

March 2021

Labor Market Analysis

Company Officers

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Prepared by the Central Valley/Mother Lode Center of Excellence

Table of Contents

- Summary 2
 - Key findings 2
- Introduction..... 3
- Occupational Demand 4
- Wages 4
- Job Postings 5
 - Salaries..... 5
 - Education..... 6
 - Baseline and Specialized Skills..... 6
 - Software Skills..... 7
 - Certifications..... 7
- Education, Work Experience & Training 8
- Supply 9
- Student Outcomes 11
- Conclusion 12
- Recommendation 12
- Appendix A: Methodology & Data Sources 13

COVID-19 Statement: This report includes employment projection data by Emsi. Emsi’s projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy during the projection period will be at approximately full employment or potential output. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, they may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Other measures such as unemployment rates and monthly industry employment estimates will reflect the most recent information on employment and jobs in the state and, in combination with input from local employers, may help validate current and future employment needs as depicted here.

If for any reason this document is not accessible or if you have specific needs for readability, please contact us and we will do our utmost to accommodate you with a modified version. To make a request, contact Nora Seronello by phone at (209) 575-6894 or by email seronellon@mjc.edu.

Summary

Please note the COVID-19 statement on page 2 when considering this report's findings.

This study conducted by the Central Valley/Mother Lode Center of Excellence examines labor market demand, wages, skills, and postsecondary supply for company officers. Five occupations related to company officers were identified for Fresno City College:

- 33-2011, Firefighters
- 29-2041, Emergency Medical Technicians and Paramedics
- 33-1021, First-Line Supervisors of Firefighting and Prevention Workers
- 33-2021, Fire Inspectors and Investigators
- 33-2022, Forest Fire Inspectors and Prevention Specialists

Key findings:

- **Occupational demand** — Nearly 3,900 workers were employed in jobs related to company officers in 2019 in the South Central Valley/Southern Mother Lode (SCV/SML) subregion. The largest occupation is firefighters with 2,143 workers in 2019, a projected growth rate of 6% over the next five years, and 165 annual openings.
- **Wages** — Fire inspectors and investigators earn the highest entry-level wage, \$41.67/hour in the subregion and \$38.94/hour in the region.
- **Employers** — Employers with the most job postings in the subregion are Adventist Health, Hall Ambulance Service Incorporated, and Commander.
- **Occupational titles** — The most common occupational title in job postings in the subregion is emergency medical technicians and paramedics. The most common job title is paramedic.
- **Skills and certifications** — The top baseline skill is communication, the top specialized skill is CPR, and the top software skill is Microsoft Office. The most in-demand certification is Emergency Medical Technician.
- **Education** — A postsecondary nondegree award is the typical entry-level education required for four of the five occupations. A high school diploma is typically required for forest fire inspectors and prevention specialists.
- **Supply** — Analysis of postsecondary completions in the region shows that on average 172 awards were conferred in the Central Valley/Mother Lode region each year.

Based on a comparison of occupational demand and supply, there is an undersupply of 29 trained workers in the subregion and 261 workers in the region. The Center of Excellence recommends that Fresno City College work with the regional director, the college's advisory board, and local industry in the expansion of programs to address the shortage of company officers workers in the region. Although there is an oversupply of EMT and paramedic workers in the region and these occupations are not high wage, an EMT certification is required as part of the pathway to becoming a firefighter and other occupations that are high-wage and provide for economic sustainability.

Introduction

The Central Valley/Mother Lode Center of Excellence was asked by Fresno City College to provide labor market information for company officers. The geographical focus for this report is the South Central Valley/Southern Mother Lode (SCV/SML) subregion, but regional demand and supply data has been included for broader applicability and use. The average living wage for a single adult in the SCV/SML subregion is \$10.30/hour.¹ Analysis of the program and occupational data related to company officers resulted in the identification of applicable occupations. The Standard Occupational Classification (SOC) System codes and titles used in this report are:

- 33-2011, Firefighters
- 29-2041, Emergency Medical Technicians and Paramedics
- 33-1021, First-Line Supervisors of Firefighting and Prevention Workers
- 33-2021, Fire Inspectors and Investigators
- 33-2022, Forest Fire Inspectors and Prevention Specialists

The occupational titles, job descriptions, sample job titles, and knowledge and skills from the Bureau of Labor Statistics and O*NET OnLine are shown below. Data was not available for Emergency Medical Technicians and Paramedics.

