school diploma or equivalent	Retail
Maintenance and Repair Workers, General	1,139	$17.17	High school diploma or equivalent	Gov't

[24] Source: Emsi. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietars).

Occupation (SOC)	Unique (Aug 2015 - Aug 2016)	Avg. Hourly Earnings[24]	Typical Entry Level Education	Key Sectors
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	972	$27.83	High school diploma or equivalent	Trans.; Mfg.
Licensed Practical and Licensed Vocational Nurses	970	$23.87	High school diploma or equivalent	Health Care
Sales Representatives, Services, All Other	969	$23.05	High school diploma or equivalent	Prof. Services; Admin. & Support Services
General and Operations Managers	929	$42.89	Bachelor's degree	Health Care
Postsecondary Teachers	861	$35.58	Doctoral or professional degree	Gov't
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	859	$15.77	High school diploma or equivalent	Gov't; Health Care
Teacher Assistants	805	$13.15	Some college, no degree	Gov't; Health Care
Nursing Assistants	667	$13.58	Postsecondary non-degree award	Health Care
Social and Human Service Assistants	637	$14.26	High school diploma or equivalent	Health Care
Computer User Support Specialists	622	$22.55	Some college, no degree	Gov't
Home Health Aides	588	$11.34	Less than high school	Health Care
Office Clerks, General	552	$14.90	High school diploma or equivalent	Gov't; Health Care
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	526	$13.58	Less than high school	Gov't; Admin & Support Services
Cooks, Restaurant	518	$11.40	Less than high school	Tourism
Medical Secretaries	377	$16.17	High school diploma or equivalent	Health Care

Occupation (SOC)	Unique (Aug 2015 - Aug 2016)	Avg. Hourly Earnings[24]	Typical Entry Level Education	Key Sectors
Bookkeeping, Accounting, and Auditing Clerks	351	$17.17	High school diploma or equivalent	Gov't; Health Care
Elementary School Teachers, Except Special Education	314	$27.94	Bachelor's degree	Gov't
Management Analysts	150	$28.08	Bachelor's degree	Prof. Services
Cooks, Institution and Cafeteria	141	$14.31	Less than high school	Health Care
Social and Community Service Managers	122	$32.46	Bachelor's degree	Health Care
Landscaping and Groundskeeping Workers	122	$12.65	Less than high school	Admin. & Support Services
Market Research Analysts and Marketing Specialists	104	$27.09	Bachelor's degree	Prof. Services
Recreation Workers	76	$13.28	Bachelor's degree	Health Care

Top Hard Skills[25]

Based on job postings for the top 35 high demand occupations, the top required hard skills most listed include: Customer Service; Sales; Training; Nursing; and Management.

Skill	Postings with Skill
Customer Service	9,742
Sales	9,092
Training	8,952
Nursing	8,521
Management	7,809
Retailing	7,313
Health Care	7,125
Recruitment	5,294
Communications	5,202
Insurance	5,107
Hospitalization	4,996
Merchandising	4,994
Cleaning	4,058
Critical Care	4,042
Selling Techniques	3,707
Post-Anesthesia Care Unit	3,512
Travel Nursing	3,447
Advanced Cardiovascular Life Support (ACLS)	3,376
Operations	3,375
Neonatal Intensive Care Unit	3,310
CATH Protein Structure Classification	3,239
Labor Delivery Recovery And Postpartum	3,165
Cardiac Catheterization	3,156
Lifting	3,128
Basic Life Support	3,101

[25] Source: Emsi. Hard skills tend to be more well-defined and specific than soft skills, and are often highly technical, subject-matter specific, or acquired through on-the-job training. They are not always technical. Examples are sales techniques, online marketing, foreign languages, 3D animation software, and skilled trades/tools/techniques.

Top Soft Skills[26]

Based on job postings for the top 35 high demand occupations, the top required soft skills listed include: Scheduling (Project Management), followed by Leadership, Leading, Learning, Cleanliness, Listening, and Coordinating.

Skill	Postings with Skill
Scheduling (Project Management)	7,198
Leadership	2,249
Leading	1,793
Learning	1,635
Cleanliness	1,627
Listening	1,330
Coordinating	1,306
Ethics	592
Mental Health	485
Cooperation	357
Critical Thinking	346
Creativity	308
Telephone Skills	239
Literacy	238
Depth Perception	217
Personal Grooming	212
Career Development	193
Team Building	190
Leadership Development	135
Conversation	109
Perception	105
Persistence	83
Agility	82
Listening Skills	72
Persuasive Communication	61

[26] Source Emsi. Soft skills differ from hard skills in that they include broad, basic competencies that include character traits such as ethics, assertiveness, or positive attitude; general cognitive or physical abilities like critical thinking, creativity, problem-solving, fine motor skills, and basic literacy; and basic interpersonal skills such as leadership, cooperation, diversity awareness, and persuasion.

Industry and Occupation Connections

Industries drive economic growth, but the fuel that enables those industries to function are its workers, who are classified by occupational codes. 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 five occupations and connected to some of the region's key industries.[27] Note that seven of the top ten high demand occupations are tied to the Health Care sector.

Connection between Top Occupations and Key Industries

Top Occupations	Key Industries
Personal Care Aides	• Health Care
Combined Food Preparation and Serving Workers, Including Fast Food	• Accommodation and Food Services
Home Health Aides	• Health Care
Registered Nurses	• Health Care
Nursing Assistants	• Health Care
Retail Salespersons	• Retail Trade
Customer Service Representatives	• Retail Trade • Administrative and Support and Waste Management Services • Finance and Insurance
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	• Government • Administrative and Support and Waste Management Services • Health Care • Other Services (except Public Administration)
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	• Government • Health Care • Other Services (except Public Administration) • Professional, Scientific, and Technical Services
Elementary School Teachers, Except Special Education	• Government
General and Operations Managers	• Health Care • Retail Trade • Government • Other Services (except Public Administration)

[27] Occupations are by 4-digit SOC code.

Detailed Industry Analysis

The following section provides an in-depth look at sectors that are important to the regional economy. These industry sectors include: Health Care; Manufacturing; Information Technology (IT); Agriculture; and Tourism. For each of these sectors, the top sub sectors by employment are listed by 4-digit NAICS code, as well as the staffing patterns for each sector. The staffing patterns show the top occupations by employment at the 4-digit SOC level. Trends in employment and wage information are also provided.

Health Care by Employment – (4-Digit NAICS)

The largest sectors by employment include Individual and Family Services (11,994); General Medical and Surgical Hospitals (10,485); Offices of Physicians (4,779); and Nursing Care Facilities (Skilled Nursing Facilities) (3,361). Individual and Family Services and Vocational Rehabilitation Services have the highest LQ. Over the past five years the most significant growth has been within Individual and Family Services and General Medical and Surgical Hospitals. Both are projected to grow over the next five years to 2020, with especially high growth in Individual and Family Services.

The individual industries within the Health Care sector are a mix of high-paying and low-paying. The sector paying the highest average wages is Specialty (except Psychiatric and Substance Abuse) Hospitals ($78,719), while the sector with the lowest average wages is Individual and Family Services ($13,221). It is worth noting that this sector is also one of the largest employers in the County and it is a growing sector.

Industry	2015 Jobs	'10-'15 Change	CE '10-'15	'15-'20 Change	CE '15-'20	'15 LQ	Average Earnings
Individual and Family Services	11,994	8,582	6,461	3,758	1,100	3.12	$13,221
General Medical and Surgical Hospitals	10,485	764	213	684	(14)	1.34	$66,875
Offices of Physicians	4,779	48	(415)	(76)	(579)	1.07	$73,648
Nursing Care Facilities (Skilled Nursing Facilities)	3,361	(8)	(26)	535	276	1.18	$36,037
Offices of Dentists	2,140	58	(141)	136	(70)	1.31	$47,047
Offices of Other Health Practitioners	2,082	(30)	(467)	136	(205)	1.29	$33,567
Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly	1,976	359	81	331	(1)	1.32	$20,387
Child Day Care Services	1,794	(224)	(208)	(77)	(155)	0.84	$18,987
Outpatient Care Centers	1,333	306	59	358	100	1.01	$50,044
Home Health Care Services	1,160	(200)	(484)	(17)	(285)	0.49	$28,270
Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	1,142	(74)	(186)	(8)	(143)	1.07	$24,515
Vocational Rehabilitation Services	1,122	(190)	(174)	43	7	1.87	$18,967
Other Ambulatory Health Care Services	530	(115)	(202)	(23)	(100)	0.95	$57,217
Other Residential Care Facilities	426	(76)	(81)	15	(10)	1.52	$26,962
Community Food and Housing, and Emergency and Other Relief Services	380	23	0	94	60	1.36	$32,387
Medical and Diagnostic Laboratories	358	1	(46)	(6)	(55)	0.76	$46,627
Specialty (except Psychiatric and Substance Abuse) Hospitals	282	239	236	75	4	0.75	$78,719
Psychiatric and Substance Abuse Hospitals	11	(31)	(35)	Insf. Data	(4)	0.06	$46,628

Staffing Patterns for Health Care (Top 20 4-digit SOC)

The top four occupations by employment for this industry sector include: Registered Nurses (5,026); Personal Care Aids (4,012); Nursing, Psychiatric, and Home Health Aides (3,202); and Miscellaneous Healthcare Support Occupations (3,095). All four occupations experienced strong growth over the past five years; however, Personal Care Aids had the highest growth, adding 2,617 jobs. Over the next five years through 2020, it is also expected to add the highest number of jobs (1,734). However, this occupation pays one of the lowest median wages in this industry sector at $10.15/hr. This is marginally higher than the occupation with the lowest median earnings, which is Childcare Workers at $9.68/hr. The occupation with the highest median hourly earnings is Physicians and Surgeons ($100.05/hr).

Occupation	2015 Employment	Change, 2010-2015		Projected Change, 2015-2020		Median Hourly Earnings
Registered Nurses	5,026	579	13%	419	8%	$37.56
Personal Care Aides	4,012	2,617	188%	1,734	43%	$10.15
Nursing, Psychiatric, and Home Health Aides	3,202	808	34%	812	25%	$12.39
Miscellaneous Healthcare Support Occupations	3,095	154	5%	83	3%	$16.24
Secretaries and Administrative Assistants	2,103	341	19%	171	8%	$16.55
Building Cleaning Workers	1,374	271	25%	157	11%	$11.60
Miscellaneous Community and Social Service Specialists	1,347	658	96%	221	16%	$17.22
Childcare Workers	1,279	(95)	(7%)	(93)	(7%)	$9.68
Counselors	1,257	296	31%	151	12%	$19.93
Licensed Practical and Licensed Vocational Nurses	1,143	163	17%	154	13%	$23.66
Therapists	1,132	82	8%	117	10%	$37.97
Office Clerks, General	1,087	233	27%	44	4%	$13.52
Physicians and Surgeons	1,014	(31)	(3%)	(9)	(1%)	$100.05
Receptionists and Information Clerks	995	111	13%	44	4%	$12.91
Social Workers	789	245	45%	152	19%	$22.45
First-Line Supervisors of Office and Administrative Support Workers	588	89	18%	40	7%	$21.85
Health Practitioner Support Technologists and Technicians	585	65	13%	50	9%	$20.37
Preschool and Kindergarten Teachers	584	39	7%	37	6%	$17.35
Dental Hygienists	578	17	3%	43	7%	$41.55
Recreation and Fitness Workers	528	221	72%	97	18%	$14.22

High Demand Occupations for Health Care (Top 20 Growing 5-digit SOC)

The following table includes a look at the top occupations by added jobs through 2020. Within this sector, there are a variety of entry level, as well as middle to higher skilled jobs. Wages range from $9.76/hr for Maids and Housekeeping Cleaners to $37.56/hr for Registered Nurses. Generally, those paying higher wages require education beyond a high school diploma.

Description	2020 Jobs	2015 – 2020 Change	Median Hourly Earnings	Typical Entry Level Education	Typical On-The-Job Training
Personal Care Aides	5,746	1,734	$10.15	Less than high school	Short-term on-the-job training
Home Health Aides	1,561	467	$10.37	Less than high school	Short-term on-the-job training
Registered Nurses	5,445	419	$37.56	Associate's degree	None
Nursing Assistants	2,297	331	$13.15	Postsecondary non-degree award	None
Social and Human Service Assistants	1,118	166	$13.22	High school diploma or equivalent	Short-term on-the-job training
Licensed Practical and Licensed Vocational Nurses	1,297	154	$23.66	Postsecondary non-degree award	None
Maids and Housekeeping Cleaners	991	104	$9.76	Less than high school	Short-term on-the-job training
Recreation Workers	584	91	$11.62	Bachelor's degree	None
Medical Secretaries	1,264	90	$15.58	High school diploma or equivalent	Moderate-term on-the-job training
Social and Community Service Managers	424	80	$28.82	Bachelor's degree	None
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	808	74	$15.19	High school diploma or equivalent	Short-term on-the-job training
Cooks, Institution and Cafeteria	480	67	$13.79	Less than high school	Short-term on-the-job training
General and Operations Managers	576	62	$36.05	Bachelor's degree	None
Healthcare Social Workers	286	60	$32.94	Master's degree	None
Rehabilitation Counselors	370	59	$14.25	Master's degree	None
Teacher Assistants	513	57	$12.88	Some college, no degree	None
First-Line Supervisors of Personal Service Workers	272	53	$15.65	High school diploma or equivalent	None
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	536	52	$12.98	Less than high school	Short-term on-the-job training
Child, Family, and School Social Workers	334	51	$20.42	Bachelor's degree	None
Bookkeeping, Accounting, and Auditing Clerks	518	48	$16.73	High school diploma or equivalent	Moderate-term on-the-job training

Unique Job Postings for High Demand Health Care Occupations

The majority of unique job postings over the past year have been Shasta and Butte Counties.

County Name	Aug 2016 Total Postings
Shasta County, CA	610
Butte County, CA	457
Nevada County, CA	239
Plumas County, CA	147
Siskiyou County, CA	125
Tehama County, CA	119
Lassen County, CA	95
Modoc County, CA	65
Del Norte County, CA	60
Trinity County, CA	33
Sierra County, CA	21

Top Posted Occupations

Overwhelming, Registered Nurses have made up the greatest number of job postings over the past year.

