



San Joaquin Valley Regional Planning Unit Data Analysis

About this Document

In preparation for the development of its regional plan as required by the Workforce Innovation and Opportunity Act (WIOA), Stanislaus County Workforce Development contracted with Resource Development Associates (RDA) to conduct data analysis and prepare data tables and figures to be incorporated into the San Joaquin Valley Regional Planning Unit (SJVRPU) plan. RDA organized this document in alignment with the Employment Development Department directive that states that the regional plan should:

- I. Provide an analysis of the industries and occupations for which there is existing demand.
- II. Provide an analysis of the industries and occupations for which demand is emerging.
- III. Provide an assessment of the employment needs of employers, including knowledge, skills, and abilities required.
- IV. Provide an analysis of current employment and unemployment data, including labor force participation rates and trends in the region.
- V. Provide an analysis of key labor market trends, including across existing industries and occupations.
- VI. Provide an analysis of the educational and skill levels of the workforce.

RDA utilized JobsEQ, a software that provides access to labor market data through various data sources, including, but not limited to, the Bureau of Economic Analysis, the Bureau of Labor Statistics, and the Census Bureau. JobsEQ allowed RDA to collect data specifically for SJVRPU. We also supplemented JobsEQ reports with data from the American Community Survey through the Census Bureau. The final section of this document provides a demographic portrait of the SJVRPU to provide further context to the data presented.

Data Analysis Limitations Due to COVID-19

Since March 2020, the COVID-19 pandemic and subsequent shutdowns have caused major disruptions to California's and the SJVRPU's economic activity, industry growth and output, and employment. The impacts of the pandemic were felt swiftly across the state where unemployment climbed to a height of 16.2% by April 2020.¹ Throughout most of 2020, the economy has slowly improved across the SJVRPU, but continues to experience elevated levels of unemployment and labor market volatility due to the loosening and tightening of restrictions in response to changes in the pandemic.

Typically, during a recession, economic models look to past recessions with similar characteristics to forecast the recession's impact on employment, labor market and industry trends, and economic impacts. The COVID-19 recession is unprecedented in many regards. First, this recession itself is unique in that it is driven by a public health crisis rather than typical market drivers. Secondly, characteristics of this recession are somewhat unprecedented in terms of its unforeseen and sudden onset, the near immediate erasure of historically high employment levels and economic growth across the state, the

¹ Employment Development Department, Labor Market Information Division, Report 400 C Monthly Labor Force Data for Counties April 2020, Revised. Data is not seasonally adjusted.





depth of the impact on specific occupations and industries, and the uneven effect it has had across all industries and occupations. Lastly, the shift of the nearly two-thirds of the US workforce to remote settings has also resulted in unevenly distributed impacts across workers, employers, industries, and regions².

These factors have made typical economic models less reliable and as such forecasts of industry, occupational, and employment growth are less certain. The forecasts provided in this document do include COVID-19 recession as a variable and align with the general consensus that economic growth will accelerate over 2021 and the GDP will likely return to pre-COVID-19 levels by 2022³. That is not to say that the SJVRPU’s economic data fully depicts the challenges local regions have experienced since March 2021 or can predict with absolute certainty how the recovery across the SJVRPU will play out. It will likely take years to fully understand how this pandemic has impacted and transformed the local, regional and state labor markets and workforce.

Summary Statement

Despite recent economic challenges due the COVID-19 pandemic, the SJVRPU is situated to grow economically over the next five years. Unemployment has decreased over 2020 and will continue to drop to near pre-COVID-19 levels over the course of 2021. The region has many of the ingredients needed for healthy economic growth: a large working age population and a high rate of workforce participation, historical and forecasted growth across a diverse mix of industry sectors, job demand across a range of occupations with varying education or training requirements, and an economy that offers opportunities to workers at various stages of their career. While many industries are forecast to continue to grow modestly over the next five years, a large portion of economic growth and job development in the SJVRPU is situated in a handful of sectors, specifically within healthcare, transportation and warehousing, and construction.

The **healthcare** industry is the largest generator of jobs for the SJVRPU and is expected to continue to grow at a rate of 3.6%. Occupations in healthcare support, healthcare practitioners, and social service providers are all projected to grow over the next five years and have a higher demand for qualified workers than the available regional labor supply. Given the growth and demand in this industry/occupational sector, investment in the region’s healthcare career technical education pipeline should remain a priority for the region’s workforce development partners.

The **transportation and warehousing** industry and related occupations represent a unique opportunity for the region. The growth of this industry and associated occupations have demonstrated high growth (8.3% annually) over the past five years and has a higher than average local demand. This trend is likely driven by several factors including growth of online shopping and ecommerce with notable growth during the pandemic as well as the SJVRPU’s strategic location along California’s main transportation corridor and availability and affordability of land for developing large distribution centers. Many of the occupations in this sector are entry-level, but they do offer decent wages and are opportunities for job seekers entering or reentering the workforce or that job seekers that experience barriers to employment or are difficult to employ.

² Bloom, N. 2020. “How Working from Home Works Out”. Stanford Institute for Economic Policy Research. Policy Brief. June 2020.

³ Congressional Budget Office. 2021. An Overview of the Economic Outlook: 2021 to 2031. Retrieved February 2, 2021 from <https://www.cbo.gov/publication/56965>

The **construction industry** is also expected to continue to experience healthy job growth at a rate of 1.1% annually. Similarly, construction-related occupations are also expected to add over 3,000 jobs to the region and grow at a rate of a 1.2% annually. This trend will likely be driven by construction projects in both the Central Valley as well as large urban areas adjacent to the SJVRPU such as the San Francisco Bay Area and potentially the Los Angeles region.

There were several industries and occupations within the SJVRPU that are noted as potentially new and emerging opportunities that workforce partners may want to consider developing career education pipelines in. Industries with potentially emerging job growth are **professional scientific, and technical services** and **mining, quarrying, and oil and gas extraction**⁴ industries. From an occupational standpoint, there is a growing occupational demand in protective services specifically for security guards as well as a notable demand for installation, maintenance, and repair occupations. It is also worth noting that these are careers that offer sustainable wages and have less demanding training requirements for entry into.

The **retail trade** and **accommodation and food services industries** have experienced outsized employment contractions due to COVID-19. While a rebound is expected once social distancing measures are fully lifted, it is unclear if these industries will rebound to pre-COVID-19 employment levels. As a large share of the retail economy has shifted to online sales, it is not clear the extent to which this sector will return fully to a brick and mortar economy. Retail has historically been a large generator of entry and mid-level jobs; a permanent contraction in this industry and occupation could impact employment trends especially for entry-level jobs. While the accommodation and food services industries and occupations have also seen a contraction over 2020, pre-COVID-19 employment levels are expected to resume in this industry and will likely continue to be a critical source of employment for the region.

Lastly, **Agriculture** will continue to be a behemoth in terms of the total percent (13%) of employment for the region. However, job growth in agriculture is expected to be flat or slightly contract. This is likely due to both advances in agricultural technology and the use automation that reduce labor demand as well as geographic limitations on farmable terrain. It is also worth noting that agriculture jobs are often labor intensive and offer some of the lowest wages in the region. However, for the foreseeable future, agriculture will continue to account for a wide portion of employment across the region.

Although the next few years are expected to bring recovery and growth across the state and the SJVRPU, there are still levels of uncertainty and change that may impact the region's industry and workforce. COVID-19 aside, the future of work is expected to experience dramatic changes over the next decade with growing trends towards remote work, shifting consumer demands, technological innovations, and automation of key occupations. The SJVRPU and the affiliated local workforce boards should continue to monitor micro and macro industry and occupational trends and look for opportunities to strengthen existing workforce investments, bolster career education pipelines, and develop a modern and in-demand workforce.

⁴ This is industry demand is largely concentrated in Kern County.

I. Industries and Occupations: Existing Demand

To understand current demand across both industries and occupations, we assessed the following indicators:

- **Percent employment** (level of employment) demonstrates the portion of total employment by an industry or occupation for the San Joaquin Valley Regional Planning Unit (SJVRPU) and reflect the level of demand based on the proportion of employment in a given industry or occupational group.
- **5-year annual growth** (job growth) shows the overall employment trend in an industry or occupational group. This measure uses historical employment data based on moving quarterly average to calculate the average annual increase or contraction of employment in a specific industry or occupational group over a five-year period.
- **Location quotient** is a measure of the relative size or concentration of the region's industry's or occupational group's employment compared to the national average.

Industries with Existing Demand

Table 1 below lists the SJVRPU industries with high to moderate employment demand. In the SJVRPU, transportation and healthcare and social assistance are the industries with highest percent employment, job growth, and concentration of sector employment (also referred to as location quotient or LQ). All of the priority sectors with the exceptions of energy and manufacturing are industries with a high demand for workers.

- **Healthcare and social assistance** is one of the largest employers in the region and will likely continue that trend based on historical growth and the expanding need for healthcare services that is being driven by both demographics, an aging population across the region, and a large expansion of access to healthcare insurance beginning in 2014 with the Affordable Care Act.
- **Transportation and warehousing**, while encompassing a smaller share of the workforce, has grown by 8.3% per year and has a high concentration of workers compared to national trends. The growth in this is likely driven by the expansion of online shopping in the past decade.
- **Construction** accounts for about 5% of all jobs across the region and has grown at 3.1% over the past three years reflecting high demand. While the construction industry's LQ suggests a lower concentration of construction jobs in the region compared to the national averages, the high percentage of employment in the region and healthy growth point to an existing high demand for workers in this industry.
- The **public administration and education** industries account for a wide swath of the employment across the region (6% and 10% respectively). Both of these industry sectors experience high employment, concentration of jobs, and job growth. As these industries are made up largely of directly or indirectly publicly led and funded agencies, services, and programs, growth in these sectors are heavily driven by tax revenues, demographics, and legislation.
- **Agriculture** makes a large percentage (13%) of employment and the region has ten-times the number of workers compared to the national average. This is likely being driven by the San Joaquin Valley being one of the leading agricultural producing regions in the world. The low growth in agriculture is likely being driven by automation and technological advances that reduce the number of workers needed as well as geographic limitations on expansion of current

agricultural output. Despite the low growth, the seasonality of agriculture employment combined with outsized portion of total employment and LQ indicates that there is employment demand.

- Data from the **Manufacturing** industry suggests moderate to low demand for workers. While manufacturing does account for 7% of the jobs in the SJVRPU, these are largely in the agricultural food processing subsectors. The LQ suggest concentration of jobs of in the region below the nation average and the industry has experienced negligible job growth over the past five years. This tracks with a national contraction trend for employment in manufacturing where the industry accounts for 8% all employment, but has seen only 0.3% in annual job growth over the past five years.
- **Accommodation and food services** and **retail** are often interconnected service industries that account for a large portion of employment in the region (respectively 10% and 7%). While jobs in accommodation and food services have grown at annual rate of 0.8%, the retail industry has experienced a contraction in job growth at rate of -0.3% annually. The contraction in retail jobs is likely being driven by multiple factors including growth in online retail and regional economic trends. However, the size of total employment in these industries suggest there is ongoing demand for workers.

Table 1. SJVRPU Industries with Existing Employment Demands, 2020 Q2

Industry	% of Total Employment	Location Quotient (LQ)	5-Year Annual Growth Rate	Employment Demand
Healthcare and Social Assistance	15%	1.05	3.6%	High Demand
Transportation and Warehousing	6%	1.26	8.3%	High Demand
Construction	5%	0.87	3.1%	High Demand
Educational Services	10%	1.17	1.8%	High Demand
Public Administration	6%	1.28	1.6%	High Demand
Agriculture, Forestry, Fishing and Hunting	13%	10.00	-0.1%	High Demand
Manufacturing	7%	0.84	0.0%	Moderate Demand
Administrative and Support and Waste Management and Remediation Services	5%	0.75	1.8%	Moderate Demand
Accommodation and Food Services	7%	0.84	0.8%	Moderate Demand
Retail Trade	10%	0.95	-0.3%	Moderate Demand

Source: JobsEQ Industry Snapshot, 2020Q2 based upon a four-quarter moving average, ranked by Percent of Total Employment. Proportion of total employment is calculated out of a total of 1,604,661 employed in the region.



As of the second quarter(Q2) of 2020, there are 1,604,661 employed workers in the SJVRPU. Table 2 depicts the distribution of all employment across the two-digit NAICS industry groups. The industry groups are ranked from highest level of employment to lowest.

Table 2. Percent of Overall Employment by Industry, 2020 Q2

NAICS	Industry	% of Total Employment
62	Healthcare and Social Assistance	15.33%
11	Agriculture, Forestry, Fishing and Hunting	13.48%
44	Retail Trade	9.65%
61	Educational Services	9.58%
72	Accommodation and Food Services	7.05%
31	Manufacturing	6.93%
92	Public Administration	6.16%
48	Transportation and Warehousing	5.93%
23	Construction	5.04%
56	Administrative and Support and Waste Management and Remediation Services	4.74%
81	Other Services (except Public Administration)	3.43%
42	Wholesale Trade	3.03%
54	Professional, Scientific, and Technical Services	2.71%
52	Finance and Insurance	1.76%
53	Real Estate and Rental and Leasing	1.24%
71	Arts, Entertainment, and Recreation	1.23%
22	Utilities	0.73%
55	Management of Companies and Enterprises	0.71%
51	Information	0.67%
21	Mining, Quarrying, and Oil and Gas Extraction	0.59%

Source: JobsEQ Industry Snapshot, 2020Q2 based upon a four-quarter moving average, ranked by Percent of Total Employment. Proportion of total employment is calculated out of a total of 1,604,661 employed in the region.

Table 3 depicts the concentration of employment by industry as of the second quarter of 2020. Only a handful of industries have concentrations of employment that exceed the sector’s national average of employment. However, the agriculture, forestry, fishing, and hunting industry have ten-times the employment that the industry has based on the national average.

Table 3. SJVRPU Top Competitive Industries, 2020 Q2

NAICS	Industry	Location Quotient
11	Agriculture, Forestry, Fishing and Hunting	10.00
21	Mining, Quarrying, and Oil and Gas Extraction	1.42
22	Utilities	1.40
92	Public Administration	1.28
48	Transportation and Warehousing	1.26
61	Educational Services	1.17
62	Healthcare and Social Assistance	1.05
44	Retail Trade	0.95
23	Construction	0.87
72	Accommodation and Food Services	0.84
31	Manufacturing	0.84
42	Wholesale Trade	0.79
81	Other Services (except Public Administration)	0.78
56	Administrative and Support and Waste Management and Remediation Services	0.75
53	Real Estate and Rental and Leasing	0.71
71	Arts, Entertainment, and Recreation	0.66
55	Management of Companies and Enterprises	0.46
52	Finance and Insurance	0.43
54	Professional, Scientific, and Technical Services	0.39

Source: JobsEQ Industry Snapshot, 2020Q2 based upon a four-quarter moving average, ranked by Location Quotient (LQ). Location Quotient is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an industry (or occupation) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

Occupations with Existing Demand

To understand occupations with existing demand, we used similar indicators (% employment, LQ, and annual growth) to assess demand by two-digit SOC occupations. In addition, we also provided a separate table (see Table 5) that lists unemployment rates and the number of online ads for each two-digit SOC occupation. Table 4 below depicts SJVRPU occupations with moderate to high demand as of Q2, 2020. For the most part occupational employment demand is similar to employment demand by industry with healthcare, social services, and transportation and warehousing showing the strongest employment demand.