Firefighters

Job Description: Control and extinguish fires or respond to emergency situations where life, property, or the environment is at risk. Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster assistance.

Knowledge: Public Safety and Security, Building and Construction, Customer and Personal Service, Education and Training, Mechanical

Skills: Active Listening, Monitoring, Coordination, Operation Monitoring, Critical Thinking

First-Line Supervisors of Firefighting and Prevention Workers

Job Description: Directly supervise and coordinate activities of workers engaged in firefighting and fire prevention and control.

Knowledge: Public Safety and Security, Customer and Personal Service, Administration and Management, English Language, Education and Training

Skills: Critical Thinking, Monitoring, Speaking, Active Listening, Complex Problem Solving

Fire Inspectors and Investigators

Job Description: Inspect buildings to detect fire hazards and enforce local ordinances and state laws, or investigate and gather facts to determine cause of fires and explosions.

Knowledge: Public Safety and Security, Building and Construction, Customer and Personal Service, Law and Government, Education and Training

Skills: Active Listening, Critical Thinking, Speaking, Judgement and Decision Making, Complex Problem Solving

Forest Fire Inspectors and Prevention Specialists

Job Description: Enforce fire regulations, inspect forest for fire hazards, and recommend forest fire prevention or control measures. May report forest fires and weather conditions.

Knowledge: Administration and Management, Customer and Personal Service, Education and Training, Personnel and Human Resources, Public Safety and Security

Skills: Critical Thinking, Coordination, Speaking, Active Listening, Judgement and Decision Making

¹ The term "living wage" in Center of Excellence reports is calculated by averaging the self-sufficiency wages from the Insight Center's California Family Needs Calculator for each county in the subregion: <https://insightccd.org/tools-metrics/self-sufficiency-standard-tool-for-california/>.

Occupational Demand

The South Central Valley/Southern Mother Lode subregion employed 3,867 workers in company officer occupations in 2019 (Exhibit 1). The largest occupation is firefighters with 2,143 workers in 2019. This occupation is projected to grow by 6% over the next five years and has the greatest number of projected annual openings, 165.

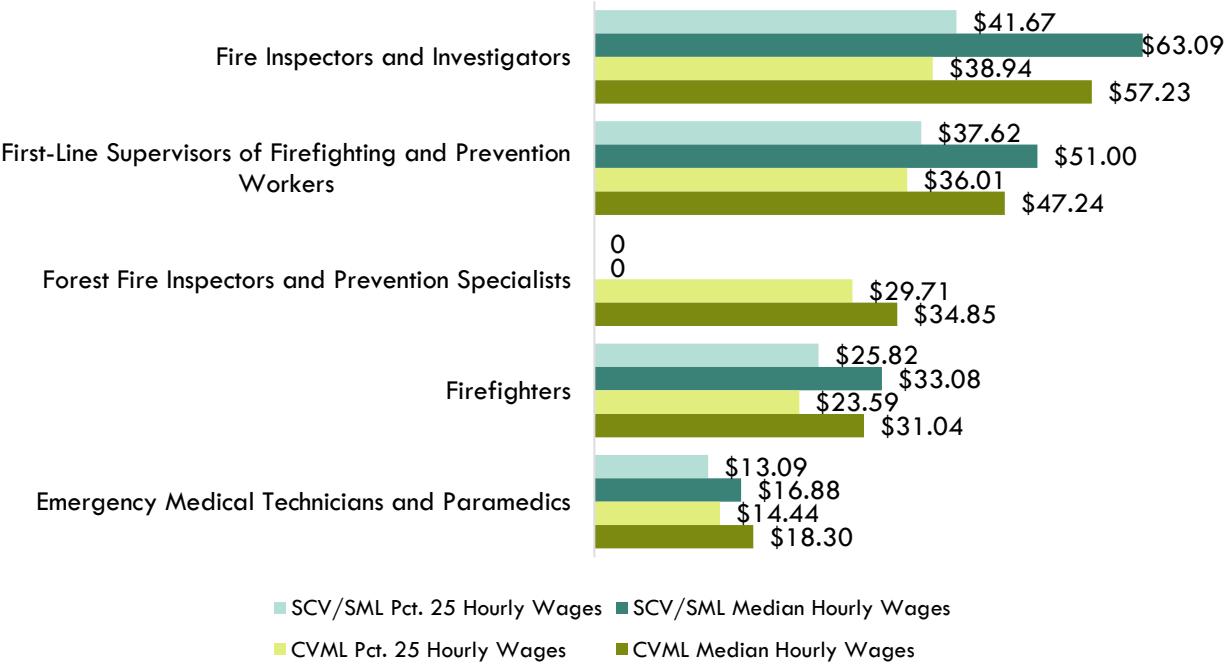
Exhibit 1. Company officer employment and occupational projections in the SCV/SML subregion