Occupation (SOC)	Unique (Aug 2015 - Aug 2016)
Registered Nurses	15,676
Personal Care Aides	1,268
Licensed Practical and Licensed Vocational Nurses	970
General and Operations Managers	929
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	859
Teacher Assistants	805
Nursing Assistants	667
Social and Human Service Assistants	637
Maids and Housekeeping Cleaners	608
Home Health Aides	588
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	526
Medical Secretaries	377
Bookkeeping, Accounting, and Auditing Clerks	351
Healthcare Social Workers	191
First-Line Supervisors of Personal Service Workers	148
Cooks, Institution and Cafeteria	141
Social and Community Service Managers	122
Child, Family, and School Social Workers	110
Recreation Workers	76
Rehabilitation Counselors	21

Top Hard Skills

Frequently listed hard skills for Health Care occupations include: Nursing; Health Care; Hospitalization; Critical Care; Insurance; and Post-Anesthesia Care Unit.

Skill	Postings with Skill
Nursing	8,397
Health Care	5,967
Hospitalization	4,731
Critical Care	4,041
Insurance	3,564
Post-Anesthesia Care Unit	3,512
Travel Nursing	3,447
Advanced Cardiovascular Life Support (ACLS)	3,374
Neonatal Intensive Care Unit	3,310
CATH Protein Structure Classification	3,238
Labor Delivery Recovery And Postpartum	3,165
Cardiac Catheterization	3,156
Basic Life Support	3,097
Recruitment	2,697
Training	2,578
Management	2,457
Emergency (Healthcare)	2,198
Acute Care	1,998
Cardiopulmonary Resuscitation	1,953
Education	1,920

Top Soft Skills

The top soft skills for Health Care occupations include: Scheduling (Project Management); Leadership; Coordinating; Leading; and Mental Health.

Skill	Postings with Skill
Scheduling (Project Management)	2,952
Leadership	958
Coordinating	904
Leading	673
Mental Health	510
Learning	310
Critical Thinking	305
Cleanliness	296
Listening	255
Ethics	159
Depth Perception	149
Literacy	145
Career Development	138
Creativity	112
Cooperation	105
Telephone Skills	95
Perception	84
Team Building	66
Leadership Development	57
Persistence	52

Manufacturing Top 20 by Employment – (4-Digit NAICS)

Many of the top manufacturing employers are classified within the wood and the food and beverage industries. These sectors include Sawmills and Wood Preservation (1,462); Other Wood Product Manufacturing (1,329); Beverage Manufacturing (857); and Fruit and Vegetable Preserving and Specialty Food Manufacturing (728). These four also have a relatively high LQ with Sawmills and Wood Preservation having the highest (9.02).

Over the past five years, Bakeries and Tortilla Manufacturing and Veneer, Plywood, and Engineered Wood Product Manufacturing added the most employees (297 and 210, respectively). Much of this growth was due to competitive reasons. However, only Bakeries and Tortilla Manufacturing is projected to grow over the next five years to 2020. Other growing sectors include Other Wood Product Manufacturing; Beverage Manufacturing; Other Miscellaneous Manufacturing; Architectural and Structural Metals Manufacturing; Cement and Concrete Manufacturing; and Grain and Oilseed Milling;

The manufacturing sector paying the highest average earnings is Communications Equipment Manufacturing ($87.072). The sector with the lowest average wages is Bakeries and Tortilla Manufacturing ($24,790).

Industry	2015 Jobs	'10-'15 Change	CE '10-'15	'15-'20 Change	CE '15-'20	'15 LQ	Average Earnings
Sawmills and Wood Preservation	1,462	134	(2)	(231)	(202)	9.02	$54,189
Other Wood Product Manufacturing	1,329	116	25	121	206	3.44	$44,894
Beverage Manufacturing	857	150	(23)	62	30	2.38	$40,199
Fruit and Vegetable Preserving and Specialty Food Manufacturing	728	(197)	(180)	(102)	(84)	2.51	$43,859
Other Miscellaneous Manufacturing	620	50	10	48	103	1.15	$30,127
Bakeries and Tortilla Manufacturing	522	297	281	140	135	0.98	$24,790
Veneer, Plywood, and Engineered Wood Product Manufacturing	461	210	171	(127)	(105)	3.70	$51,018
Architectural and Structural Metals Manufacturing	422	144	108	89	70	0.68	$38,248
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	358	(141)	(182)	(63)	(18)	0.80	$30,153
Cement and Concrete Product Manufacturing	326	(18)	(40)	8	(1)	1.05	$59,134
Agriculture, Construction, and Mining Machinery Manufacturing	318	96	58	(14)	(31)	0.78	$45,918
Grain and Oilseed Milling	307	24	26	85	86	3.08	$49,274
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	274	(40)	(29)	(8)	(3)	0.41	$55,363
Converted Paper Product Manufacturing	271	70	79	(3)	16	0.59	$49,554
Printing and Related Support Activities	268	(12)	11	(70)	(38)	0.34	$29,940
Other Fabricated Metal Product Manufacturing	259	(17)	(46)	(6)	(14)	0.55	$43,845
Plastics Product Manufacturing	253	62	44	(14)	(6)	0.27	$51,824
Medical Equipment and Supplies Manufacturing	250	(44)	(53)	(32)	(39)	0.45	$42,500
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	239	12	(27)	(6)	(17)	0.37	$39,648
Communications Equipment Manufacturing	212	(297)	(176)	(90)	(56)	1.39	$87,072

Staffing Patterns for Manufacturing (Top 20 4-digit SOC)

The occupations that employ the most people in the manufacturing sector include Laborers and Material Movers, Hand (937) and Miscellaneous Assemblers and Fabricators (754). Laborers and Material Movers, Hand (117); Miscellaneous Production Workers (76); and Woodworking Machine Setters, Operators, and Tenders (69) added the most jobs over the past five years. The growth projections through 2020 within this sector are modest, with Miscellaneous Food Processing Workers and Welding, Soldering, and Brazing Workers leading the way. The occupation within this sector with the highest median earnings is General and Operations Managers ($36.05/hr), while the occupation paying the lowest is Miscellaneous Production Workers ($12.79).

Occupation	2015 Employment	Change, 2010-2015		Projected Change, 2015-2020		Median Hourly Earnings
Laborers and Material Movers, Hand	937	117	14%	(36)	(4%)	$12.95
Miscellaneous Assemblers and Fabricators	754	39	5%	8	1%	$13.40
Woodworking Machine Setters, Operators, and Tenders	673	69	11%	(43)	(6%)	$16.38
Miscellaneous Production Workers	625	76	14%	(9)	(1%)	$12.79
Driver/Sales Workers and Truck Drivers	437	47	12%	5	1%	$17.19
First-Line Supervisors of Production and Operating Workers	400	9	2%	0	0%	$23.83
Cabinetmakers and Bench Carpenters	321	(6)	(2%)	(22)	(7%)	$16.46
Packaging and Filling Machine Operators and Tenders	313	(8)	(2%)	(2)	(1%)	$13.89
General and Operations Managers	286	13	5%	(7)	(2%)	$36.05
Sales Representatives, Wholesale and Manufacturing	280	(8)	(3%)	(3)	(1%)	$24.22
Industrial Machinery Installation, Repair, and Maintenance Workers	274	44	19%	8	3%	$22.51
Welding, Soldering, and Brazing Workers	252	49	24%	17	7%	$16.92
Machinists	245	32	15%	6	2%	$17.45
Miscellaneous Food Processing Workers	237	21	10%	21	9%	$13.42
Shipping, Receiving, and Traffic Clerks	236	8	4%	(6)	(3%)	$16.58
Industrial Truck and Tractor Operators	218	(4)	(2%)	(16)	(7%)	$16.86
Maintenance and Repair Workers, General	210	16	8%	(1)	(0%)	$16.14
Miscellaneous Managers	208	10	5%	5	2%	$21.71
Inspectors, Testers, Sorters, Samplers, and Weighers	192	(14)	(7%)	1	1%	$16.56
Office Clerks, General	177	5	3%	(7)	(4%)	$13.52

High Demand Occupations for Manufacturing (Top 20 Growing 5-digit SOC)

The following table includes a look at the top occupations by added jobs through 2020. Within this sector, all high demand occupations require a high school diploma or less education. However, most require at least short-term on-the-job training, with several requiring moderate to long-term training. Wages range from $10.00/hr for Counter Attendants within food to $23.08/hr for Industry Machinery Mechanics.

Description	2020 Jobs	2015 – 2020 Change	Median Hourly Earnings	Typical Entry Level Education	Typical On-The-Job Training
Bakers	149	31	$11.36	Less than high school	Long-term on-the-job training
Sewing Machine Operators	133	14	$11.11	Less than high school	Short-term on-the-job training
Welders, Cutters, Solderers, and Brazers	240	13	$16.91	High school diploma or equivalent	Moderate-term on-the-job training
Food Batchmakers	96	11	$13.20	High school diploma or equivalent	Moderate-term on-the-job training
Meat, Poultry, and Fish Cutters and Trimmers	30	10	$12.59	Less than high school	Short-term on-the-job training
Industrial Machinery Mechanics	193	10	$23.08	High school diploma or equivalent	Long-term on-the-job training
Retail Salespersons	79	9	$11.14	Less than high school	Short-term on-the-job training
Team Assemblers	624	7	$12.98	High school diploma or equivalent	Moderate-term on-the-job training
Slaughterers and Meat Packers	23	7	$14.07	Less than high school	Short-term on-the-job training
Packers and Packagers, Hand	213	6	$12.18	Less than high school	Short-term on-the-job training
Machinists	251	6	$17.45	High school diploma or equivalent	Long-term on-the-job training
Structural Metal Fabricators and Fitters	62	6	$19.41	High school diploma or equivalent	Moderate-term on-the-job training
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	82	6	$19.60	High school diploma or equivalent	Moderate-term on-the-job training
Cashiers	47	6	$10.33	Less than high school	Short-term on-the-job training
Sheet Metal Workers	49	5	$19.57	High school diploma or equivalent	Apprenticeship
Computer-Controlled Machine Tool Operators, Metal and Plastic	55	5	$19.95	High school diploma or equivalent	Moderate-term on-the-job training
Driver/Sales Workers	41	5	$16.50	High school diploma or equivalent	Short-term on-the-job training
Managers, All Other	213	5	$21.71	High school diploma or equivalent	None
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	29	5	$10.00	Less than high school	Short-term on-the-job training
First-Line Supervisors of Retail Sales Workers	29	5	$16.09	High school diploma or equivalent	None

Job Data from the North State Grow Manufacturing Roundtable & Expo, October 2014

For employers participating at the Expo, Appendix D lists the positions that regional manufacturers typically hire, the level of required education and which positions are hard to fill. This data should be considered along with the job posting data when implementing workforce recommendations.

Unique Job Postings for High Demand Manufacturing Occupations

In general, there tend to be fewer job postings for manufacturing occupations as many manufacturers turn to other methods such as temporary employees to hire. However, in August 2016, the majority of postings were in Butte, Shasta, Nevada, and Tehama Counties.

County Name	Aug 2016 Total Postings
Butte County, CA	523
Shasta County, CA	493
Nevada County, CA	166
Tehama County, CA	101
Siskiyou County, CA	61
Lassen County, CA	38
Plumas County, CA	36
Del Norte County, CA	34
Trinity County, CA	19
Modoc County, CA	7
Sierra County, CA	1

Top Posted Occupations

The top job postings for high demand Manufacturing occupations include: First-Line Supervisors of Retail Sales Workers; Retail Salespersons; and Cashiers. It should be noted that these occupations support other sectors as well. Thus, not every posting may be for a manufacturing employee.

Occupation (SOC)	Unique (Aug 2015 - Aug 2016)
Managers, All Other	634
Packers and Packagers, Hand	240
Machinists	124
Industrial Machinery Mechanics	58
Welders, Cutters, Solderers, and Brazers	39
Meat, Poultry, and Fish Cutters and Trimmers	29
Computer-Controlled Machine Tool Operators, Metal and Plastic	26
Sheet Metal Workers	21
Team Assemblers	18
Bakers	15
Structural Metal Fabricators and Fitters	6

Top Hard Skills

The top hard skills listed for high demand Manufacturing positions include: Sales; Customer Service; Retailing; Merchandising; and Management.

Skill	Postings with Skill
Sales	9,009
Customer Service	7,985
Retailing	7,594
Merchandising	5,477
Management	5,078
Training	4,340
Selling Techniques	3,501
Operations	2,338
Communications	2,241
Retail Sales	1,973
Lifting	1,909
Recruitment	1,837
Cleaning	1,767
Innovation	1,265
Customer Experience	1,261
Presentations	1,244
Displaying (Exhibition)	1,061
Customer Satisfaction	1,026
Loss Prevention	987
Distribution (Business)	980

Top Soft Skills

Frequently listed soft skills within job postings for Manufacturing jobs include: Scheduling (Project Management); Leadership; Leading; Learning; and Listening.

Skill	Postings with Skill
Scheduling (Project Management)	3,555
Leadership	1,723
Leading	1,209
Learning	640
Listening	615
Cleanliness	533
Creativity	441
Ethics	362
Creative Problem-Solving	281
Coordinating	170
Team Building	139
Cooperation	137
Personal Grooming	119
Assertiveness	87
Conversation	79
Career Development	78
Tenacity	49
Leadership Development	48
Public Speaking	45
Team Leading	41

Agriculture by Employment – (4-Digit NAICS)

The vast majority of employment in this sector is found in Crop Production, followed by Support Activities for Crop Production. Crop Production experienced the highest growth in employment over the past five years and is projected to grow through 2020. Support Activities for Animal Production is another growing subsector. The subsector paying the highest average wage is Support Activities for Forestry ($46,478), while the lowest is Support Activities for Animal Production ($21,166).

Industry	2015 Jobs	'10-'15 Change	CE '10-'15	'15-'20 Change	CE '15-'20	'15 LQ	Average Earnings
Crop Production	5,271	569	312	97	88	3.64	$33,585
Support Activities for Crop Production	1,678	65	(77)	4	(89)	2.12	$37,333
Logging	953	(47)	(25)	(110)	(32)	7.55	$42,848
Animal Production and Aquaculture	854	88	94	(56)	(9)	1.16	$29,246
Support Activities for Forestry	542	69	46	(25)	(7)	16.99	$46,478
Fishing	246	52	58	33	51	4.56	$46,154
Support Activities for Animal Production	168	34	34	0	2	2.42	$21,166
Forest Nurseries and Gathering of Forest Products	80	59	66	(21)	(12)	19.60	$48,764
Hunting and Trapping	28	4	(0)	6	7	3.14	$26,548
Timber Tract Operations	<10	Insf. Data	3	Insf. Data	1	1.10	Insf. Data

Staffing Patterns for Agriculture (Top 20 4-digit SOC)

The largest occupation required to staff this sector is Miscellaneous Agricultural Workers. This sector grew the most over the past five years in terms of new jobs and is projected to grow over the next five years to 2020. The occupation that pays the highest median wages is Sales Representatives, Wholesale and Manufacturing ($24.22), while the occupation with the lowest is Nonfarm Animal Caretakers ($10.77).

