



ENTRY-LEVEL FIREFIGHTING CAREERS

IN CALIFORNIA

A labor market analysis



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EXECUTIVE SUMMARY

Due to climate change, communities across California are facing intense wildfire seasons of longer duration. Given the critical role of and the increasing pressures faced by firefighting agencies during wildfire season in the state, the Centers of Excellence for Labor Market Research prepared a labor market analysis of entry-level jobs related to firefighting in California.

Four types of firefighting entities were studied for this report: federal, state, local, and private.

The report contains a summary of the entry-level positions offered by each type of agency that are suitable for community college students exiting related programs and the training requirements that need to be met in order to be hired.

Additionally, to gain insights into employer hiring needs, an analysis of job postings was conducted for four occupations related to firefighting:

- Firefighters
- First-line supervisors of firefighting and prevention workers
- Fire inspectors and investigators
- Forest fire inspectors and prevention specialists

Using the same four occupations, an analysis of employment and projected demand was conducted which also examined entry-level, median, and experienced wages, and workforce demographics (gender, age, race/ethnicity). The study also incorporated an analysis of postsecondary supply by identifying community college programs that offer training applicable to the four firefighting occupations.

To evaluate the potential of community colleges to address diversity issues within the existing firefighting workforce, the study also examines student demographics (gender, age, race/ethnicity) across three types of firefighting programs and compares those numbers with the statewide population of career education (CE) students.

The study team also consulted subject matter experts (SMEs) who helped inform this report's findings and proposed next steps. **In short, the study finds that more work on expanding diversity is needed within the firefighting workforce and among community college programs. The study recommends further assessment of whether community college training is meeting workforce needs, as well as a deeper evaluation of hiring needs specific to entry-level positions at the federal and local levels.**

IN THIS REPORT:

Firefighting entry-level positions defined and described

Labor market demand examined for entry-level fire firefighters

Analysis presented of postsecondary programs and awards leading to firefighting employment

Recommendations and next steps for moving forward



INTRODUCTION

The intensification and increased prevalence of wildfires due to climate change has brought attention to a variety of factors affecting the size and scope of the firefighting workforce in California.

Congressional hearings conducted in early 2022 brought to light a growing firefighter shortage among federal agencies caused by low morale and low pay, with reforms apparently stalled in Washington D.C.¹ In California, this shortage could have widespread impacts with news reports indicating the number of federal firefighters appears to be diminishing with vacancies in California 15% below the previous year's hiring peak.² One article notes the U.S. Forest Service lost 1,000 firefighters or 20% of its workforce in California over a two-year period from 2019 to 2021.³

Meanwhile, fire departments nationwide are grappling with an aging workforce, with those in the 50–59 age group increasing 49% and those 60 or older more than doubling over a 20-year period.⁴ In addition, the state authorized \$72 million to hire more Cal Fire firefighters to make up for a general workforce shortage, enough funding for an additional 838 firefighters — about 56 more crews, which average 15 firefighters.⁵

Gap analysis

This study was undertaken in response to anecdotal reports from employers and community college instructors that a firefighting workforce shortage exists in California. One pressing question presented to the study team was whether the state's community colleges are training a sufficient number of students to enter

firefighting occupations. This question became even more compelling in light of numerous news articles reporting on a national shortage of wildland firefighters.

As a result, the Far North Center of Excellence (COE) conducted a preliminary comparison of workforce demand (annual job openings) and supply (average number of students receiving community college awards)⁶ across the state. The analysis revealed that when all firefighting-related awards (certificates and degrees) were taken into account, an oversupply of 40 workers appeared to exist in California.

Supply/Demand Gap Analysis = Near Parity

Demand = 3,428 annual job openings

Supply = 3,468 community college awards

Difference = 40 (oversupply of awards)

However, this finding is not as clear cut as it might seem. Workforce numbers from the economic modeling firm Lightcast, which were used for the analysis, do not include a count of demand by federal agencies. Consequently, the research team suspects current employment and projected annual job openings may not be representative of actual employment needs throughout California.

To develop a clearer picture of workforce needs, the COE undertook a more in-depth labor market study to analyze the shifting needs for firefighters across California and the role that community colleges have in preparing the future firefighting workforce.

¹ Joe Wertz, "Federal agencies are struggling to hire and retain firefighters," National Public Radio, June 2, 2022, <https://www.npr.org/2022/06/02/1102575243/federal-agencies-are-struggling-to-hire-and-retain-firefighters>.

² Ximena Bustillo, "Federal firefighters are waiting for pay raises they hope will help fill their ranks," National Public Radio, June 11, 2022, accessed June 20, 2022, <https://www.npr.org/2022/06/11/1103982837/federal-firefighters-waiting-for-pay-raises-they-hope-will-help-fill-their-ranks>.

³ Kurtis Alexander, "California fire season is coming. And firefighter ranks have plunged 20%," San Francisco Chronicle, March 19, 2022, <https://www.sfchronicle.com/bayarea/article/California-fire-season-is-coming-And-firefighter-ranks-have-plunged-20%#photo=17010095.php>.

⁴ Rita Fahy, Ben Everts and Gary P. Stein, "US Fire Department Profile 2019," National Fire Protection Association, 2021, <https://www.nfpa.org/-/media/files/News-and-Research/Fire-statistics-and-reports/Emergency-responders/osfdprofile.pdf>.

⁵ John Woolfolk, "California wildfires: How short is the state on firefighters as fires burn out of control?" The Mercury News, August 21, 2020, <https://www.mercurynews.com/2020/08/21/how-short-is-california-on-firefighters/>.

⁶ The analysis of awards (degrees and certificates) employed a liberal assessment of all types of awards, including professional development certificates. The average award count includes awards for the completion of 12 units and higher, up to an associate degree.

Study goals

For this study, entry-level firefighting positions typically employed by four different types of entities were examined:

- **Federal**—National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service, and Bureau of Indian Affairs
- **State**—Cal Fire
- **Local**—Municipal and county fire departments throughout California
- **Private**—Independent contractors, such as Firestorm, Miller Timber, and Grayback Forestry, many of which are based outside California⁷

While fire prevention and mitigation as well as forest management and restoration are critical components of mitigating wildfires, this report focuses solely on entry-level firefighting occupations that are tasked with containing and extinguishing fires. This study does not delve into labor market needs for firefighter/paramedics and firefighter/EMTs for which a shortage may also exist, according to news articles and SME interviews. The decision not to include these job titles in this study was based on the highly regulated and specialized training required for all fire-related occupations.

Due to the complexity of the labor market as well as changing federal and state policies, this study compiled an overview of the various workforce agencies providing firefighters to combat wildfires on private and public lands in California. The report's overview is accompanied by an in-depth examination of workforce training requirements, current employment and projected demand, current and future workforce demographics, and firefighting training programs offered by community colleges.

In addition to quantitative data analysis, this report includes qualitative input gathered through interviews with SMEs. Findings presented in this report are intended to inform existing community college firefighting training programs.

Several questions underpin the research framework:

- Which agencies employ the most firefighters and is workforce demand being met by community college fire programs?
- Which entry-level firefighting occupations lead to promising careers for students?
- Do workforce preparation needs exist that are not being addressed by community college training programs?



⁷ The research team collected the names of leading private contractors and researched their locations and job requirements. Job posting data confirmed that private contractors are based outside of California but do hire locally and regionally.

METHODOLOGY

Labor market and community college supply data compiled in this report are derived from a variety of external sources. Labor market data was drawn from the economic modeling firm and job postings aggregator Lightcast. Data from Lightcast was used to analyze job postings associated with the occupations included in this report. Occupations analyzed were identified using the Standard Occupational Classification (SOC) System. (Appendix A contains more information on data sources.)

A literature review along with in-depth semi-structured interviews with SMEs comprised the qualitative portion of this study and were used to validate occupational training requirements and explore the alignment between workforce

needs and existing community college programs. Interviews were primarily conducted between October 2021 and September 2022. (The interview tool used for the study and a list of SMEs can be found in Appendix B.)

Finally, a postsecondary supply analysis was conducted. Program offerings and award data were identified using Taxonomy of Programs (TOP) codes and sourced from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart and the Chancellor's Office Curriculum Inventory System (COCI). Data regarding community college student demographics and outcomes was obtained from Cal-PASS Plus LaunchBoard Strong Workforce Program metrics.



FIREFIGHTING OVERVIEW

“Any firefighter in Southern California whether they live in a city or someplace rural, they are going to go to wildland fires. It takes so many resources to extinguish them. ... You have firefighters that are on city fire engines that are leaving and going to wildland fires for three weeks, a month.”