Occupation	2019 Jobs	2024 Jobs	5-Year Change	5-Year % Change	Annual Openings
Firefighters	2,143	2,263	119	6%	165
Emergency Medical Technicians and Paramedics	1,316	1,605	289	22%	142
First-Line Supervisors of Firefighting and Prevention Workers	255	273	18	7%	19
Fire Inspectors and Investigators	146	153	8	5%	16
Forest Fire Inspectors and Prevention Specialists	<10	<10	Insf. Data	Insf. Data	1
TOTAL	3,867	4,303	436	11%	342

Wages

Exhibit 2 compares the entry-level and experienced wages of the company officers occupations. Fire inspectors and investigators earn the highest entry-level wage, \$41.67/hour in the subregion and \$38.94/hour in the region. Subregional entry-level and experienced wages were not available for forest fire inspectors and prevention specialists.

Exhibit 2. Entry-level and experienced wage comparison in the SCV/SML subregion and region



Job Postings

There were 169 job postings for the five occupations in the SCV/SML subregion from September 2020 to February 2021.² The employers with the most job postings are listed in Exhibit 3.

Exhibit 3. Top employers of company officers by number of job postings

Employer	Job Postings	% Job Postings
Adventist Health	16	10%
Hall Ambulance Service Incorporated	8	5%
Commander	6	4%
Air Methods	5	3%
Valley Children's Healthcare	5	3%
Air Methods Corporation	4	3%
City Coalunga	4	3%
Kaweah Delta Health Care Dst	4	3%
Kern County	4	3%
County Kern	3	2%

Exhibit 4 shows how job postings for the targeted occupations in the SCV/SML subregion are distributed across seven O*NET OnLine occupations. The occupational title emergency medical technicians and paramedics is listed in 113 job postings. Note how this occupational title dominates the job posting results. Common job titles in postings include paramedic in 13 job postings, EMT in nine job postings, and emergency medical technician in seven job postings.

Exhibit 4. Top occupational titles in job postings for company officers

Occupational Title	Job Postings	% of Job Postings
Emergency Medical Technicians and Paramedics	113	67%
Municipal Firefighters	22	13%
Municipal Fire Fighting and Prevention Supervisors	15	9%
Fire Inspectors	8	5%
Forest Fire Fighting and Prevention Supervisors	7	4%
Forest Fire Inspectors and Prevention Specialists	3	2%
Forest Firefighters	1	1%

Salaries

No data was available on “Market Salaries” for company officers occupations. Market Salaries are calculated by Burning Glass which uses a machine learning model built off of millions of job postings every year, and accounts for adjustments based on locations, industry, skills, experience, education requirements, among other variables.

² Other than occupation titles and job titles, the categories below can be counted one or multiple times per job posting, and across several areas in a single posting. For example, a skill can be counted in two different skill types, and an employer can indicate more than one education level.

Education

Of the 169 job postings, 92 listed an education level preferred for the positions being filled. Of those, 84% requested high school or vocational training, 39% requested an associate degree, and 9% requested a bachelor's degree (Exhibit 5). A job posting can indicate more than one education level. Hence, the percentages shown in the chart below may total more than 100%.