Occupation	2015 Employment	Change, 2010-2015		Projected Change, 2015-2020		Median Hourly Earnings
Miscellaneous Agricultural Workers	4,603	463	11%	28	1%	$12.64
Farmers, Ranchers, and Other Agricultural Managers	1,070	76	8%	(4)	(0%)	$19.19
Logging Workers	649	(21)	(3%)	(76)	(12%)	$19.59
First-Line Supervisors of Farming, Fishing, and Forestry Workers	346	28	9%	(11)	(3%)	$23.21
Driver/Sales Workers and Truck Drivers	336	29	9%	(2)	(1%)	$17.19
Laborers and Material Movers, Hand	259	19	8%	1	0%	$12.95
Graders and Sorters, Agricultural Products	174	12	7%	0	0%	$13.67
Forest and Conservation Workers	165	32	24%	(9)	(5%)	$12.50
Fishers and Related Fishing Workers	148	31	26%	25	17%	$17.71
Grounds Maintenance Workers	131	20	18%	1	1%	$12.32
Secretaries and Administrative Assistants	124	21	20%	0	0%	$16.55
Nonfarm Animal Caretakers	108	4	4%	(19)	(18%)	$10.77
Bookkeeping, Accounting, and Auditing Clerks	79	7	10%	0	0%	$16.73
Animal Trainers	77	(25)	(25%)	(16)	(21%)	$11.40
Hunters and Trappers	70	15	27%	13	19%	$14.58
Miscellaneous Production Workers	69	8	13%	(1)	(1%)	$12.79
Office Clerks, General	64	2	3%	0	0%	$13.52
Building Cleaning Workers	61	9	17%	1	2%	$11.60
Sales Representatives, Wholesale and Manufacturing	61	7	13%	2	3%	$24.22
Heavy Vehicle and Mobile Equipment Service Technicians and Mechanics	54	3	6%	0	0%	$22.68

High Demand Occupations for Agriculture (Top Growing 5-digit SOC)

Within the Agriculture sector, the primary high demand occupations include: Fishers and Related Fishing Workers; Farmworkers, Farm, Ranch, and Aquacultural Animals; and Agricultural Equipment Operators. All four occupations require a less than high school education and pay wages between $14.58/hr (Hunters and Trappers) to $17.17/hr (Fishers and Related Fishing Workers). While these occupations are entry level for those without a high school diploma, most require at least short-term on-the-job training.

Description	2020 Jobs	2015 – 2020 Change	Median Hourly Earnings	Typical Entry Level Education	Typical On-The-Job Training
Fishers and Related Fishing Workers	173	25	$17.71	Less than high school	Moderate-term on-the-job training
Farmworkers, Farm, Ranch, and Aquacultural Animals	394	17	$16.43	Less than high school	Short-term on-the-job training
Agricultural Equipment Operators	390	15	$16.12	Less than high school	Short-term on-the-job training
Hunters and Trappers	83	13	$14.58	Less than high school	Short-term on-the-job training
Packaging and Filling Machine Operators and Tenders	28	3	$13.89	High school diploma or equivalent	Moderate-term on-the-job training
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	51	2	$22.88	High school diploma or equivalent	Moderate-term on-the-job training
Light Truck or Delivery Services Drivers	66	2	$13.99	High school diploma or equivalent	Short-term on-the-job training
Customer Service Representatives	27	2	$15.87	High school diploma or equivalent	Short-term on-the-job training
Sales Managers	13	2	$34.66	Bachelor's degree	None

Unique Job Postings for High Demand Agriculture Occupations

In August 2016 the greatest number of job postings for this sector were in Shasta, Butte, and Nevada Counties.

County Name	Aug 2016 Total Postings
Shasta County, CA	128
Butte County, CA	125
Nevada County, CA	63
Tehama County, CA	23
Siskiyou County, CA	21
Lassen County, CA	19
Plumas County, CA	16
Modoc County, CA	11
Del Norte County, CA	5
Trinity County, CA	5
Sierra County, CA	2

Top Posted Occupations

While Customer Service Representatives makes up the largest category for posted occupations within this sector, this occupation crosses across multiple sectors so not all of these will likely pertain to just the Agriculture sector.

Occupation (SOC)	Unique (Aug 2015 - Aug 2016)
Customer Service Representatives	2,587
Light Truck or Delivery Services Drivers	1,044
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	972
Sales Managers	546
Packaging and Filling Machine Operators and Tenders	155
Farmworkers, Farm, Ranch, and Aquacultural Animals	13
Agricultural Equipment Operators	4

Top Hard Skills

The most frequently listed hard skills for these occupations include: Customer Service; Sales; Training; and Management.

Skill	Postings with Skill
Customer Service	2,156
Sales	1,927
Training	1,472
Management	1,095
Retailing	789
Marketing	785
Insurance	776
Selling Techniques	698
Communications	678
Merchandising	671
Recruitment	647
Warehousing	585
Finance	569
Driving	451
Lifting	311
Collections	297
Computer Literacy	295
Life Insurance	285
Sales Management	284
Administration	280

Top Soft Skills

The most frequently listed soft skills amongst high demand occupations include: Scheduling (Project Management); Leadership; Leading; and Listening.

Skill	Postings with Skill
Scheduling (Project Management)	849
Leadership	255
Leading	211
Listening	175
Learning	130
Coordinating	119
Telephone Skills	77
Creativity	55
Literacy	32
Listening Skills	27
Career Development	26
Ethics	21
Critical Thinking	20
Creative Problem-Solving	19
Cleanliness	18
Active Listening	17
Assertiveness	13
Self-Sufficiency	13
Active Learning	12
Deductive Reasoning	12

Tourism[28] by Employment – (4-Digit NAICS)

The vast majority of employment within this industry sector is found within three subsectors: Restaurants and Other Eating Places (17,890); Other Amusement and Recreation Industries (3,357); and Traveler Accommodation (2,631). Over the past five years, Restaurants and Other Eating Places added over 2,000 jobs. The subsector is projected to add over 850 jobs through 2020. The sector with the highest average earnings is Other Support Services ($46,228), while the sector with the lowest is Spectator Sports ($10,695).

Industry	2015 Jobs	'10-'15 Change	CE '10-'15	'15-'20 Change	CE '15-'20	'15 LQ	Average Earnings
Restaurants and Other Eating Places	17,890	2,152	(641)	864	(361)	1.04	$18,372
Other Amusement and Recreation Industries	3,357	(460)	(935)	133	(125)	1.51	$21,759
Traveler Accommodation	2,631	45	(161)	145	31	0.84	$23,218
Special Food Services	739	8	(127)	120	77	0.56	$17,839
Drinking Places (Alcoholic Beverages)	655	(61)	(116)	60	45	1.00	$16,059
Independent Artists, Writers, and Performers	574	(29)	(64)	(17)	(27)	1.14	$11,280
RV (Recreational Vehicle) Parks and Recreational Camps	396	34	(16)	33	12	3.71	$31,491
Museums, Historical Sites, and Similar Institutions	181	32	8	17	1	0.69	$31,858
Other Support Services	176	111	104	30	17	0.33	$46,228
Gambling Industries	144	37	32	42	34	0.61	$27,220
Spectator Sports	138	(30)	(45)	(1)	(5)	0.42	$10,695
Travel Arrangement and Reservation Services	86	12	8	(9)	(5)	0.23	$25,474
Performing Arts Companies	74	18	11	7	4	0.30	$22,750
Promoters of Performing Arts, Sports, and Similar Events	55	(27)	(54)	8	2	0.22	$30,777
Amusement Parks and Arcades	47	(9)	(20)	20	16	0.14	$13,664
Scenic and Sightseeing Transportation, Water	42	Insf. Data	37	11	10	1.36	$28,772
Rooming and Boarding Houses	36	(24)	(28)	7	7	1.34	$26,262

[28] 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).

Industry	2015 Jobs	'10-'15 Change	CE '10-'15	'15-'20 Change	CE '15-'20	'15 LQ	Average Earnings
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	14	(1)	(3)	(2)	(3)	0.25	$30,271
Scenic and Sightseeing Transportation, Land	<10	Insf. Data	(6)	Insf. Data	(0)	0.22	Insf. Data

Staffing Patterns for Tourism (Top 20 4-digit SOC)

The majority of employment within this industry sector is found within four occupations that are found within the food service industry: Fast Food and Counter Workers (5,726); Cooks (4,081); Waiters and Waitresses (3,443); and Supervisors of Food Preparation and Serving Workers (1,434). and Building Cleaning Workers (1,620). These subsectors also added the most jobs over the past five years, and are projected to add the greatest number through 2020. However, all of the top twenty occupations are expected to grow over the same time period.

Within this industry sector, General and Operations Managers is the occupation paying the highest median wage at $36.05/hr. The occupation with the lowest median earnings is Dining Room and Cafeteria Attendants and Bartender Helpers at $9.68/hr.

Occupation	2015 Employment	Change, 2010-2015		Projected Change, 2015-2020		Median Hourly Earnings
Fast Food and Counter Workers	5,726	840	17%	553	10%	$9.92
Cooks	4,081	459	13%	155	4%	$11.06
Waiters and Waitresses	3,443	223	7%	61	2%	$9.83
Supervisors of Food Preparation and Serving Workers	1,434	170	13%	117	8%	$13.70
Building Cleaning Workers	928	0	0%	57	6%	$11.60
Bartenders	879	17	2%	49	6%	$10.04
Dishwashers	875	72	9%	16	2%	$9.71
Cashiers	795	46	6%	32	4%	$10.33
Food Preparation Workers	730	41	6%	29	4%	$10.26
Recreation and Fitness Workers	682	(92)	(12%)	33	5%	$14.22
Food Service Managers	666	28	4%	21	3%	$16.33
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	655	45	7%	2	0%	$9.94
Hotel, Motel, and Resort Desk Clerks	624	34	6%	40	6%	$10.47
Grounds Maintenance Workers	420	(28)	(6%)	26	6%	$12.32
Dining Room and Cafeteria Attendants and Bartender Helpers	407	20	5%	17	4%	$9.68

Occupation	2015 Employment	Change, 2010-2015		Projected Change, 2015-2020		Median Hourly Earnings
Miscellaneous Entertainment Attendants and Related Workers	378	(56)	(13%)	19	5%	$10.87
Driver/Sales Workers and Truck Drivers	263	27	11%	24	9%	$17.19
General and Operations Managers	257	1	0%	11	4%	$36.05
Maintenance and Repair Workers, General	255	(4)	(2%)	17	7%	$16.14
Athletes, Coaches, Umpires, and Related Workers	212	0	0%	19	9%	$16.30

High Demand Occupations for Tourism (Top 20 Growing 5-digit SOC)

Entry level education requirements for the high demand occupations within this sector tend to be a high school diploma or less. Overall wages, particularly within the food sector, tend to be on the low side at just under $10.00/hr. Most of these occupations require at least short-term on-the-job training.

Description	2020 Jobs	2015 – 2020 Change	Median Hourly Earnings	Typical Entry Level Education	Typical On-The-Job Training
Combined Food Preparation and Serving Workers, Including Fast Food	5,560	542	$9.91	Less than high school	Short-term on-the-job training
Cooks, Restaurant	2,236	109	$11.14	Less than high school	Moderate-term on-the-job training
First-Line Supervisors of Food Preparation and Serving Workers	1,321	108	$13.11	High school diploma or equivalent	None
Waiters and Waitresses	3,504	61	$9.83	Less than high school	Short-term on-the-job training
Bartenders	928	49	$10.04	Less than high school	Short-term on-the-job training
Maids and Housekeeping Cleaners	775	48	$9.76	Less than high school	Short-term on-the-job training
Hotel, Motel, and Resort Desk Clerks	664	40	$10.47	High school diploma or equivalent	Short-term on-the-job training
Cooks, Fast Food	1,663	34	$9.66	Less than high school	Short-term on-the-job training
Cashiers	818	31	$10.33	Less than high school	Short-term on-the-job training
Food Preparation Workers	759	29	$10.26	Less than high school	Short-term on-the-job training
Landscaping and Groundskeeping Workers	440	25	$11.91	Less than high school	Short-term on-the-job training

Description	2020 Jobs	2015 – 2020 Change	Median Hourly Earnings	Typical Entry Level Education	Typical On-The-Job Training
Food Service Managers	687	21	$16.33	High school diploma or equivalent	None
Fitness Trainers and Aerobics Instructors	510	20	$18.73	High school diploma or equivalent	Short-term on-the-job training
Driver/Sales Workers	221	19	$16.50	High school diploma or equivalent	Short-term on-the-job training
Maintenance and Repair Workers, General	272	17	$16.14	High school diploma or equivalent	Long-term on-the-job training
Dining Room and Cafeteria Attendants and Bartender Helpers	424	17	$9.68	Less than high school	Short-term on-the-job training
Amusement and Recreation Attendants	365	17	$10.32	Less than high school	Short-term on-the-job training
Dishwashers	891	16	$9.71	Less than high school	Short-term on-the-job training
Coaches and Scouts	188	15	$16.18	Bachelor's degree	None
Recreation Workers	206	14	$11.62	Bachelor's degree	None

Unique Job Postings for High Demand Tourism Occupations

In August 2016, the vast majority of job postings were found in Shasta, Nevada, and Butte Counties.