– Interview subject with 25 years of firefighting experience

Influence of wildland fires on firefighting occupations

Due to the increased prevalence of wildland fires occurring in rural, urban, and suburban areas in California, there is overlap among the several different types of fire agencies that may respond to fires and assign personnel to combat them long term.⁸ Examples of extreme urban interface fires in California include the Caldor fire which burned over 1,000 structures near South Lake Tahoe in 2021, the Camp Fire’s near-complete destruction of the city of Paradise in 2018, and the 2017 Tubbs fire in Santa Rosa.

The need for firefighters and increased pressures they experience on the job are being influenced by wildfires. When a wildland fire is reported, the first fire agency to respond will usually coordinate the effort. Depending on whether the fire is on private or public land and whether it is within a city’s or county’s jurisdiction, the responding agency may be Cal Fire, a federal firefighting agency such as the U.S. Forest Service, or a municipal or county fire department. In rural areas, community volunteers/reserve firefighters who received extensive training and must meet certain parameters in order to staff a local fire station, may be the first individuals to reach a fire.⁹ The agency that arrives on the scene first may choose to hand off oversight to another larger agency if containment of a fire proves difficult. Due to the increased size and frequency of wildland fires, agencies outside a region may be called upon to provide additional firefighters who may be assigned to a fire for several weeks or longer.

With the increase in wildland fires, municipal and county fire agencies are starting to rely more on federal (low-skilled) hand crews within their jurisdictions. For example, the Los Angeles City Fire Department recruits volunteers seeking entry into fire service careers to staff its hand crews,¹⁰ and Los Angeles County collaborates closely with the U.S. Forest Service for hand crew support. Cal Fire also provides hand crews by contracting with private entities. Members of hand crews only need to meet the 79-hour federal firefighting training requirement but can be used to supplement shortages of Firefighter I positions by Cal Fire. Due to the low pay and low-skilled nature of hand crews, these jobs are not a primary focus of this study.

⁸ Kramer, Heather Anu; Mockrin, Miranda H.; Alexandre, Patricia M.; Radeloff, Volker C. “High wildfire damage in interface communities in California,” *International Journal of Wildland Fire*, 2019, 28(9): 641, <https://doi.org/10.1071/WF18108>; <https://www.nrs.fs.fed.us/pubs/58348>.

⁹ Reserve firefighters may receive a stipend or be reimbursed for time spent fighting a fire. The rate of pay may be substantially lower than the rate of pay earned by a full-time firefighter.

¹⁰ Training Ground Blog, Oxnard College, accessed November 11, 2021, <http://thetrainingground.oxnardcollege.edu/los-angeles-city-fire-department>.

Cal Fire units

It is also important to note that six counties in California operate as “contract counties” with Cal Fire: Kern, Los Angeles, Marin, Orange, Santa Barbara, and Ventura. Cal Fire provides funding to the six counties for fire protection services including wages of suppression crews, maintenance of firefighting facilities, fire

prevention assistants, pre-fire management positions, dispatch, special repairs, and administrative services. In California’s remaining 52 counties, Cal Fire operates 21 administrative units (Exhibit 1).¹¹ (Appendix C contains a table displaying the California Community College districts within their assigned regions that correspond with Cal Fire regions.)

Exhibit 1. California Community College regions corresponding to Cal Fire Administrative Units¹²

Community College Region	Cal Fire Administrative Units
Far North	Butte County (BTU)
	Humboldt-Del Norte (HUU)
	Lassen-Modoc (LMU)
	Mendocino (MEU)
	Shasta-Trinity (SHU)
	Siskiyou (SKU)
	Tehama-Glenn (TGU)
North (Greater Sacramento)	Sonoma-Lake-Napa (LNU)
	Amador-El Dorado (AEU)
Bay	Nevada-Yuba-Placer (NEU)
	San Mateo-Santa Cruz (CZU)
	Santa Clara (SCU) (Marin County is a contract county.)
Central Valley/Mother Lode	(Kern County is a contract county.)
	Fresno Kings (FKU)
	Madera-Mariposa-Merc (MMU)
	San Benito-Monterey (BEU)
	Tulare (TUU)
South Central Coast	Tuolumne-Calaveras (TCU)
	San Luis Obispo (SLU) (Santa Barbara and Ventura counties are contract counties.)
Los Angeles	(Los Angeles County is a contract county.)
Orange County	(Orange County is a contract county.)
Inland Empire/Desert	San Bernardino (BDU), Riverside (RRU)
San Diego/Imperial	San Diego (MVU)

¹¹ “Cal Fire Units,” Cal Fire, 2022, accessed June 20, 2022, [https://www.fire.ca.gov/units/:map of Cal Fire Administrative Units](https://www.fire.ca.gov/units/:map%20of%20Cal%20Fire%20Administrative%20Units), https://www.fire.ca.gov/media/vjgbb5hf/cdfadmin_19_ada.pdf.

¹² Please note: Cal Fire Administrative Units do not perfectly align with the community college regions; this table is provided as a tool to assist community colleges that wish to collaborate with their local units.

Entry-level positions overview

While many agencies use Firefighter Type I/1 and II/2 designations, these designations are not synonymous in job titles (Exhibit 2).

Exhibit 2. Common entry-level job titles by agency type

Agency Type	Entry-level Job Title	Notable Characteristics
Federal	Firefighter 2 (FFT 2)	Seasonal, wildland firefighters
State (Cal Fire)	Firefighter I	Seasonal firefighters who can progress into Firefighter II positions
Local (Municipal/County)	Firefighter II	Entry-level Firefighter II positions lead into Firefighter I positions. Firefighter/EMTs and firefighter/paramedics are preferred, but due to worker shortages, firefighters without EMT or paramedic certifications may be accepted into positions
Private	Firefighter 2 (FFT 2)	Job titles and responsibilities typically mirror federal wildland firefighter positions

It is important to note the training differences that exist between federal and municipal/county agencies which use a common term Firefighter II/ Firefighter 2 in job titles. The municipal/county Firefighter II jobs require advanced in-house training and many hours of instruction over the course of 15 to 22 weeks. By comparison, federal Firefighter 2 jobs require less training. Usually, a candidate must be able to hike 3 miles in 45 minutes with a 45-pound backpack and have a Red Card that can be obtained through online training called S-130 Firefighter Training or S-190 Introduction to Wildland Fire Behavior. The online training takes 9-12 hours to complete.

Federal entry-level positions

There are a variety of entry-level positions, mainly seasonal, that apply to firefighting through federal agencies. These include working on a hand crew or Hot Shot crew. Entry-level firefighting jobs are typically grouped under the title “Forestry Aid and Forestry Technician,” and the hiring process can be complicated.¹³ All applicants must use USAJobs, and many applicants may not make it into hiring pools due to missing or incomplete documentation. For higher level positions, federal resumes must be extensive and match federal titles and descriptions.

In recent years, pay disparities between Cal Fire and federal agencies have received increased attention, including during Congressional testimony on the shortage of federal seasonal wildland firefighters. Federal pay is generally considered low, noticeably more so in California, and is believed to be hurting recruitment efforts of wildland firefighters. Federal wildland jobs have been widely reported to be prone to burnout because the duration of the “season” can be extended as needed, resulting in little downtime for firefighters; in addition, these jobs tend to have lower pay than firefighting jobs with other agencies and fewer benefits due to their designation as seasonal employment.

Various proposals have been put forward to reassess the roles and responsibilities of federal wildland firefighters and increase pay, including changing the designation of these jobs to full-time, salaried positions. (Please refer to Appendix D for details on the federal infrastructure bill and proposed changes to firefighter pay.) For the purpose of this study at this time, and due to the fact that these positions are currently comparatively low paid and require significantly less training than municipal/county and Cal Fire firefighting jobs, federal firefighting jobs may be most appropriate as avenues for secondary employment opportunities for community college graduates.

¹³ “NWCG S-130, Firefighter Training Q0900 - S130,” U.S. Fire Administration, accessed June 20, 2022, <https://apps.usfa.fema.gov/nfacourses/catalog/details/10622>. “NWCG S-190, Introduction to Wildland Fire Behavior Q0901 - S190,” U.S. Fire Administration, accessed June 20, 2022, <https://apps.usfa.fema.gov/nfacourses/catalog/details/10623>.

State entry-level positions

Cal Fire only accepts applications for seasonal, entry-level Firefighter I positions during November, with hiring occurring in March and April.¹⁴ Applicants must submit an application directly to Cal Fire by mail, online, or in person.¹⁵ Cal Fire typically recruits firefighters through community college fire academies and the California Conservation Corps.¹⁶ A statement from Cal Fire provided for this study notes that community college fire academies “assist potential candidates in obtaining the necessary certificates and training which are often taken into consideration or are required before a candidate is hired.” In 2022, Cal Fire anticipated receiving more than 5,000 applications, including applications from returning firefighters, and expected to make 3,600 appointments into Firefighter I positions. These positions are 9 months in duration or 1,500 hours and can lead to permanent Firefighter II positions with the agency.

