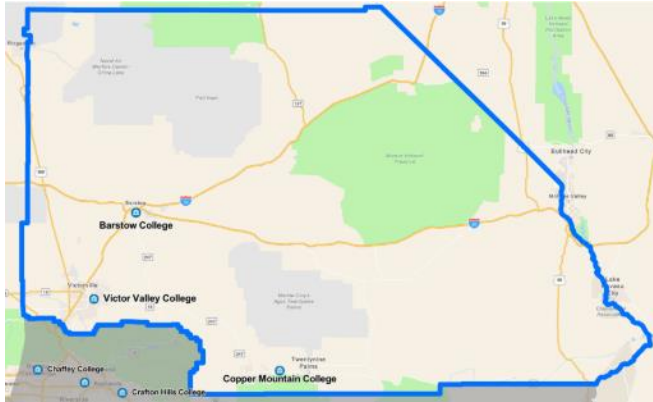


Workforce Summary for High Desert Subregion

This report summarizes the current and future labor market information for the High Desert Subregion. Inland Empire/ Desert Region comprises four subregions: Inland Empire-San Bernardino County (Metro-1), Inland Empire-Riverside County (Metro-2), High Desert (San Bernardino County) and Low Desert (Riverside County). The High Desert subregion includes Victorville, Barstow, Needles, Adelanto, Hesperia, Twentynine Palms.

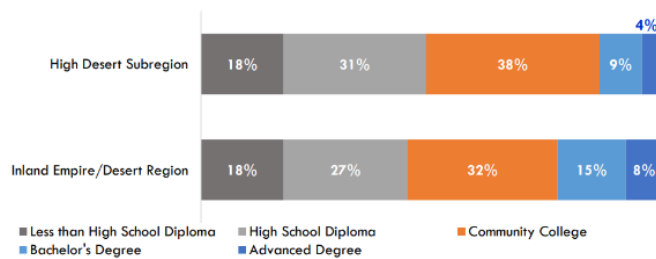
High Desert Subregional Overview



The High Desert Subregion of San Bernardino County stretches north from the San Bernardino Mountains to the southern edge of Inyo County and east from the Los Angeles County border to the Arizona and Nevada state lines. While it's the largest subregion in terms of area, and the largest county in the country, it holds approximately 11% of the overall county population and 9% of the jobs in the region. This area includes three community colleges and 10 high school districts (Graph 1).

Graph 1. Community colleges in the High Desert Subregion¹

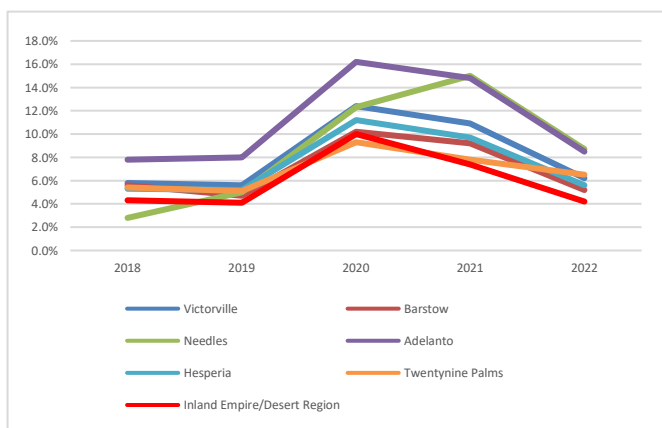
Education Attainment



Graph 2 shows educational attainment among residents aged 25 and older, indicating their highest completed education level. Around 49% of the subregion's residents have a high school diploma or lower, which is 4% higher than the Inland Empire/Desert Region. The subregion also has a higher percentage of residents (38%) with community college education compared to the region (32%). However, fewer subregion residents have a bachelor's degree or higher (13%) compared to the region (23%).

Graph 2. Educational attainment, High Desert Subregion and Inland Empire/Desert Region, 2021¹

Unemployment Rate



Labor force data reflects the employment status of people by where they live. Labor force is the total count of residents working (employed) or seeking work (unemployed). The unemployment rate represents the number of unemployed individuals expressed as a share of the total labor force. In 2018, the regional unemployment rate averaged 4.3%, dropping to 4.1% in 2019 (Graph 3). However, the COVID-19 pandemic spiked the rate to 10% in 2020, recovering slightly to 7.4% in 2021. Analyzing the annualized growth rates, the Inland Empire/Desert Region displayed a modest decline of -0.47%. It's worth noting that within the High Desert subregion, Barstow stood out with a particularly negative annualized growth rate of -1.47%.