County Name	Aug 2016 Total Postings
Shasta County, CA	322
Nevada County, CA	315
Butte County, CA	307
Tehama County, CA	79
Siskiyou County, CA	43
Lassen County, CA	38
Del Norte County, CA	36
Plumas County, CA	19
Trinity County, CA	4
Sierra County, CA	3
Modoc County, CA	3

Top Posted Occupations

The occupations within Tourism with the greatest number of job postings for the past year include: Cashiers; First-Line Supervisors of Food Preparation and Serving Workers; Combined Food Preparation and Serving Workers, Including Fast Food; and Maintenance and Repair Workers, General

Occupation (SOC)	Unique (Aug 2015 - Aug 2016)
Cashiers	2,862
First-Line Supervisors of Food Preparation and Serving Workers	2,160
Combined Food Preparation and Serving Workers, Including Fast Food	1,361
Maintenance and Repair Workers, General	1,139
Food Service Managers	835
Driver/Sales Workers	609
Maids and Housekeeping Cleaners	608
Cooks, Restaurant	518
Hotel, Motel, and Resort Desk Clerks	452
Waiters and Waitresses	395
Food Preparation Workers	386
Dining Room and Cafeteria Attendants and Bartender Helpers	224
Coaches and Scouts	189
Dishwashers	169
Amusement and Recreation Attendants	134
Landscaping and Groundskeeping Workers	122
Bartenders	114
Recreation Workers	76
Fitness Trainers and Aerobics Instructors	9
Cooks, Fast Food	

Top Hard Skills

The most frequently listed hard skills amongst job postings within this sector include: Restaurant Operation; Cleaning; Training; Customer Service, and Management.

Skill	Postings with Skill
Restaurant Operation	3,129
Cleaning	3,105
Training	3,020
Customer Service	2,381
Management	2,211
Retailing	1,923
Recruitment	1,740
Lifting	1,687
Sales	1,425
Food Services	1,341
Communications	1,331
Operations	1,239
Merchandising	1,139
Carry	1,096
Information Security	1,063
Maintenance	1,036
Sanitation	923
Hospitality	900
Storage (Warehousing)	898
Outline Of Food Preparation	789

Top Soft Skills

The most frequently requested soft skills include Cleanliness and Scheduling (Project Management). Other top soft skills include: Learning; Leadership; and Listening.

Skill	Postings with Skill
Cleanliness	1,818
Scheduling (Project Management)	1,648
Learning	930
Leadership	717
Listening	511
Leading	460
Personal Grooming	200
Ethics	157
Coordinating	145
Leadership Development	130
Team Building	118
Cooperation	92
Perception	82
Career Development	65
Creativity	59
Team Management	42
Depth Perception	26
Literacy	24
Positive Mental Attitude	20
Social Skills	19

Information Technology (IT) – (4-Digit NAICS)

The largest subsector by employment within this sector is Computer Systems Design and Related Services with 1,268 jobs. It is also projected to add the most jobs through 2020. In fact, all three subsectors are projected to add jobs during the same time period.

All three subsectors pay high wages of at least $60,000 annually.

Industry	2015 Jobs	'10-'15 Change	CE '10-'15	'15-'20 Change	CE '15-'20	'15 LQ	Average Earnings
Computer Systems Design and Related Services	1,268	271	(11)	240	28	0.36	$61,895
Software Publishers	107	21	0	42	28	0.19	$70,672
Data Processing, Hosting, and Related Services	106	1	(20)	19	17	0.21	$70,197

Staffing Patterns for Information Technology (IT) (Top 20 4-digit SOC)

Within this sector, the occupations with highest number of jobs include Software Developers and Programmers (463); Computer Support Specialists (138); and Computer and Information Analysts (102). All three have both demonstrated and are projected to experience growth. Wages within this sector tend to be high, with many paying greater than $20.00/hr.

Occupation	2015 Employment	Change, 2010-2015		Projected Change, 2015-2020		Median Hourly Earnings
Software Developers and Programmers	463	97	27%	91	20%	$29.81
Computer Support Specialists	138	35	34%	34	25%	$23.59
Computer and Information Analysts	102	13	15%	23	23%	$33.43
Database and Systems Administrators and Network Architects	60	4	7%	11	18%	$33.84
General and Operations Managers	54	14	35%	10	19%	$36.05
Computer and Information Systems Managers	49	10	26%	10	20%	$48.21
Miscellaneous Sales Representatives, Services	43	8	23%	11	26%	$18.95
Customer Service Representatives	36	5	16%	8	22%	$15.87
Secretaries and Administrative Assistants	34	8	31%	7	21%	$16.55
Office Clerks, General	33	7	27%	5	15%	$13.52
Sales Representatives, Wholesale and Manufacturing	30	6	25%	8	27%	$24.22
Bookkeeping, Accounting, and Auditing Clerks	26	6	30%	5	19%	$16.73
Management Analysts	26	5	24%	6	23%	$26.75
Marketing and Sales Managers	25	6	32%	5	20%	$37.40
Miscellaneous Managers	22	0	0%	2	9%	$21.71
Miscellaneous Business Operations Specialists	22	6	38%	4	18%	$28.17
Computer, Automated Teller, and Office Machine Repairers	22	2	10%	1	5%	$15.43
Market Research Analysts and Marketing Specialists	21	6	40%	6	29%	$24.03
Miscellaneous Computer Occupations	20	1	5%	1	5%	$29.53
Accountants and Auditors	17	4	31%	3	18%	$26.40

High Demand Occupations for Information Technology (IT) (Top Growing 5-digit SOC, 5 or More Jobs)

Many of the IT occupations are high demand occupations. They also pay relatively high wages. Specific occupations include: Software Developers, Applications; Computer User Support Specialists; Software Developers, Systems Software; Computer Systems Analysts; and Computer Programmers. All of these are projected add at least 15 new jobs through 2020. Overall wages within this sector tend to be relatively higher than those in other sectors, with many paying over $20.00/hr. However, many of these occupations also require a higher level of entry level educational requirement such as a Bachelor's degree.

Description	2020 Jobs	2015 – 2020 Change	Median Hourly Earnings	Typical Entry Level Education	Typical On-The-Job Training
Software Developers, Applications	166	38	$34.58	Bachelor's degree	None
Computer User Support Specialists	146	30	$22.52	Some college, no degree	Moderate-term on-the-job training
Software Developers, Systems Software	143	26	$37.65	Bachelor's degree	None
Computer Systems Analysts	115	19	$33.03	Bachelor's degree	None
Computer Programmers	150	15	$25.56	Bachelor's degree	None
Web Developers	95	12	$17.65	Associate's degree	None
Sales Representatives, Services, All Other	54	11	$18.95	High school diploma or equivalent	Short-term on-the-job training
General and Operations Managers	64	10	$36.05	Bachelor's degree	None
Computer and Information Systems Managers	59	10	$48.21	Bachelor's degree	None
Network and Computer Systems Administrators	49	8	$32.92	Bachelor's degree	None
Customer Service Representatives	44	8	$15.87	High school diploma or equivalent	Short-term on-the-job training
Management Analysts	32	6	$26.75	Bachelor's degree	None
Market Research Analysts and Marketing Specialists	27	6	$24.03	Bachelor's degree	None
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	29	6	$33.46	Bachelor's degree	Moderate-term on-the-job training

Description	2020 Jobs	2015 – 2020 Change	Median Hourly Earnings	Typical Entry Level Education	Typical On-The-Job Training
Computer Network Support Specialists	26	5	$29.31	Associate's degree	None
Office Clerks, General	38	5	$13.52	High school diploma or equivalent	Short-term on-the-job training
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	27	5	$15.19	High school diploma or equivalent	Short-term on-the-job training
Bookkeeping, Accounting, and Auditing Clerks	31	5	$16.73	High school diploma or equivalent	Moderate-term on-the-job training

Unique Job Postings for High Demand Information Technology Occupations

This is another industry sector that tends to have fewer job postings. However, for the August 2016 time period, the greatest number of postings were in Butte, Shasta, and Nevada Counties.

County Name	Aug 2016 Total Postings
Butte County, CA	249
Shasta County, CA	201
Nevada County, CA	102
Tehama County, CA	31
Siskiyou County, CA	27
Lassen County, CA	23
Plumas County, CA	20
Del Norte County, CA	11
Modoc County, CA	6
Trinity County, CA	5
Sierra County, CA	4

Top Posted Occupations

The vast majority of job postings over the past year were for Customer Service Representatives. Other top occupations include Sales Representatives, Services All Other; General and Operations Managers; and Secretaries and Administrative Assistants, Except Legal, Medical, and Executive.

Occupation (SOC)	Unique (Aug 2015 - Aug 2016)
Customer Service Representatives	2,587
Sales Representatives, Services, All Other	969
General and Operations Managers	929
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	859
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	639
Computer User Support Specialists	622
Office Clerks, General	552
Computer Systems Analysts	381
Network and Computer Systems Administrators	371
Bookkeeping, Accounting, and Auditing Clerks	351
Software Developers, Applications	318
Web Developers	197
Management Analysts	150
Computer Programmers	106
Market Research Analysts and Marketing Specialists	104
Computer and Information Systems Managers	85
Computer Network Support Specialists	44
Software Developers, Systems Software	32

Top Hard Skills

For postings within this sector, the most frequently listed hard skills include: Management; Customer Service; Sales; Training; and Communications.

Skill	Postings with Skill
Management	2,753
Customer Service	2,473
Sales	2,307
Training	1,914
Communications	1,788
Administration	1,459
Operations	1,339
Finance	1,305
Selling Techniques	1,148
Recruitment	1,114
Retailing	979
Marketing	957
Insurance	950
Reports	819
Maintenance	794
Information Security	785
Clerical Works	740
Health Care	738
Testing	623
Analysis	579

Top Soft Skills

Overall Scheduling (Project Management) was listed as the most desired soft skill. Other top skills include: Leadership; Leading; Listening; and Coordinating.

Skill	Postings with Skill
Scheduling (Project Management)	1,519
Leadership	728
Leading	465
Listening	419
Coordinating	382
Learning	195
Telephone Skills	144
Ethics	134
Creativity	81
Literacy	69
Team Building	69
Critical Thinking	66
Cooperation	64
Listening Skills	58
Persuasive Communication	51
Public Speaking	45
Persistence	44
Active Listening	40
Cleanliness	37
Career Development	34

Appendix A:

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), 2016.1 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 2010-2014 Estimates
- U.S. Census OnTheMap

Competitive Effect

Used in conjunction with "Shift-Share Analysis" techniques[29], *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:
[% of total local employment/% 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 provider greater specificity.

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

[29] 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.

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

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

Manufacturing

NAICS	Description
3111	Animal Food Manufacturing
3112	Grain and Oilseed Milling
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing
3115	Dairy Product Manufacturing
3116	Animal Slaughtering and Processing
3118	Bakeries and Tortilla Manufacturing
3119	Other Food Manufacturing
3121	Beverage Manufacturing
3149	Other Textile Product Mills
3152	Cut and Sew Apparel 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
3222	Converted Paper Product Manufacturing
3231	Printing and Related Support Activities
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
3271	Clay Product and Refractory Manufacturing
3272	Glass and Glass Product Manufacturing
3273	Cement and Concrete Product Manufacturing
3279	Other Nonmetallic Mineral Product Manufacturing
3313	Alumina and Aluminum Production and Processing
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
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
3331	Agriculture, Construction, and Mining Machinery Manufacturing
3332	Industrial Machinery Manufacturing
3333	Commercial and Service Industry Machinery Manufacturing
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing
3335	Metalworking Machinery Manufacturing
3339	Other General Purpose Machinery Manufacturing
3341	Computer and Peripheral Equipment Manufacturing
3342	Communications Equipment Manufacturing

NAICS	Description
3344	Semiconductor and Other Electronic Component Manufacturing
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
3346	Manufacturing and Reproducing Magnetic and Optical Media
3351	Electric Lighting Equipment Manufacturing
3352	Household Appliance Manufacturing
3353	Electrical Equipment Manufacturing
3362	Motor Vehicle Body and Trailer Manufacturing
3363	Motor Vehicle Parts Manufacturing
3364	Aerospace Product and Parts Manufacturing
3366	Ship and Boat Building
3369	Other Transportation Equipment Manufacturing
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing
3372	Office Furniture (including Fixtures) Manufacturing
3391	Medical Equipment and Supplies Manufacturing
3399	Other Miscellaneous Manufacturing

Information Technology (IT)

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

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

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

Appendix B:

Regional Input Session Takeaways

May 2016

Over the course of two weeks in May, 2016, sixteen input sessions were conducted across the region, with at least one in each of the 11 counties. Local businesses and community partners were invited to provide input on the greatest opportunities and challenges for the local economy, the services available to assist with business growth, and the greatest workforce needs for employers. Each county had its own unique set of takeaways and priorities, however, the following themes were identified as important across the region as a whole.

- The active participation and enthusiasm in each of the input sessions across the region was impressive and indicates a high level of engagement and interest in contributing to the implementation of a regional strategy. Moving forward, it will be critical to continue to communicate with these participants and other community members to harness this energy into coordinated action.
- There was a common theme across input sessions of recognition that Northern California is different from the rest of California in a lot of ways, and state policies often seem to disregard this. There is a need for advocacy for the region – to bring awareness to its differences and what it is like for businesses to operate in this area.
- One of the biggest strengths that surfaced across the region was the high quality of life that is available in the area. People live in the area because they want to and want to pursue a certain lifestyle. This can be valuable in talent attraction efforts if this message can be developed and used for recruitment.
- A great challenge of the region is its size and the vast geography that it covers. Logistically, this can make collaboration difficult, but the geography also varies extensively, leading to different economic strengths in different communities. Despite this barrier, there seemed to be a willingness that would support collaborative efforts if a mechanism for communication and "sharing wins" could be developed.
- Across the region, participants recognized that youth engagement was crucial to building the future workforce. Many youth do not have a full understanding of the opportunities that are available to them locally after graduation, and that there are careers they can pursue without leaving to get a four year degree. Educating more on these opportunities through more connections with education and business and promoting work-based learning activities at a younger age can help to keep young people engaged in their local communities.

- Entrepreneurship and small business development was mentioned as an opportunity and a need in nearly every input session. This can be an important strategy to fill in some of the service gaps that exist in the smaller, more isolated communities. It was also cited as a strategy to engage those who are not suited for a typical nine to five job. Entrepreneurship can help capture some of the creativity and alternate ways of thinking that can often be written off as a lack of interest in working.
- Housing was mentioned as a challenge in almost every county across the region. In some areas, the housing stock is so low that there aren't available properties for workers coming in from outside of the area, especially rental properties. The lack of rental properties is also particularly challenging for areas with a large seasonal workforce. In other areas, the available housing is so expensive that it is difficult to attract entry-level workers who will not be earning enough to afford the available properties.
- Another infrastructure barrier that was frequently mentioned was access to high speed internet. Most communities across the region do not have fiber access or broadband, which affects both business and talent attraction.