Local entry-level positions

Municipal and county fire departments typically advertise open permanent positions on their websites, and it is up to applicants to identify where they would like to work and check those websites regularly. There are a handful of subscription job aggregator websites that agencies sometimes use to advertise positions.

Private entry-level positions

Independent contractors, such as Firestorm, Miller Timber, Wildland Defense, Capstone, and Grayback Forestry advertise on their company websites and through employment websites like Indeed. Cal Fire and the U.S. Forest Service contract with these private entities to provide hand crews and other firefighting resources. Exhibit 3 shows examples of entry-level wages by agency type and corresponding wages.



¹⁴ “Cal OES INSIDE LOOK: CAL FIRE ACADEMY,” Cal Fire, video posted on YouTube, August 2, 2017, accessed June 22, 2022, <https://www.youtube.com/watch?v=YktMycxXDl0>.

¹⁵ “Careers,” Cal Fire, 2021, accessed November 11, 2021, <https://www.fire.ca.gov/careers/>.

¹⁶ See requirements here: “Wildland Firefighting,” California Conservation Corps, 2022, accessed June 20, 2022, <https://ccc.ca.gov/what-we-do/emergency-responses/firefighting/>.

Exhibit 3. Examples of entry-level firefighting positions

Agency Type	Entry-level Job Title	Wages
Federal	Entry-level GS 2 Wildland Seasonal Firefighter	<p>\$9.67-\$14.51/hour¹⁷</p> <p>Depending on the region in California, GS2 wages can be higher, up to \$18.45 in Sacramento-Roseville,¹⁸ up to \$20.70 in San Jose-San Francisco-Oakland,¹⁹ up to \$18.98 in San Diego-Carlsbad.²⁰</p>
	<p>Other examples of job titles: -Hotshot Wildland Firefighter Trainee (GS-02, Range/Forestry Aid)</p> <p>-Hotshot Wildland Firefighter (GS-04 Range/Forestry Technician)</p>	
State (Cal Fire)	Firefighter I, seasonal	<p>\$15.00-\$18.96/hour</p> <p>\$3,443-\$4,351/month²¹</p> <p>Please note: The above amount does not include extended duty week compensation which is paid in a separate check once per month.</p>
	Firefighter II, permanent	<p>Approx. \$16.40/hour</p> <p>\$3,728-\$4,834/month, approximately \$58,008/year</p>
Local (Municipal/County)	Firefighter or Firefighter Trainee or Fire Recruit	<p>Approx. \$27.64-\$35.74/hour</p> <p>Pay can vary greatly depending on location.</p> <p>In Northern California, pay for an entry-level firefighter can be \$4,988.10-\$6,708.46/month, up to roughly \$80,496/year.²²</p> <p>In Southern California, the Los Angeles Fire Department pays entry-level firefighters \$6,223-\$8,673/month, or \$74,687-\$104,086/year.²³</p>
Private	Wildland Firefighter-Engine Crew positions, Consumer Fire Products Inc.	\$15-\$25/hour
	Seasonal Firefighter, Grayback	\$19.60/hour
	FFT-2, Miller Timber	\$19.60/hour
	Seasonal Wildland Firefighter, Wildfire Defense Systems	\$25-\$38/hour

¹⁷ "Salary Table 2022-General Schedule," Office of Personnel Management, hourly rates, accessed June 20, 2022, https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2022/GS_h.pdf.

¹⁸ "Salary Table 2022-SAC," Office of Personnel Management, hourly rates for Sacramento-Roseville, accessed June 20, 2022, https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2022/SAC_h.pdf.

¹⁹ "Salary Table 2022-SF," Office of Personnel Management, hourly rates for San Jose-San Francisco-Oakland, accessed June 20, 2022, https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2022/SF_h.pdf.

²⁰ "Salary Table 2022-SD," Office of Personnel Management, hourly rates for San Diego-Carlsbad, accessed June 20, 2022, https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2022/SD_h.pdf.

²¹ "State of California Civil Service Pay Scale," State of California, March 8, 2022, page 9, https://www.calhr.ca.gov/Pay%20Scales%20Library/PS_Sec_17.pdf.

²² "Firefighter (20242044)," CalOpps, 2022, accessed June 20, 2022, <https://www.calopps.org/lincoln/job-20242044>.

²³ "Join Los Angeles Fire Department," Los Angeles Fire Department, 2022, accessed June 20, 2022, <https://www.joinlafd.org/index.cfm>.

TRAINING & EDUCATION REQUIREMENTS

Across all agencies, experience tends to be valued over education for ascending the career ladder, and preliminary training is mandatory for entry-level firefighting occupations for all employer groups — federal, state, municipal/county, and private.²⁴

Many agencies operate their own in-house training academies, and this is the case for federal agencies, Cal Fire, and large municipal and county fire departments. Municipal/county fire departments have the most stringent training requirements, followed by Cal Fire.

These two employer groups have a great deal of overlap in their training requirements. However, Cal Fire does not require the three National Fire Protection Association exams typically required by the State Fire Marshal for Firefighter I certification for municipal/county firefighters.

Training for municipal firefighters is offered through community college fire academies as well as through the California Firefighter Joint Apprenticeship Committee (Cal-JAC), a partnership between the Office of the California State Fire Marshal and the California Professional Firefighters, AFL-CIO. According to one SME, municipal firefighters who have some work experience and are seeking career advancement into supervisory positions will often enroll at for-profit schools, such as Red Helmet Training in Rancho Cucamonga.²⁵ Crafton Hills College in Southern California attempted to roll out similar coursework years ago, but enrollment was too low to sustain the classes.

At the state level, Cal Fire has an established training program and training campuses located throughout the state but recruits some community college students and works closely with a few community college fire academies. Cal Fire also provides in-house training for promotion from permanent Firefighter II positions into positions such as fire apparatus engineer and fire captain. A statement from Cal Fire provided for this study clarifies education

requirements, stating that “although advanced degrees of all types are encouraged for all Cal Fire employees, and are taken into consideration during promotional examinations, they are not necessarily required for entry-level positions.”

Across all types of firefighting entities, career advancement tends to hinge upon work experience, but state firefighters are facing new educational attainment requirements to ascend into upper-level positions. Cal Fire is now requiring a two-year degree for chief fire officer promotions.

Examples of amount of pre-employment training required

Local/Municipal (Los Angeles Fire Department): 560 hours (14 weeks)

Cal Fire: 219 hours

Federal (Forest Service): 79 hours

Private Contractor (Grayback): 40 hours

Role of community colleges in Cal Fire career pathways

Community college students are hired by Cal Fire, which may recruit through community college fire academies.

Regional Occupational Programs (ROPs) also provide training for students planning to seek employment with Cal Fire.

²⁴ At the time of this report, data was unavailable on the number of trainees completing in-house fire academies through large municipal and county fire agencies.

²⁵ “Welcome to Red Helmet Training,” Red Helmet Training, accessed November 12, 2021, <http://www.redhelmettraining.com/>.

The State Fire Marshal has outlined the associate degree requirement for Cal Fire chief fire officers. These requirements can be met in the following ways in conjunction with on-the-job experience:

- Associate degree (any major) or higher from an accredited postsecondary institution
- 60 semester units or 90 quarter units from an accredited postsecondary institution
- 45 semester units or 67.5 quarter units from an accredited postsecondary institution
- Certificate of Achievement from a California Community College in one of the following fields of study: Fire Science; Fire Technology, Company Officer; Pre-Hospital Care²⁶

U.S. federal and private wildland firefighters have the lowest requirements of the four agency categories. Federal wildland firefighting training is largely provided in-house by the Forest Service. The number of training hours for federal service wildland firefighters is much lower than that of Cal Fire and municipal/county fire departments.

Federal agencies offer their own online and in-person training programs, and some private contractors provide in-house training. Wildland firefighting training is also offered through the National Wildfire Coordinating Group.²⁷ The National Wildfire Suppression Association, which represents more than 200 private sector contractors, provides certified instructors to meet NWCG wildland standards referred to as PMS 310-1.

“Because of the massive exodus of baby boomers, it’s created a lot of openings. A lot of fire departments are hiring candidates without a paramedic (license). Not a lot of (students) want to go to paramedic school because it’s a long process and is expensive.”

- Interview subject involved in delivering community college fire academy training

Hiring process for a firefighter at a large municipal agency

Pre-requisite: Must have valid EMT certificate

Selection Process:

- Pass Fire Candidate Assessment
- Submit online job application
- Pass screening interview and Candidate Advancement Program (CAP) Fitness Assessment
- Background check and evaluation on interpersonal skills
- Review of qualifications
- Complete medical and psychological testing
- Interview with upper-level supervisor
- Pass in-house fire academy program which can last 14 to 22 weeks depending on the agency

Sources: SME interviews and <https://www.joinlafd.org/index.cfm?section=hiringprocess>.