Table 4. SJVRPU Occupations with Existing Employment Demands, 2020 Q2

Occupation	% of Total Employment	LQ	5-year Annual Growth Rate.	Employment Demand
Healthcare Support Occupations	5%	1.18	5.2%	High Demand
Community and Social Service Occupations	2%	1.17	3.5%	High Demand
Transportation and Material Moving Occupations	10%	1.22	3.1%	High Demand
Healthcare Practitioners and Technical Occupations	5%	0.90	2.6%	High Demand
Farming, Fishing, and Forestry Occupations	10%	15.59	0.6%	High Demand
Educational Instruction and Library Occupations	7%	1.23	1.8%	High Demand
Protective Service Occupations	2%	1.07	2.1%	High Demand
Construction and Extraction Occupations	4%	0.90	1.6%	Moderate Demand
Installation, Maintenance, and Repair Occupations	3%	0.87	1.3%	Moderate Demand
Management Occupations	6%	0.96	0.9%	Moderate Demand
Food Preparation and Serving Related Occupations	7%	0.89	0.6%	Moderate Demand
Business and Financial Operations Occupations	4%	0.71	1.9%	Moderate Demand
Office and Administrative Support Occupations	10%	0.79	0.3%	Moderate Demand

Source: JobsEQ Occupation Snapshot, 2020Q2 based upon a four-quarter moving average, ranked by Percent of Total Employment. Proportion of total employment is calculated out of a total of 1,604,661 employed in the region.

Table 5 provides the unemployment rate and the number of online jobs ads for the most common occupations in the SJVRPU which has an overall unemployment rate of 9.8% as of 2020, Q2. While this table mostly aligns with demand observed in both industry and occupational sectors, it demonstrates higher levels of employment volatility in the region. Many high demand occupations have lower unemployment than the region's overall unemployment rate. However, it is also important to note that certain occupations such as warehouse and transportation and construction may experience elevated levels of unemployment as these occupations are often characterized by hourly paid positions, seasonal or project-based work, and high turnover. The number of online jobs for each occupation also helps to further nuance demand as occupations with high unemployment, but also a high number of online ads may reflect the occupation has high turnover rates or volatility rather than low demand.

Table 5. SJVRPU Occupational Employment Demand, 2020 Q2

Occupation	Unemployment Rate	Online Job Ads
Healthcare Practitioners and Technical Occupations	3.2%	6,912
Management Occupations	3.4%	3,126
Community and Social Service Occupations	3.6%	1,423
Business and Financial Operations Occupations	4.2%	1,867
Protective Service Occupations	4.7%	739
Healthcare Support Occupations	7.0%	2,012
Installation, Maintenance, and Repair Occupations	7.0%	2,382
Office and Administrative Support Occupations	7.2%	4,196
Educational Instruction and Library Occupations	8.0%	1,857
SJVRPU Region – All Occupations	9.8%	N/A
Occupations with an Unemployment Rate Higher Than the Regional Rate		
Sales and Related Occupations	10.1%	7,247
Production Occupations	10.5%	1,651
Transportation and Material Moving Occupations	11.9%	6,004
Construction and Extraction Occupations	13.8%	807
Personal Care and Service Occupations	15.0%	771
Food Preparation and Serving Related Occupations	15.7%	4,751
Farming, Fishing, and Forestry Occupations	16.0%	71

Source: JobsEQ Occupation Snapshot, 2020Q2 based upon a four-quarter moving average, ranked by Percent of Total Employment. Proportion of total employment is calculated out of a total of 1,604,661 employed in the region.

Table 6 provides depicts how the regions employment of 1,604,661 workers is distributed across occupations by their two-digit SOC.

Table 6. Percent of Overall Employment by Occupation, 2020 Q2

SOC	Occupation	% of Total Employment
53-0000	Transportation and Material Moving Occupations	10%
43-0000	Office and Administrative Support Occupations	10%
45-0000	Farming, Fishing, and Forestry Occupations	10%
41-0000	Sales and Related Occupations	8%
35-0000	Food Preparation and Serving Related Occupations	7%
25-0000	Educational Instruction and Library Occupations	7%
11-0000	Management Occupations	6%
31-0000	Healthcare Support Occupations	5%
29-0000	Healthcare Practitioners and Technical Occupations	5%
51-0000	Production Occupations	5%
47-0000	Construction and Extraction Occupations	4%
13-0000	Business and Financial Operations Occupations	4%
49-0000	Installation, Maintenance, and Repair Occupations	3%
37-0000	Building and Grounds Cleaning and Maintenance Occupations	3%
33-0000	Protective Service Occupations	2%
39-0000	Personal Care and Service Occupations	2%
21-0000	Community and Social Service Occupations	2%
15-0000	Computer and Mathematical Occupations	1%
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	1%
17-0000	Architecture and Engineering Occupations	1%
19-0000	Life, Physical, and Social Science Occupations	1%
23-0000	Legal Occupations	1%

Source: JobsEQ Occupation Snapshot, 2020Q2 based upon a four-quarter moving average, ranked by Percent of Total Employment. Proportion of total employment is calculated out of a total of 1,604,661 employed in the region.

Occupational Demand Summary

The following summary provides an overview on occupational demand in the SJVRPU. Detailed narrative of occupations is provided in the following sections.

Currently there is a large demand for range of **healthcare support and healthcare practitioner and technical occupations**. These occupations account for a large portion of the total jobs in the region, but like many occupations in the healthcare and social assistance industry, require varying levels of training, certifications and licensure, and specialization. Healthcare occupations account for about 15% of total employment and have generally seen healthy job growth that ranges from 5.2% to 2.6% across occupations. It would appear that much of the demand is for practitioners and health technical operators as there are 6,694 online jobs ads for these roles and unemployment in these occupations is around 3.2%. There is also high demand for community and social support occupations. Job growth in these occupations have increased 3.5% annually over the past five years and have seen a low unemployment rate of 3.6%. Currently there are 1,350 online ads for open positions.

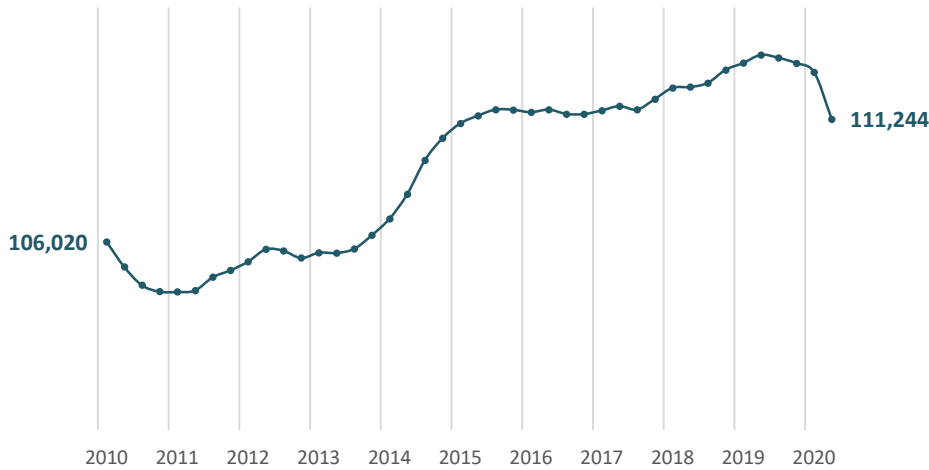


Within the transportation and warehousing industry, **material movers and motor vehicle operators** occupations all have high demand currently. Material movers and motor vehicle operators make up nearly all of the employment in this industry accounting for 94% of all jobs (respectively 61% and 33%). Over the past five years, materials movers' jobs grew at annual rate of 3.5% while motor vehicle operations grew by 2.4% annually. Currently, there are 5,545 online ads for material mover and vehicle operators jobs in the region. Ten-year projections suggest that there will be an oversupply of about 250 jobs in these occupations.

There is a moderately high demand for **protective services** occupations. This occupation has grown at annual rate of 2.1% over the past five years driven mostly by growth in non-law enforcement protective services (security guard roles). This occupation also has moderately low unemployment (4.7%) and an LQ (1.07) within range of the national average. There are currently 781 online job ads across the region for open positions in this occupation.

Target Industries Manufacturing

Figure 1. SJVRPU Manufacturing Employment, Four-Quarter Moving Average 2010-2020



Source: JobsEQ Labor & Wage Trends; Manufacturing; Four-Quarter Moving Average. 2020Q1-2020Q2 is preliminary data.

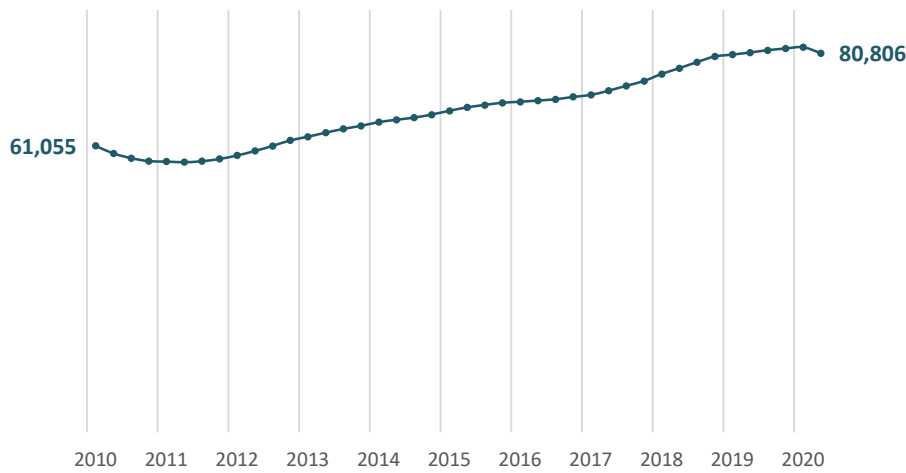
Table 7. SJVRPU Top Occupations in Manufacturing Industry, 4-Year Demand

SOC	Occupation	Current	4 Year Demand			
		Empl	Exits	Transfers	Empl Growth	Total Demand
51-9111	Packaging and Filling Machine Operators and Tenders	7,284	1,287	2,105	24	3,416
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	4,691	849	1,773	28	2,649
51-3092	Food Batchmakers	4,432	1,067	1,565	15	2,647
51-2092	Team Assemblers	4,732	722	1,339	-304	1,757
53-7064	Packers and Packagers, Hand	2,669	644	902	9	1,554
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	2,675	445	900	32	1,377
51-1011	First-Line Supervisors of Production and Operating Workers	3,316	426	931	7	1,364
51-9198	Helpers--Production Workers	2,167	458	813	1	1,272
53-7051	Industrial Truck and Tractor Operators	2,506	302	835	10	1,146
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	2,899	428	898	-215	1,111

Source: JobsEQ Industry/Occupation Mix; Occupation Distribution for Manufacturing in SJVRPU. Data as of 2020Q2 based upon a four-quarter moving average. Ranked by Total Demand.

Construction

Figure 2. SJVRPU Construction Employment, Four-Quarter Moving Average 2010-2020



Source: JobsEQ Labor & Wage Trends; Construction; Four-Quarter Moving Average. 2020Q1-2020Q2 is preliminary data.

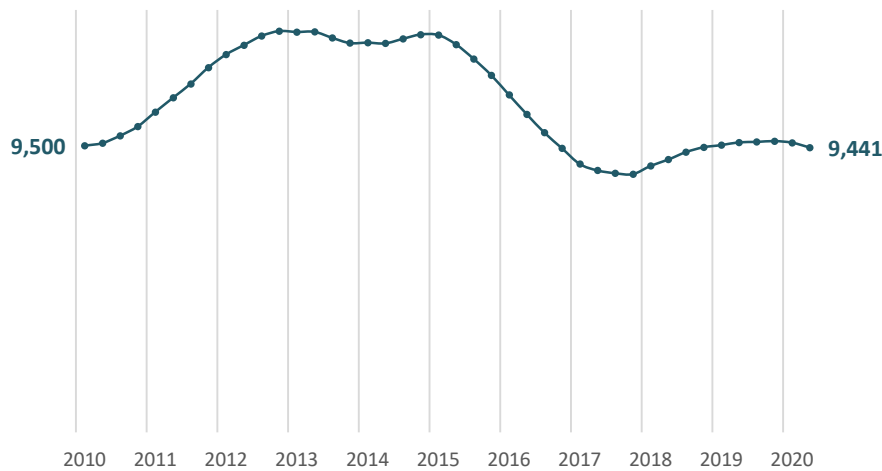
Table 8. SJVRPU Top Occupations in Construction Industry, 4-Year Demand

SOC	Occupation	Current	4 Year Demand			
		Empl	Exits	Transfers	Empl Growth	Total Demand
47-2061	Construction Laborers	10,821	1,512	3,575	570	5,657
47-2031	Carpenters	7,981	1,030	2,393	295	3,718
47-2111	Electricians	4,678	615	1,686	250	2,550
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	4,377	556	1,371	228	2,154
47-2152	Plumbers, Pipefitters, and Steamfitters	3,528	439	1,242	232	1,913
43-9061	Office Clerks, General	2,550	579	661	25	1,265
47-2141	Painters, Construction and Maintenance	2,796	404	772	78	1,254
47-2073	Operating Engineers and Other Construction Equipment Operators	2,247	327	779	139	1,245
11-9021	Construction Managers	3,364	298	723	162	1,183
47-2051	Cement Masons and Concrete Finishers	2,153	264	691	110	1,065

Source: JobsEQ Industry/Occupation Mix; Occupation Distribution for Construction in SJVRPU. Data as of 2020Q2 based upon a four-quarter moving average. Ranked by Total Demand.

Energy

Figure 3. SJVRPU Energy Employment, Four-Quarter Moving Average 2010-2020



Source: JobsEQ Labor & Wage Trends; Mining, Quarrying, and Oil and Gas Extraction; Four-Quarter Moving Average. 2020Q1-2020Q2 is preliminary data.