Appendix C:

NoRTEC Regional Survey Summary

March – July, 2016

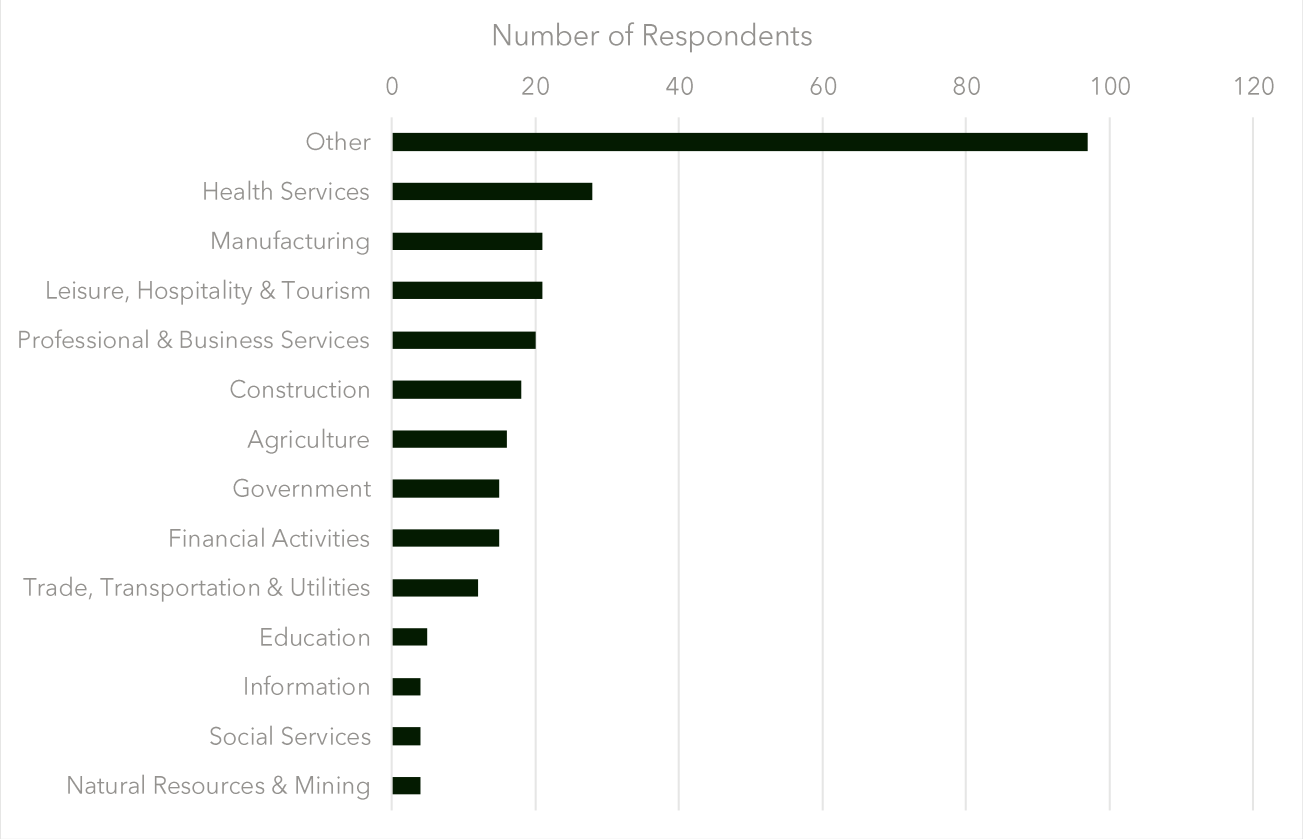
TPMA in collaboration with NoRTEC and its service providers developed a survey designed to engage regional employers and to better understand current workforce trends and needs in the NoRTEC region. In doing so, our consulting team collaborated with NoRTEC and its service providers, which included a diverse group of workforce development, economic development, and other community organizations. Over a four-month period the survey was distributed via email and completed through face-to-face meetings with employers. Survey questions were focused on the following topics:

- Industry and business demographics;
- Employment numbers and projections;
- Labor market "churn";
- Skill needs and gaps;
- Education and training requirements;
- Desired industry recognized credentials; and
- Training challenges.

Just under 300 employers participated in the survey. The following includes a summary, analysis and key findings.

Which industry best describes your company?

The employers surveyed represent a wide variety of industries across the 11-county region. Aside from the category of "Other", the majority of industries represented through the survey include: Health Services; Manufacturing; Leisure, Hospitality, & Tourism; and Professional & Business Services.



How many employees do you have?

Of those who responded to the survey, the total average employment per business was just over 62 employees. Many businesses surveyed employ seasonal and temporary employers, which will be an important consideration for NoRTEC as it moves forward to provide workforce services. It should also be noted that the vast majority of businesses surveyed have fewer than 20 employees.

Number of Employees*																		
	5 or less	6-10	11-20	21-30	31-40	41-50	51-75	76-100	101-150	151-200	201-250	251-300	301-350	351-400	401-450	451-500	501 or	Average
Total	83	49	49	16	16	6	20	17	12	11	5	2	0	3	0	5	1	62
Full-time	102	45	72	17	12	9	13	2	14	4	5	1	0	1	0	3	1	41
Part-time	102	41	17	4	3	1	6	3	2	2	0	0	0	0	0	0	1	24
Seasonal	58	9	3	4	2	2	4	1	0	0	0	0	0	1	0	0	1	21
Temporary	56	7	1	2	1	1	0	0	0	0	0	0	0	0	0	0	1	21

**Number of responses for each category.*

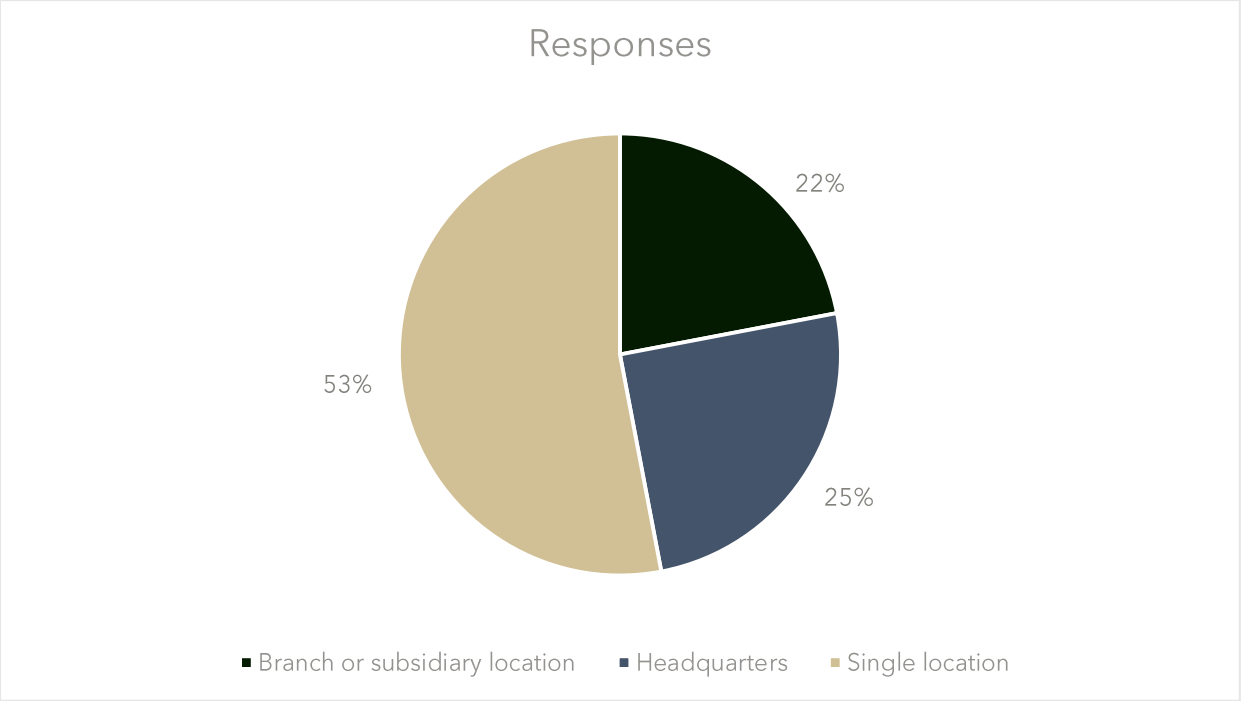
How many total employees do you have by county?

Aside from Del Norte County, the highest average employment is found within Butte, Shasta, Tehama, Lassen, Modoc, and Trinity counties.

County	Average
Butte	12.6
Del Norte	89.6
Lassen	11.5
Modoc	10.6
Nevada	3.5
Plumas	1.8
Shasta	12.0
Sierra	1.1
Siskiyou	9.3
Tehama	11.9
Trinity	10.2

Which best describes this location?

Over half of the businesses that responded to the survey have just one location. The remaining 47% of respondents represent businesses with more than one location.

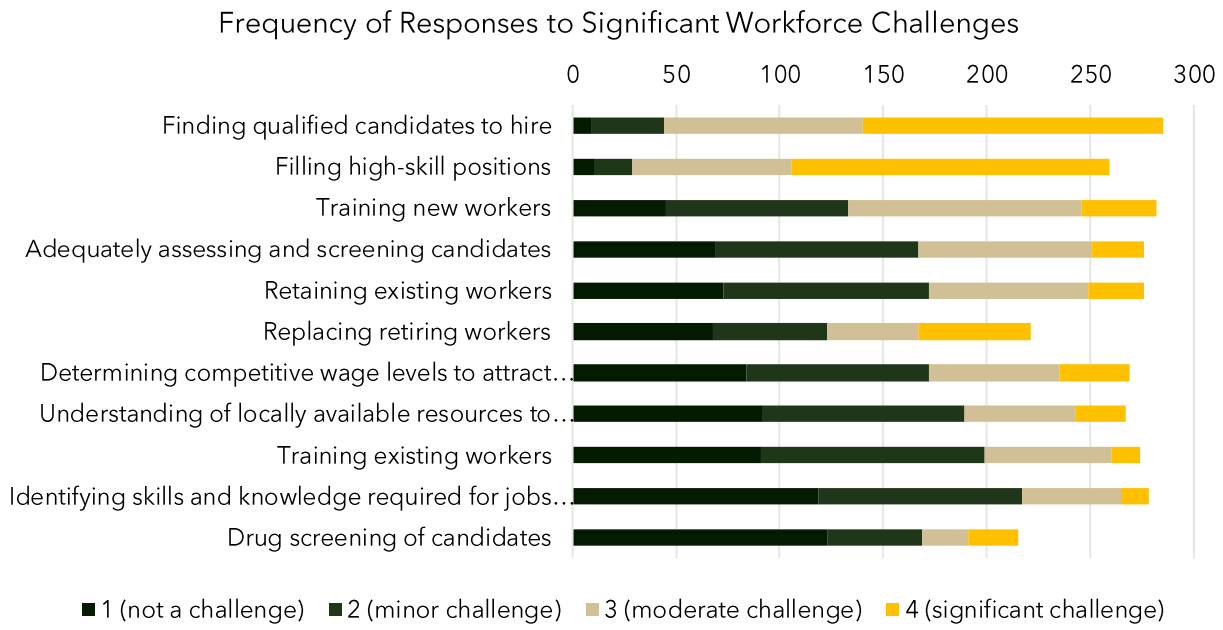


On a scale of 1 (not a challenge) to 4 (significant challenge), how challenging are the following workforce issues for your company?

According to survey respondents, of the 11 workforce challenges presented within the survey, the top challenges include: finding qualified candidates to hire; filling high-skill positions; training new workers; adequately assessing and screening candidates; and retaining existing workers.

While these are all challenges that many workforce regions encounter, these results indicate that there is a need for NoRTEC to work with regional service providers and employers to assist with pre-employment activities such as finding qualified candidates, and better assessing and screening candidates.

Workforce Issues	1 (not a challenge)	2 (minor challenge)	3 (moderate challenge)	4 (significant challenge)	Unsure or N/A
Finding qualified candidates to hire	9	35	96	145	7
Training new workers	45	88	113	36	9
Filling high-skill positions	11	18	77	153	29
Adequately assessing and screening candidates	69	98	84	25	11
Drug screening of candidates	123	46	22	24	75
Determining competitive wage levels to attract workers	84	88	63	34	19
Identifying skills and knowledge required for jobs at my company	119	98	48	13	11
Retaining existing workers	73	99	77	27	10
Training existing workers	91	108	61	14	10
Replacing retiring workers	68	55	44	54	67
Understanding of locally available resources to help my company	92	97	54	24	23



Top Five Most Challenging Workforce Issues from Above

Top Five Challenges	Responded "Moderate Challenge or Higher"
Finding qualified candidates to hire	241
Filling high-skill positions	230
Training new workers	149
Adequately assessing and screening candidates	109
Retaining existing workers	104

What is your most significant workforce-related challenge or your greatest workforce need? [ten or more responses]

For those who responded, "finding qualified workers" was the most frequently cited challenge, followed consecutively by "soft skills"; "offering a competitive wage"; "retaining employees"; and "failing drug tests".

Challenge	Top Responses
Finding qualified workers	118
Soft skills	58
Offering a competitive wage	26
Retaining employees	21
Failing drug tests	12

What is the average vacancy length for open positions?

The average length based on all responses is 9.72 weeks.

How many full-time (35+ hours/week) new, replacement, and retiring workers do you expect within the next 0 to 12 months, 1 to 2 years, 3 to 4 years, and 5 to 7 years?

Overall, the average number of expected and new workers is fairly low. Over the next seven years, the numbers are also expected to remain fairly consistent. However, the survey results indicate a slight uptick in the number of expected new workers, and the number of retiring workers over the next five to seven years. At the same time periods when employment is expected to increase, the number of retirements is expected to increase, which could create some tension in the labor market. Therefore, this is a trend that NoRTEC needs to monitor moving forward.

Number of New Positions	Average	Range
0-12 months	1.6	1-2
1-2 years	2.1	2
3-4 years	2.1	2
5-7 years	2.2	2

Number of Replacement Workers	Average	Range
0-12 months	2.7	2-3
1-2 years	2.5	2-3
3-4 years	2.6	2-3
5-7 years	2.7	2-3

Number of Retiring Workers	Average	Range
0-12 months	1.1	1
1-2 years	1.1	1
3-4 years	1.3	1
5-7 years	1.8	1-2

Please provide information regarding your current wages for up to 3 of your top full-time occupations by number of employees.

The responses below are a summary of occupations most noted. Based on survey results, the top three occupations most noted tended to fall within three categories: 1) general labor/entry-level positions; 2) managers; and 3) technicians. Of these three, the greatest number of available jobs reported were within the technician category. However, the highest wages reported were within the managers category.