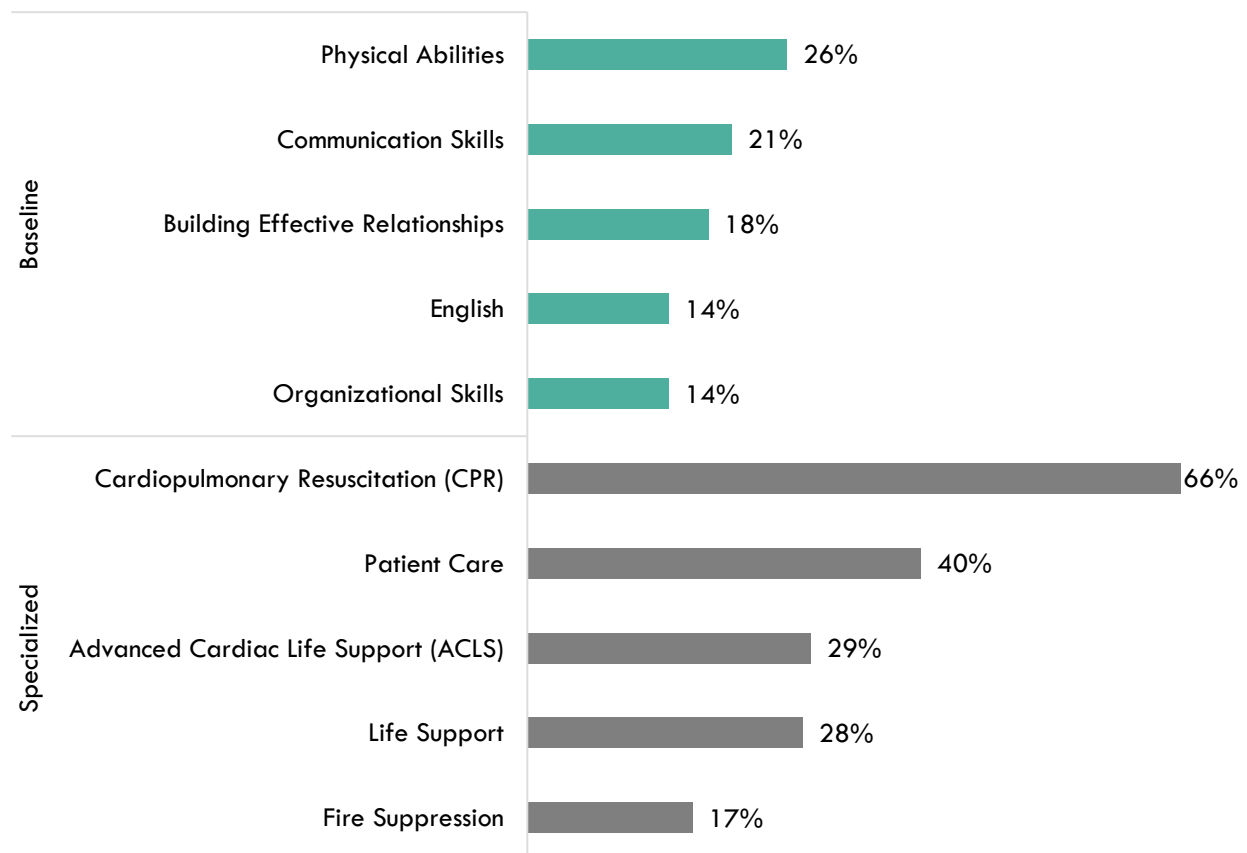
Exhibit 5. Education levels requested in job postings for company officers

Education Level	Job Postings	% of Job Postings
High school or vocational training	77	84%
Associate degree	36	39%
Bachelor's degree	8	9%
Doctoral degree	2	2%
Master's degree	1	1%

Baseline and Specialized Skills

Exhibit 6 depicts the top baseline and specialized skills for the targeted occupations. The three most important baseline skills are communication, 26% of job postings, communication, 21%, and building effective relationships, 18%. The top three specialized skills are CPR, 66% of job postings, patient care, 40%, and advanced cardiac life support, 29%.

