**Firefighter/EMT Occupations**

**Labor Market Information Report**

**Mission College**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

August 2020

# Recommendation

Based on all available data, there appears to be an undersupply of Firefighter/EMT workers compared to the demand for this cluster of occupations in the Bay region and in the Silicon Valley sub-region (Santa Clara County). There is a projected annual gap of about 585 students in the Bay region and 132 students in the Silicon Valley Sub-Region.

This report also provides student outcomes data on employment and earnings for TOP 2133.50-Fire Academy programs in the state and region. It is recommended that these data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at Mission College and in the region.

This report profiles Firefighter/EMT Occupations in the 12 county Bay region and in the Silicon Valley sub-region for a proposed new program recommendation at Mission College.

|  |
| --- |
| * **Firefighters 33-2011:** Control and extinguish firesor 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. |
| Entry-Level Educational Requirement: Postsecondary nondegree *award* |
| Training Requirement: Long-term *on-the-job training* |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 61% |
|  |

**Occupational Demand**

**Table 1. Employment Outlook for F** **Firefighter/EMT Occupations in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2019 Jobs | 2024 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 25% Hourly Wage | Median Hourly Wage |
| Firefighters | 8,355 | 8,780 | 426 | 5% | 3,337 | 667 | $32.29 | $45.32 |

*Source: EMSI 2020.3*

**Bay Region** includes Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

**Table 2. Employment Outlook for Firefighter/EMT Occupations in Silicon** **Valley Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2019 Jobs | 2024 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 25% Hourly Wage | Median Hourly Wage |
| Firefighters | 1,592 | 1,703 | 111 | 7% | 670 | 134 | $43.97 | $55.72 |

*Source: EMSI 2020.3*

**Silicon** **Valley Sub-Region** includes Santa Clara County

### Job Postings in Bay Region and Silicon Valley Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (July 2019 - June 2020)**

| Occupation | Bay Region | Silicon Valley Sub-Region |
| --- | --- | --- |
| Municipal Firefighters | 143 | 20 |
| Forest Firefighters | 18 | 7 |
| **TOTAL** | **161** | **27** |

*Source: Burning Glass*

**Table 4a. Top Job Titles for Firefighter/EMT Occupations for latest 12 months (July 2019 - June 2020) Bay Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | Bay | Common Title | Bay |
| Firefighter | 117 | Rookie, Connected Fitness | 1 |
| Swimmer | 5 | Navy Swimmer | 1 |
| Aircraft Specialist | 5 | Medic | 1 |
| Specialist | 4 | Lead Technician | 1 |
| Blood Drive Volunteers | 3 | Lead Foot Patrol | 1 |
| Senior Specialist | 2 | Law Volunteer, Board | 1 |
| Mobile Patrol Lead | 2 | Guard | 1 |
| Fire Fighter | 2 | Entrepreneur | 1 |
| Volunteer, Digital, Marine | 1 | Dont Know About Speed Physics Could Be Costing To More Than Think | 1 |
| Volunteer, Concept, Breakfast | 1 | Detail Lead | 1 |
| Volunteer, Board | 1 | Cac/Csst | 1 |
| Tv-Obsessed Streamers/Vloggers | 1 | Building Specialist | 1 |
| Technician | 1 | Area Paramedics Medic, Benefits, Safety | 1 |
| Service Detail Lead | 1 | Area Medic, Trauma | 1 |

**Table 4b. Top Job Titles for Firefighter/EMT Occupations for latest 12 months (July 2019 - June 2020) Silicon** **Valley Sub-Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | Silicon Valley | Common Title | Silicon Valley |
| Firefighter | 18 | Entrepreneur | 1 |
| Mobile Patrol Lead | 2 | Dont Know About Speed Physics Could Be Costing To More Than Think | 1 |
| Technician | 1 | Area Paramedics Medic, Benefits, Safety | 1 |
| Service Detail Lead | 1 | Aircraft Specialist | 1 |
| Lead Technician | 1 |  |  |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Firefighter/EMT Workers in Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Industry – 6 Digit NAICS (No. American Industry Classification) Codes | Jobs in Industry (2019) | Jobs in Industry (2024) | % Change (2019-24) | % Occupation Group in Industry (2019) |
| Local Government, Excluding Education and Hospitals (903999) | 7,668 | 8,054 | 5% | 92% |
| All Other Support Services (561990) | 140 | 144 | 3% | 2% |
| State Government, Excluding Education and Hospitals (902999) | 131 | 142 | 8% | 2% |
| Federal Government, Civilian, Excluding Postal Service (901199) | 91 | 90 | -1% | 1% |
| Federal Government, Military (901200) | 88 | 86 | -2% | 1% |
| Convention and Trade Show Organizers (561920) | 86 | 93 | 8% | 1% |