Top Occupation 1

Title: General Labor/Entry-level

Job Description: Varies; primarily food service, maintenance, and physical labor

Average number of jobs at location: 11

Desired/required certificates/credentials: None; HS diploma preferred

Average entry level: $11.69/hr

Average mid-level: $12.93/hr

Average advanced-level: $15.26/hr

Top Occupation 2

Title: Managers

Job Description: Manage day-to-day operations of business and other employees

Average number of jobs at location: 2-3

Desired/required certificates/credentials: None; HS and some college preferred; previous management experience preferred

Average entry level: $16.77/hr

Average mid-level: $20.27/hr

Average advanced-level: $25.61/hr

Top Occupation 3

Title: Technicians

Job Description: Provided skilled labor and content knowledge in area of expertise

Average number of jobs at location: 20

Desired/required certificates/credentials: Previous experience in trade required; journeymen certifications preferred

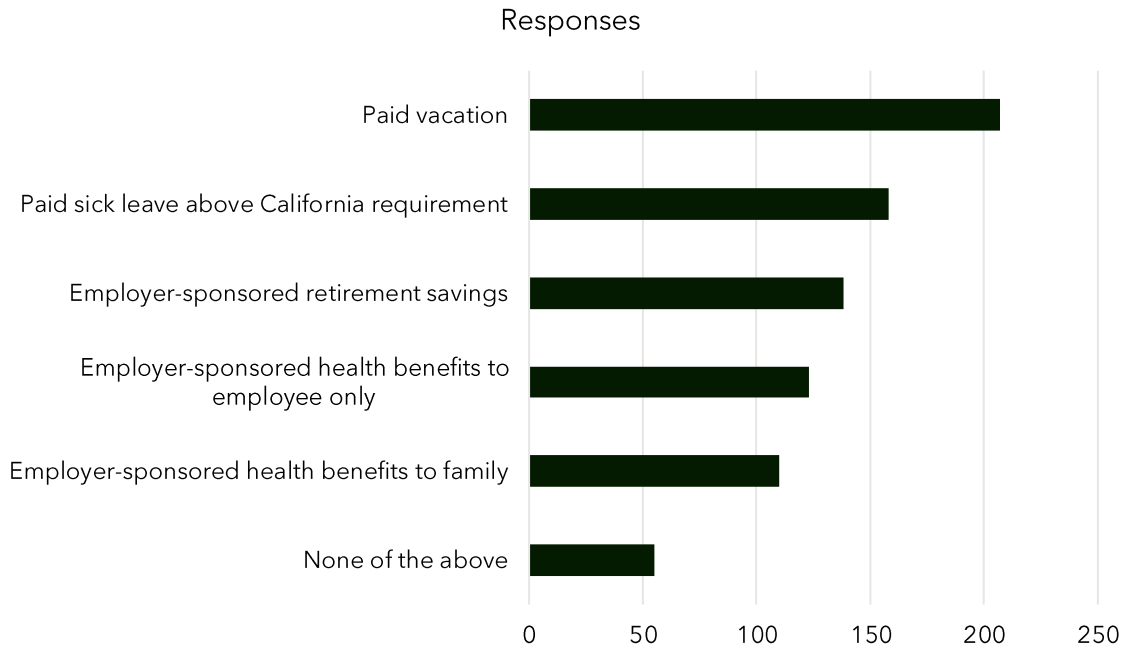
Average entry level: $14.48/hr

Average mid-level: $18.35/hr

Average advanced-level: $20.51/hr

Do you provide any of the following health benefits?

Respondents indicated that most provide either paid vacation or paid sick leave above the California requirement.



Top five most difficult to fill positions and why

While the total number of responds for this question was low, general/entry-level and technical positions were the most difficult to fill. The lack of qualified candidates was the number one reason provided by employers.

Position	Reason	Responses
General/entry-level labor	Low wages, undesirable positions/schedules	22
Technicians	Lack of qualified candidates	20
Management positions	Lack of qualified candidates	15
High skill positions	Lack of qualified candidates	12
Medical staff	Lack of qualified candidates; candidates unwilling to relocate to a rural area	11

Please provide information for up to 3 of your most difficult to fill full-time occupations.

Detailed occupational information provided by employers regarding the most difficult to fill, full-time positions is similar to the top occupations listed above. Both entry-level and technical operations are the most difficult to fill. However, there is also a need for various openings within the medical field. The wages for medical positions tend to be higher.

Title: General/Entry-level labor
Brief job description: Varies; primarily food service, maintenance, and production assistance
Number of current openings: 64
Desired or required certificates or credentials (if any): None; previous work experience preferred
Hourly/annual wage ($): $13.11/hr

Title: Medical Positions
Brief job description: Various openings – doctors; PAs; nurses (RN or LVN)
Number of current openings: 83
Desired or required certificates or credentials (if any): Appropriate education and state medical licenses
Hourly/annual wage ($): $30.20/hr

Title: Technicians
Brief job description: Provide skilled labor and content knowledge in area of expertise
Number of current openings: 386
Desired or required certificates or credentials (if any): Previous technical experience; journeymen certifications preferred
Hourly/annual wage ($): $18.20/hr

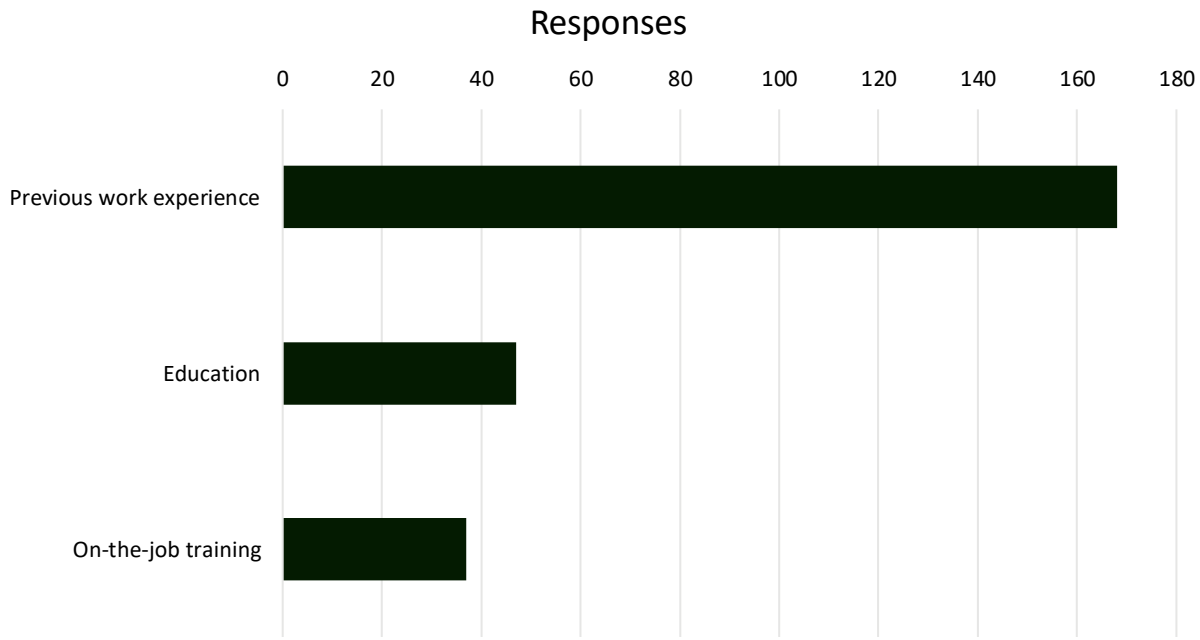
What are the factors that most impact difficult to fill positions? [ten or more responses]

Again, the most significant challenge indicated that was required for difficult to fill positions was finding qualified candidates. This was closely followed by finding candidates with the necessary soft skills, as well as those willing to accept the relatively low wages offered within the region. This data suggests that NoRTEC should consider focusing on recruitment strategies designed to bring workforce talent to the region, as local supply appears to be low and often unqualified.

Top Responses	Responses
Finding qualified candidates	69
Candidates lacking soft skills	27
Low wages	24
Candidates unwilling to relocate to rural areas	14
Candidates failing drug test	12
Undesirable work conditions	11

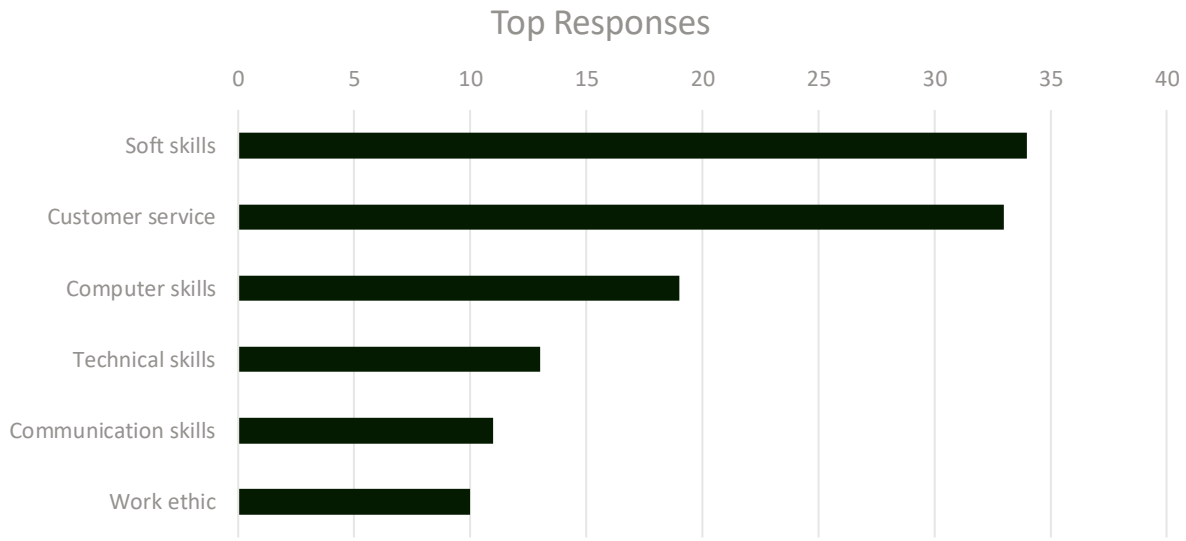
What do you look for most from candidates in difficult to fill positions?

Of those who responded to this question, previous work experience was overwhelmingly indicated when looking for new candidates.



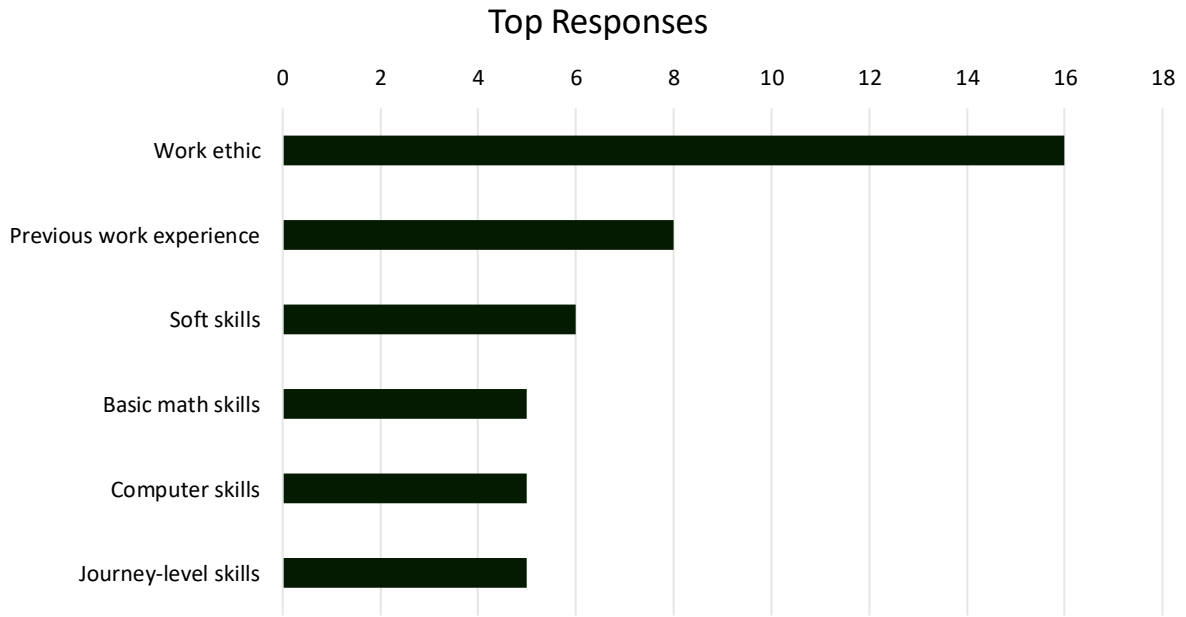
What other (if any) skills and/or experience levels are currently in greatest demand? [ten or more responses]

When asked about skills, employers who responded indicated that soft skills, followed closely by customer experience skills/experience were in greatest demand.



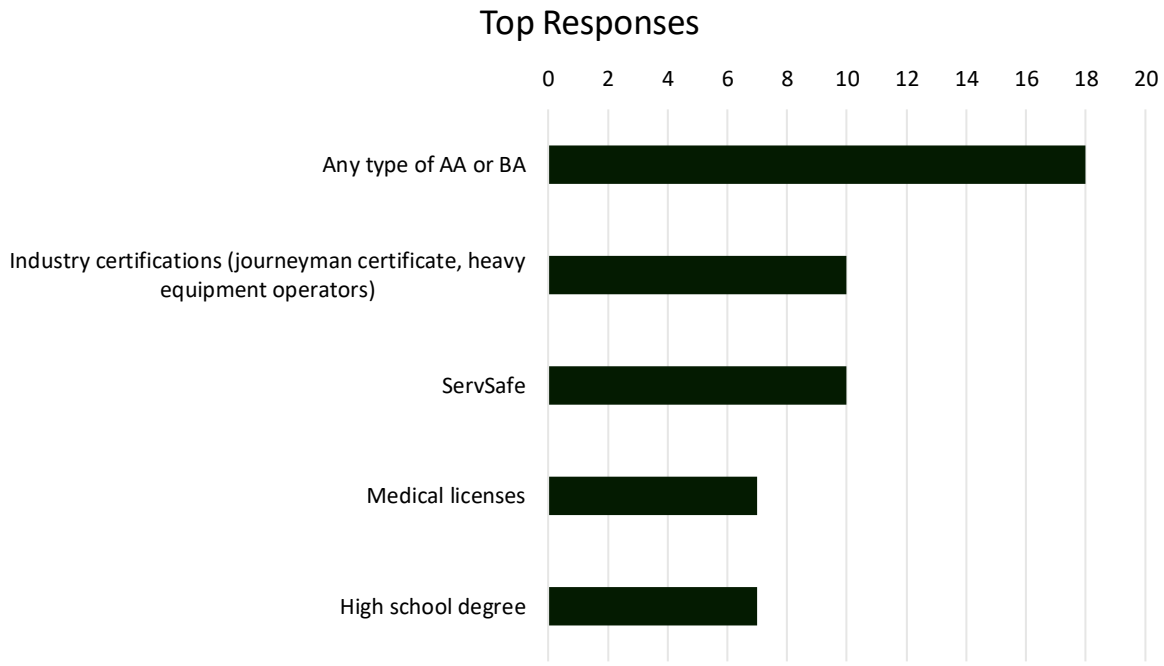
What other (if any) skills and/or experience levels are most difficult to find? [five or more responses]

Responses to this question were somewhat low. However, work ethic was the most mentioned skill for employees.