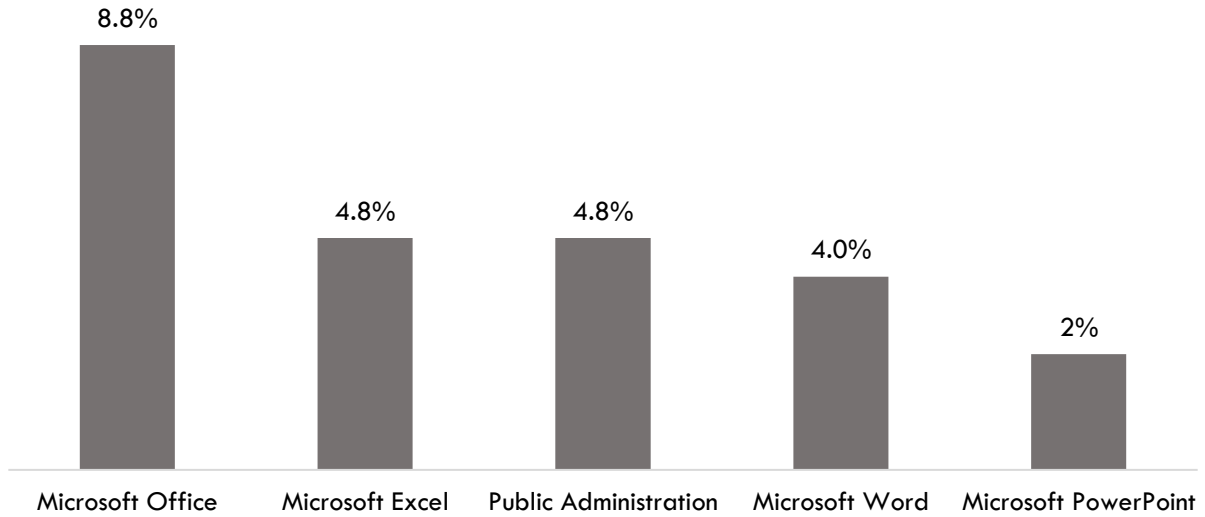
Exhibit 6. In-demand company officer baseline and specialized skills



Software Skills

Analysis also included the software skills most in demand by employers. Microsoft Office and Excel were the top two software skills identified in job postings (Exhibit 7).

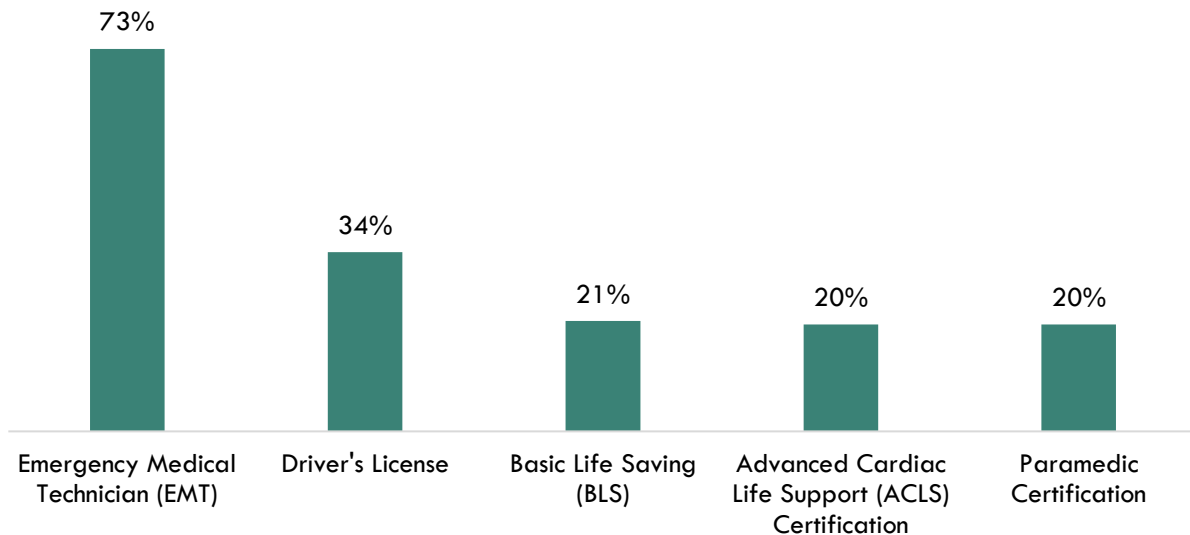
Exhibit 7. In-demand company officer software skills