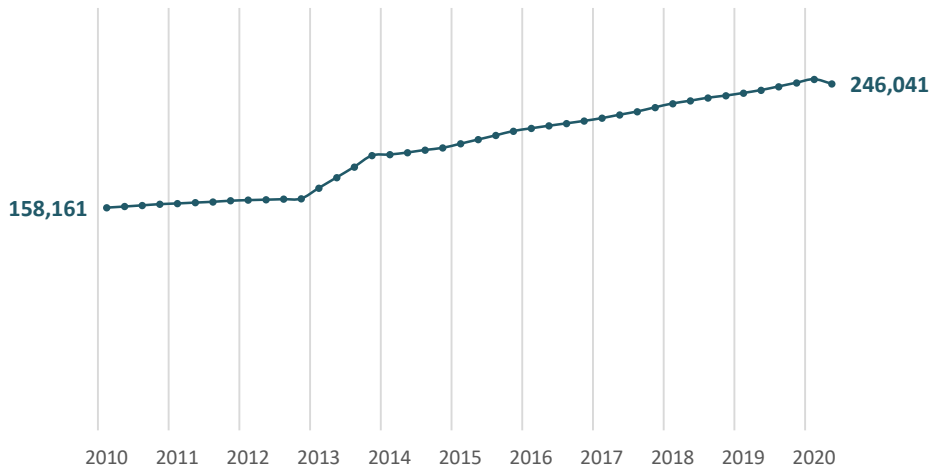
Table 9. SJVRPU Top Occupations in Energy Industry, 4-Year Demand

SOC	Occupation	Current	4 Year Demand			
		Empl	Exits	Transfers	Empl Growth	Total Demand
47-5013	Service Unit Operators, Oil and Gas	781	94	381	54	529
47-5071	Roustabouts, Oil and Gas	663	80	298	49	427
47-5012	Rotary Drill Operators, Oil and Gas	581	70	284	43	397
53-3032	Heavy and Tractor-Trailer Truck Drivers	449	79	141	29	249
47-5011	Derrick Operators, Oil and Gas	341	42	167	26	235
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	414	53	131	26	210
47-5081	Helpers--Extraction Workers	219	31	94	17	142
47-2073	Operating Engineers and Other Construction Equipment Operators	243	35	83	11	129
43-9061	Office Clerks, General	205	46	53	1	101
11-1021	General and Operations Managers	242	21	67	12	100

Source: JobsEQ Industry/Occupation Mix; Occupation Distribution for Mining, Quarrying, and Oil and Gas Extraction in SJVRPU. Data as of 2020Q2 based upon a four-quarter moving average. Ranked by Total Demand.

Healthcare

Figure 4. SJVRPU Healthcare Employment, Four-Quarter Moving Average 2010-2020



Source: JobsEQ Labor & Wage Trends; Healthcare and Social Assistance; Four-Quarter Moving Average. 2020Q1-2020Q2 is preliminary data.

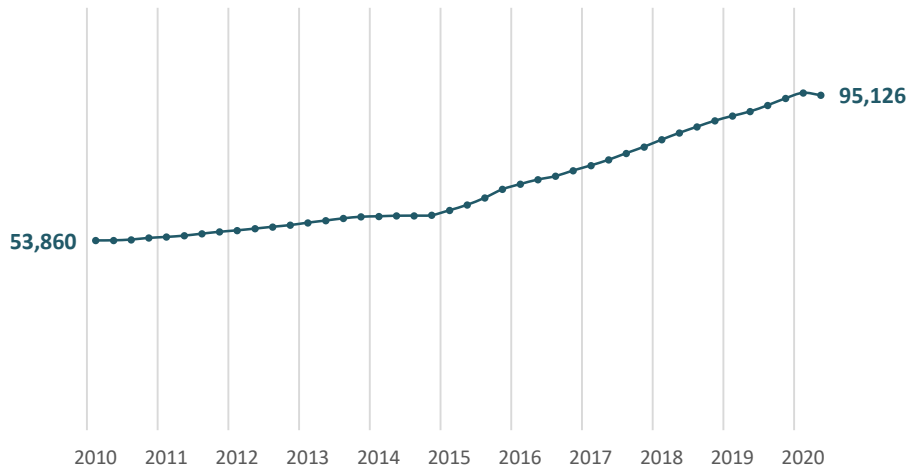
Table 10. SJVRPU Top Occupations in Healthcare Industry, 4-Year Demand

SOC	Occupation	Current	4 Year Demand			
		Empl	Exits	Transfers	Empl Growth	Total Demand
31-1122	Personal Care Aides	38,660	13,243	11,632	5,386	30,261
31-1121	Home Health Aides	13,835	3,461	3,718	1,940	9,119
29-1141	Registered Nurses	26,175	3,092	2,871	1,288	7,251
31-1131	Nursing Assistants	9,524	2,147	2,306	369	4,823
31-9092	Medical Assistants	7,955	1,376	2,505	768	4,649
39-9011	Childcare Workers	6,494	1,984	2,011	181	4,177
43-6013	Medical Secretaries and Administrative Assistants	7,372	1,615	1,932	489	4,036
21-1093	Social and Human Service Assistants	4,029	725	1,432	429	2,586
43-4171	Receptionists and Information Clerks	4,064	1,007	1,319	236	2,562
43-9061	Office Clerks, General	3,943	919	1,050	126	2,095

Source: JobsEQ Industry/Occupation Mix; Occupation Distribution for Healthcare and Social Assistance in SJVRPU. Data as of 2020Q2 based upon a four-quarter moving average. Ranked by Total Demand.

Transportation and Logistics

Figure 5. SJVRPU Transportation & Warehousing Employment, Four-Quarter Moving Average 2010-2020



Source: JobsEQ Labor & Wage Trends; Transportation & Warehousing; Four-Quarter Moving Average. 2020Q1-2020Q2 is preliminary data.

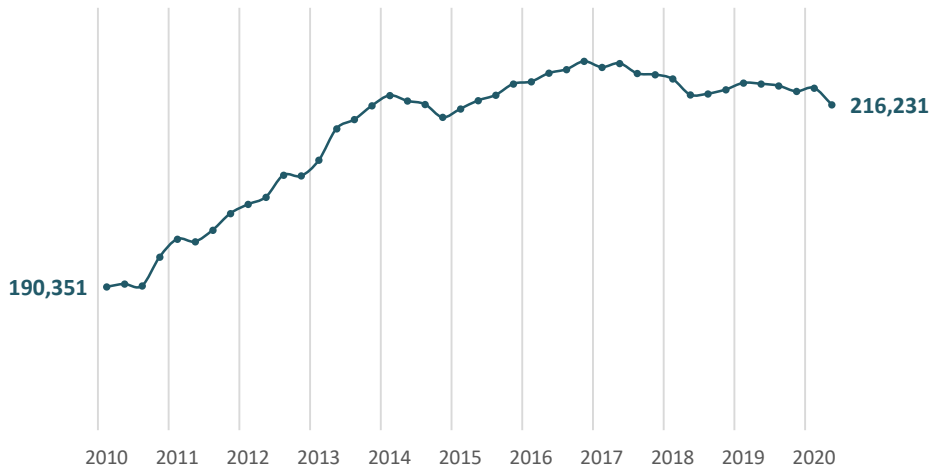
Table 11. SJVRPU Top Occupations in Transportation & Logistics, 4-Year Demand

SOC	Occupation	Current	4 Year Demand			
		Empl	Exits	Transfers	Empl Growth	Total Demand
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	15,998	3,088	6,450	987	10,524
53-3032	Heavy and Tractor-Trailer Truck Drivers	17,892	3,041	5,415	578	9,033
53-7065	Stockers and Order Fillers	5,774	1,276	2,051	404	3,730
53-7051	Industrial Truck and Tractor Operators	6,121	771	2,134	267	3,172
53-3058	Passenger Vehicle Drivers, Except Bus Drivers, Transit and Intercity	3,706	1,141	816	269	2,226
53-3033	Light Truck Drivers	4,219	729	1,298	195	2,222
53-7064	Packers and Packagers, Hand	2,501	589	824	-44	1,369
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	2,720	368	863	137	1,368
43-5071	Shipping, Receiving, and Inventory Clerks	2,122	298	597	116	1,011
53-3052	Bus Drivers, Transit and Intercity	1,670	545	343	69	957

Source: JobsEQ Industry/Occupation Mix; Occupation Distribution for Transportation and Warehousing in SJVRPU. Data as of 2020Q2 based upon a four-quarter moving average. Ranked by Total Demand.

Agriculture

Figure 6. SJVRPU Agriculture, Forestry, Fishing and Hunting Employment, Four-Quarter Moving Average 2010-2020



Source: JobsEQ Labor & Wage Trends; Agriculture, Forestry, Fishing and Hunting; Four-Quarter Moving Average. 2020Q1-2020Q2 is preliminary data.

Table 12. SJVRPU Top Occupations in Agriculture

SOC	Occupation	Current	4 Year Demand			
		Empl	Exits	Transfers	Empl Growth	Total Demand
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	129,170	21,511	66,684	4,531	92,727
11-9013	Farmers, Ranchers, and Other Agricultural Managers	24,574	6,222	3,713	425	10,360
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	10,210	1,616	5,011	-101	6,527
45-2091	Agricultural Equipment Operators	6,864	1,182	3,664	458	5,303
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	5,033	765	2,359	238	3,362
45-2041	Graders and Sorters, Agricultural Products	4,655	777	2,058	164	2,998
53-7064	Packers and Packagers, Hand	4,182	1,073	1,503	238	2,814
53-3032	Heavy and Tractor-Trailer Truck Drivers	2,072	357	636	93	1,086
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	1,603	308	644	94	1,046
53-7051	Industrial Truck and Tractor Operators	1,481	188	521	76	785

Source: JobsEQ Industry/Occupation Mix; Occupation Distribution for Agriculture, Forestry, Fishing and Hunting in SJVRPU. Data as of 2020Q2 based upon a four-quarter moving average. Ranked by Total Demand.

II. Industries and Occupations: Emerging Demand

To assess emerging demand across SJVRPU industries and occupational sectors, we assessed the following indicators based on a four-year forecast: ⁵

- **Total Demand** is the number of jobs demanded in the industry or occupation over the number of forecasted years. Total New Demand is the sum of Exits, Transfers and Employment growth, which are defined as follows:
 - **Exits** is the number of workers forecasted to leave the workforce.
 - **Transfers** is the number of workers expected to transfer from one industry to another.
 - **Employment Growth** is the forecasted number of new jobs that are expected to be created.
- **Annual % Growth (ann % growth)** is the forecasted average annual employment growth in a given industry or occupation.

Emerging Demand by Industries

Over the next four years, **healthcare and social assistance** is expected to continue to be an industry centered around job demand. The projected job growth in this industry is estimated at 1.9% annually. Similar to current demand, **construction, transportation and warehousing, agriculture, and accommodation and food services** area also expected to continue to grow over the next four years.

Table 13. Industry Snapshot 4-Year Forecast

NAICS	Industry	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Healthcare and Social Assistance	115,297	47,161	48,754	19,382	1.9%
21	Mining, Quarrying, and Oil and Gas Extraction	4,384	1,278	2,653	453	1.2%
72	Accommodation and Food Services	79,634	33,021	41,591	5,022	1.1%
23	Construction	36,041	11,596	20,740	3,705	1.1%
48	Transportation and Warehousing	44,902	17,509	23,693	3,700	1.0%
54	Professional, Scientific, and Technical Services	16,728	5,612	9,492	1,624	0.9%
11	Agriculture, Forestry, Fishing and Hunting	102,160	40,460	54,569	7,131	0.8%
99	Unclassified	8	3	4	1	0.8%
56	Administrative and Support and Waste Management and Remediation Services	37,718	15,019	20,482	2,216	0.7%
53	Real Estate and Rental and Leasing	8,649	3,711	4,443	495	0.6%
55	Management of Companies and Enterprises	4,438	1,536	2,619	283	0.6%
52	Finance and Insurance	11,214	4,015	6,586	613	0.5%
81	Other Services (except Public Administration)	26,208	11,529	13,763	916	0.4%
71	Arts, Entertainment, and Recreation	11,434	5,004	6,180	251	0.3%
61	Educational Services	57,944	27,410	29,573	960	0.2%
92	Public Administration	37,268	15,395	20,942	931	0.2%
42	Wholesale Trade	20,371	7,683	12,728	-41	0.0%
44	Retail Trade	81,970	36,474	46,076	-580	-0.1%
31	Manufacturing	45,756	17,046	29,185	-475	-0.1%
22	Utilities	4,184	1,528	2,691	-35	-0.1%

⁵ Forecast employment trends is based on projections from the Bureau of Labor Statistics, forecasts for **2018-2028**, adapted for regional growth patterns by JobsEQ.



51	Information	3,949	1,485	2,632	-167	-0.4%
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Source: JobsEQ Industry Snapshot, 2020Q2 based upon a four-quarter moving average, ranked by Annual % Growth. Exits and transfers are approximate estimates based upon occupation separation rates.

Other Notable Emerging Industries

Professional, scientific, and technical services industry is a much smaller industry in terms of employment that is showing signs of emerging job growth over the next years. From 2015-2020, this industry in SJVRPU had negligible growth (0%) but is expected to grow modestly at an annual rate of 0.9% over the past four years.

Mining, Quarrying, and Oil and Gas Extraction is an industry where new demand is projected to emerge with the second highest growth projection of 1.2%. It is unclear what is driving this as historically this industry contracted by -6% over the past five years. Similar to the oil and gas markets, job demand seems highly volatile in this industry.

Emerging Demand by Occupations

Job demand is expected in various occupations across the SJVRPU. Table 14 provides a list of all two-digit SOC occupations that are expected to grow over the next four years. In particular occupations within the **healthcare and social assistance** industry are expected to continue to grow over the next four years. It is also forecasted that there will be demand for workers in the following occupations:

- Food preparation and serving related
- Construction and extraction
- Personal care and service
- Farming, Fishing, and forestry
- Transportation and material moving

Each of these occupations are expected to have positive job growth as an annual percentage and large total employment growth over four years. In addition, most of these occupations offer both entry level and mid-career employment opportunities.