²⁶ “Chief Fire Officer Certification – Associate Degree Requirement,” Office of the State Fire Marshal, October 9, 2021, accessed October 10, 2022, <https://osfm.fire.ca.gov/media/11539/chief-fire-officer-degree-requirement.pdf>.

²⁷ “National Wildfire Coordinating Group,” National Wildfire Coordinating Group, accessed June 20, 2022 <https://www.nwcg.gov/>.

Municipal/county entry-level training requirements

At the local level, particularly in rural areas, firefighters may start out as reservists/volunteers and once they obtain Firefighter I and EMT or paramedic certification, they can be hired into entry-level positions. Due to workforce shortages, some fire departments are waiving EMT/paramedic requirements, according to SME interviews.

Volunteers are required to complete extensive training to volunteer, and the requirements for volunteers may be more stringent than for seasonal firefighters hired by the federal government.

Preferred entry-level firefighting candidates for city or county firefighter positions have either completed a community college fire academy program (18-weeks) or a fire technology associate degree; however, this form of education is not a requirement for these positions. Larger agencies additionally require that job candidates complete an in-house academy (drill tower) spanning 15 to 22 weeks to screen for physical fitness and knowledge, skills, and abilities.²⁸ In addition to passing in-house fire academy training, a municipal/county firefighter must obtain state certification.

Training process for entry-level municipal/county firefighting positions

- A community college fire academy program (18-weeks) or a fire technology associate degree is preferred but not required.
- The completion of a community college fire academy program may not preclude a job candidate from being required to complete an agency's in-house fire academy.
- The program for an in-house academy may span 14 to 22 weeks.

Municipal/County Firefighter I Certification

To meet the requirements of the State Fire Marshal California for Firefighter 1 Certification, an applicant must complete one year as a volunteer or reserve firefighter, or 6 months as an intern/full-time paid firefighter with a California fire department; and also complete the following:

Coursework

- Firefighter 1A: Structure (FEMA independent study courses IS-100, IS-200, IS-700, and IS-800 are required corequisites)
- Firefighter 1B: Hazardous Materials
- Firefighter 1C: Wildland
- Confined Space Rescue Awareness (SFT or IAFF)

Certification Exams

- Cognitive & Psychomotor Exams
- NFPA 1001: Firefighter 1 (SFT Firefighter 1A: Structure)
- NFPA 1072: Awareness and Core Operations level: with Product Control and Personal Protective Equipment mission specific competencies
- NFPA 1051: Wildland Firefighter 1 (SFT Firefighter 1C: Wildland)

Source: "Fire Fighter I," Office of the State Fire Marshal, 2022, accessed June 20, 2022, <https://osfm.fire.ca.gov/divisions/state-fire-training/cfstes-professional-certification/fire-fighter-1-2019/>.

²⁸ This 2021 report by the Los Angeles City Fire Department discusses its academy training and challenges with diversity and retention: "Los Angeles Fire Department Annual Recruit Training Academy Overview," prepared by Fire Chief Ralph M. Terrazas, January 14, 2022, accessed June 20, 2022, pp. 4-13, https://ens.lacity.org/lafd/lafdreport/lafdreport1864149147_03262021.pdf.

State entry-level training requirements

At the state level, 219 hours pre-employment training is required for Cal Fire Type I Firefighters. A high school diploma is required to be hired as a Type 1 Firefighter, and an associate degree is required in order to be promoted into higher level "officer" positions.

Cal Fire runs its own academy in the city of Lone, outside Sacramento, offering 7-week courses year round. Ninety percent (90%) of students who attend the academy become seasonal firefighters.²⁶ In extreme fire seasons, the training may be accelerated to graduate students. Once a seasonal firefighter has completed the training and worked for 9 months as a seasonal Firefighter I, they are eligible to become a permanent Firefighter II. Employees assigned to training at Cal Fire Training Centers are paid during their stays.

The California Conservation Corps (CCC) provides training for corps members leading into firefighting career pathways. Through year-long paid positions (earning a \$2,610/month stipend), corps members are trained in-house and gain wildland firefighting experience with the opportunity to earn certifications required by Cal Fire and federal agencies.²⁷



Cal Fire Firefighter I Certification

Required training for Firefighter I positions (an asterisk shows overlap with municipal/county fire department requirements for State Fire Marshal California Firefighter 1 Certification):

- CAL FIRE Basic Firefighter Certificate
- California State Fire Marshal (SFM) Confined Space Awareness Certificate*
- California SFM Hazardous Materials First Responder Operational Certificate*
- Firefighter Survival (Structural)*
- Federal Emergency Management Agency (FEMA) IS-100: Introduction to Incident Command System*
- FEMA IS-700: An Introduction to the National Incident Management System (NIMS)*

- FEMA IS-800: National Response Framework, An Introduction*
 - CPR
- Emergency medical services (EMS) qualifications (must have one):
 - Public Safety First Aid*
 - Emergency Medical Technician (EMT)*
 - Paramedic (EMT-P)*
- Desirable Trainings:
 - SFM Accredited FFI Academy or equivalent FFI Academy taught at a California accredited institution of postsecondary education recognized by the American Council on Education*
 - SFM Firefighter I Certification*

Source: Cal Fire, "Seasonal FireFighter I Hiring," <https://www.fire.ca.gov/careers/>.

Federal entry-level training requirements

Seasonal wildland firefighters (Firefighter 2 also known as FFT-2) must complete 79 hours pre-employment training. The federal wildland firefighting jobs require that a candidate be able to hike 3 miles in 45 minutes with a 45-pound backpack and have a Red Card, which can be obtained through online training called S-130 Firefighter Training or S-190 Introduction to Wildland Fire Behavior. The online training takes 9-12 hours to complete. The Bureau of Land Management, National Park Service, Forest Service, Bureau of Indian Affairs, and U.S. Fish and Wildlife Service each has its own process for hiring seasonal wildland firefighters.²⁹

For a seasonal wildland firefighter (no more than 1,039 hours), the GS-2 classification requires three months of general experience, which can be any work experience performing (1) any type of work that demonstrates the ability to perform the duties of a wildland firefighter; or (2) experience that demonstrates familiarity with wildfire or completed requirements for high school graduation or equivalent.³⁰

Private contractor entry-level training requirements

Training requirements appear to be fairly consistent among private contractors. (Training requirements were compared across three major private contractors: Miller Timber Services, Consumer Fire Products Inc., and Grayback.) These requirements are aligned with the training required for federal FFT-2 seasonal wildland firefighters. Private contractors are based throughout the western United States but provide services in California.

- IS-700 National Incident Management System (NIMS) An Introduction
- I-100 Introduction to the Incident Command System, ICS 100
- Physical Fitness/Pack Test (Red Card)
- L-180 – Human Factors on the Fireline

- S-130 – Basic Wildland Firefighting
- S-190 – Introduction to Wildland Fire Behavior

Miller Timber Services offers in-house training through three modules for job candidates covering the above requirements in addition to an 8-hour hands-on field exercise.³¹ Grayback also offers in-house training and its L-180 requirement is a 5-day course that consists of a fitness capacity test, classroom training and a field examination day.³²



²⁹ "Wildland Firefighting," California Conservation Corps, 2022, accessed June 20, 2022, <https://ccc.ca.gov/what-we-do/emergency-responses/firefighting/>.

³⁰ "How To Become A Wildland Firefighter," National Wildfire Coordinating Group, May 11, 2022, accessed June 20, 2022, <https://www.nwcg.gov/how-to-become-a-wildland-firefighter>

³¹ "Forestry Aid (Wildland Firefighter) Not to Exceed 1039 hours," job posting on USAJobs, accessed June 20, 2022, <https://www.usajobs.gov/job/650262500>.

³² "Training Course," Miller Timber, 2021, accessed November 12, 2021, <https://www.millertimber.com/careers/wildland-firefighters/training-course/>.

³³ "Work for Grayback," Grayback Forestry, 2020, accessed November 12, 2021, <https://www.graybackforestry.com/employment-application>.

Recruitment and retention issues identified in interviews

The following summary reflects the consensus of SMEs interviewed for this study. (For a complete list of SMEs please see Appendix B.)

