** Firefighters**

**Labor Market Information Report**

**Ohlone College**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

November 2019

# Recommendation

Based on all available data, there appears to be an undersupply of Firefighters compared to the demand for this occupation in the Bay region and in the East Bay sub-region (Alameda and Contra Costa Counties.) There is a projected annual gap of about 586 students in the Bay region and 161 students in the East Bay Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 2133.50 - Fire Academy 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 Ohlone College and in the region.

# Introduction

This report profiles Firefighters in the 12 county Bay region and in the East Bay sub-region for a proposed new program at Ohlone College.

|  |
| --- |
| * **Firefighters (SOC 33-2011):** 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.
 |
| 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 Firefighters in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation  | 2018 Jobs | 2023 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Firefighters |  8,500  |  8,977  | 477 | 6% |  3,316  |  663  | $24.70 | $44.66 |

*Source: EMSI 2019.2*

**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 Firefighters in East Bay Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation  | 2018 Jobs | 2023 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Firefighters |  2,268  |  2,333  | 65 | 3% |  812  |  162  | $25.46 | $43.60 |

*Source: EMSI 2019.2*

**East Bay Sub-Region** includes Alameda and Contra Costa Counties

### Job Postings in Bay Region and East Bay Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (October 2018 - September 2019)**

| Occupation | Bay Region | East Bay |
| --- | --- | --- |
|  Municipal Firefighters | 124 | 54 |
|  Forest Firefighters | 19 | 3 |
|  **Total** | **143** | **57** |

*Source: Burning Glass*

**Table 4a. Top Job Titles for Firefighters for latest 12 months (October 2018 - September 2019) Bay Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | Bay | Common Title | Bay |
| Firefighter | 97 | Plant Volunteer | 1 |
| Mobile Patrol Lead | 5 | One Tam Of Thanks Camp Fire Donation Drive | 1 |
| Mobile Fitness Team | 4 | Multiple Vacancies | 1 |
| Medic/Specialist | 4 | Jump Patrol | 1 |
| Fire Fighter | 4 | Guard | 1 |
| Swimmer | 3 | Fire Technician | 1 |
| Technician | 2 | Fire Fighters Army Entry Level | 1 |
| Jump | 2 | Fighter | 1 |
| Detail Lead | 2 | Equipment Operator | 1 |
| Alarm Specialist | 2 | Entrepreneur | 1 |
| Volunteer/Treasurer, Board | 1 | Driven Fitness Professionals | 1 |
| Volunteer, Science, Information And Technology Industry | 1 | Csst Or Cac | 1 |
| Volunteer, It | 1 | Blood Drive Volunteers | 1 |
| Tv-Obsessed Streamers/Vloggers | 1 | 200 Positions/Fire Clean | 1 |

**Table 4b. Top Job Titles for Firefighters for latest 12 months (October 2018 - September 2019) East Bay Sub-Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | East Bay | Common Title | East Bay |
| Firefighter | 49 | Jump Patrol | 1 |
| Alarm Specialist | 2 | Guard | 1 |
| Swimmer | 1 | Fire Fighters Army Entry Level | 1 |
| Multiple Vacancies | 1 | Blood Drive Volunteers | 1 |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Firefighters in Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Industry – 6 Digit NAICS (No. American Industry Classification) Codes | Jobs in Industry (2018) | Jobs in Industry (2022) | % Change (2018-22) | % in Industry (2018) |
| Local Government, Excluding Education and Hospitals (903999) | 7,848 | 7,884 | 5% | 93% |
| State Government, Excluding Education and Hospitals (902999) | 122 | 123 | 7% | 1% |
| All Other Support Services (561990) | 119 | 120 | 1% | 1% |
| Federal Government, Civilian, Excluding Postal Service (901199) | 92 | 92 | -1% | 1% |
| Federal Government, Military (901200) | 84 | 83 | -5% | 1% |
| Convention and Trade Show Organizers (561920) | 80 | 82 | 11% | 1% |

*Source: EMSI 2019.2*

**Table 6. Top Employers Posting Jobs for Firefighters in Bay Region and East Bay Sub-Region (October 2018 - September 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | East Bay |
| US Army | 34 | US Navy | 1 | US Army | 21 |
| United States Naval Services | 6 | US Department of Defense | 1 | United States Naval Services | 6 |
| state of California | 5 | US Air Force | 1 | County Contra Costa | 3 |
| National Testing Network | 4 | Tvco | 1 | Fremont Unified School District | 2 |
| Daily Dispatch | 4 | Turtle Island Restoration Network | 1 | Department Army | 2 |
| Amenify | 4 | Symmetry Financial Group | 1 | County Alameda | 2 |
| Sos Security | 3 | Shift Technologies | 1 | Coffman Engineers | 2 |
| River Rock Casino | 3 | San Ramon Valley Fire Protection District | 1 | US Department of Defense | 1 |
| County Contra Costa | 3 | San Francisco Department Of Public Works | 1 | San Ramon Valley Fire Protection District | 1 |
| Redwood City Hall Office | 2 | Rockin Jump Dublin | 1 | Rockin Jump Dublin | 1 |
| Navy | 2 | Rfi Communications & Security Systems | 1 | PAE Incorporated | 1 |
| Fremont Unified School District | 2 | Restoration Management Company | 1 | Liberty Union High School District | 1 |
| Department Army | 2 | Premier Security | 1 | Daily Dispatch | 1 |
| County Alameda | 2 | Patriot Environmental Laboratory Services | 1 | City Richmond | 1 |
| Cordelia Fire Protection District | 2 | Pachamama Alliance | 1 | City Pleasanton | 1 |
| Coffman Engineers | 2 | PAE Incorporated | 1 | City Of Richmond Ca | 1 |
| Youniquelyfit | 1 | Marin Municipal Water District | 1 | City Fremont | 1 |

*Source: Burning Glass*

# Educational Supply

There two (2) community colleges in the Bay Region issuing 77 awards on average annually (last 3 years) on TOP 2133.50 - Fire Academy. There is one college (Los Medanos College) in the East Bay Sub-Region issuing one award on average annually (last 3 years) on this TOP code.