Table 14. SJVRPU Occupational Snapshot 4-Year Forecast

SOC	Occupation	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
31-0000	Healthcare Support Occupations	56,500	23,101	24,103	9,296	2.7%
21-0000	Community and Social Service Occupations	16,905	4,804	9,898	2,203	1.7%
29-0000	Healthcare Practitioners and Technical Occupations	23,916	9,144	10,649	4,123	1.2%
35-0000	Food Preparation and Serving Related Occupations	88,031	33,979	48,777	5,275	1.1%
47-0000	Construction and Extraction Occupations	34,215	8,890	22,282	3,043	1.1%
39-0000	Personal Care and Service Occupations	24,867	10,474	13,019	1,374	0.9%
15-0000	Computer and Mathematical Occupations	7,143	1,461	4,925	757	0.9%
19-0000	Life, Physical, and Social Science Occupations	5,103	1,025	3,656	422	0.9%
45-0000	Farming, Fishing, and Forestry Occupations	114,158	26,644	82,145	5,369	0.8%
11-0000	Management Occupations	38,971	13,655	22,133	3,183	0.8%
53-0000	Transportation and Material Moving Occupations	89,717	31,148	54,099	4,470	0.7%
13-0000	Business and Financial Operations Occupations	26,541	7,226	17,436	1,878	0.7%



37-0000	Building and Grounds Cleaning and Maintenance Occupations	26,808	10,658	14,733	1,418	0.7%
23-0000	Legal Occupations	2,449	852	1,346	252	0.7%
49-0000	Installation, Maintenance, and Repair Occupations	22,715	6,896	14,578	1,240	0.6%
17-0000	Architecture and Engineering Occupations	5,579	1,580	3,643	356	0.5%
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	7,800	2,695	4,806	299	0.4%
25-0000	Educational Instruction and Library Occupations	42,190	18,881	21,962	1,346	0.3%
33-0000	Protective Service Occupations	16,720	7,027	9,335	358	0.2%
41-0000	Sales and Related Occupations	77,275	30,821	46,158	296	0.1%

Source: JobsEQ Occupational Snapshot, 2020Q2 based upon a four-quarter moving average, ranked by Annual % Growth. Exits and transfers are approximate estimates based upon occupation separation rates.

To provide a more detailed depiction of employment demand by occupations, Table 15 provides occupational demand at the six-digit SOC level.

Table 15. SJVRPU Detailed Occupational Snapshot 4-Year Forecast

SOC	Detailed Occupation	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
31-1122	Personal Care Aides	30,781	13,488	11,847	5,446	3.3%
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	93,698	21,744	67,408	4,546	0.9%
35-3023	Fast Food and Counter Workers	33,288	14,078	16,586	2,624	1.6%
31-1121	Home Health Aides	9,240	3,510	3,770	1,960	3.3%
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	22,839	6,940	14,496	1,403	0.9%
29-1141	Registered Nurses	7,993	3,430	3,185	1,378	1.2%
53-3032	Heavy and Tractor-Trailer Truck Drivers	13,370	4,505	8,020	845	0.8%
35-2014	Cooks, Restaurant	6,747	2,223	3,691	833	2.1%
31-9092	Medical Assistants	4,789	1,421	2,587	781	2.3%
11-1021	General and Operations Managers	7,238	1,595	5,013	631	0.9%
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	12,276	5,388	6,271	617	0.7%
47-2061	Construction Laborers	6,350	1,705	4,029	616	1.2%
43-6013	Medical Secretaries and Administrative Assistants	4,234	1,693	2,025	516	1.6%
35-3031	Waiters and Waitresses	13,278	4,592	8,186	501	0.8%
21-1093	Social and Human Service Assistants	3,213	923	1,823	468	2.2%
45-2091	Agricultural Equipment Operators	5,410	1,208	3,746	456	1.6%
11-9013	Farmers, Ranchers, and Other Agricultural Managers	10,381	6,232	3,719	430	0.4%
37-3011	Landscaping and Groundskeeping Workers	5,967	1,751	3,802	414	1.0%
31-1131	Nursing Assistants	5,160	2,293	2,463	404	1.0%



13-1198	Project Management Specialists and Business Operations Specialists, All Other	5,339	1,388	3,548	403	0.8%
53-7051	Industrial Truck and Tractor Operators	5,943	1,475	4,080	389	0.8%
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	5,452	1,458	3,613	381	1.2%
53-3058	Passenger Vehicle Drivers, Except Bus Drivers, Transit and Intercity	4,358	2,325	1,662	371	1.2%
49-9071	Maintenance and Repair Workers, General	5,149	1,726	3,057	365	0.8%
21-1018	Substance Abuse, Behavioral Disorder, and Mental Health Counselors	1,892	481	1,051	360	2.6%

Source: JobsEQ Occupational Snapshot, 2020Q2 based upon a four-quarter moving average, ranked by Employment Growth. Exits and transfers are approximate estimates based upon occupation separation rates.

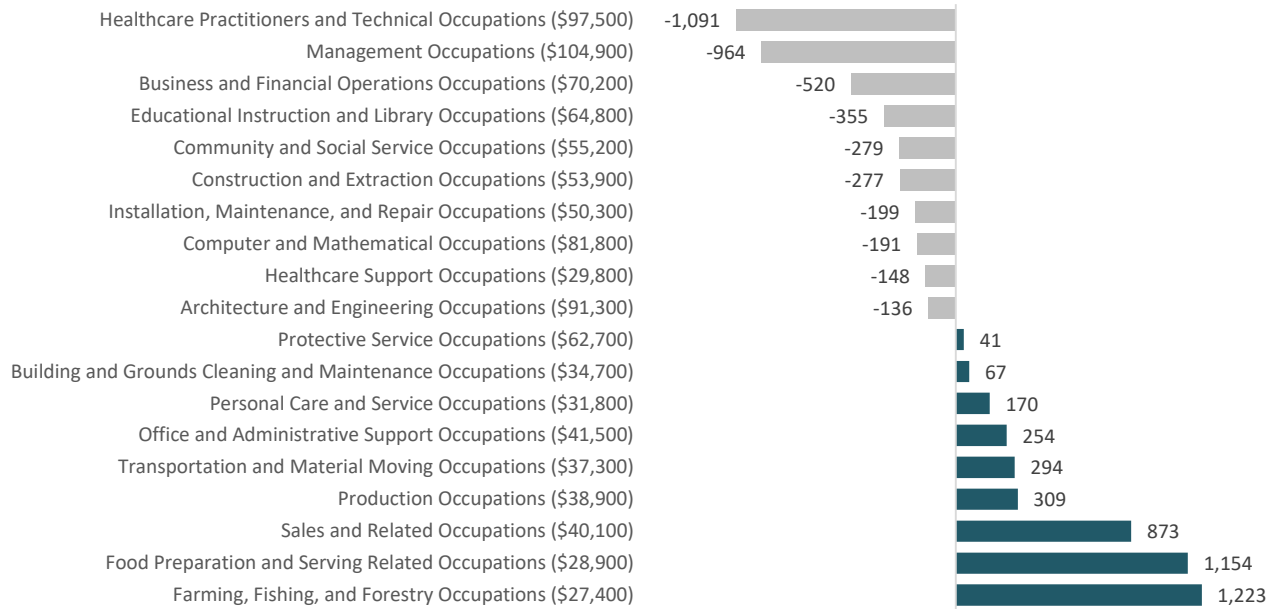
Emerging Gaps in Healthcare Occupations

Conversely, another indicator of emerging in occupations is to look at occupational gaps. Over the next 10 years, large gaps are forecasted in core healthcare and social assistance roles. In the healthcare sector, healthcare support occupations are expected to grow by 2.7% per year and healthcare practitioners and technical occupations are expected to grow by 1.2% annually. One of the largest occupational gaps projected for the region over the next 10 years is among healthcare practitioners and healthcare technicians and technologists. This potential occupational gap is expected to be around 1,090 positions (see Figure 7). This also suggests that there will be a large demand in healthcare occupations in the future.

Personal care aides and home health aide occupations account for 30,781 and 9,240 jobs respectively, across region and a large portion of demand for healthcare support occupations. Both occupations are expected to grow at rates of 3.3% annually and are expected to add respectively 5,446 and 1,960 jobs over four years (see Table 15).

Community and social service occupation is expected to grow by 1.7% annually. Over the next 10 years, there is expected to be a gap of 279 positions in the community and social service occupations specifically among counselors and social workers roles (see Figure 7).

Figure 7. 10-year Potential Occupation Gaps in the SJVRPU



Source: JobsEQ Occupation Gaps, 2020Q2. Wages data as of 2019.

Food Preparation and Serving Related Occupations

Food preparation and serving are occupations where job demand is expected to continue growth over the next four years by 5,275 jobs. In particular, most of the demand will be in the food and beverage servers, wait staff, and cook and food preparation worker occupations as shown below in Table 16.

Table 16. SJVRPU Occupation Snapshot, Food Preparation and Serving Related Occupations

SOC	Occupation	Current	4 Year Forecast				
		Empl	Exits	Transfers	Empl Growth	Total Demand	% Ann Growth
35-3023	Fast Food and Counter Workers	39,107	14,078	16,586	2,624	33,288	1.6%
35-3031	Waiters and Waitresses	16,083	4,592	8,186	501	13,278	0.8%
35-2014	Cooks, Restaurant	9,560	2,223	3,691	833	6,747	2.1%
35-2021	Food Preparation Workers	8,653	2,633	3,606	329	6,568	0.9%
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	7,865	1,458	3,613	381	5,452	1.2%
35-2011	Cooks, Fast Food	9,586	1,972	3,275	-267	4,981	-0.7%
35-3011	Bartenders	3,921	767	2,105	143	3,015	0.9%
35-9021	Dishwashers	4,473	1,358	1,542	102	3,001	0.6%
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	3,991	1,365	1,465	157	2,988	1.0%
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	2,581	1,215	1,269	118	2,602	1.1%

Source: JobsEQ Occupation Snapshot; Food Preparation and Serving Related Occupations in SJVRPU. Data as of 2020Q2 based upon a four-quarter moving average. Ranked by Total Demand.



Construction and Extraction

Construction and extraction occupations are expected to continue grow over the next four years by 3,043 jobs. Most of the demand will be in construction labor, carpenters, and electricians.

Table 17. SJVRPU Occupation Snapshot, Construction and Extraction Occupations

SOC	Occupation	Current	4 Year Forecast				
		Empl	Exits	Transfers	Empl Growth	Total Demand	% Ann Growth
47-2061	Construction Laborers	12,230	1,705	4,029	616	6,350	1.2%
47-2031	Carpenters	8,919	1,149	2,668	315	4,132	0.9%
47-2111	Electricians	5,970	778	2,132	274	3,184	1.1%
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	5,678	718	1,771	275	2,764	1.2%
47-2152	Plumbers, Pipefitters, and Steamfitters	4,484	552	1,561	251	2,365	1.4%
47-2073	Operating Engineers and Other Construction Equipment Operators	3,481	499	1,189	170	1,859	1.2%
47-2141	Painters, Construction and Maintenance	3,192	461	882	88	1,430	0.7%
47-2051	Cement Masons and Concrete Finishers	2,283	279	732	112	1,123	1.2%
47-2081	Drywall and Ceiling Tile Installers	2,342	274	662	21	957	0.2%
47-2181	Roofers	1,561	171	514	80	765	1.3%

Source: JobsEQ Occupation Snapshot; Construction and Extraction Occupations in SJVRPU. Data as of 2020Q2 based upon a four-quarter moving average. Ranked by Total Demand.

Personal Care and Service

Personal care and service occupations are expected to continue grow over the next four years by 1,374 jobs. Childcare workers, hairstylists, recreation workers are the occupations with the most demand.

Table 18. SJVRPU Occupation Snapshot, Personal Care and Service Occupations

SOC	Occupation	Current	4 Year Forecast				
		Empl	Exits	Transfers	Empl Growth	Total Demand	% Ann Growth
39-9011	Childcare Workers	10,077	3,062	3,104	235	6,401	0.6%
39-5012	Hairdressers, Hairstylists, and Cosmetologists	5,317	1,348	1,414	188	2,949	0.9%
39-9032	Recreation Workers	3,894	988	1,745	196	2,929	1.2%
39-3091	Amusement and Recreation Attendants	2,304	1,019	1,192	89	2,300	1.0%
39-9031	Exercise Trainers and Group Fitness Instructors	2,393	611	1,080	139	1,830	1.4%
39-2021	Animal Caretakers	1,788	535	703	112	1,350	1.5%
39-1098	First-Line Supervisors of Personal Service and Entertainment and Recreation Workers, Except Gambling Services	2,504	429	612	159	1,200	1.6%
39-3031	Ushers, Lobby Attendants, and Ticket Takers	855	454	392	11	857	0.3%
39-5092	Manicurists and Pedicurists	1,317	304	326	57	687	1.1%
39-9098	Crematory Operators and Personal Care and Service Workers, All Other	916	253	343	88	684	2.3%

Source: JobsEQ Occupation Snapshot; Personal Care and Service Occupations in SJVRPU. Data as of 2020Q2 based upon a four-quarter moving average. Ranked by Percent of Annual Growth.

Farming, Fishing, and Forestry

Farming, fishing, and forestry occupations are expected to continue grow over the next four years by 5,369 jobs. The vast majority of this demand is for farmworkers and laborers, particularly in crop, nursery, and greenhouse settings.

Table 19. SJVRPU Occupation Snapshot, Farming, Fishing, and Forestry Occupations

SOC	Occupation	Current	4 Year Forecast				
		Empl	Exits	Transfers	Empl Growth	Total Demand	% Ann Growth
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	130,618	21,744	67,408	4,546	93,698	0.9%
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	10,431	1,651	5,119	-104	6,667	-0.2%
45-2091	Agricultural Equipment Operators	7,034	1,208	3,746	456	5,410	1.6%
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	5,208	791	2,439	242	3,472	1.1%
45-2041	Graders and Sorters, Agricultural Products	5,392	892	2,364	152	3,409	0.7%
45-2099	Agricultural Workers, All Other	718	120	372	29	522	1.0%
45-2011	Agricultural Inspectors	547	98	234	18	350	0.8%
45-2021	Animal Breeders	353	57	177	4	238	0.3%
45-4011	Forest and Conservation Workers	265	39	147	-3	183	-0.2%
45-3031	Fishing and Hunting Workers	126	20	70	13	104	2.5%

Source: JobsEQ Occupation Snapshot; Farming, Fishing, and Forestry Occupations in SJVRPU. Data as of 2020Q2 based upon a four-quarter moving average. Ranked by Total Demand.

Transportation and Material Moving

Transportation and material moving occupations are expected to continue grow over the next four years by 4,470 jobs. The vast majority of this demand is for laborers and freight stock and material movers, stockers and order fillers, and heavy tractor-trailer truck drivers.