- **Low pay, high burnout for federal wildland firefighters**—Federal firefighter positions tend to appeal to younger workers willing to work far from home or long periods without time off. Federal wildland positions are considered low wage compared to Cal Fire and municipal/county positions. These positions also have fewer benefits than Cal Fire or municipal/county firefighter jobs. Federal wildland firefighting positions are considered “seasonal” jobs but increasingly the duration is extended. As a result, many federal seasonal firefighters seek positions at Cal Fire. Cal Fire does not accept U.S. Forest Service training, so a firefighter moving over to Cal Fire must complete Cal Fire training to be hired.
- **Cal Fire is losing firefighters to city and county departments**—Across the board, migration is occurring from lower-paid firefighting jobs to higher-paid jobs, according to news reports and SME interviews. For example, Cal Fire has an annual vacancy rate of 28% for its higher-level permanent Firefighter II positions. Cal Fire firefighters are attracted to employment with municipal/county fire departments because they can earn more money annually and work fewer hours (2 days/week).
- **Community college students who complete a fire academy program may have to wait a long time for a job**—The hiring process for municipal/county firefighters can take more than two years from submitting a job application to passing initial screening and a 15-to-22-week in-house fire academy (also known as a drill tower). During this time, a recruit may earn a low rate of pay, approximately 50% to 75% of what an entry-level firefighter may earn per hour. Because getting hired by a municipal/county fire department can take such a long time, some students who graduate from a community college fire academy go on to get their EMT certification, which allows them to work as EMTs until a firefighter/EMT position opens up. “If you’re an EMT, and you’re willing to work, you’ll get a job right away,” one SME said. Students also will work as volunteer/reserve firefighters while waiting to be hired into a full-time position.
- **City/municipal requirements for firefighter/paramedics have been relaxed due to the firefighter shortage**—According to SMEs, the retirement of baby boomers is causing a hiring crunch for fire departments that typically would only hire firefighters who are licensed paramedics. Many agencies have relaxed that standard and are hiring firefighters who are not paramedics. “Every fire department in Southern California has vacancies. ... It’s easier to get a job now than it has been compared to the last 30 to 40 years,” one SME said. Obtaining a paramedic license requires a significant amount of additional training and coursework and may require travel far from home to attend a program, a potential deterrent for the future workforce.
- **Covid vaccination requirements may exacerbate shortage**—Three SMEs expressed concerns that covid vaccine requirements would exacerbate the shortage of firefighters statewide because current workers are refusing to get vaccinated causing staffing shortfalls.
- **Lack of diversity continues to be an issue**—There are challenges with diversity, in terms of gender and race/ethnicity, not only in the firefighting workforce but in community college fire programs. Concerns about lack of diversity were repeatedly raised in interviews and are confirmed in this report through data analysis of workforce and community college SWP student demographics.





JOB POSTING ANALYSIS

Online job postings can provide insights into employer demand for specific jobs and skill sets. However, it is important to note that while job postings can offer a broader understanding of employer demand, they should not be used as a direct measure of demand for specific occupations in the economy since an employer can post more than one job ad for the same position or may post job ads to test out a potential labor market without actually filling any positions.

Using the job ads aggregator Lightcast, online job postings for the 12-month period from March 2021 to April 2022 were analyzed for this study. Close analysis suggests firefighting job postings may not be reflective of actual hiring needs because the various agencies that hire these positions do not use traditional online job postings to recruit for positions.

- Federal agencies advertise and hire through USAJOBS. In the western United States, the application deadline for wildland firefighters is usually mid-October with job application selection completed by mid-February.³⁴
- Cal Fire does not typically advertise positions except through its website. Applications for seasonal firefighting positions are only accepted annually during the month of November.
- City and county fire departments typically announce open positions as they become available on their websites and may advertise on national firefighting websites such as FireRescue1.com. They usually expect firefighters who want to join their agency to be tracking when openings get posted and to apply accordingly.
- Private contractors may post job ads on traditional online hiring websites such as Indeed.com although they typically announce open positions on their websites and may offer in-house training that must be completed before an individual can be hired into a position.

However, firefighting job postings still can shed light on certain worker characteristics that are in demand within the labor market. Using job posting data, the study team identified top job titles, skills, certifications, education requirements, and employers for four main firefighting occupations in California:

- First-Line supervisors of firefighting and prevention workers (SOC 33-1021)
- Firefighters (SOC 33-2011)
- Fire inspectors and investigators (SOC 33-2021)
- Forest fire inspectors and prevention specialists (SOC 33-2022)

Common employers

Employers with the most job advertisements in California are Wildfire Defense Systems and the State of California (Exhibit 4). Many of the employers listed in job postings are private employers based outside California whose services focus on fire prevention. The following employers have a comparably large number of job postings seeking job applicants:

- Wildfire Defense Systems, based in Bozeman, Montana, provides wildfire defense services
- Allied Universal, a security company with headquarters in California and Pennsylvania, provides firefighters to protect facilities
- Surefox, based in Dallas, Texas, is a custom security consulting firm
- Bay Alarm, based in Concord, California, is a residential and commercial security system provider
- Statcomm Inc., based in Mountain View, California, bills itself as an “all-in-one fire protection resource”

³⁴ “Wildland Fire Jobs Hiring Calendar,” Wildland Fire Jobs, 2019, accessed June 20, 2022, <https://wildlandfirejobs.com/hiring-calendar/>.

The employer name “Commander” in Exhibit 4 likely refers to a branch of the military hiring firefighter/hazmat workers since the locations for these postings are Coronado, El Centro, Lemoore, Port Hueneme, and San Diego.

Interestingly, the major private contractor Capstone Fire and Safety Management, which has headquarters in Escondido and provides wildland and other fire services to federal incident management teams, did not appear in job postings. As of June 2, 2022, Capstone’s website showed 11 firefighting openings in California.³⁵ Among the job postings identified through Lightcast, the California Public Utilities Commission has 20 job postings seeking applicants.

Exhibit 4. Top 10 employers listed in job postings for firefighting occupations, n=2,552

Employer	Job Postings
Wildfire Defense Systems	140
Daily Dispatch	63
State of California	38
Johnson Controls Incorporated	31
Allied Universal	31
Commander	28
Surefox North America	26
Equity Lifestyle Properties	22
Bay Alarm Company	22
University Of California	20

Job and occupational titles

The types of job titles and occupational titles used in job postings provide insights into the kinds of workers employers are seeking.³⁶ Job titles are fairly evenly distributed across firefighter, fire inspector, and battalion chief (Exhibit 5). Occupational titles, however, are heavily concentrated around municipal firefighters, with this occupational title occurring in 812 job postings, about a third of all postings. The occupational title “wildland firefighter” only appears in 15 job postings. (This is a common job title used by the federal government. By comparison, Cal Fire uses “Firefighter I” seasonal, for entry-level positions.)

Exhibit 5. Job titles and occupational titles in job postings for firefighting occupations, n=2,552

Job Titles		Occupational Titles	
Firefighter	83	Municipal Firefighters	812
Fire Inspector	75	Firefighter	83
Battalion Chief	64	Firefighter/Paramedic	37
Fire Chief	64	Firefighter Paramedic	19
Fire Alarm Inspector	42	Wildland Firefighter	15

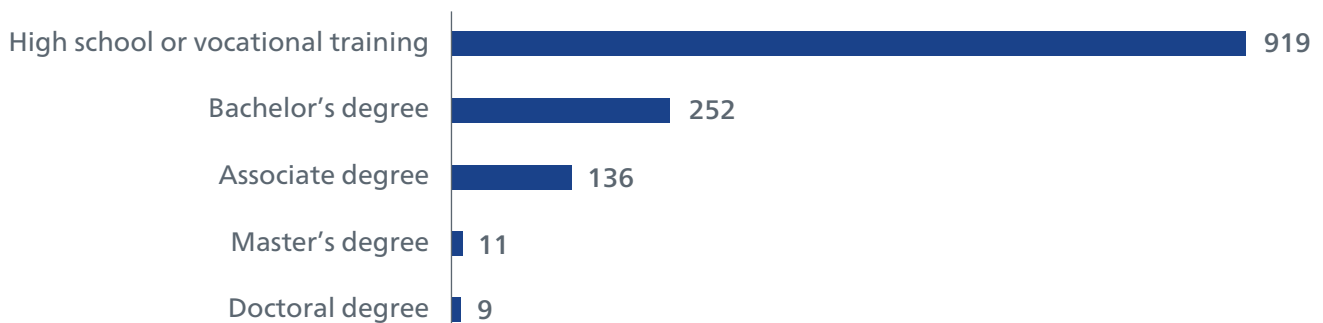
³⁵ “Wildland Fire Services,” Capstone, 2022, accessed June 20, 2022, <https://capstonefire.com/wildland-fire-prevention-and-suppression/>.

³⁶ A job title usually refers to a specific position while an occupational title may refer to a broader role within an industry. For example, “pediatrician” is a job title but “physicians and surgeons” is an occupational title. Similarly, “receptionist” is a job title but “secretaries and administrative assistants, except legal, medical, and executive” is an occupational title.

Educational requirements

The minimum level of education required in most job postings is high school or vocational training, occurring in 75% of job postings (Exhibit 6). A bachelor's degree was the second most common level of education in job postings, occurring in 252 postings, about 21% of all postings with educational requirements. The frequency of a bachelor's degree is somewhat surprising given that interviews with SMEs indicated that experience tends to be more highly valued than education within the fire service workforce. However, according to a retired municipal fire division chief, a bachelor's degree is likely listed in job postings because it is the preferred level of education for applicants, but many agencies are aware that they may end up hiring candidates with only a high school education. In addition, the job posting education level findings are particularly relevant to community colleges, the leading institutions providing fire technology associate degrees in the state since only 136 job postings request an associate degree.