Graph 3. Annual average unemployment rate for High Desert Cities, 2018-2022²

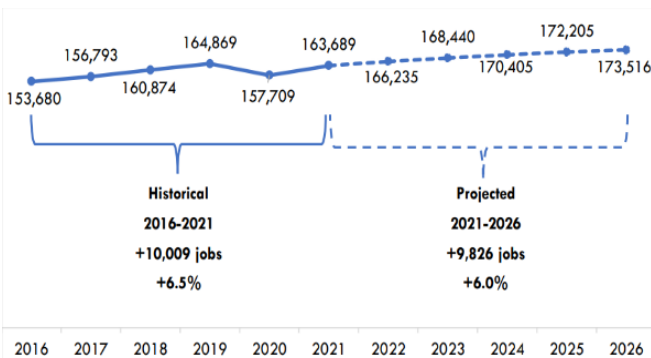
1. 2023 workforce demand assessment high desert subregion, inland empire desert regional consortium and centers of experience for labor market research.

2. California Employment Development Department.



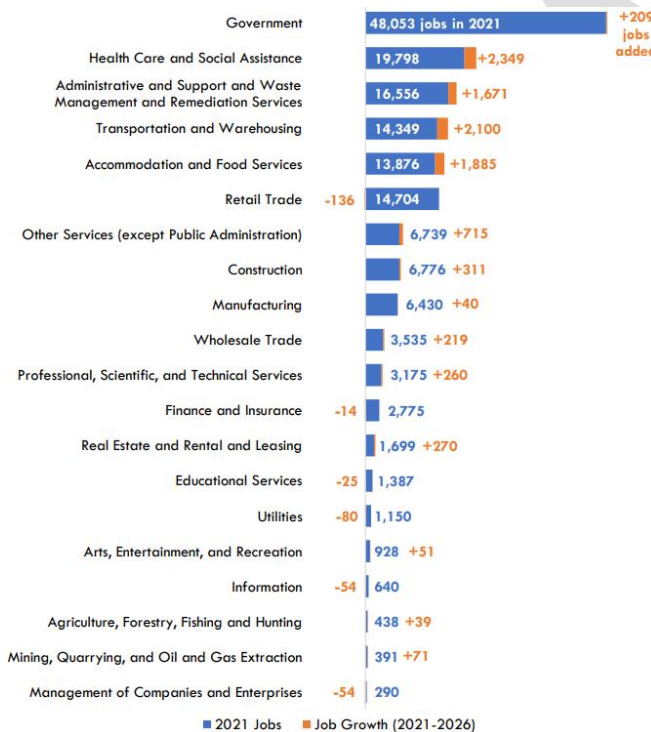
High Desert Subregional Industries

This section presents data about the High Desert subregion, including job count, projected job growth, and its contribution to the larger region's job growth. Graph 4 juxtaposes employment growth over the past and upcoming five years. Within the subregion, there were approximately 163,700 jobs in 2021, constituting around 9% of the entire employment in the Inland Empire/Desert Region, which totaled nearly 1.74 million jobs.



During the previous five years (2016 to 2021), subregional employment surged by 6.5%, a net addition of over 10,000 jobs. The subregion's industry employment is predicted to increase by 6% over the next five years, resulting in over 9,800 new jobs. This growth rate is slower compared to the projected job growth of 8.6% for the wider region. In 2020, the subregion experienced a minor employment decline due to the COVID-19 pandemic, shedding an average of nearly 7,200 jobs, which accounted for approximately 4% of the total employment.

Graph 4. Historical and projected change in industry employment, High Desert Subregion, 2016-2026¹



In 2021 (blue bars), the largest industries by employment were Government; Health Care and Social Assistance; Administrative and Support and Waste Management and Remediation Services; Transportation and Warehousing; Accommodation and Food Service; and Retail Trade (Graph 5). These industries accounted for nearly 113,500 jobs or approximately 69% of subregional employment. Orange bars represent projected jobs growth in 2021-2026. The top five industries adding the most jobs to the subregion by 2026 are Health Care and Social Assistance; Transportation and Warehousing; Accommodation and Food Services; Administrative and Support and Waste Management and Remediation Services; and Other Services (except public administration). These five industries are projected to contribute 89% of the subregion's job growth over the next five years. Retail Trade; Finance and Insurance; Educational Services; Utilities; Information; and Management of Companies and Enterprises are all job categories that are expected to see a decrease in employment.