*Source: EMSI 2020.3*

**Table 6. Top Employers Posting Firefighter/EMT Occupations in Bay Region and Silicon** **Valley Sub-Region (July 2019 - June 2020)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | Silicon Valley |
| National Testing Network | 9 | City Salinas | 2 | Navy | 3 |
| Daily Dispatch | 6 | City Of El Cerrito | 2 | United States Marie Corps | 1 |
| United States Marie Corps | 5 | City Napa | 2 | Tmob | 1 |
| Tesla | 3 | City Berkeley | 2 | Symmetry Financial Group | 1 |
| San Ramon Valley Fire Protection District | 3 | City Albany | 2 | SOS Security | 1 |
| Navy | 3 | Catchafire | 2 | Restoration Management Co | 1 |
| American Red Cross | 3 | Alameda County Social Services | 2 | Premier Security | 1 |
| United States Naval Services | 2 | State of California | 1 | National Testing Network | 1 |
| Umpqua Community College | 2 | Village Wellington | 1 | Merit Educational Consultants | 1 |
| Tesla Motors | 2 | Under Armour | 1 | Iosm | 1 |
| San Francisco Public Works | 2 | Uncommon Law | 1 | Cnic | 1 |
| Redwood City Hall Office | 2 | US Government | 1 | City Santa Clara | 1 |
| Livermore Navy Talent Acquisition Group | 2 | Tvco | 1 | Autonation | 1 |
| Iosm | 2 | Tmob | 1 | Advanced Restoration | 1 |
| East Bay Regional Park District | 2 | Thenewstribune Com | 1 |  |  |
| County Marin | 2 | Symmetry Financial Group | 1 |  |  |
| County Contra Costa | 2 | Sos Security | 1 |  |  |

*Source: Burning Glass*

# Educational Supply

There are two (2) community colleges in the Bay Region issuing 80 awards on average annually (last 3 years ending 2018-19) on TOP 2133.50 - Fire Academy. There are no colleges in the Silicon Valley Sub-Region issuing awards on average annually (last 3 years) on this TOP code.

There is one (1) Other Educational Institution in the Bay Region, located in the Silicon Valley Sub-Region, issuing two (2) Bachelor’s Degrees on average annually (last 3 years) on TOP 2133.00 - Fire Technology.

**Table 7a. Community College Awards on TOP 2133.50 - Fire Academy in Bay Region**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| College | Sub-Region | Associates | Certificate 18+ Units | Certificate Low Unit | Total |
| Los Medanos | East Bay | 2 |  |  | 2 |
| Santa Rosa | North Bay | 78 |  |  | 78 |
| **Total Bay Region** | | **80** |  |  | **80** |
| **Total Silicon** **Valley Sub-Region** | | **0** |  |  | **0** |

# Source: Data Mart

Note: The annual average for awards is 2016-17 to 2018-19.

**Table 7b. Bachelor’s Degree Awards on TOP 2133.00 - Fire Technology in Bay Region**

|  |  |  |
| --- | --- | --- |
| **College** | **Sub-Region** | **Bachelor’s Degree** |
| Cogswell College | Silicon Valley | 2 |
| **Total Bay Region** | | **2** |
| **Total Silicon Valley Sub-Region** | | **2** |

# Source: Data Mart

Note: The annual average for awards is 2014-15 to 2016-17.

# Gap Analysis

Based on the data included in this report, there is a labor market gap in the Bay region with 667 annual openings for the Firefighter/EMT occupational cluster and 82 annual (3-year average) awards from community colleges and Other Educational Institutions for an annual undersupply of 585 students. In the Silicon Valley Sub-Region, there is also a gap with 134 annual openings and two (2) annual (3-year average) awards for an annual undersupply of 132 students.

# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 2133.50-Fire Academy**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2015-16 | Bay  All CTE Programs | Mission College All CTE Programs | State  2133.50 | Bay  2133.50 | Silicon Valley 2133.50 | Mission College 2133.50 |
| % Employed Four Quarters After Exit | 74% | 77% | 79% | 82% | 89% | n/a |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | $10,336 | $19,779 | $22,377 | $30,776 | n/a |
| Median % Change in Earnings | 46% | 49% | 20% | 30% | -8% | n/a |
| % of Students Earning a Living Wage | 63% | 66% | 70% | 83% | 93% | n/a |