Exhibit 6. Educational requirements in job postings for firefighting occupations, n=1,225³⁷



Work experience

Most job ads require that applicants possess up to two years of experience (Exhibit 7). Experience requirements in job ads are concentrated around five years or less.

Exhibit 7. Minimum experience requirements in job postings for firefighting occupations, n=1,378³⁸

Experience	Job Postings
0 to 2 years	600
3 to 5 years	423
6 to 8 years	62
9+ years	86



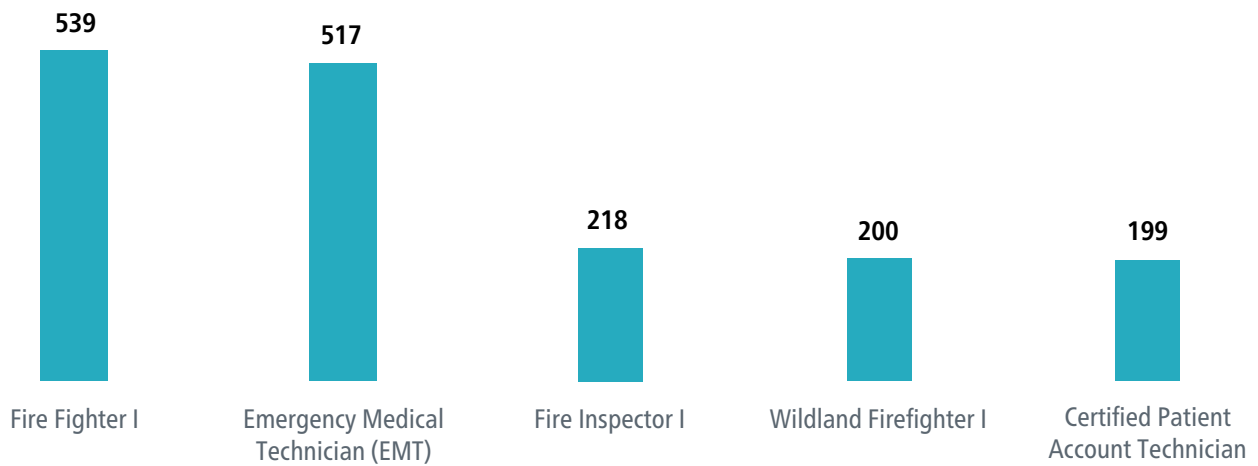
³⁷ Note: 48% of records have been excluded because they do not include a degree level. As a result, the chart below may not be representative of the full sample.

³⁸ Note: 54% of records have been excluded because they do not include an experience level. As a result, the chart below may not be representative of the full sample.

Certifications

Aside from a driver’s license, certifications most in demand by employers in job postings are Firefighter 1 I and emergency medical technician (Exhibit 8). Of all certifications listed in job postings, Firefighter I is the most commonly requested certification, occurring in 539 job ads. This is followed by Emergency Medical Technician in 517 job ads. The Wildland Firefighter I certification shown in the chart below refers to a requirement for employment by municipal/county agencies and Cal Fire. Job applicants for municipal/county agencies and Cal Fire are usually required to have completed State Fire Marshal approved coursework for Firefighter I certification, which includes Firefighter 1A: Structure; Firefighter 1B: Hazardous Materials Awareness and Operations; and Firefighter 1C: Wildland. For Cal Fire, this coursework or a Cal Fire Basic Fire Fighter Certificate is acceptable.³⁹

Exhibit 8. Top certifications in job postings for firefighting occupations, n=2,552



³⁹ "Acceptable Documents Used for FFI, FFII, and FAE," Cal Fire, 2022, accessed October 24, 2022, <https://www.fire.ca.gov/media/9593/ffi-ffii-fae-acceptable-documents-final-09122019.pdf>.

WORKFORCE SIZE AND EMPLOYMENT DEMAND

Interviews with SMEs indicate there is a severe shortage of firefighters across California for federal and municipal (city and county) firefighting jobs. However, just as with job postings, this severity does not appear to be reflected in the current employment data analysis. Employment data concerning hiring needs for information about current employment and vacancies within several agency groups (federal, local/municipal, and private) was not available to inform this analysis. (However, Cal Fire was able to supply its workforce data to supplement statewide labor market data available from Lightcast.) Another labor market research snag is that current occupational employment data collected in California may not include seasonal Cal Fire and federal firefighters.

Further complicating workforce data analysis is the fact that most private contractors are based outside California, and, as a result, their employment numbers are not reflected in California labor market data, even though their firefighters may be working in the state.⁴⁰

Similar to the job posting analysis, current employment labor market data was examined for the same four main firefighting occupations in California:

- First-line supervisors of firefighting and prevention workers (SOC 33-1021)
- Firefighters (SOC 33-2011)
- Fire inspectors and investigators (SOC 33-2021)
- Forest fire inspectors and prevention specialists (SOC 33-2022)

Note on federal workforce data:

Since the research team could not obtain specific data pertaining to hiring needs for federal entry-level firefighters, it is impossible to draw any reasonable conclusions with the data currently available.

USDA Forest Service Pacific Southwest Region (Region 5) did provide the following:

“Nationwide, the Forest Service has 11,300 firefighters. Of the 11,300 firefighters, approximately 4,500 firefighters are temporary, seasonal hires. The Forest Service and Department of the Interior are increasing their capacity from 2021 levels to 16,700 Federal firefighters (11,300 Forest Service; 5,400 DOI) to better respond to wildfires across the nation.”

⁴⁰ The research team did reach out to USDA Forest Service Pacific Southwest Region (Region 5) to request workforce data specific to California, but this request was denied. The same request was made of Cal Fire, which supplied data that is presented later in this section. The research team also contacted the California State Firefighters Association but was informed that municipal/county workforce data was not being collected at this time.

Staffing patterns

An analysis of staffing patterns confirms that employment data collected in California does not include state and federal firefighters.

Staffing patterns show local agencies comprise 93% of firefighting employment in the state (Exhibit 9). Employment is concentrated among local government agencies, indicating that municipal firefighters comprise a large share of available workforce data.

Exhibit 9. Staffing patterns (based on the four occupations) in California

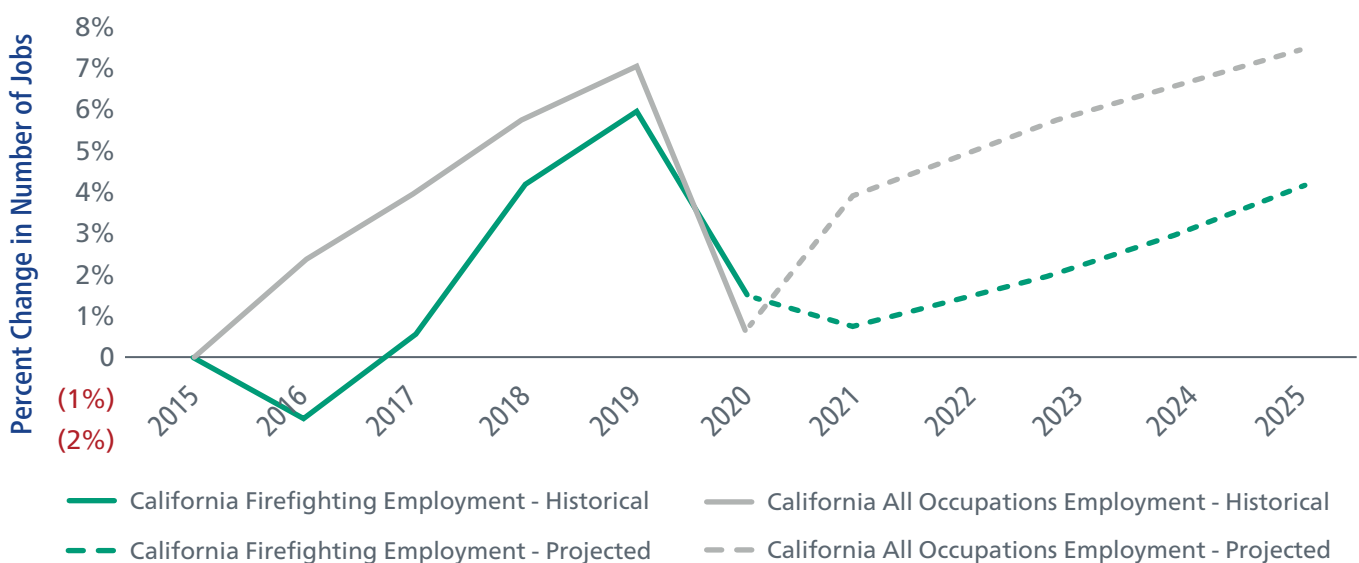
Employer Type by Industry	2021 Percent Employment
Local Government, Excluding Education and Hospitals	90.1%
Other Support Services	2.9%
State Government, Excluding Education and Hospitals	2.8%
Federal Government, Military	1.6%
Federal Government, Civilian	1.3%
Investigation and Security Services	0.3%
Other	1.1%



Employment and projected demand

The rate of firefighting employment declined slightly during the Covid-19 pandemic but is projected to rebound over the next five years (Exhibit 10). (Note: This data is adjusted for seasonal employment and includes seasonal workers.)