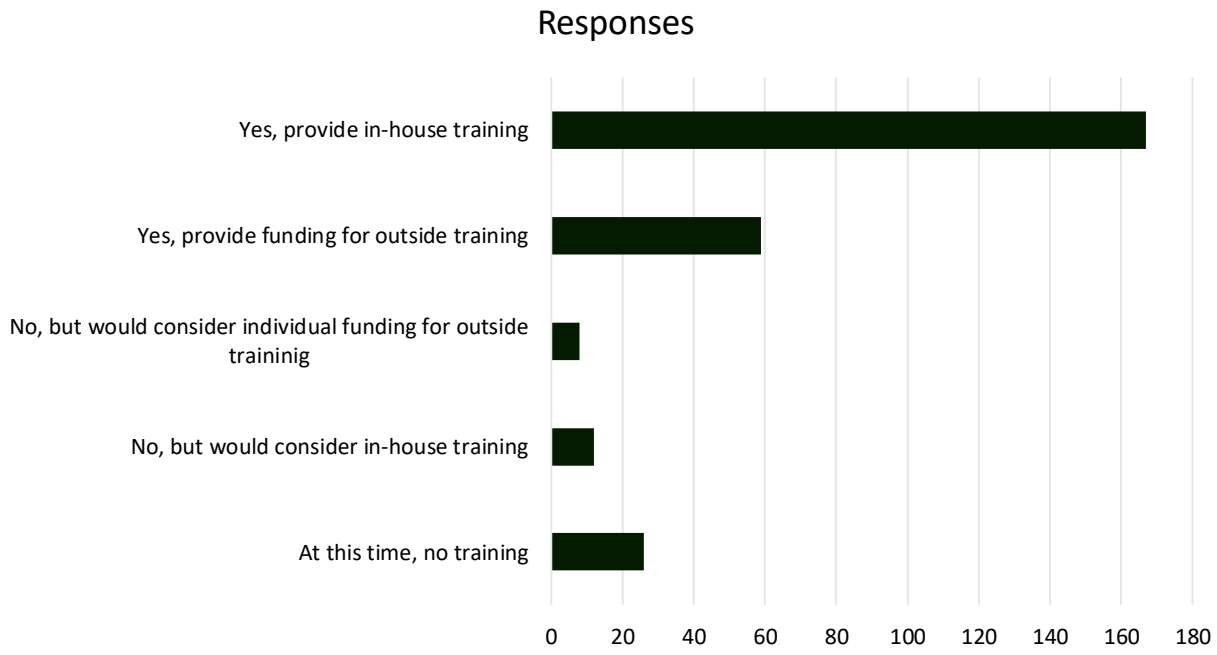
What industry-recognized credentials, certifications and/or degrees do you value most? [five or more responses]

Overall, most respondent did not place a high level of importance on finding employees who have industry-recognized credentials. However, for those who responded, some level of college education was most frequently mentioned.



Do you offer training or other professional development, above and beyond initial on-the-job training?

Most respondents indicated that some level of training is already provided. The vast majority indicated the availability of in-house training. The next level of training indicates funding and assistance for outside training.



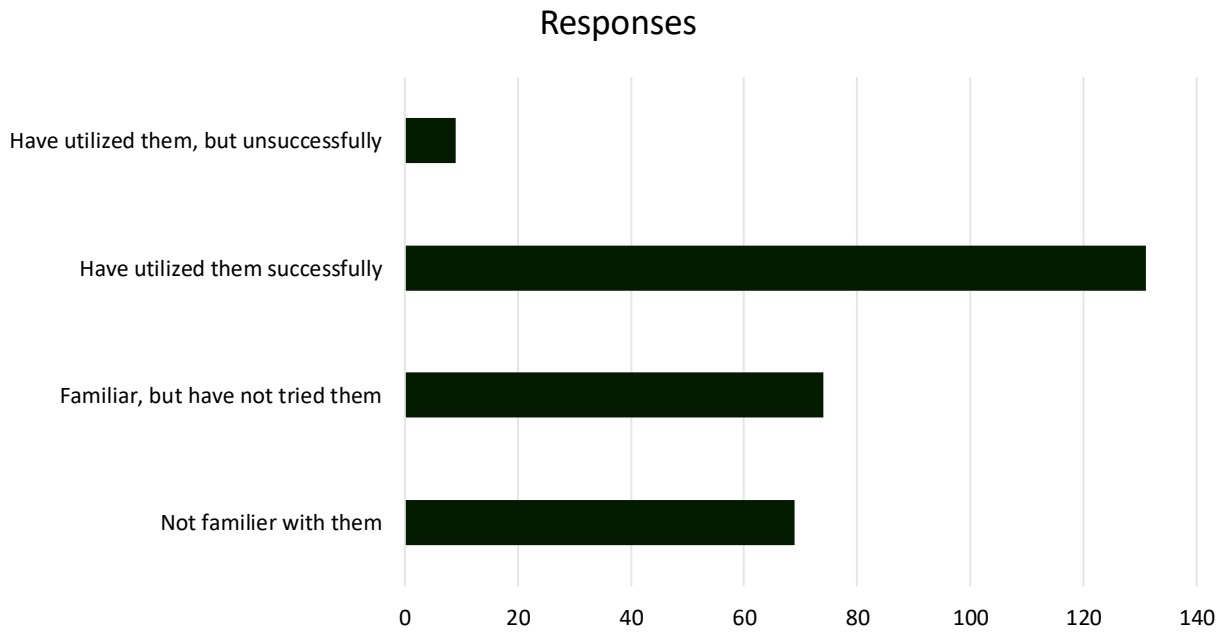
How do you rate the following?

This question is designed to better understand current workforce needs. While responses vary, an area where employers need the most assistance is clearly the overall quality of entry-level workers.

	Excellent	Good	Fair	Poor	Unsure
Soft skills of workers	35	115	77	21	19
Hard/technical skills of workers	25	113	77	17	19
Overall quality of entry-level workers	10	94	110	42	12
Overall quality of high-skill workers	52	118	51	14	32
Quality of education and training programs	25	94	71	20	47
Knowledge of available services from America's Job Center of California	38	59	55	35	74
If used, the overall effectiveness of services from America's Job Center of California	41	83	9	27	91

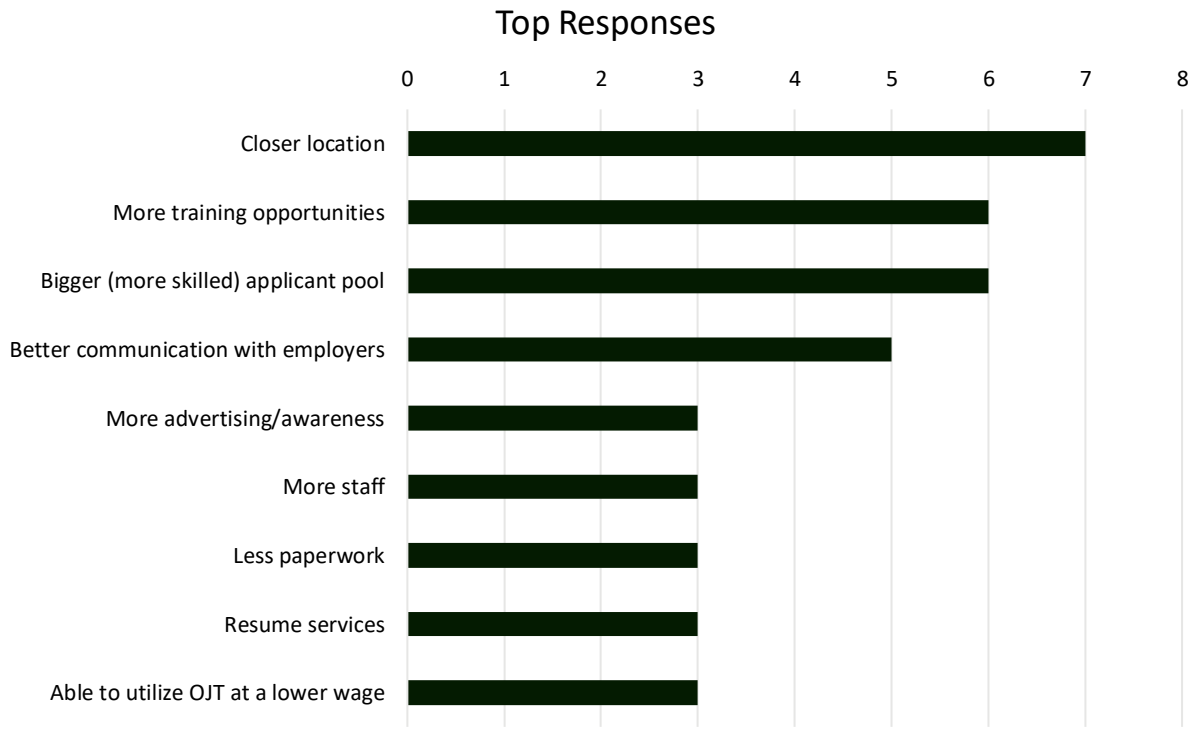
Which of the following best describes your experience with your local America's Job Center of California office and/or business service center?

For those employers who have utilized their local America's Job Center of California, individual experiences have mostly been positive. That said, over 130 employers indicated that they were either familiar, but have not tried them or were no familiar with their offerings. This presents a significant opportunity for NoRTEC to promote workforce services.



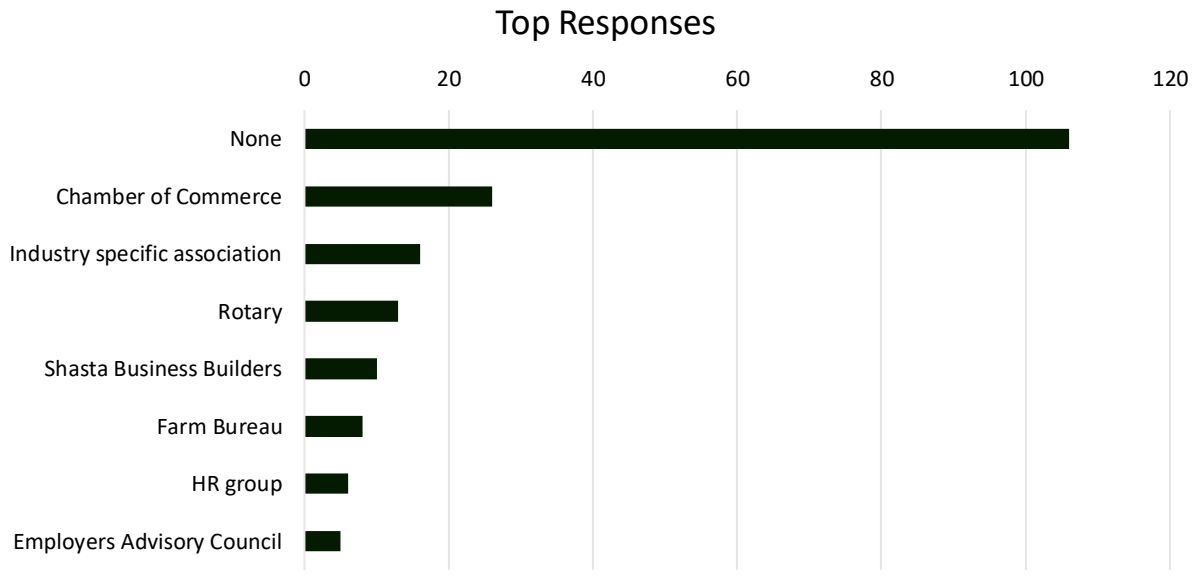
If utilized, if you could improve one thing about your local America's Job Center in California office and/or business service center, what would it be? [three or more responses]

For this question, there were limited responses, and, thus, it is difficult to draw significant conclusions regarding areas for improvement. Thus, TPMA recommends that NoRTEC and its service providers continue to engage regional employers.



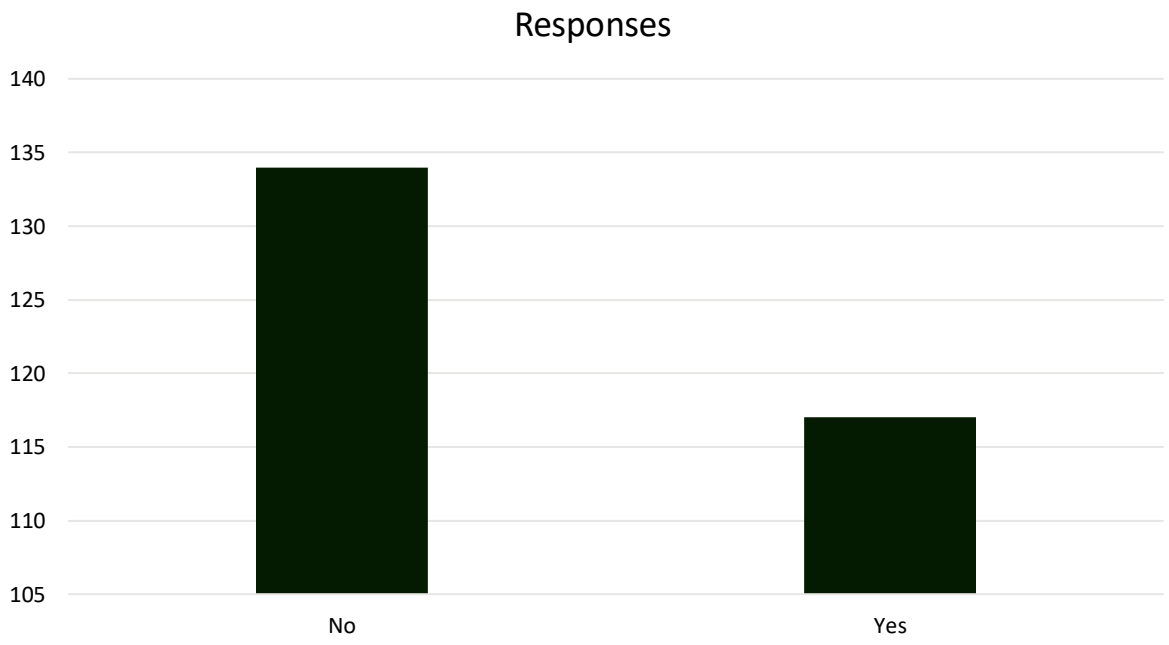
What business or trade groups do you currently participate in? [five or more responses]

The vast majority of respondents do not participate in an industry-specific trade group. This indicates a significant opportunity for NoRTEC to both educate and inform employers regarding industry groups that may provide company benefits, as well as industry knowledge.