Graph 5. Current and projected change in industry employment, High Desert Subregion, 2021-2026¹



| Industry Groups (NAICS4) | 2021 Jobs | 2021-2026 Job Change | Growth Rate | Location Quotient | Average Earnings Per Job |
|---|-----------|----------------------|-------------|-------------------|--------------------------|
| Transportation and Warehousing | | | | | |
| General Freight Trucking (4841) | 4,781 | 576 | 12% | 3.6 | \$75,650 |
| Warehousing and Storage (4931) | 3,846 | 806 | 21% | 2.3 | \$56,256 |
| Specialized Freight Trucking (4842) | 1,312 | 329 | 25% | 2.9 | \$83,866 |
| Freight Transportation Arrangement (4885) | 349 | 78 | 22% | 1.2 | \$71,337 |
| Support Activities for Rail Transportation (4882) | 194 | 56 | 29% | 5.7 | \$62,446 |
| Other Pipeline Transportation (4869) | 109 | 21 | 19% | 13.3 | \$128,312 |
| Other Support Activities for Transportation (4889) | 106 | 9 | 9% | 3 | \$60,113 |
| Other Services (except Public Administration) | | | | | |
| Automotive Repair and Maintenance (8111) | 1,603 | 194 | 12% | 1.3 | \$52,675 |
| Drycleaning and Laundry Services (8123) | 815 | 278 | 34% | 3.1 | \$85,883 |
| Death Care Services (8122) | 177 | 26 | 14% | 1.2 | \$90,461 |
| Administrative and Support and Waste Management and Remediation Services | | | | | |
| Facilities Support Services (5612) | 1,538 | 256 | 17% | 9.8 | \$83,962 |
| Remediation and Other Waste Management Services (5629) | 318 | 28 | 9% | 1.9 | \$86,682 |
| Industry Groups (NAICS4) | | | | | |
| Real Estate and Rental and Leasing | | | | | |
| Automotive Equipment Rental and Leasing (5321) | 473 | 177 | 37% | 2.5 | \$71,219 |
| Mining, Quarrying, and Oil and Gas Extraction | | | | | |
| Nonmetallic Mineral Mining and Quarrying (2123) | 373 | 69 | 19% | 3.8 | \$114,522 |
| Manufacturing | | | | | |
| Animal Food Manufacturing (3111) | 317 | 49 | 15% | 4.6 | \$75,656 |
| Soap, Cleaning Compound, and Toilet Preparation Manufacturing (3256) | 240 | 53 | 22% | 2 | \$88,012 |
| Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (3253) | 152 | 48 | 32% | 4 | \$79,064 |
| Nonferrous Metal (except Aluminum) Production and Processing (3314) | 112 | 13 | 12% | 2 | \$95,339 |
| Health Care and Social Assistance | | | | | |
| Psychiatric and Substance Abuse Hospitals (6222) | 240 | 27 | 11% | 1.9 | \$69,604 |
| Construction | | | | | |
| Other Heavy and Civil Engineering Construction (2389) | 202 | 18 | 9% | 1.3 | \$99,969 |

Table 6. Industry groups with high-quality jobs, High Desert Subregion, 2021-2026¹

Logistics and Materials Transportation

The high school-level logistics support occupations require a high school diploma or equivalent and short to medium term on-the-job training. The community college-level logistics operations occupations require