Exhibit 10. Percent change in firefighting employment and projected occupational demand in California, 2015-2025



The largest occupation is firefighters with more than 32,700 workers in 2020 (Exhibit 11). This occupation is projected to grow by 2% through 2025, accounting for nearly 3,000 annual openings primarily for municipal positions. The projected rate of change over the five year period is reflective of new jobs.

Other firefighting occupations are comparatively small in terms of employment size. Jobs for first-line supervisors of firefighting and prevention workers are projected to grow by 4% or 286 annual openings. Overall, for the combined occupational group, just 3% growth is projected through 2025. Projected job growth for all occupations in California is 3% through 2025.

Exhibit 11. Firefighting employment and projected demand by occupation, California, 2020-2025

Occupation	2020 Jobs	2025 Jobs	2020-2025 Change	2020-2025 % Change	Annual Openings
Firefighters	32,737	33,467	730	2%	2,929
First-Line Supervisors of Firefighting and Prevention Workers	2,943	3,061	119	4%	286
Fire Inspectors and Investigators	842	878	36	4%	126
Forest Fire Inspectors and Prevention Specialists	492	558	67	14%	87
TOTAL	37,014	37,965	951	3%	3,428

Based on numbers provided by Cal Fire, the agency employs approximately 8,000 permanent and seasonal employees.⁴¹ Each year, Cal Fire typically receives more than 5,000 applications for seasonal, entry-level Firefighter I positions, and unlike federal and municipal/county fire departments was reportedly not facing a workforce shortage at the time the study was being conducted. In early 2022, Cal Fire anticipated hiring more than 3,600 Firefighter I applicants (Exhibit 12).

Exhibit 12. Firefighting workforce data provided by Cal Fire

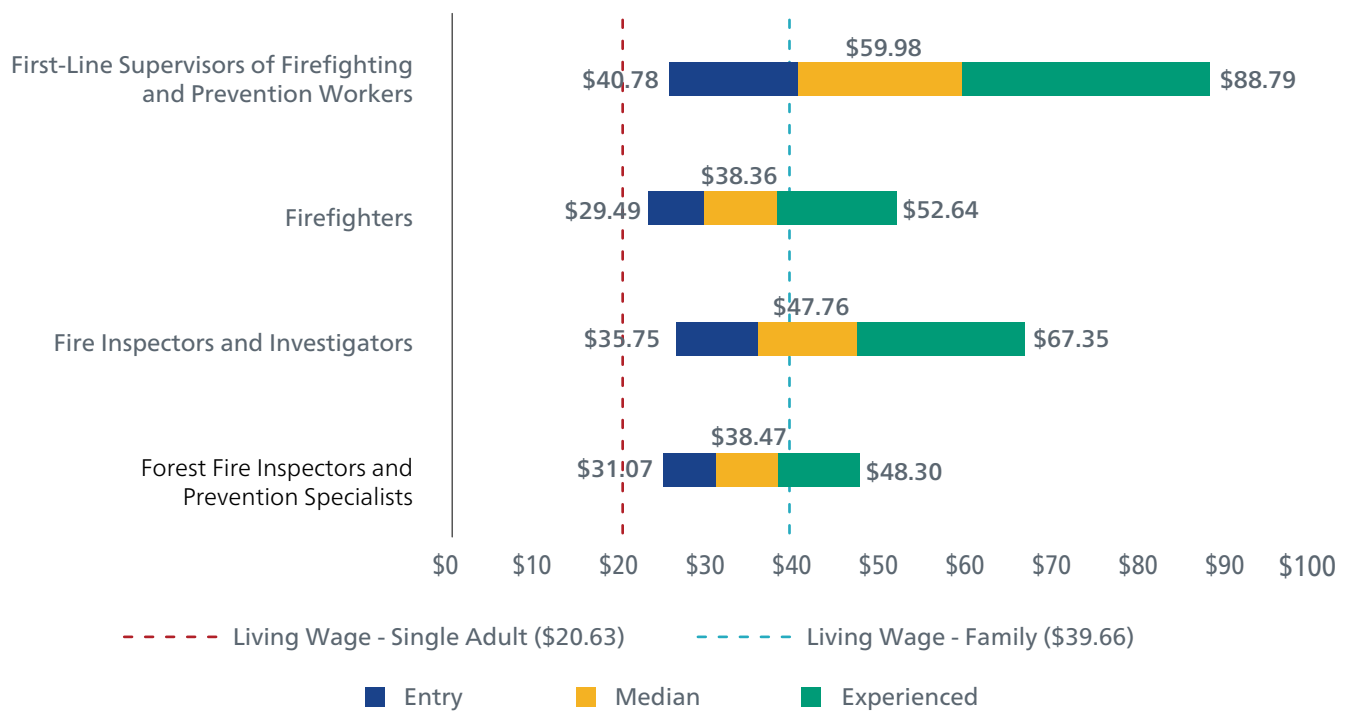
Position Title	Appointments (2021)	Established Positions (Budgeted Amount)	Filled Positions (as of August 21, 2022)	Vacant Positions	Vacancy Rate
Firefighter I	3,605	N/A	N/A	N/A	N/A
Firefighter II	209	365	273	92	25%
Firefighter II / Paramedic	170	399	286	113	28%

⁴¹ "Careers," Cal Fire, 2022, accessed October 10, 2020, <https://www.fire.ca.gov/careers/>.

Firefighting wages

First-line supervisors of firefighting and prevention workers earn the highest wages of the four occupations (Exhibit 13). This occupation’s median wage is \$59.98/hour. Firefighters earn the lowest wages of the four occupations. The median wage for firefighters is \$38.37/hour; however, these wages likely reflect hourly earnings for municipal/county firefighters, not state and federal firefighters. All occupations pay wages that are well above the living wage threshold of \$20.64 in California.

Exhibit 13. Hourly wage comparison showing entry-level, median, and experienced wages for the four firefighting occupations in California⁴²



⁴² Entry-level wages are derived from the 25th percentile; experienced wages are derived from the 75th percentile.

WORKFORCE DEMOGRAPHICS

Gender

Women comprise only 7% of the firefighting workforce in California (Exhibit 14). SMEs confirmed a lack of diversity in terms of gender within the firefighting workforce and are working to address this issue.

Age

Only about a third of the firefighting workforce in California is below the age of 34, with 67% of workers above the age of 35 (Exhibit 15). One-third of workers employed in these occupations in 2021 were 45 years or older. (Please note: This data does not include seasonal workers.)

Interviews with SMEs revealed that firefighters are delaying retirement due to state changes to pensions and that municipal firefighting agencies are experiencing difficulties retaining young recruits, with a substantial proportion of recruits unable to meet hiring standards.

Exhibit 14. Comparison of gender within the firefighting workforce in California, 2021