Table 20. SJVRPU Occupation Snapshot, Transportation and Material Moving Occupations

SOC	Occupation	Current	4 Year Forecast				
		Empl	Exits	Transfers	Empl Growth	Total Demand	% Ann Growth
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	36,956	6,940	14,496	1,403	22,839	0.9%
53-7065	Stockers and Order Fillers	26,129	5,387	8,662	248	14,297	0.2%
53-3032	Heavy and Tractor-Trailer Truck Drivers	26,517	4,505	8,020	845	13,370	0.8%
53-7064	Packers and Packagers, Hand	13,057	3,179	4,451	144	7,774	0.3%
53-7051	Industrial Truck and Tractor Operators	11,848	1,475	4,080	389	5,943	0.8%
53-3033	Light Truck Drivers	10,896	1,841	3,277	292	5,410	0.7%
53-3058	Passenger Vehicle Drivers, Except Bus Drivers, Transit and Intercity	7,772	2,325	1,662	371	4,358	1.2%
53-7061	Cleaners of Vehicles and Equipment	6,190	1,278	2,453	179	3,910	0.7%
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	5,728	764	1,791	212	2,767	0.9%
53-3031	Driver/Sales Workers	5,068	831	1,480	-4	2,308	0.0%

Source: JobsEQ Occupation Snapshot; Transportation and Material Moving Occupations in SJVRPU. Data as of 2020Q2 based upon a four-quarter moving average. Ranked by Total Demand.

III. Assessment of Employment Needs

To assess employment needs, we measured occupational, skill, and awards gaps projected to across the SJVRPU’s industries and occupations which are defined as follows:

- **Occupational gaps** are occupations where labor supply shortages are expected to occur. Gaps are calculated based on a forecast comparing occupation demand growth to the local population growth and the projected educational attainment of those residents.
- **Skills gaps** are defined as the difference between the supply and demand for a skill. Positive gaps are surpluses of a skill and negative gaps represent a shortage of a skill. Skill supply is collected by JobsEQ from resume data; demand (openings) is collected from job ads.
- **Awards gaps** show the difference between the number of awards awarded (which are post-secondary certificates or degrees) and the occupation demand in your region for which each award is required. Negative values represent a shortage, of degrees being awarded to meet the demand for the occupation. The positive values represent the surplus of awards meaning that the number of awards awarded are greater than the target range of demand.

Employers across SJVRPU are anticipated to experience gaps in workers for specific occupation as displayed below in Table 21. Healthcare practitioners and technical occupations will be particularly hard to hire given existing shortages in this occupation and the level of education, training, certification, and licensure required for these roles. One of the largest awards gaps in the region is for registered nurses (see Table 22) and seven of the top ten skills gaps are in health-related certifications (see Table 23).

Education instruction and library occupations and community and social services occupations are also occupational gaps that are may be difficult to fill given the training and education required for these roles. There is also a gap in the region of education related degrees and overall need.

Management roles also represent a large occupational gap and may also be difficult roles for employers to fill given that management roles are generally considered mid-career positions.

Construction and extraction occupations are expected have a modest occupational gap. However, gaps in this occupational area may be easier to fill as construction occupations offer wide range of roles across various levels of skills and experience.

Table 21. 10-year Occupational Gap Forecasted for the SJVRPU (2020-2030)

Occupation	10-year Gap
Healthcare Practitioners and Technical Occupations (\$97,500)	-1,091
Management Occupations (\$104,900)	-964
Business and Financial Operations Occupations (\$70,200)	-520
Educational Instruction and Library Occupations (\$64,800)	-355
Community and Social Service Occupations (\$55,200)	-279
Construction and Extraction Occupations (\$53,900)	-277
Installation, Maintenance, and Repair Occupations (\$50,300)	-199
Computer and Mathematical Occupations (\$81,800)	-191
Healthcare Support Occupations (\$29,800)	-148
Architecture and Engineering Occupations (\$91,300)	-136

Source: JobsEQ Occupation Gaps for SJVRPU. Data as of 2020Q2.

Table 22 depicts the gaps between the number of awarded degrees in the region and overall employment demand by occupation. Occupations in healthcare and education have the most gaps in the numbers of awards. Other award gaps are not insignificant but are in occupations that represent a smaller share of the region’s overall employment.

Table 22. SJVRPU Awards Gaps, Two-year Degree or Higher

Occupation	Award Gap
Registered Nurses	-691
Elementary School Teachers, Except Special Education	-675
Accountants and Auditors	-467
Medical and Health Services Managers	-219
Market Research Analysts and Marketing Specialists	-215
Middle School Teachers, Except Special and Career/Technical Education	-193
Financial Managers	-170
Education Administrators, Kindergarten through Secondary	-145
Physicians, All Other; and Ophthalmologists, Except Pediatric	-124
Civil Engineers	-116

Source: JobsEQ Awards Gaps by Occupation. Data as of 2020Q2.

As shown in Table 23, Healthcare certifications are by far in the highest demand across the SJVRPU. Other in demand skills also align with current and emerging employment needs. Forklift certification is a skill in high demand with a projected gap of 263 openings which seems notable given the size of employment in transportation and warehousing industry and in material moving. Similarly, ServSafe Food Project Manager Certification is also expected to remain in high demand. It is also worth noting, that both of these skills require

Table 23. SJVRPU Employer In-demand Certifications for All Occupations

Certification	Number of Candidates	Number of Openings	Gap
Certification in Cardiopulmonary Resuscitation (CPR)	3,327	4,526	-1,198
First Aid Certification	1,791	2,827	-1,036
Certified Nursing Assistant (CNA)	1,413	1,736	-324
Forklift Certified	553	815	-263
National Phlebotomy Association Certified Phlebotomist	133	331	-197
Certified Home Health Aide	59	249	-191
Basic Life Support (BLS)	2,087	2,232	-145
Licensed Clinical Social Worker (LCSW)	126	248	-122
ServSafe Food Protection Manager Certification	168	289	-121
Registered Medical Assistant	28	125	-97
Medical Assistant Certification (MA)	342	431	-89
Secret Clearance	340	426	-86
Texas Alcoholic Beverage Commission Certification (TABC)	14	75	-61
Certified Personal Trainer (CPT)	55	101	-46
Licensed Professional Counselor (LPC)	6	53	-46
Licensed Practical Nurse (LPN)	132	169	-37
OSHA 10	90	122	-33



DOT Medical Card	17	48	-32
Certified Public Accountant (CPA)	303	331	-28
Professional in Human Resources (PHR)	45	72	-27
Certified Management Accountant (CMA)	10	34	-24
Board Certified Behavior Analyst (BCBA)	25	49	-24
Project Management Professional (PMP)	72	95	-23
Emergency Medical Technician (EMT)	253	276	-22
Registered Dental Assistant (RDA)	106	126	-20

Source: JobsEQ Skill Gaps in SJVRPU. Data as of 2020Q2; openings and candidate sample compiled in July 2019. Ranked by Gap.

Table 24 provides an inventory of in-demand skills across occupations in the region. Many of the in-demand skills listed are aligned to occupations where there is both current and forecasted demand. For instance, power tools, heavy equipment operation, and Bobcats are skills valued in the construction and extraction industry and occupations. Other skills, such as Microsoft Office and Excel are in high demand because they are valued in multiple industries and occupational sectors.

Table 24. SJVRPU Employer In-demand skills for all Occupations

Skill	Number of Candidates	Number of Openings	Gap
Mathematics	3,940	5,818	-1,878
Spanish	8,927	10,548	-1,621
Microsoft Office	9,788	11,319	-1,531
Microsoft Excel	12,900	13,874	-974
Teaching/Training, Job	2,415	3,325	-910
Mechanical	2,535	3,389	-853
Teaching/Training, School	5,167	5,997	-830
Forklifts	4,908	5,666	-758
Microsoft Outlook	5,259	5,957	-697
Manufacturing	2,197	2,625	-428
Power Tools	1,399	1,647	-249
Lean Six Sigma	238	487	-248
Working With Children	261	496	-235
Barcode Scanners	321	524	-203
Heavy Equipment Operation	508	688	-180
Automated External Defibrillators (AED)	399	573	-174
Presentation	1,379	1,539	-160
Purchasing	545	703	-158
Personal Computers (PC)	353	505	-152
Microsoft Access	451	602	-151
Calculators	134	277	-144
Budgeting	344	477	-133
Mandarin	70	202	-132
Accounting	915	1,044	-129
Bobcats	120	249	-129
SAP	1,085	1,208	-123
Inventory Management	813	929	-117

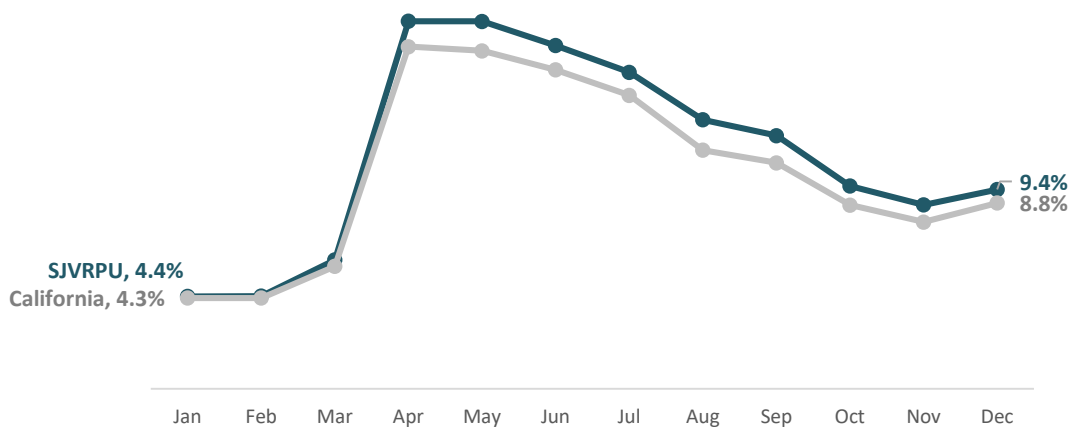


Source: JobsEQ Skill Gaps in SJVRPU. Data as of 2020Q2; openings and candidate sample compiled in July 2019. Ranked by Gap.

IV. Current Employment and Unemployment Trends

In the beginning of 2020, unemployment rates were relatively low in the SJVRPU, on par with the unemployment rate across the State. With the onset of the COVID-19 pandemic, there was a sharp increase in the rate of unemployment at the regional and state levels in April 2020. The unemployment rate has decreased steadily since June 2020, although there was a slight uptick at the end of the year in December 2020.

Figure 8. SJVRPU Monthly Unemployment Rate, 2020



Source: California Employment Development Department, Local Area Unemployment Statistics, 2020. Data for December 2020 is preliminary. The data present is not adjusted for seasonality.

Table 25 provides an overview of unemployment rates by each of the SJVRPU’s local regions as of October 2020. Unemployment is highest in Tulare County and lowest in Madera County.

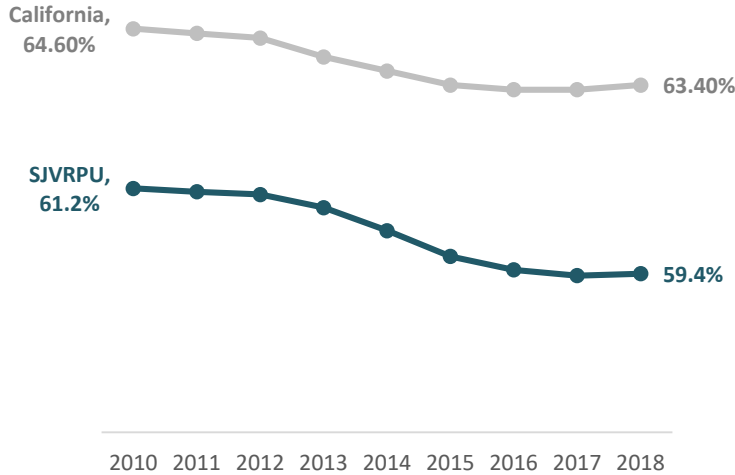
Table 25. SJVRPU Unemployment Totals and Rates by Region

SJVRPU Local Region	Total Unemployed	Unemployment Rate
Tulare County	21,182	10.9%
Kern/Inyo/Mono Counties	41,592	10.5%
San Joaquin County	32,945	10.0%
Fresno County	41,673	9.3%
Kings County	5,257	9.3%
Merced County	10,852	9.3%
Stanislaus County	21,885	9.1%
Madera County	5,235	8.5%

Source: JobsEQ Labor & Wage Trends. Data as of October 2020.

Within the SJVRPU, the civilian labor force makes up, 59.4% of region’s population. As shown in Figure 9, this trend is slightly lower than the State percentages, but appears to track with the state trend of a slight decline since 2010.

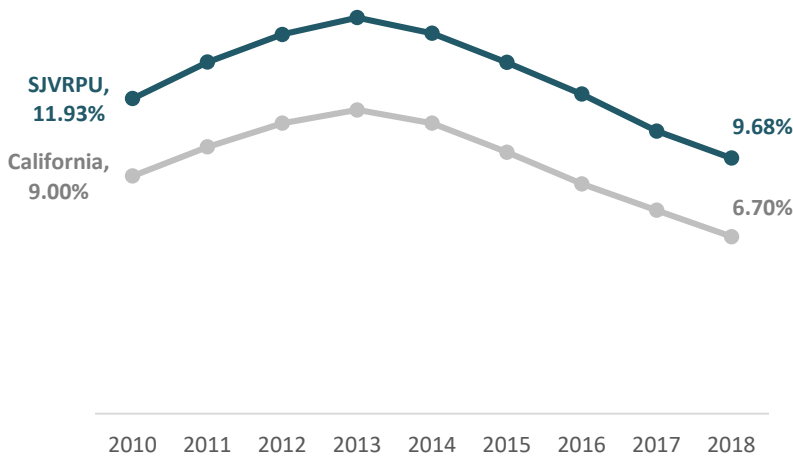
Figure 9. SJVRPU Civilian Labor Force 2010-2018



Source: JobsEQ Demographic Profile Summary, ACS 5-Year Estimates 2014-2018.

SJVRPU currently and historically has a higher unemployment rate than the overall state. Often recessions have larger impacts on the region and the region takes longer to recover. The non-seasonally adjusted unemployment rate is likely higher due to the seasonality of work in the agriculture industry.