| Occupation | 2020 Jobs | 2025 Jobs | 5-Yr % Change (New Jobs) | 5-Yr Openings (New + Replacement Jobs) | Annual Openings (New + Replacement Jobs) | % of workers age 55+ |
|--|---------------|---------------|--------------------------|--|--|----------------------|
| First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors | 9,116 | 10,575 | 16% | 5,998 | 1,200 | 21% |
| Transportation, Storage, and Distribution Managers | 2,509 | 2,933 | 17% | 1,338 | 268 | 22% |
| Logisticians | 1,557 | 1,731 | 11% | 865 | 173 | 14% |
| Community College-level Total (Logistics Operations) | 13,181 | 15,239 | 16% | 8,201 | 1,640 | 19% |
| Shipping, Receiving, and Inventory Clerks | 10,964 | 11,793 | 8% | 5,968 | 1,194 | 18% |
| Production, Planning, and Expediting Clerks | 4,845 | 5,309 | 10% | 2,825 | 565 | 22% |
| Cargo and Freight Agents | 1,085 | 1,453 | 34% | 914 | 183 | 17% |
| High School-level Total (Logistics Support) | 16,894 | 18,555 | 10% | 9,707 | 1,941 | 19% |
| Total | 30,075 | 33,794 | 12% | 17,908 | 3,582 | 19% |

Table 7. Five-year projections for Logistics, 2020-2025³

occupational group is projected to grow by 10% through 2025 and is expected to have 1,941 annual job openings. Table 7 displays the job counts, five-year projected job growth, job openings, and the share of incumbent workers aged 55 years and greater in the region.

Table 6 provides a sample of high-quality industry groups. High-quality industries are those that are growing faster than the region overall (at or above 8.6% growth), have average per-job earnings above the living wage standard (\$45,386 annually), and have a high location quotient at or above 1.2. A location quotient reflects the concentration of an industry in an area compared to the nation overall. Highly concentrated industries, those with a high location quotient, often describe the type of business activity an area is “known for.” In 2021, about 17,300 jobs belonged to such high-quality industry groups, comprising around 11% of the subregion's employment. These industries are projected to contribute 32% of the subregion's job growth in the next five years.

The detailed industry groups displayed in Table 6 with fast growth, strong earnings, and high concentration in the subregion compared to the nation overall include Transportation and warehousing; Other services (except public administration); Administrative and Support and Waste Management and Remediation Services; Mining, Quarrying, and Oil and Gas Extraction; Manufacturing; Health Care and Social Assistance; and Construction.

mid to long-term work experience. While logisticians typically require a bachelor's degree, it is considered a community college-level occupation because a high share of incumbent workers possess a community college-level education as their highest level of educational attainment. In 2020, there were a total of 30,075 total logistics jobs in the region. About 44% of the logistics jobs were community college-level logistics operations occupations. This group's employment is projected to increase by 16% through 2025 and is expected to have 1,640 annual job openings. The high school-level logistics support

3. Emsi 2021.3; 4. Burning Glass-Labor Insights



| Occupation | Job Ads | Regional Average Time to Fill (Days) | Statewide Average Time to Fill (Days) |
|--|--------------|--------------------------------------|---------------------------------------|
| Transportation, Storage, and Distribution Managers | 1,433 | 33 | 34 |
| First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors | 550 | 39 | 38 |
| Logisticians | 399 | 39 | 39 |
| Logistics Operation Total | 2,382 | 35 | 36 |
| Shipping, Receiving, and Inventory Clerks | 2,353 | 26 | 26 |
| Production, Planning, and Expediting Clerks | 831 | 34 | 34 |
| Cargo and Freight Agents | 332 | 25 | 26 |
| Logistics Support Total | 3,516 | 28 | 29 |
| Total | 5,898 | 31 | 32 |

positions as other employers in California.

Table 8. Job ads and time to fill⁴

Electronics and Electric Technology

| Occupation | 2020 Jobs | 2025 Jobs | 5-Yr % Change (New Jobs) | 5-Yr Openings (New + Replacement Jobs) | Annual Openings (New + Replacement Jobs) | % of workers age 55+ |
|---|--------------|--------------|--------------------------|--|--|----------------------|
| Electrical Engineers | 1,079 | 1,141 | 6% | 418 | 84 | 30% |
| Electronics Engineers, Except Computer | 742 | 769 | 4% | 268 | 54 | 29% |
| Bachelor's Degree-level Total | 1,821 | 1,910 | 5% | 687 | 137 | 30% |
| Electrical and Electronic Engineering Technologists and Technicians | 882 | 903 | 2% | 435 | 87 | 30% |
| Electrical and Electronics Repairers, Commercial and Industrial Equipment | 586 | 605 | 3% | 255 | 51 | 17% |
| Electrical and Electronics Repairers, Powerhouse, Substation, and Relay | 234 | 225 | (4%) | 91 | 18 | 16% |
| Electrical and Electronics Installers and Repairers, Transportation Equipment | 160 | 160 | (0%) | 65 | 13 | 11% |
| Community College-level Total | 1,862 | 1,893 | 2% | 846 | 169 | 23% |
| Total | 3,683 | 3,803 | 3% | 1,532 | 306 | 26% |