Certifications

Of the 169 job postings, 153 contained certification data. Among those, 73% indicated a need for Emergency Medical Technician certification. The next top certifications are driver's license and basic life saving (Exhibit 8). The high prevalence of EMT certifications in the job postings is likely related to the demand for firefighters as this certification is a hiring requirement for this occupation.

Exhibit 8. Top company officer certifications requested in job postings



Education, Work Experience & Training

A postsecondary nondegree award is the typical entry-level education required for four of the five occupations (Exhibit 9). A high school diploma is typically required for forest fire inspectors and prevention specialists.

Exhibit 9. Education, work experience, training, and Current Population Survey results for company officers occupations³

Occupation	Typical Entry-level Education	Work Experience Required	Typical On-The-Job Training	CPS
Firefighters	Postsecondary nondegree award	None	Long-term	60.7%
Emergency Medical Technicians and Paramedics	Postsecondary nondegree award	None	None	66.1%
First-Line Supervisors of Firefighting and Prevention Workers	Postsecondary nondegree award	Less than 5 years	Moderate-term	56.8%
Fire Inspectors and Investigators	Postsecondary nondegree award	5 years or more	Moderate-term	58.4%
Forest Fire Inspectors and Prevention Specialists	High school diploma or equivalent	Less than 5 years	Moderate-term	58.4%

³ "Labor Force Statistics from the Current Population Survey," Bureau of Labor Statistics, <https://www.bls.gov/cps/>.

Supply

Analysis of firefighting-related program data from the California Community Colleges Chancellor’s Office Data Mart included the TOP codes and titles: 011400 - Forestry/Technical Firefighting Emphasis, 213300 - Fire Technology, and 213310 - Wildland Fire Technology. Analysis of the last three years of data shows that, on average, 172 awards were conferred in the Central Valley/Mother Lode region each year (Exhibit 10).

Exhibit 10. Postsecondary supply for firefighting occupations in the region

TOP Code-Title	College	Associate Degree	Certificate 18 < 30 Semester Units	Certificate 30 < 60 Semester Units	Certificate 6 < 18 Semester Units	Subtotal
011400 - Forestry/Technical Firefighting Emphasis	Reedley College		11			11
	Bakersfield	23		14		37
	Columbia	12	26			38
213300 - Fire Technology	Fresno City	6				6
	Merced	7		2		9
	Modesto	18		6		24
	Porterville			4		4
	San Joaquin Delta	0				0
	Sequoias	9		1		9
	Bakersfield	3				3
213310 - Wildland Fire Technology	Porterville				30	30
	TOTAL	78	37	26	30	172

Analysis of EMT/paramedic-related program data from the California Community Colleges Chancellor's Office Data Mart included the TOP codes and titles: 125000 - Emergency Medical Services and 125100 - Paramedic. Analysis of the last three years of data shows that, on average, 397 awards were conferred in the Central Valley/Mother Lode region each year (Exhibit 11).

Exhibit 11. Postsecondary supply for EMT/paramedic occupations in the region

TOP Code - Title	Colleges	Associate Degree	Certificate 18 < 30 semester units	Certificate 30 < 60 semester units	Certificate 6 < 18 semester units	Noncredit award 960+ hours	Subtotal
125000 - Emergency Medical Services	Bakersfield				179		179
	Cerro Coso				6		6
	Columbia	0	1		1	1	3
	Merced				20		20
	Modesto				49		49
	Porterville				59		59
	Sequoias				28	34	61
125100 - Paramedic	Bakersfield	2		4			6
	Fresno City			0			0
	West Hills Lemoore	2	11				13
TOTAL		4	11	5	342	34	397

There is an undersupply of 29 firefighting-related workers in the SCV/SML subregion and 261 firefighting-related workers in the region (Exhibit 12). However, an oversupply of 203 workers in the subregion and 165 workers in the region exists for EMTs and paramedics (Exhibit 13).