*Source: Launchboard Pipeline (version available on (8/5/20)*

# Skills, Certifications and Education

**Table 9. Top Skills for Firefighter/EMT Occupations in Bay Region (July 2019 - June 2020)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| Fire Suppression | 51 | Fire Trucks | 9 | Chemistry | 6 |
| Repair | 47 | Hydraulics | 9 | Emergency Care | 6 |
| HAZMAT | 33 | Scheduling | 9 | Lifting Ability | 6 |
| Cardiopulmonary Resuscitation (CPR) | 28 | Self-Contained Breathing Apparatus (SCBA) | 9 | Medical Assistance | 6 |
| Fire Protection | 26 | Training Programs | 9 | Customer Service | 5 |
| Advanced Cardiac Life Support (ACLS) | 24 | Ventilation | 9 | Manual Dexterity | 5 |
| Life Support | 19 | Basic Trauma Life Support (BTLS) | 8 | Patient Care | 5 |
| Emergency Medical Care | 18 | Equipment Operation | 8 | Pediatric Advanced Life Support | 5 |
| Medical Emergencies | 17 | Hand Tools | 8 | Performance testing | 5 |
| Emergency Services | 13 | Incident Command System | 8 | Safety Codes | 5 |
| Network Testing | 12 | Equipment Maintenance | 7 | Traffic Laws | 5 |
| Prevention Activities | 12 | Fire Control | 7 | Electrocardiogram (EKG / ECG) | 4 |
| Public Health and Safety | 11 | Occupational Health and Safety | 7 | Motor Vehicle Operation | 4 |
| Trauma | 11 | Budgeting | 6 | Patient Transportation and Transfer | 4 |
| Power Tools | 10 | Chain Saws | 6 | Predictive / Preventative Maintenance | 4 |

*Source: Burning Glass*

**Table 10. Certifications for Firefighter/EMT Occupations in Bay Region (July 2019 - June 2020)**

|  |  |  |  |
| --- | --- | --- | --- |
| Certification | Postings | Certification | Postings |
| Emergency Medical Technician (EMT) | 75 | Driver/Operator Pumper | 6 |
| Certified Patient Account Technician | 58 | American Heart Association Certification | 6 |
| Firefighter | 54 | Wildland Firefighter | 5 |
| Driver's License | 50 | Airport Firefighter | 5 |
| Firefighter I | 49 | Aerial Rescue and Fire Fighting (ARFF) | 5 |
| Paramedic Certification | 39 | Pediatric Advanced Life Support (PALS) Certification | 4 |
| Firefighter II | 16 | Hazardous Materials Certification | 4 |
| First Aid CPR AED | 13 | Basic Life Saving (BLS) | 4 |
| Advanced Cardiac Life Support (ACLS) Certification | 10 | HazMat Technician | 3 |
| HazMat Awareness | 9 | HazMat Operations | 3 |
| CDL Class C | 8 | Driver/Operator Mobile Water Supply | 3 |
| National Registry of Emergency Medical Technicians (NREMT) | 6 | CDL Class B | 3 |

*Source: Burning Glass*

**Table 11. Education Requirements for Firefighter/EMT Occupations in Bay Region**

Note: 37% of records have been excluded because they do not include a degree level. As a result, the chart below may not be representative of the full sample.

|  |  |  |
| --- | --- | --- |
| Education (minimum advertised) | Latest 12 Mos. Postings | Percent 12 Mos. Postings |
| High school or vocational training | 100 | 98% |
| Associate Degree | 2 | 2% |
| Bachelor’s Degree or Higher | 0 | 0% |

*Source: Burning Glass*

# Methodology

Occupations for this report were identified by use of skills listed in O\*Net descriptions and job descriptions in Burning Glass. Labor demand data is sourced from Economic Modeling Specialists International (EMSI) occupation data and Burning Glass job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CTE Launchboard and CCCCO Data Mart.

# Sources

O\*Net Online

Labor Insight/Jobs (Burning Glass)

Economic Modeling Specialists International (EMSI)

CTE LaunchBoard [www.calpassplus.org/Launchboard/](http://www.calpassplus.org/Launchboard/)

Statewide CTE Outcomes Survey

Employment Development Department Unemployment Insurance Dataset

Living Insight Center for Community Economic Development

Chancellor’s Office MIS system

# Contacts

For more information, please contact:

* Doreen O’Donovan, Research Analyst, for Bay Area Community College Consortium (BACCC) and Centers of Excellence (CoE), [doreen@baccc.net](mailto:doreen@baccc.net) or (831) 479-6481
* John Carrese, Director, San Francisco Bay Center of Excellence for Labor Market Research, [jcarrese@ccsf.edu](mailto:jcarrese@ccsf.edu) or (415) 267-6544