Table 8 shows the number of job ads posted during the last 12 months and the regional and statewide average time filling each occupation. Over the previous 12 months, there were 5,898 job ads for the logistics occupational group in the Inland Empire/Desert Region. Regional employers spent approximately seven days longer filling logistics operations positions than logistics support positions. On average, regional employers fill online job advertisements for logistics workers in 31 days, one day shorter than the statewide time to fill. Job advertisements indicate that regional employers may face similar challenges filling open

The community college-level occupations either require an associate degree or a postsecondary nondegree award. The bachelor's degree-level occupations typically require workers to obtain a four-year degree before entering employment. In 2020, there were 3,683 total electronics and electric technology jobs in the region. Employment for the community college-level electronics occupational group is projected to increase by 2% through 2025; 169 job openings are projected annually. Bachelor's degree-level occupations are expected to have 137 annual job openings, increasing employment by 5% over the next five years. Table 9 displays the job counts, five-year projected job growth, job openings, and the share of incumbent workers aged 55 years and greater in the region.

Table 9. Five-year projections for the electronics occupational group, 2020-2025⁵

| Occupation | Job Ads | Regional Average Time to Fill (Days) | Statewide Average Time to Fill (Days) |
|--|--------------|--------------------------------------|---------------------------------------|
| Electrical Engineers | 137 | 39 | 40 |
| Electronics Engineers, Except Computer* | 4,011 | - | 39 |
| Bachelor's Degree-level Total | 4,148 | 39 | 40 |
| Electrical and Electronic Engineering Technologists and Technicians | 357 | 32 | 35 |
| Electrical and Electronics Repairers, Powerhouse, Substation, and Relay* | 115 | - | 31 |
| Electrical and Electronics Repairers, Commercial and Industrial Equipment* | 16 | - | - |
| Electrical and Electronics Installers and Repairers, Transportation Equipment* | 0 | - | - |
| Community College-level Total | 488 | 32 | 35 |
| Total | 4,636 | 34 | 39 |

Table 10. Job ads and time to fill⁴

There were no advertisements for electrical and electronics installers and repairers, transportation equipment in the region or California. On average, regional employers fill online job advertisements for electronics workers in 34 days, 5. Emsi 2021.4

Table 10 shows the number of job ads posted during the last 12 months and the regional and statewide average time filling each occupation. Over the previous 12 months, there were 4,636 job ads posted for the electronics occupational group in the region. The job advertisement searches for electronics engineers, except computer; electrical and electronics repairers, powerhouse, substation, and relay; electrical and electronics repairers, commercial and industrial equipment; and electrical and electronics installers and repairers, transportation equipment workers were expanded to California to ensure there were sufficient advertisements from which to obtain reliable job advertisement information.



five days shorter than the statewide time to fill. Job advertisements indicate that regional employers face fewer challenges filling open positions than other employers in California.

Industrial Automation Technology

| Occupation | 2021 Jobs | 2026 Jobs | 5-Yr % Change | 5-Yr Openings (New + Replacement Jobs) | Annual Openings (New + Replacement Jobs) | % of workers age 55+ |
|---|------------|------------|---------------|--|--|----------------------|
| Electrical and Electronics Repairers, Commercial and Industrial Equipment | 648 | 683 | 5% | 294 | 59 | 17% |
| Electro-Mechanical and Mechatronics Technologists and Technicians | 127 | 126 | (1%) | 59 | 12 | 29% |
| Total | 776 | 810 | 4% | 354 | 71 | 19% |

Table 11. Five-year projections for the electronics occupational group, 2021-2026⁶

| Occupation | Job Ads | Median Posting Duration (Days) |
|---|------------|--------------------------------|
| Electro-Mechanical and Mechatronics Technologists and Technicians | 265 | 29 |
| Electrical and Electronics Repairers, Commercial and Industrial Equipment | 1 | N/A |
| Total | 266 | 29 |

Table 12. Job ads and time to fill, California, Feb 2022 - Jan 2023⁶
open for 27 days, indicating that it is slightly more challenging for employers to fill industrial automation positions than other jobs.