If you do not participate, would you be open to a member of our staff contacting you to participate in a local business group for your industry that focuses on tackling the most pressing workforce and business growth issues?

Over 115 survey respondents indicated that they would be open to NoRTEC contacting them to participate in an industry-wide organization. TPMA will supply NoRTEC with the positive responses.



Appendix D:

Job Boards – North State Grow Manufacturing Roundtable & Expo

October, 2014

Each company participating at the Expo displayed a board with the positions they typically hire, the level of education required for each position, and which positions are hard to fill (highlighted in yellow). The following is a list of the positions presented at the Expo.

Job positions C Sys Labs

High School Graduate

Customer Kit Parts Auditor
Component Prep Pick/Place
Component Prep Through Hole
Pick/Place Component Loader
Wire Cutting/Stripping
Wire Tinning
PCB Stuffing
Laser Cutter Operator
Shipping/Receiving
Janitorial

Jr. College Graduate

Electrical Testing
Pick/Place Operator
Selective Soldering Operator
Incoming Component Inspector
Work Scheduling
Final Product Inspection
Hand Soldering/Retouch
Administration Assistant
Solder Paste Applicator

University Graduate

CAD Engineering- PCB's
Circuit Design- Testing
Circuit Design- Products
Firmware Code Developer
Pick/Place Programming
Accounting
Process Development
Machine/Fixture Design
Purchasing
Sr. Administration
Document Control

Job positions at Air Spray

High School Graduate

Janitorial
Facilities Maintenance
Receptionist
Aircraft Apprentice
Fabricator
Welder
Stores/Supply Technician
Ground Support Equipment Technician
Machinist

Jr. College Graduate

FAA Airframe/Power Plant Mechanic
FAA Aircraft Inspector
Tanker Pilot
Aircraft Crew Chief
Maintenance Supervisor
Aircraft Field Support Operator
Airframe Fabricator
Jet Engine Operator
Electronics Technician
Electrical System Designer
Avionics Installer
NDT Operator
CAD Solid Model Designer
Welder
Machinist

University Graduate

Maintenance Manager
Production Management
Mechanical Engineer
Electrical Engineer
Mechatronics Engineer
Accounting
Human Resources
Project Management

Job positions at All Metals Supply

High School Graduate

Press Brake Operator

Warehouse Hand

General Floorhand

Jr. College Graduate

Laser Operator

Certified Welder

Plasma Operator

Press Brake Programmer

Inside Sales

Project Quoting

University Graduate

Laser Programmer

Plasma Programmer

Project Management

Project Coordinator

Job positions at Alliance for Workforce Development, Inc.

High School Graduate

Receptionist

Service Coordinator

Jr. College Graduate

Tutor

Accounts Receivable

Accounts Payable

Program Coordinator

University Graduate

Business Service Representative

Managers

HR and Benefits Administrator

Directors

Job positions at Dynaplug

High School Graduate

Receptionist
Shipping/Receiving
Inventory
Parts Puller
Janitorial
Small Parts Assembly
Maintenance

Jr. College Graduate

Quality Control
Supervisor
Engineering Technician
Solid Model CAD Technician
CNC Mill Operator
Sales/Customer Support
Administration Assistant
Graphic Design

University Graduate

Mechanical Engineer
Marketing
Accounts Manager
Purchasing
Project Management
Production Management
Business Development

Job positions at Elite Solar

High School Graduate

Parts Assembly

Inventory/Parts Puller

Shipping & Receiving

Janitorial

Solar Installer

Office Assistant

Sales Assistant

Shop Assistant

Jr. College Graduate

Customer Service Rep.

Monitoring Installer

Installation Technician

Monitoring Account Manager

Monitoring Programmer

Engineer Technician

Quality Control

Maintenance

Parts Runner

Website Manager

Construction Manager

Lead Solar Installer

University Graduate

Job positions at Focused Energy/Precision Fluid Controls

High School Graduate	Jr. College Graduate	University Graduate
Janitorial	Laser Marker	Software Design
Packaging	Bookkeeper	Computer Graphics
Receptionist	Process Technician	Operations Manager
Delivery	Receptionist	Accountant
Parts Cleaning	Shipping/Receiving	Engineering Technician
	Machinist	Project Manager
	Technician	Sales Engineer
	Inventory Control	Human Resources
	Quality Control	Mechanical Engineer
		Personal Assistant
		Marketing/Graphic Design
		Quality Management

Job positions at GPI

High School Graduate

Aerator
Assistant
Design Engineer
Facilities Maintenance
Forklift Operator
Inspector
Machine Operator
Maintenance Technician
Press Feeder
Press Operator
Production Lead
QA Assistant
QA Technician
Shipping/Receiving Lead
Tool Technician
Tooling
Utility Worker

Jr. College Graduate

Administrative/Executive Assistant
Clerk
Continuous Improvement Technician
Die Maker
Drafter
Electrical Technician
Electronics Technician
Field Services Coordinator
Graphic Technician
Graphics Coordinator
Human Resources Coordinator
Ink Technician
Lab Technician
Maintenance Technician
Materials Coordinator
Mechanical Technician
Payroll Administrator
Production Scheduler/Planner
Purchasing Coordinator
Tactical Designer
Technical Designer

University Graduate

Account Executive
Accountant
Benefits Analyst
Business Systems Analyst
Buyer
Carton Design Specialist
Controller
Demand Planning Analyst
Electrical/Mechanical Engineer
Environmental Engineer
Graphic Artist
Graphic Designer
Graphics Specialist
Human Resource Generalist
Machine Estimator/Production Plan.
Maintenance Planner/Scheduler
Manufacturing Engineer
Microwave Packaging Scientist
Product Development Engineer
Reliability Engineer
Risk Analyst
Six Sigma Black Belt/Lean Practitioner
Structural Designer

Job positions at InterWest Insurance Services

High School Graduate	Jr. College Graduate	University Graduate
NOT	Human Resources	Accounting
APPLICABLE	Accounting	Claims Coordinator
	Claims Coordinator	IT
	Account Manager	Human Resources
	Producer	Account Manager
	Loss Control	Producer
	Risk Manager	Loss Control
	IT	Risk Manager

Job positions at Joy Signal Technology

High School Graduate

Production Assembler

Production Lead

Product Specialist

Shipping/Receiving

Warehousing

Maintenance

Sales/Customer Support

Jr. College Graduate

Engineering Technician

CAD Technician

Quality Technician

Process Documentation

Purchasing

Supervisor

University Graduate

Mechanical Engineer

Mechatronics Engineer

Electrical Engineer

Production Management

Accounting

Human Resources

Project Management

Job positions at MTECH

High School Graduate

Shipping/Receiving Clerk
Inventory Clerk
Janitor
Production Clerk
CNC Operator
Fabricator
Finisher
Assembler
Tester

Jr. College Graduate

Production Supervisor
Buyer
Computer-Aided Drafter
Computer-Aided Machinist
Accounting Assistant
Engineering Technician

University Graduate

Human Resources
Mechanical Engineer
Marketing
Operations
Business Development
Quality
Accounting
Sales

Job positions at Net Controls, LLC

High School Graduate

Shipping/Receiving

Machinist Trainee

Parts Cleaning/Prep

Assembly

Powder Coating

Jr. College Graduate

Assembly and Test Manager

CNC Machinist (Advanced)

Customer Service Associate

Planning

Field Service

Mechanical/Electrical CAD

Inside Sales

QA Technician

Engineering Technician

University Graduate

Accounting

Sales Engineer

Manufacturing Operations

Marketing/Product Management

Design/Product Engineer

Management

Staff/Technologist

Mechanical/Electrical Engineer

Sr. Applications Engineer

Sr. Design Engineer

Job positions at Nor-Cal Vans, Inc.

High School Graduate

Receptionist

Mobility Equipment Installer

Interior Installer

Jr. College Graduate

Manual Welding

Automotive Painter

In-house Fabrication

Sales Support

Administrative Assistant

Supervisor

University Graduate

Accounting

Purchasing

Marketing

Engineering

Production Management

Job positions at Precision PCB

High School Graduate

Intern

Hand Soldering

Janitorial

Shipping/Receiving

Jr. College Graduate

Intern

Circuit Board Assembly

BGA Rework Machine Operator

BGA Machine Installer

Social Media Marketer

Sales Person

University Graduate

Manufacturing Trainer

Marketing

Advertising

Process Engineer

Production Management

Job positions at ATK-RCBS

High School Graduate	Jr. College Graduate	University Graduate
Small Parts Assembly	Customer Service	Mechanical Engineer
Assembler II	Administrative Assistant	Mechatronics Engineer
Shipping/Receiving	CNC programmer	Accounting
Maintenance Worker	Planner/Scheduler	Marketing
CNC Operator	Maintenance Technician	Production Management
Bead Blast Operator	Buyer	Human Resources
Bagger	Engineering Technician	Supply Chain Manager
Casting Grinder	Drafter	Safety/Environmental Manager
Material Mover	Supervisor	Import/Export Manager
Packager	CNC Technician	

Job positions at Roplast Industries

High School Graduate

Conversion Maintenance

Conversion Operator

Conversion Inspector

Jr. College Graduate

Press Operator

Extrusion Operator

Accounts Receivable

University Graduate

Production Supervisor

Process Engineer

Job positions at SECO Manufacturing

High School Graduate

Shipping/Receiving
Powder Coating
Assembly/Kitting
Small Parts Assembly
CNC Mill Operator
Injection Mold Operator
Receptionist
Inventory/Parts Puller
Silk Screener
Deburring/Anodizing
Sewer

Jr. College Graduate

Metal Lathe Operator
CNC Mill Programmer
Sales/Customer Support
Manual Welder
Graphic Designer
Web Designer
Order Fulfillment
Drafter
Material Inspector
Planner

University Graduate

Mechanical Engineer
Accounting
Material Specialist
Marketing
Human Resources
Product Management
Engineering Management
Logistics Management
Quality Management
Plant Management
Operations Management
IT
Purchasing
Finance Management
General Management

Job positions at Sierra Pacific Industries

High School Graduate

Truck Driver

Laborer

Millwright

Mechanic

Windows Territory Manager

Windows Service Scheduler

Window & Door Service Person

Saw Filer

Jr. College Graduate

Electrician

Dealer Sales Representative

University Graduate

Computer Engineer

Web Developer

Division Forester

District Forester

Job positions at SOF-TEK

High School Graduate	Jr. College Graduate	University Graduate
Wire Prep Assembly	Shipping/Receiving Coordinator	Quality Assurance Technician
Electronics Assembly	Inventory Management Technician	Electrical Engineer
	Front Office Secretary	Mechanical Engineer
	Wire Machine Operator	Computer Programmer

Job positions at Springboard Biodiesel

High School Graduate

Small Parts Assembly

Shipping/Receiving

Janitorial

Jr. College Graduate

Customer Support

System Assembly

Manual Welding

Inventory Management

System Maintenance Tech.

Quality Control Tech.

Production Planner

Purchasing Associate

SEO/Web Projects

Salesmen

University Graduate

Mechanical Engineer

Electrical Engineer

Marketing

Information Tech.

Production Management

Sales Manager

CFO

CEO

Job positions at Transfer Flow

High School Graduate

Small Parts Assembly
Powder Coating
Inventory/Parts Puller
Shipping/Receiving
Receptionist
Janitorial
Landscape/Gardener
Bed Lining Application
Post Welding Semi-Finish
Plasma Table Operator
CNC Mill Operator

Jr. College Graduate

Sales/Customer Support
Administrative Assistant
Manual Welding
Laser Operator
Robotics Welder Operator
Robot Programmer
Structural Material Fabricator
Solid Model CAD Technician
CNC Mill Programmer
Installation Technician
Engineering Technician
Supervisor
Maintenance
Planner
CNC Brake Press Operator

University Graduate

Mechanical Engineer
Mechatronics Engineer
Computer Engineer
Electrical Engineer
Accounting
Marketing
Advertising
Graphic Design
Human Resources
Project Management
Production Management
Chief Financial Officer
Chief Executive Officer
Purchasing

Job positions at Weiss McNair

High School Graduate

Material Handlers
Parts Kitting
Receiving Specialist
Shipping Specialist
Sub Assembly Welder
Product Assembler
Paint Preparation
Receptionist

Jr. College Graduate

Inventory Specialist
Planner/Scheduler
Order Administrator
Laser Operator
Welding Fabricator
Saw/Lathe Operator
AP/AR Clerk
Final Test Technician
CAD Technician
Field Service Mechanic

University Graduate

Mechanical Design Engineer
Hydraulics Design Engineer
Manufacturing Engineer
Mechatronics Engineer
Purchasing/Buyer
Master Scheduler
IT Specialist
Product Application Specialist
Sales Representative
Supervision/Management

Job positions at Woof & Poof

High School Graduate

Parts Assembly

Shipping/Receiving

Forklift Operator (Certified)

Custodial

Receptionist

Summer Intern

Jr. College Graduate

Sales/Customer Service

Administrative Assistant

Production Planner

Quality Control

Improvement Coordinator

Seamstress

Fabric Cutter

Purchasing

Mechanical/Machine Repair

University Graduate

Accounting

Human Resources

Project Management

Communications Manager

Marketing Manager

Graphic Designer

Creative Arts

Computer Administrator

CAD Systems Manager

Web/Internet Sales Manager