It is important to note that workforce demand in the region is somewhat nuanced in the “company officer” career area. The analysis below likely indicates more of a need for workers to fill firefighting-related occupations in the subregion and region, than occupations that are solely related to EMTs or paramedics.

Exhibit 12. Company officer workforce annual demand and supply in the SCV/SML subregion and region

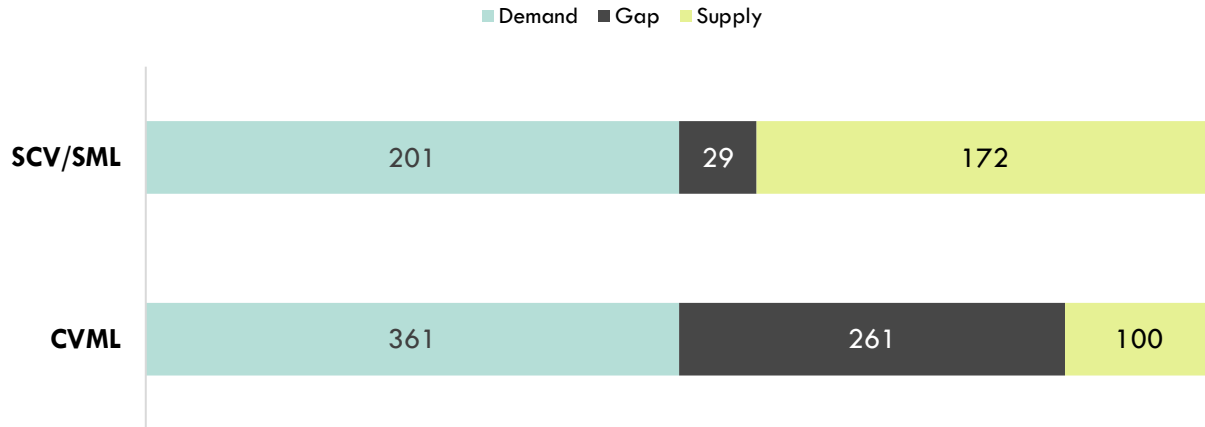
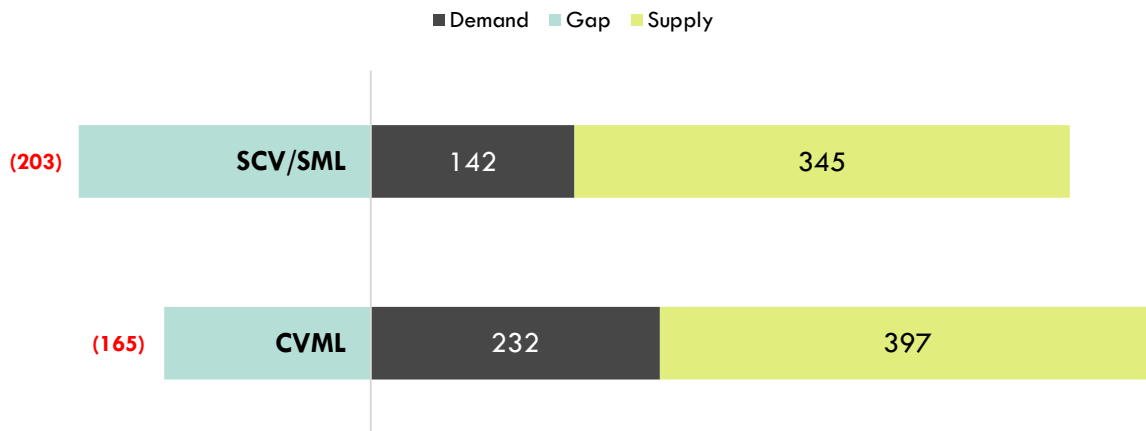


Exhibit 13. Company officer workforce annual demand and supply in the SCV/SML subregion and region



Student Outcomes

Exhibit 14 summarizes employment and wage outcomes from the California Community College Chancellor’s Cal-PASS Plus LaunchBoard for the TOP codes related to company officers. There were 211 fire technology students who received a degree or certificate or attained apprenticeship journey status and 46 who transferred; 82% of students obtained a job closely related to their field of study; 26% reported a median change in earnings; and 78% attained a living wage.