Mechatronics

| Occupation | 2020 Jobs | 2025 Jobs | 5-Yr % Change (New Jobs) | 5-Yr Openings (New + Replacement Jobs) | Annual Openings (New + Replacement Jobs) | % of workers age 55+ |
|---|--------------|--------------|--------------------------|--|--|----------------------|
| Electrical and Electronics Repairers, Commercial and Industrial Equipment | 576 | 608 | 6% | 263 | 53 | 17% |
| Electro-Mechanical and Mechatronics Technologists and Technicians | 46 | 50 | 7% | 26 | 5 | 23% |
| Community College-level Total | 622 | 657 | 6% | 289 | 58 | 18% |
| Engineers, All Other* | 1,139 | 1,204 | 6% | 430 | 86 | 34% |
| Bachelor's Degree-level Total | 1,139 | 1,204 | 6% | 430 | 86 | 34% |

Table 13. Five-year projections for the mechatronics, 2020-2025⁷

| Occupation | Job Ads | Regional Average Time to Fill (Days) | Statewide Average Time to Fill (Days) |
|--|------------|--------------------------------------|---------------------------------------|
| Mechatronics Engineers* | 340 | - | 43 |
| Bachelor's Degree-level Total | 340 | - | 43 |
| Electro-Mechanical and Mechatronics Technologists and Technicians | 97 | 30 | 36 |
| Electrical and Electronics Repairers, Commercial and Industrial Equipment* | 0 | - | - |
| Community College-level Total | 97 | 30 | 36 |
| Total | 437 | 30 | 37 |

employers likely face fewer challenges filling open positions than other employers in California.

Table 14. Job ads and time to fill⁴

In 2021, there were 776 jobs in the industrial automation occupational group in the region. Regional employment for the industrial automation occupational group is projected to increase by 4% through 2026; 71 job openings are projected annually. Table 11 displays the job counts, five-year projected job growth, job openings, and the share of incumbent workers aged 55 years and greater in the region.

Table 12 shows the number of job ads posted over the last 12 months in California and the median posting duration. On average, employers kept online job ads for electro-mechanical and mechatronics statewide online job is technologists and technicians open for 29 days. The average

In 2020, there were 1,762 total mechatronics jobs in the region. Employment for the community college-level mechatronics occupational group is projected to increase by 6% through 2025, with 58 combined annual job openings expected annually. Engineers, all others are expected to have 86 annual job openings, increasing employment by 6% over the next five years. Table 13 displays the job counts, five-year projected job growth, job openings, and the share of incumbent regional workers aged 55 years and greater.

Table 14 shows the number of job ads posted during the last 12 months and the regional and statewide average time to fill this job. On average, regional employers spent 30 days filling online job advertisements for electro-mechanical and mechatronics technologists and technicians, seven days shorter than employers throughout the state. Time to fill information reveals that regional

6. Lightcast 2022.4

7. Emsi 2022.1



Robotics

| 2020 Jobs | 2025 Jobs | 5-Yr % Change (New Jobs) | 5-Yr Openings (New + Replacement Jobs) | Annual Openings (New + Replacement Jobs) | % of workers age 55+ |
|-----------|-----------|--------------------------|--|--|----------------------|
| 47 | 51 | 9% | 25 | 5 | 23% |

In 2020, there were 47 electro-mechanical and mechatronics technologist and technician jobs in the region. While employment for this occupation is projected to grow

Table 15. Five-year projections for the robotics occupational group, 2020-2025³

by 9% through 2025, only five annual job openings are expected. Job openings include new jobs due to growth and replacement job needs. This indicates that job opportunities in the region may be scarce. Table 15 displays the job counts, five-year projected job growth, job openings, and the share of incumbent workers aged 55 years and greater in the region.

| Job Ads | Statewide Average Time to Fill (Days) |
|---------|---------------------------------------|
| 375 | 32 |

Table 16 shows the number of job ads posted in California during the last 12 months and the average time to fill this

job. On average, California employers fill online

Table 16. Job ads and time to fill⁴

job ads for electro-mechanical and mechatronics technologists and technicians within 32 days.