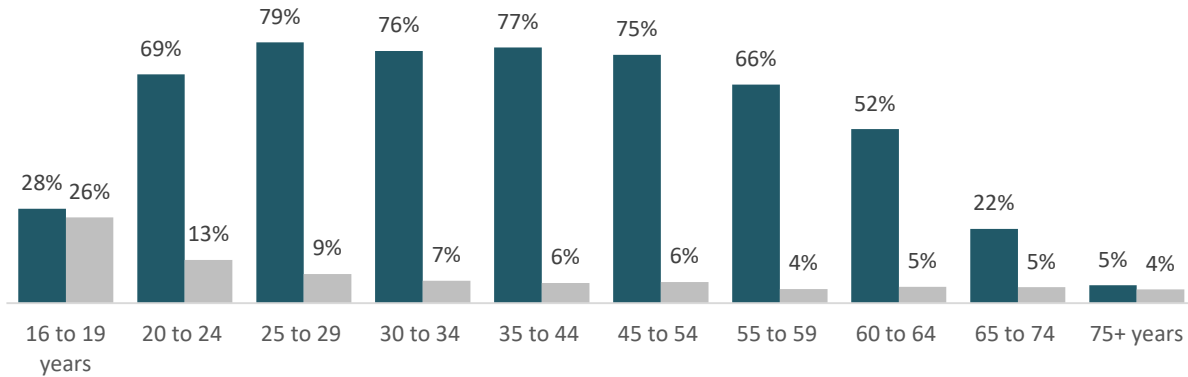
Figure 10. SJVRPU Unemployment Rate 2010-2018



Source: JobsEQ Demographic Profile Unemployed, ACS 5-Year Estimates 2014-2018.

Figure 11 depicts labor force participation and unemployment rates by age groups in 2019. Labor force participation and unemployment by age groups follows the typical bell curve where employment is expectantly low among youth (16 -19) and young adults (20-24). Employment levels peak from ages 25 to 54 then begin to taper off at 55 with a considerable drop after age 64. Similar to state and national trends, unemployment rates are highest among youth and youth adults and decline as age increases.

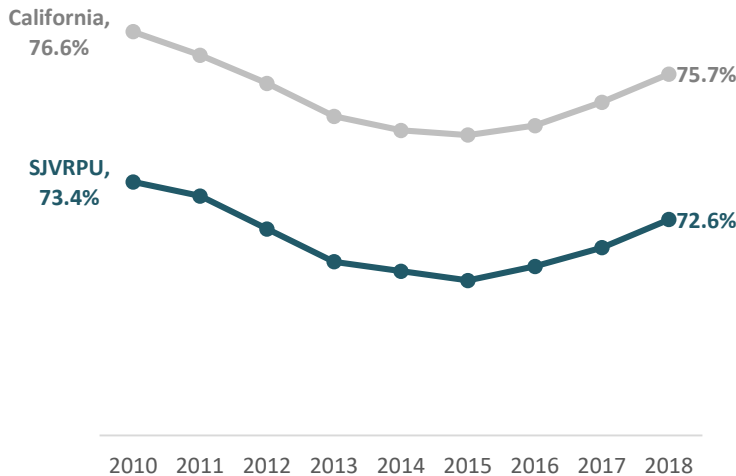
Figure 11. SJVRPU Labor Force Participation and Unemployment by Age Group



Source: ACS 1-Year Estimates 2019. Data unavailable for Inyo and Mono Counties.

Figure 12 depicts labor force participation trends among SJVRPU veterans over from 2010 - 2018. Similar to trends at the state-level, labor force participation among veterans dropped after 2010, but has regained nearly all of the losses seen over that eight-year period. This trend is also in alignment with overall unemployment decline across the state in the same period (see Figure 10).

Figure 12. SJVRPU Veterans Labor Force Participation



Source: JobsEQ Demographic Profile Summary, ACS 5-Year Estimates 2014-2018.

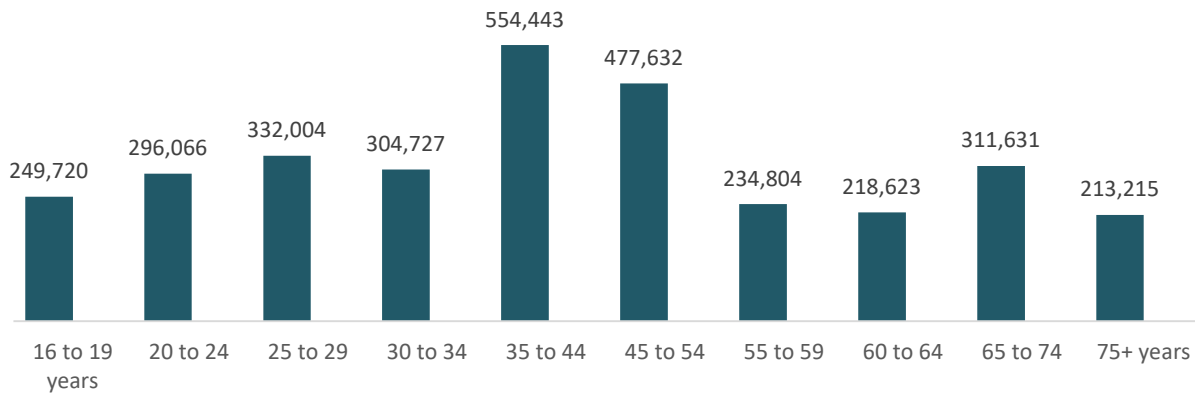
V. Key Labor Market Trends

To understand key labor market trends, we looked a variety of labor market data points that includes data from the previous sections as well as the following:

- **Working age population, labor market participation, and unemployment** across age groups to understand the concentration of current and potential workers.
- **Average wages** by occupations provides potential earning in each occupation as well as a comparison of average wage to the state level average.
- **Five-year occupational gaps** to identify where the largest shortages of workers are forecasted to occur.

Figure 13 shows the breakdown of the working age population across age groups. The two largest working age groups are individuals between the ages of 35 to 54, which account for nearly a third of the total population in the region.

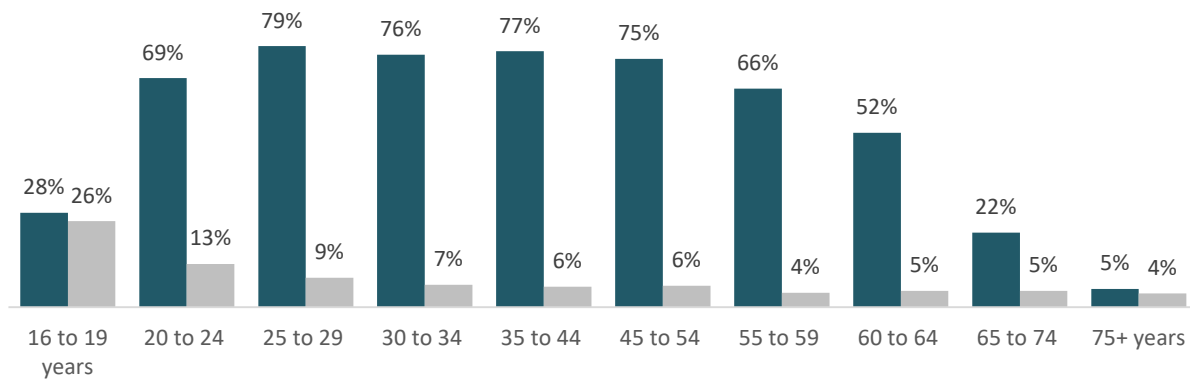
Figure 13. SJVRPU Working Age Population by Age Group



Source: ACS 1-Year Estimates 2019. Data unavailable for Inyo and Mono Counties.

Figure 11 depicts labor force participation and unemployment rates by age groups in 2019. Labor force participation and unemployment by age groups follows the typical bell curve where employment is expectantly low among youth (16 -19) and young adults (20-24). Employment levels peak from ages 25 to 54 then begin to taper off at 55 with a considerable drop after age 64. Similar to state and national trends, unemployment rates are highest among youth and youth adults and decline as age increases. Figure 11 depicts labor force participation and unemployment rates by age groups in 2019. Labor force participation and unemployment by age groups follows the typical bell curve where employment is expectantly low among youth (16 -19) and young adults (20-24). Employment levels peak from ages 25 to 54 then begin to taper off at 55 with a considerable drop after age 64. Similar to state and national trends, unemployment rates are highest among youth and youth adults and decline as age increases.

Figure 14. SJVRPU Labor Force Participation and Unemployment by Age Group



Source: ACS 1-Year Estimates 2019. Data unavailable for Inyo and Mono Counties.

Table 26 provides an overview of average wages by occupation within SJVRPU and at the state-level. It also provides averages for entry-level and experienced roles. The average annual salary across all occupations in SJVRPU is \$50,400 which is 23% lower than the California’s average of \$62,000 per year. Most occupations follow this trend of lower salaries than the state average. The difference in wages may impact the competitiveness of the SJVRPU labor market and ability to attract talent as workers may opt to take jobs in regions that offer higher pay. Also concerning is that several occupations, that when combined, make up substantial portions of the total labor force are low paying occupations; namely healthcare support, food preparation and serving, and agriculture-related occupations. Healthcare support occupations is both a growing occupation and is forecasted to have a labor shortage over the next five years, but it may be difficult to recruit people into a career that starts at an annual salary of \$29,000. It is also important to note that this career is often seen as an entryway for a career in healthcare such as in nursing or health technician occupations. On the other hand, occupations such as construction, protective services (private security), installation, maintenance, and repair, and transportation and material moving, are occupations that offer a more sustainable wage, have low training or education requirements, and are expected to grow in the next five years.

Table 26. SJVRPU Occupation Wages, Average Annual, 2019.

SOC	Occupation	SJVRPU Mean	California Mean	Entry Level Mean	Experienced Mean	Existing or Emerging Demand?
11-0000	Management Occupations	\$104,900	\$135,200	\$51,400	\$131,700	Yes
29-0000	Healthcare Practitioners and Technical Occupations	\$97,500	\$103,300	\$45,200	\$123,600	Yes
13-0000	Business and Financial Operations Occupations	\$70,200	\$84,100	\$40,800	\$84,900	Yes
25-0000	Educational Instruction and Library Occupations	\$64,800	\$68,100	\$31,800	\$81,300	Yes
33-0000	Protective Service Occupations	\$62,700	\$62,500	\$30,900	\$78,500	Yes
21-0000	Community and Social Service Occupations	\$55,200	\$59,700	\$31,800	\$66,900	Yes
47-0000	Construction and Extraction Occupations	\$53,900	\$61,200	\$32,700	\$64,600	Yes
49-0000	Installation, Maintenance, and Repair Occupations	\$50,300	\$55,700	\$30,500	\$60,100	Yes
43-0000	Office and Administrative Support Occupations	\$41,500	\$45,900	\$28,000	\$48,300	Yes
41-0000	Sales and Related Occupations	\$40,100	\$48,300	\$25,200	\$47,600	Yes
51-0000	Production Occupations	\$38,900	\$41,700	\$26,300	\$45,200	Yes
53-0000	Transportation and Material Moving Occupations	\$37,300	\$40,000	\$26,000	\$43,000	Yes
39-0000	Personal Care and Service Occupations	\$31,800	\$34,700	\$25,000	\$35,200	Yes
31-0000	Healthcare Support Occupations	\$29,800	\$33,100	\$25,000	\$32,200	Yes
35-0000	Food Preparation and Serving Related Occupations	\$28,900	\$30,700	\$24,900	\$30,900	Yes
45-0000	Farming, Fishing, and Forestry Occupations	\$27,500	\$29,100	\$24,900	\$28,700	Yes
23-0000	Legal Occupations	\$102,900	\$135,600	\$44,800	\$131,900	No



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17-0000	Architecture and Engineering Occupations	\$91,300	\$102,200	\$52,300	\$110,800	No
15-0000	Computer and Mathematical Occupations	\$81,800	\$111,300	\$46,100	\$99,700	No
19-0000	Life, Physical, and Social Science Occupations	\$79,700	\$88,500	\$41,500	\$98,800	No
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	\$54,800	\$76,100	\$27,900	\$68,300	No
37-0000	Building and Grounds Cleaning and Maintenance Occupations	\$34,700	\$36,700	\$25,400	\$39,300	No
00-0000	Total - All Occupations	\$50,400	\$62,000	\$26,000	\$62,600	N/A

Source: JobsEQ Occupation Wages. Wage data are as of 2019 and represent the average for all Covered Employment.

Table 27 provides an overview of the labor supply and demand across the SJVRPU occupational sectors. Over the next five years, several occupations in key industries are expected to experience gaps in labor supply with the largest cumulative gap in the healthcare and social services occupations. However, more specialized and thus often difficult to fill occupations in other sectors are also projected to experience labor shortages. Management occupations often require experience, education or training in a specific industry and can be hard to hire workers into these roles. Also compounding management labor shortages are a much lower average salary than the state average. STEM related fields such as Business and financial operations, computer and mathematical, architecture and engineering, and life, and physical sciences occupations often require higher levels of education and specialization which can contribute to a labor shortage. It is also worth noting that some of these occupations such as computer science, bio-tech, and finance tend to be clustered in locations that are considered industry centers or hubs.

Table 27. SJVRPU Potential Average Annual Occupation Gaps Over 5 years

SOC	Occupation	Ann Supply Gap	Current Employment	Ann Growth Demand	Annual Sep Demand	Total Annual Demand	Projected Employment	Acc. Supply 2025	Acc. Demand 2025
29-0000	Healthcare Practitioners and Technical Occupations	(957)	82,933	1,073	4,959	6,032	93,661	16,435	21,219
11-0000	Management Occupations	(803)	99,769	817	8,960	9,777	107,944	27,388	31,401
13-0000	Business and Financial Operations Occupations	(399)	62,974	481	6,174	6,656	67,787	19,765	21,758
21-0000	Community and Social Service Occupations	(244)	32,343	580	3,687	4,267	38,142	12,310	13,528
15-0000	Computer and Mathematical Occupations	(163)	20,642	195	1,599	1,794	22,592	5,150	5,967
17-0000	Architecture and Engineering Occupations	(104)	16,171	91	1,307	1,398	17,078	4,206	4,728
19-0000	Life, Physical, and Social Science Occupations	(88)	12,066	109	1,172	1,281	13,152	3,628	4,069
31-0000	Healthcare Support Occupations	(50)	83,552	2,523	11,861	14,384	108,786	40,527	40,776





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23-0000	Legal Occupations	(42)	8,405	65	550	615	9,051	1,906	2,114
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	7	16,675	76	1,877	1,953	17,435	6,025	5,989
49-0000	Installation, Maintenance, and Repair Occupations	34	53,558	317	5,374	5,691	56,723	19,301	19,130
25-0000	Educational Instruction and Library Occupations	74	111,418	343	10,217	10,560	114,849	36,677	36,304
33-0000	Protective Service Occupations	150	37,498	92	4,093	4,185	38,416	14,388	13,636
47-0000	Construction and Extraction Occupations	369	66,898	788	7,810	8,598	74,780	27,992	26,145
37-0000	Building and Grounds Cleaning and Maintenance Occupations	403	47,154	364	6,356	6,721	50,797	22,631	20,618
39-0000	Personal Care and Service Occupations	529	37,399	354	5,883	6,237	40,942	20,863	18,218
51-0000	Production Occupations	839	81,810	-40	9,737	9,696	81,408	36,442	32,246
43-0000	Office and Administrative Support Occupations	905	161,596	-124	18,438	18,314	160,355	65,587	61,063
53-0000	Transportation and Material Moving Occupations	1,390	162,135	1,146	21,339	22,485	173,600	76,809	69,859
41-0000	Sales and Related Occupations	1,734	133,587	77	19,245	19,322	134,356	69,496	60,826
35-0000	Food Preparation and Serving Related Occupations	2,416	115,243	1,367	20,733	22,101	128,915	74,311	62,230
45-0000	Farming, Fishing, and Forestry Occupations	2,827	160,837	1,378	27,239	28,617	174,620	94,149	80,016

Source: JobsEQ Occupation Gaps; Potential Average Annual Occupation Gaps over 5 Years in SJVRPU. Data as of 2020Q2, ranked by Annual Supply Gap.