Exhibit 14. Regional metrics for the TOP codes related to company officers

Metric	Emergency Medical Services 125000	Paramedics 125100	Fire Technology 213300	Wildland Fire Technology 213310
Students Who Got a Degree or Certificate or Attained Apprenticeship Journey Status	*	15	211	*
Number of Students Who Transferred	39	*	46	*
Job Closely Related to Field of Study	69%	100%	82%	80%
Median Change in Earnings	51%	91%	26%	38%
Attained a Living Wage	64%	95%	78%	68%

* denotes data not available.

Conclusion

The entry-level wages of the five occupations exceed the SCV/SML subregion’s average living wage. There were 169 job postings in the past six months for occupations related to company officers in the subregion. Analysis of skills and certification requirements in job postings indicates:

- The top baseline skill is communication, and the top specialized skill is CPR.
- The top software skill is Microsoft Office.
- The top certification is Emergency Medical Technician.

There is an undersupply of trained workers, a shortage of 29 in the SCV/SML subregion and 261 in the region.

Recommendation

The Center of Excellence recommends that Fresno City College work with the regional director, the college’s advisory board, and local industry in the expansion of programs to address the shortage of company officers workers in the region. Although there is an oversupply of EMT and paramedic workers in the region and these occupations are not high wage, an EMT certification is required as part of the pathway to becoming a firefighter and other occupations that are high wage and provide for economic sustainability.

Appendix A: Methodology & Data Sources

Data Sources

Labor market and educational supply data compiled in this report derive from a variety of sources. Data were drawn from external sources, including the Economic Modeling Specialists, Inc., the California Community Colleges Chancellor’s Office Management Information Systems Data Mart and the National Center for Educational Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS). Below is the summary of the data sources found in this study.

Data Type	Source
Labor Market Information/Population Estimates and Projections/Educational Attainment	Economic Modeling Specialists, Intl. (EMSI). EMSI occupational employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level EMSI earnings by industry: economicmodeling.com .
Typical Education Level and On-the-job Training	Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education and typical on-the-job training to each occupation for which BLS publishes projections data: https://www.bls.gov/emp/tables/educational-attainment.htm .
Labor Force, Employment and Unemployment Estimates	California Employment Development Department, Labor Market Information Division: labormarketinfo.edd.ca.gov .
Job Posting and Skills Data	Burning Glass: burning-glass.com/ .
Additional Education Requirements/ Employer Preferences	The O*NET Job Zone database includes over 900 occupations as well as information on skills, abilities, knowledge, work activities and interests associated with specific occupations: onetonline.org .

Key Terms and Concepts

Annual Job Openings: Annual openings are calculated by dividing the number of years in the projection period by total job openings.

Education Attainment Level: The highest education attainment level of workers age 25 years or older.

Employment Estimate: The total number of workers currently employed.

Employment Projections: Projections of employment are calculated by a proprietary Economic Modeling Specialists, Intl. (EMSI) formula that includes historical employment and economic indicators along with national, state and local trends.

Living Wage: The cost of living in a specific community or region for one adult and no children. The cost increases with the addition of children.

Occupation: An occupation is a grouping of job titles that have a similar set of activities or tasks that employees perform.

Percent Change: Rate of growth or decline in the occupation for the projected period; this does not factor in replacement openings.

Replacements: Estimate of job openings resulting from workers retiring or otherwise permanently leaving an occupation. Workers entering an occupation often need training. These replacement needs, added to job openings due to growth, may be used to assess the minimum number of workers who will need to be trained for an occupation.

Total Job Openings (New + Replacements): Sum of projected growth (new jobs) and replacement needs. When an occupation is expected to lose jobs, or retain the current employment level, number of openings will equal replacements.

Typical Education Requirement: represents the typical education level most workers need to enter an occupation.

Typical On-The-Job Training: indicates the typical on-the-job training needed to attain competency in the skills needed in the occupation.