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| College | Sub-Region | Certificate 18+ units | Certificate Low unit | Total |
| **Los Medanos College** | East Bay | 1 |  | 1 |
| **Santa Rosa Junior College** | North Bay |  | 76 | 76 |
| **Total Bay Region** | **1** | **76** | **77** |
| **Total East Bay Sub-Region** | **1** | **0** | **1** |

# *Source: Data Mart*

Note: The annual average for awards is 2015-16 to 2017-18.

# Gap Analysis

Based on the data included in this report, there is a labor market gap in the Bay region with 663 annual openings for the Firefighters occupation and 77 annual (3-year average) awards for an annual undersupply of 586 students. In the East Bay Sub-Region, there is also a gap with 162 annual openings and 1 annual (3-year average) award for an annual undersupply of 161 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) | Ohlone College (All CTE Programs) | State (2133.50) | Bay (2133.50) | East Bay (2133.50) | Ohlone College (2133.50) |
| % Employed Four Quarters After Exit | 74% | 82% | 79% | 82% | 92% | n/a |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | $23,375 | $19,779 | $22,327 | $8,119 | n/a |
| Median % Change in Earnings | 46% | 21% | 20% | 30% | 86% | n/a |
| % of Students Earning a Living Wage | 63% | 84% | 79% | 86% | 55% | n/a |

*Source: Launchboard Pipeline (version available on 10/18/19)*

# Skills, Certifications and Education

**Table 9. Top Skills for Firefighters in Bay Region (October 2018 - September 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| Fire Protection | 44 | Customer Service | 6 | Prospective Clients | 4 |
| Repair | 35 | Medical Emergencies | 6 | Public Health and Safety | 4 |
| Fire Suppression | 25 | Network Testing | 6 | Algebra | 3 |
| Cardiopulmonary Resuscitation (CPR) | 21 | Patient Care | 6 | Ambulance Operations | 3 |
| Equipment Operation | 21 | Cleaning | 5 | Business Communications | 3 |
| HAZMAT | 19 | Fitness | 5 | Equipment Inspection | 3 |
| Emergency Services | 15 | Pediatric Advanced Life Support | 5 | Flickr | 3 |
| Life Support | 15 | Predictive / Preventative Maintenance | 5 | Hydraulics | 3 |
| Emergency Medical Care | 13 | Prevention Activities | 5 | Medical Consultants | 3 |
| Advanced Cardiac Life Support (ACLS) | 10 | Basic Trauma Life Support (BTLS) | 4 | Patient Transportation and Transfer | 3 |
| Trauma | 10 | Business-to-Business | 4 | Pediatrics | 3 |
| Scheduling | 8 | Group Fitness | 4 | Physics | 3 |
| Training Programs | 7 | Performance Analysis | 4 | Power Tools | 3 |
| Chemistry | 6 | Primary Care | 4 | Rehabilitation | 3 |
| Customer Contact | 6 | Property Management | 4 | Simulation | 3 |

*Source: Burning Glass*

**Table 10. Certifications for Firefighters in Bay Region (October 2018 - September 2019)**

Note: 49% of records have been excluded because they do not include a certification. As a result, the chart below may not be representative of the full sample.

|  |  |  |  |
| --- | --- | --- | --- |
| Certification | Postings | Certification | Postings |
| Emergency Medical Technician (EMT) | 58 | American Heart Association Certification | 8 |
| Firefighter | 34 | Aerial Rescue and Fire Fighting (ARFF) | 8 |
| Firefighter I | 31 | Fire Inspector II | 4 |
| Driver's License | 29 | Fire Inspector I | 4 |
| Certified Patient Account Technician | 26 | Personal Fitness Trainer Certification | 3 |
| Paramedic Certification | 24 | Hazardous Materials Technician | 3 |
| First Aid Cpr Aed | 12 | HazMat Technician | 3 |
| National Registry of Emergency Medical Technicians (NREMT) | 11 | HazMat Awareness | 3 |
| Firefighter II | 9 | HazMat Operations | 2 |
| Airport Firefighter | 9 | HazMat Incident Commander | 2 |
| Driver/Operator Pumper | 8 | Fire Officer I | 2 |
| Driver/Operator Mobile Water Supply | 8 | Fire Officer | 2 |

*Source: Burning Glass*

**Table 11. Education Requirements for Firefighters in Bay Region**

Note: 54% 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 | 63 | 95% |
| Associate Degree | 2 | 3% |
| Bachelor’s Degree or Higher | 1 | 2% |

*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 or (831) 479-6481
* John Carrese, Director, San Francisco Bay Center of Excellence for Labor Market Research, jcarrese@ccsf.edu or (415) 267-6544