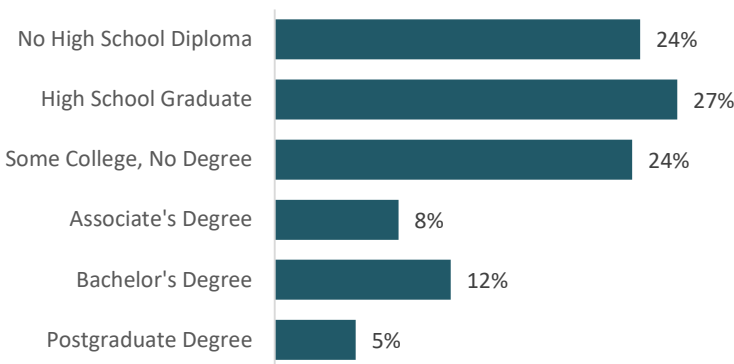
VI. Assessment of Education and Skill Level

To assess the education and skill level of the workers in the SJVRPU, we used **demographic data** from the American Community Survey, five-year estimates (2014-18) and looked at **awards and skill gaps data** provided by JobsEQ. The majority of the region’s population age 25-64 have not been awarded a college degree (75%). Only 8% of the region’s population aged 25-64 has earned an associate’s degree, while 12% has earned a bachelor’s degree and 5% has been awarded a postgraduate degree (See Figure 15). The unemployment rate is highest amongst those who have less than a high school degree (13%) and lowest amongst those who have obtained a bachelor’s degree or higher (3%, see Figure 16).

Of the traditional college-aged population, those 18-24 years old, 60% are not enrolled in college or graduate school, 36% are enrolled in public school, and 4% are enrolled in private school (Figure 17).

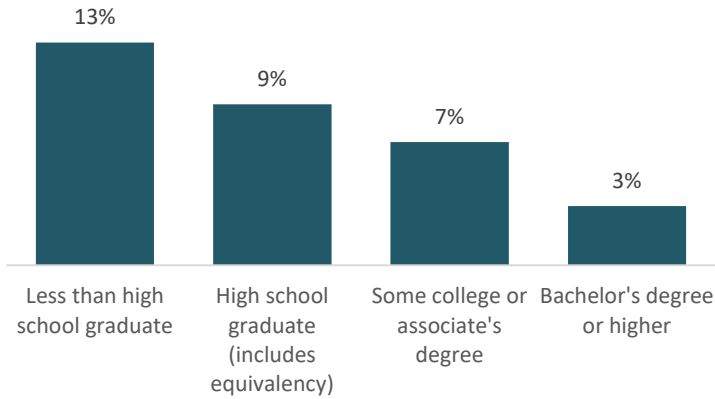
As noted earlier, many of the in-demand skills in SJVRPU are aligned to occupations where there is both current and forecasted demand. For instance, power tools, heavy equipment operation, and Bobcats are skills valued in the construction and extraction industry and occupations. Other skills, such as Microsoft Office and Excel are in high demand because they are valued in multiple industries and occupational sectors.

Figure 15. SJVRPU Educational Attainment, Age 25-64



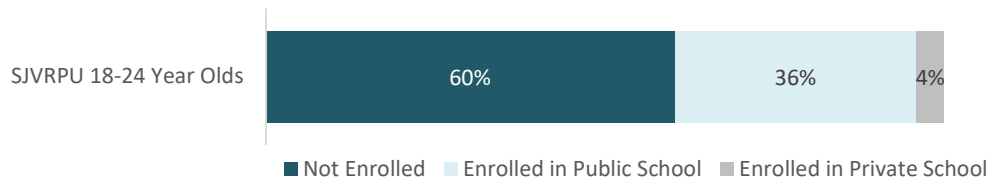
Source: JobsEQ Demographic Profile Summary, ACS 5-Year Estimates 2014-2018.

Figure 16. SJVRPU Unemployment Rate by Educational Attainment, Age 25-64



Source: JobsEQ Demographic Profile Unemployed, ACS 5-Year Estimates 2014-2018.

Figure 17. SJVRPU College/Graduate School Enrollment by Type, 18-24 Years



Source: ACS 1-Year Estimates 2019. Data unavailable for Inyo and Mono Counties.



Table 28. SJVRPU Gaps in Hard Skills for All Occupations

Skill	Number of Candidates	Number of Openings	Gap
Mathematics	3,940	5,818	-1,878
Spanish	8,927	10,548	-1,621
Microsoft Office	9,788	11,319	-1,531
Microsoft Excel	12,900	13,874	-974
Teaching/Training, Job	2,415	3,325	-910
Mechanical	2,535	3,389	-853
Teaching/Training, School	5,167	5,997	-830
Forklifts	4,908	5,666	-758
Microsoft Outlook	5,259	5,957	-697
Manufacturing	2,197	2,625	-428
Power Tools	1,399	1,647	-249
Lean Six Sigma	238	487	-248
Working With Children	261	496	-235
Barcode Scanners	321	524	-203
Heavy Equipment Operation	508	688	-180
Automated External Defibrillators (AED)	399	573	-174
Presentation	1,379	1,539	-160
Purchasing	545	703	-158
Personal Computers (PC)	353	505	-152
Microsoft Access	451	602	-151
Calculators	134	277	-144
Budgeting	344	477	-133
Mandarin	70	202	-132
Accounting	915	1,044	-129

Source: JobsEQ Skill Gaps in SJVRPU. Data as of 2020Q2; openings and candidate sample compiled in July 2019.



Table 29 shows that in SJVRPU, the most awards are being granted to those in the liberal arts and sciences, followed by business administration and management, and psychology. Many of the awards earned are aligned with the occupational growth forecasted for the region. Many of the awards for certificate programs under one year are for child care providers/assistants. Truck and bus driver/commercial vehicle operators and instructors also account for a large portion of these short-term awards. For programs that are between one and two years, liberal arts and sciences, medical/clinical assistants, and cosmetologists are earning a large portion of the awards. After liberal arts degrees, the most associate's degrees were awarded in humanities, psychology, business administration and management, criminal justice/police science, and biological and physical sciences. Fewer degrees were awarded at the bachelor's, master's, and doctoral levels.

Table 29. SJVRPU Awards

CIP Code	Title	Cert < 1 Yr	Cert 1+ but < 2 Yr	Associate's	Bachelor's	Master's	Doctorate	Total Awards
24.0101	Liberal Arts and Sciences/Liberal Studies	643	3,420	3,307	1,162	0	0	8,532
52.0201	Business Administration and Management, General	82	11	1,251	2,078	289	0	3,711
42.0101	Psychology, General	0	0	1,300	1,178	47	8	2,533
51.0801	Medical/Clinical Assistant	360	1,886	265	0	0	0	2,511
19.0709	Child Care Provider/Assistant	1,583	126	686	0	0	0	2,395
26.0101	Biology/Biological Sciences, General	0	0	851	782	27	0	1,660
24.0103	Humanities/Humanistic Studies	0	0	1,530	0	2	2	1,534
43.0107	Criminal Justice/Police Science	122	112	1,071	0	0	0	1,309
51.3801	Registered Nursing/Registered Nurse	2	0	844	380	27	0	1,253
09.0101	Speech Communication and Rhetoric	354	0	433	280	9	0	1,076
13.0101	Education, General	197	65	46	0	705	11	1,026
30.0101	Biological and Physical Sciences	0	0	1,023	0	0	0	1,023
45.1101	Sociology	0	0	383	500	4	0	887
45.0101	Social Sciences, General	0	0	711	65	0	0	776
49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	668	0	0	0	0	0	668



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47.0201	Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician	45	574	46	0	0	0	665
12.0401	Cosmetology/Cosmetologist, General	1	649	0	0	0	0	650
47.0604	Automobile/Automotive Mechanics Technology/Technician	235	307	62	0	0	0	607
31.0501	Health and Physical Education/Fitness, General	0	0	98	480	24	0	602
51.3902	Nursing Assistant/Aide and Patient Care Assistant/Aide	515	0	0	0	0	0	515
51.0000	Health Services/Allied Health/Health Sciences, General	132	0	151	211	0	0	496
48.0508	Welding Technology/Welder	385	64	44	0	0	0	493
54.0101	History, General	0	0	283	182	21	0	486
51.0904	Emergency Medical Technology/Technician (EMT Paramedic)	458	4	5	0	0	0	467
51.0601	Dental Assisting/Assistant	55	405	6	0	0	0	466

Source: JobsEQ Award in SJVRPU. Data as of 2020Q2; excludes awards from online schools. Data as of the 2018-2019 academic year.





Table 30 demonstrates the awards gaps that are forecasted for SJVRPU that will feed into the occupations that are in-demand. The target range includes the US Awards Benchmark and the Annual Demand. Business and financial operations occupations will see an awards gap of 1,018 and healthcare practitioners and technical operations will see a gap of 814 awards. There will be a surplus of awards granted that feed into arts, design, entertainment, sports, and media occupations.

Table 30. SJVRPU Awards Gaps

SOC	Occupation	Award Gap	Awards	Target Range	Annual Demand	US Awards Benchmark
13-0000	Business and Financial Operations Occupations	(1,018)	1,111	2,129 – 6,579	6,579	2,129
29-0000	Healthcare Practitioners and Technical Occupations	(814)	4,371	5,185 – 5,895	5,895	5,185
15-0000	Computer and Mathematical Occupations	(145)	930	1,075 – 1,768	1,768	1,075
19-0000	Life, Physical, and Social Science Occupations	(129)	1,135	1,264 – 1,626	1,264	1,626
25-0000	Educational Instruction and Library Occupations	(101)	7,073	7,174 – 10,508	10,508	7,174
41-0000	Sales and Related Occupations	(65)	100	166 – 19,308	19,308	166
17-0000	Architecture and Engineering Occupations	(62)	1,180	1,241 – 1,387	1,387	1,241
23-0000	Legal Occupations	(39)	296	335 – 607	607	335
35-0000	Food Preparation and Serving Related Occupations	(18)	163	181 – 21,738	21,738	181
37-0000	Building and Grounds Cleaning and Maintenance Occupations	(6)	43	49 – 6,652	6,652	49
11-0000	Management Occupations	0	7,309	6,584 – 9,656	9,656	6,584
21-0000	Community and Social Service Occupations	0	3,436	3,217 – 4,146	4,146	3,217
31-0000	Healthcare Support Occupations	0	3,946	1,590 – 13,703	13,703	1,590
33-0000	Protective Service Occupations	0	2,575	1,459 – 4,163	4,163	1,459
39-0000	Personal Care and Service Occupations	0	4,380	1,531 – 6,156	6,156	1,531
43-0000	Office and Administrative Support Occupations	0	1,736	798 – 18,269	18,269	798
45-0000	Farming, Fishing, and Forestry Occupations	0	378	302 – 28,306	28,306	302
47-0000	Construction and Extraction Occupations	0	327	261 – 8,453	8,453	261
49-0000	Installation, Maintenance, and Repair Occupations	0	1,826	1,081 – 5,641	5,641	1,081
51-0000	Production Occupations	0	637	535 – 9,679	9,679	535
53-0000	Transportation and Material Moving Occupations	0	670	319 – 22,271	22,271	319
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	540	2,479	1,655 – 1,938	1,938	1,655

Source: JobsEQ Award Gaps by Occupation in SJVRPU. Data as of 2020Q2; excludes awards from online schools.

Demographic Portrait

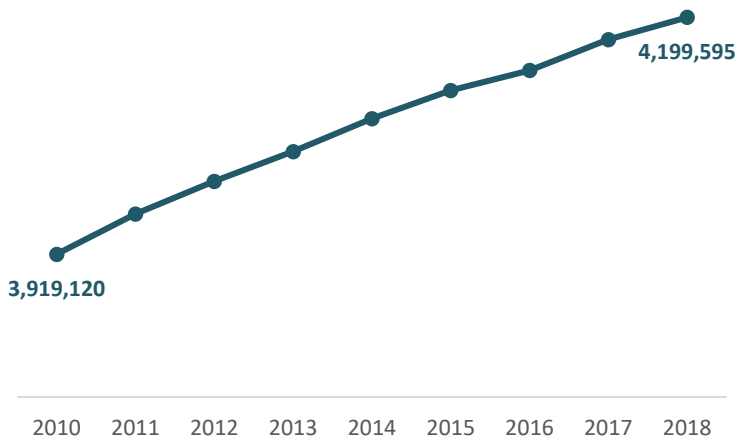
Population

Table 31. Selected SJVRPU Demographic and Income Characteristics

SJVRPU Demographics	
Population	4,199,595
Median Age	32.5
Households	1,288,082
Median Household Income	\$53,807
Median Home Value	\$242,661
Poverty Level (of all people)	20.9%
Per Capita Income	\$23,368

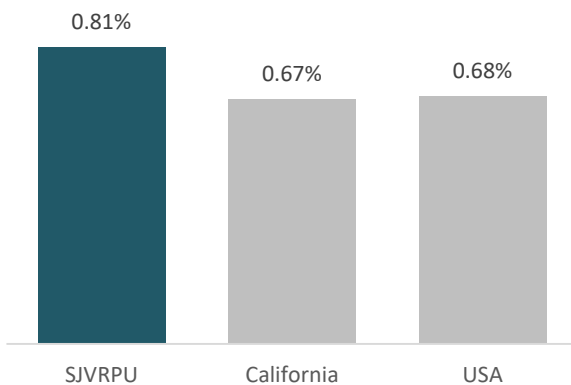
Source: JobsEQ Demographic Profile Summary, ACS 5-Year Estimates 2014-2018

Figure 18. SJVRPU Population 2010-2018



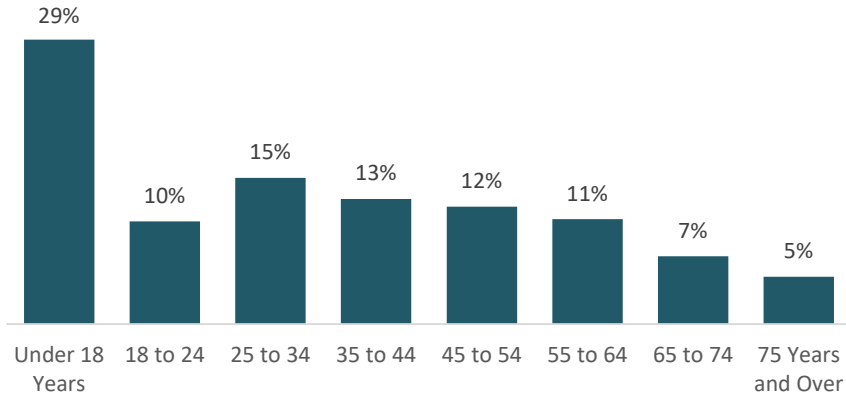
Source: JobsEQ Demographic Profile Summary, ACS 5-Year Estimates 2014-2018

Figure 19. SJVRPU Population Annual Growth Rates



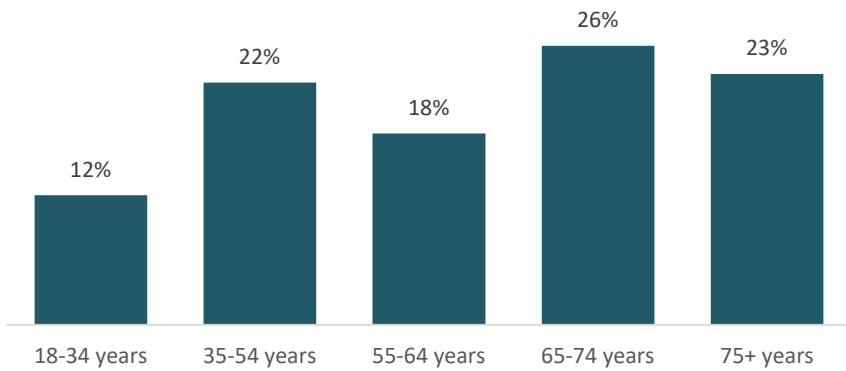
Source: JobsEQ Demographic Profile Summary, ACS 5-Year Estimates 2014-2018

Figure 20. SJVRPU Age Distribution



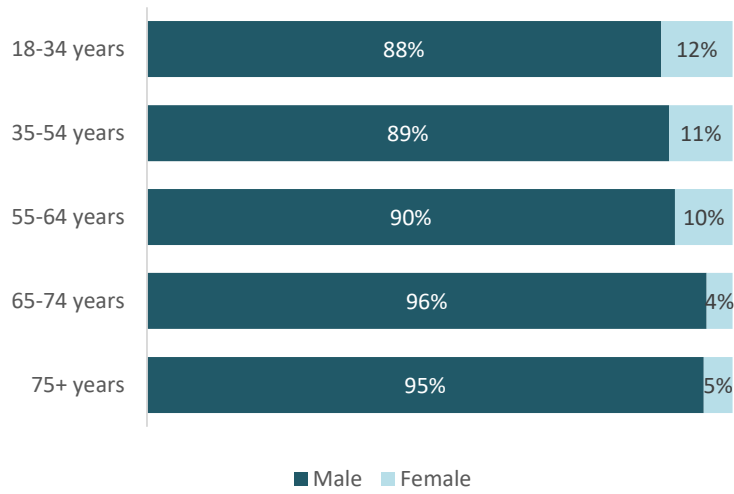
Source: JobsEQ Demographic Profile Summary, ACS 5-Year Estimates 2014-2018

Figure 21. SJVRPU Veteran Population by Age Group



Source: ACS 1-Year Estimates 2019. Data unavailable for Inyo and Mono Counties.

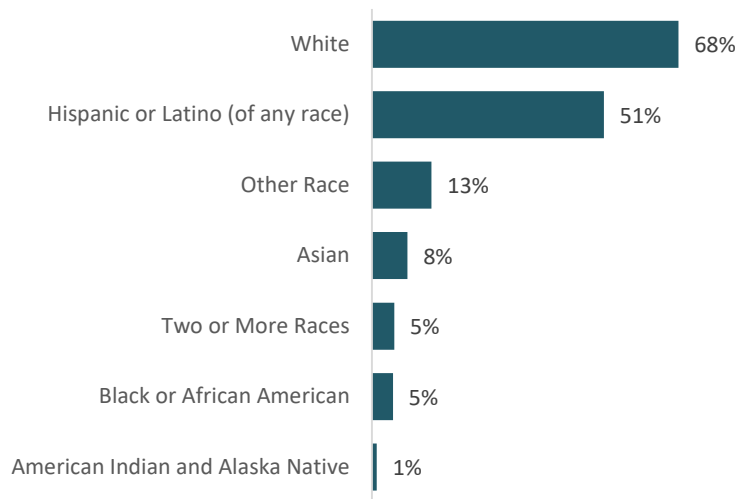
Figure 22. SJVRPU Veteran Population by Age and Gender



Source: ACS 1-Year Estimates 2019. Data unavailable for Inyo and Mono Counties.

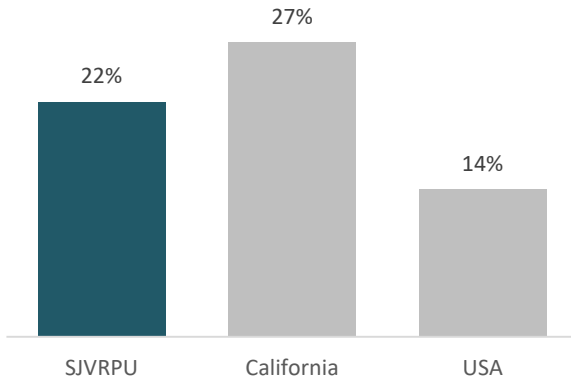
Race, Ethnicity, & Language Abilities

Figure 23. SJVRPU Race/Ethnicity



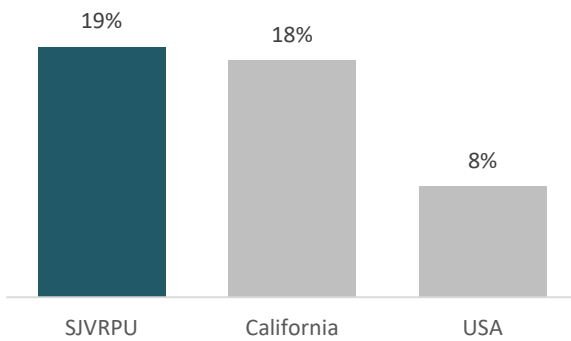
Source: JobsEQ Demographic Profile Summary, ACS 5-Year Estimates 2014-2018

Figure 24. Foreign Born Population



Source: JobsEQ Demographic Profile Summary, ACS 5-Year Estimates 2014-2018

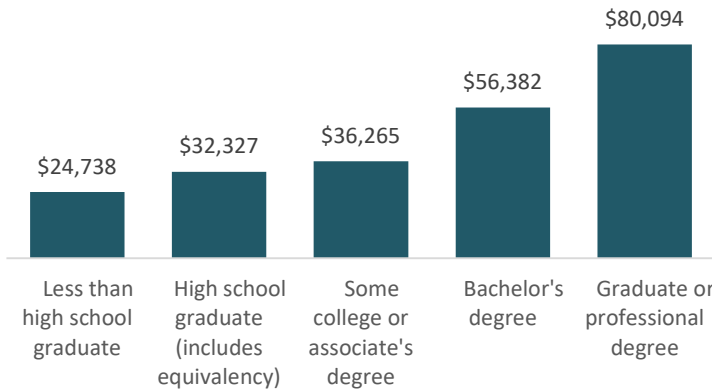
Figure 25. Population that Speaks English *Less Than Very Well*



Source: JobsEQ Demographic Profile Summary, ACS 5-Year Estimates 2014-2018

Educational Attainment & Economic Opportunity

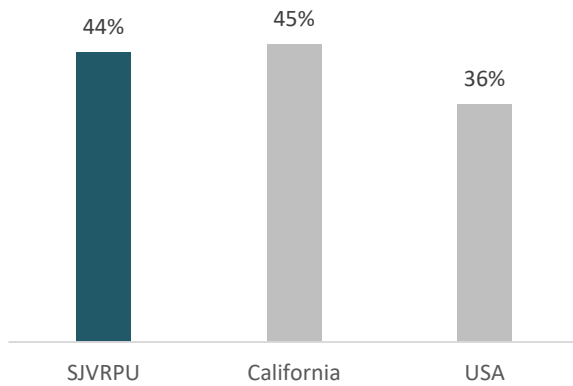
Figure 26. SJVRPU Average Median Earnings and Educational Attainment



Source: ACS 1-Year Estimates 2019 for population 25 years and over. Data unavailable for San Joaquin County.

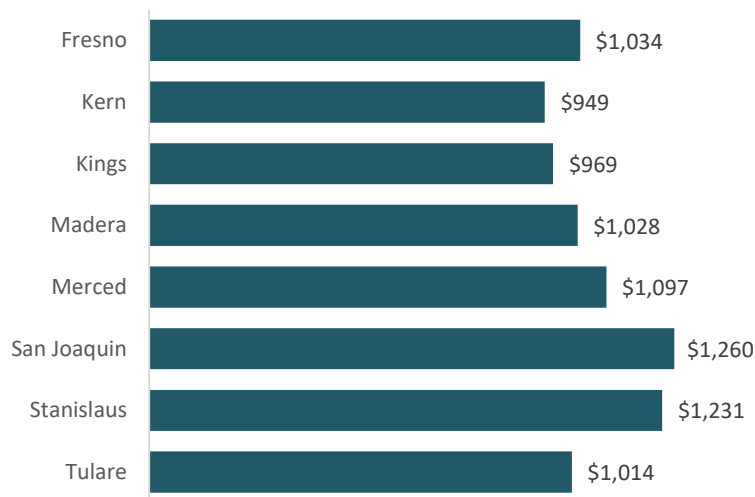
Households & Housing

Figure 27. Renter-Occupied Housing Units



Source: JobsEQ Demographic Profile Summary, ACS 5-Year Estimates 2014-2018

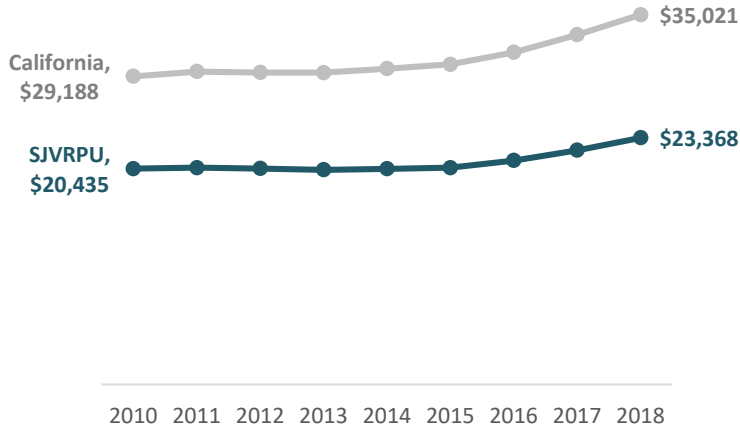
Figure 28. SJVRPU Median Gross Rent (Dollars) by County



Source: ACS 1-Year Estimates 2019. Data unavailable for Inyo and Mono Counties.

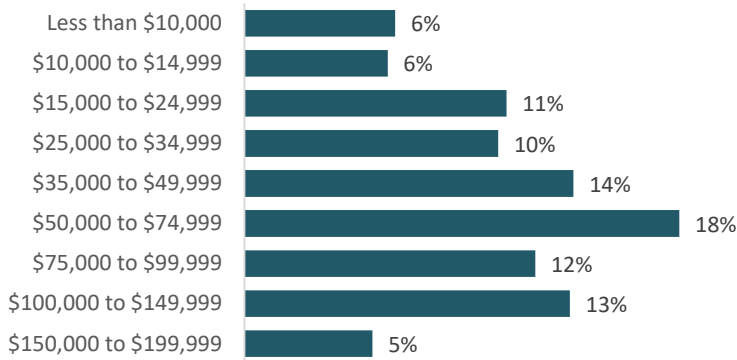
Income & Poverty

Figure 29. Per Capita Income 2010-2018



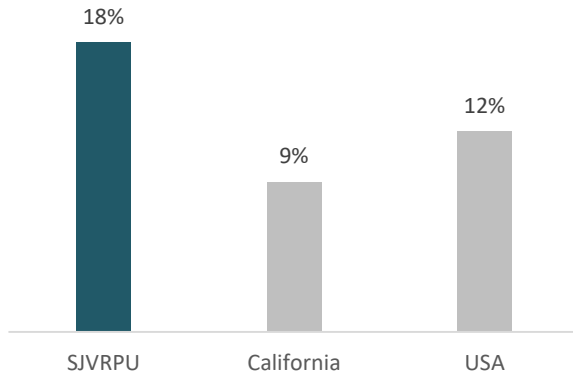
Source: JobsEQ Demographic Profile Unemployed, ACS 5-Year Estimates 2014-2018

Figure 30. SJVRPU Household Income



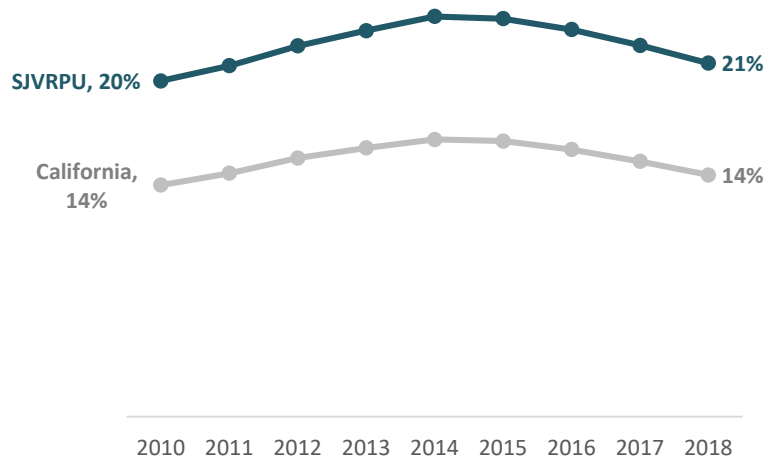
Source: JobsEQ Demographic Profile Household Income, ACS 5-Year Estimates 2014-2018

Figure 31. SJVRPU Households Receiving Food Stamps/SNAP



Source: JobsEQ Demographic Profile Summary, ACS 5-Year Estimates 2014-2018

Figure 32. SJVRPU Poverty Level (of all people) 2010-2018



Source: JobsEQ Demographic Profile Summary, ACS 5-Year Estimates 2014-2018