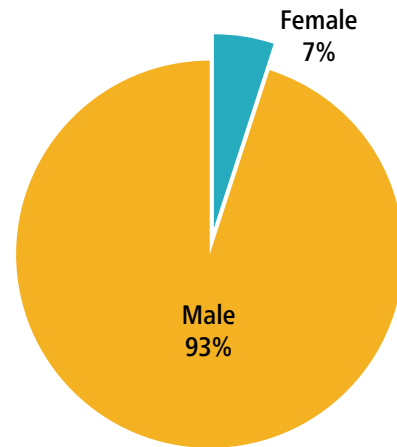
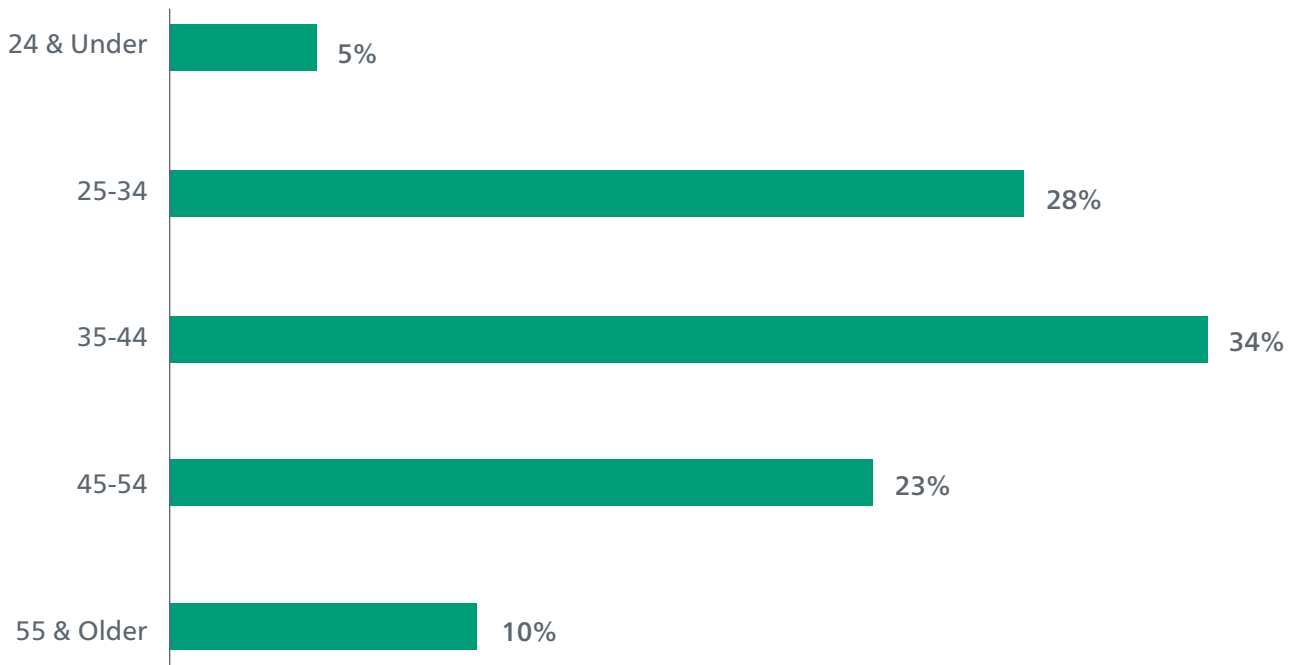


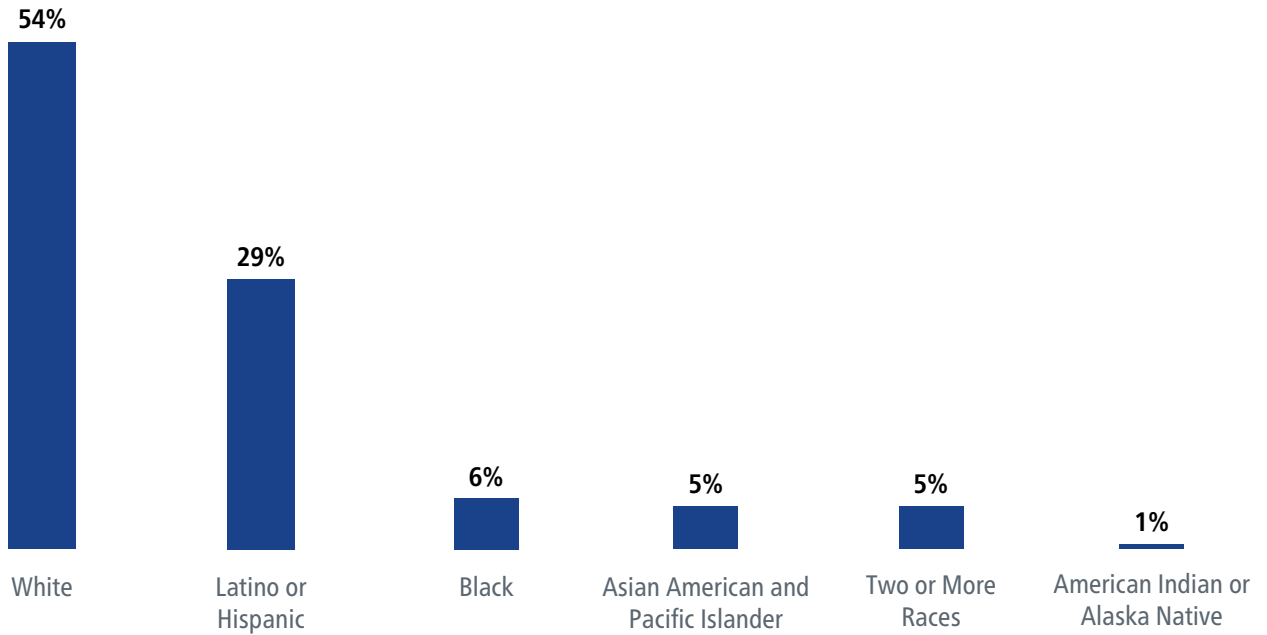
Exhibit 15. Firefighting workforce age comparison in California, 2021



Race/ethnicity

More than half of the firefighting workforce in California is white, 54% (Exhibit 16). Workers identifying as Latino or Hispanic comprise 29% of the workforce. Firefighters identifying as Black comprise 6% of the workforce, followed by Asian Americans and Pacific Islanders, 5%. SMEs confirmed a lack of diversity in terms of race/ethnicity within the firefighting workforce and are working to address this issue.

Exhibit 16. Race/ethnicity of the firefighting workforce in California, 2021



POSTSECONDARY SUPPLY ANALYSIS: COMMUNITY COLLEGE PROGRAMS

Community college fire academies prioritize training that is geared to the most stringent requirements for firefighters: Firefighter I certification for municipal/county fire departments. However, community college fire programs may address other requirements, such as federal wildland firefighting and Cal Fire requirements. For example, Crafton Hills College in Southern California incorporates both federal and Cal Fire requirements in its fire academy curriculum.

Firefighting curriculum is overseen by the State Fire Marshal to meet “Blueprint 2020” national standards. The State Fire Marshall oversees two types of training programs in California:

1. Accredited Local Academies (ALAs), which are offered through larger municipal fire departments, such as Los Angeles, Long Beach, and Sacramento, and which pay recruits a low hourly wage to attend.
2. Accredited Regional Training Programs (ARTPs), which are largely offered through community colleges and which students pay tuition to attend.

A student who completes an ARTP may need to complete additional training offered through the municipal fire department that is doing the hiring or may be required to complete that department’s ALA. (Seasonal, entry-level Firefighter I applicants complete Cal Fire’s academy after being hired.)

In California, 33 community colleges are accredited by the State Fire Marshal to deliver approved curriculum and offer certification testing for Firefighter 1 and Firefighter 2.⁴³

Program analysis

Data analysis shows that over the past three years, 57 of the 116 community colleges conferred awards (degrees and certificates) for firefighting-related programs (TOP 2133).⁴⁴ On average, fire technology programs conferred the greatest number of awards each year, nearly 2,500 (Exhibit 17). Fire academies conferred the second greatest number, 972 each year on average. Wildland fire technology programs conferred the fewest awards, only 36 awards.

Aside from their value for promotional career advancement opportunities within Cal Fire, fire technology degrees are not considered necessary for firefighter positions, based on SME interviews. These degrees seem to be more valuable for promotion within agencies for workers ascending from entry-level positions or for occupations tasked with fire prevention, forest management, or community planning.

As mentioned earlier, 57 community colleges confer awards associated with firefighting programs. Of those, 56 colleges confer fire technology awards with 54 providing associate degrees. Of the 57 community colleges with programs, 27 confer fire academy awards, with three providing associate degrees. Wildland technology is the least widely offered program. Of the 57, four colleges confer wildland technology awards, with three providing associate degrees.

⁴³ “Accredited Regional Training Programs,” Office of the State Fire Marshal, March 2022, accessed June 20, 2022, <https://osfm.fire.ca.gov/media/kqncb0pl/artp-list.pdf>.

⁴⁴ 33 community colleges are accredited by the State Fire Marshall.

Exhibit 17. Annual average community college awards, academic years 2018-19 through 2020-21

TOP Code	TOP Description	Colleges conferring awards	Annual Awards 2018-19	Annual Awards 2019-20	Annual Awards 2020-21	3-Year Annual Awards Average
2133.00	Fire Technology	56	2,385	2,451	2,544	2,460
2133.50	Fire Academy	27	894	935	1,088	972
2133.10	Wildland Fire Technology	4	50	16	41	36
TOTAL			3,329	3,402	3,673	3,468

Length of programs

Awards are most heavily concentrated among associate degrees and long-term certificates requiring at least 16 units but no more than 30 semester units (Exhibit 18). Two categories have demonstrated increases in awards over the past three years: certificates requiring 16 < 30 semester units, which increased from 923 to 1,416 awards, and certificates requiring 30 < 60 units, which increased from 390 to 439 awards. A notable decline from 840 to 676 awards occurred for short-term certificates requiring 6 < 18 semester units.

Exhibit 18. Annual average community college awards, academic years 2018-19 through 2020-21⁴⁵

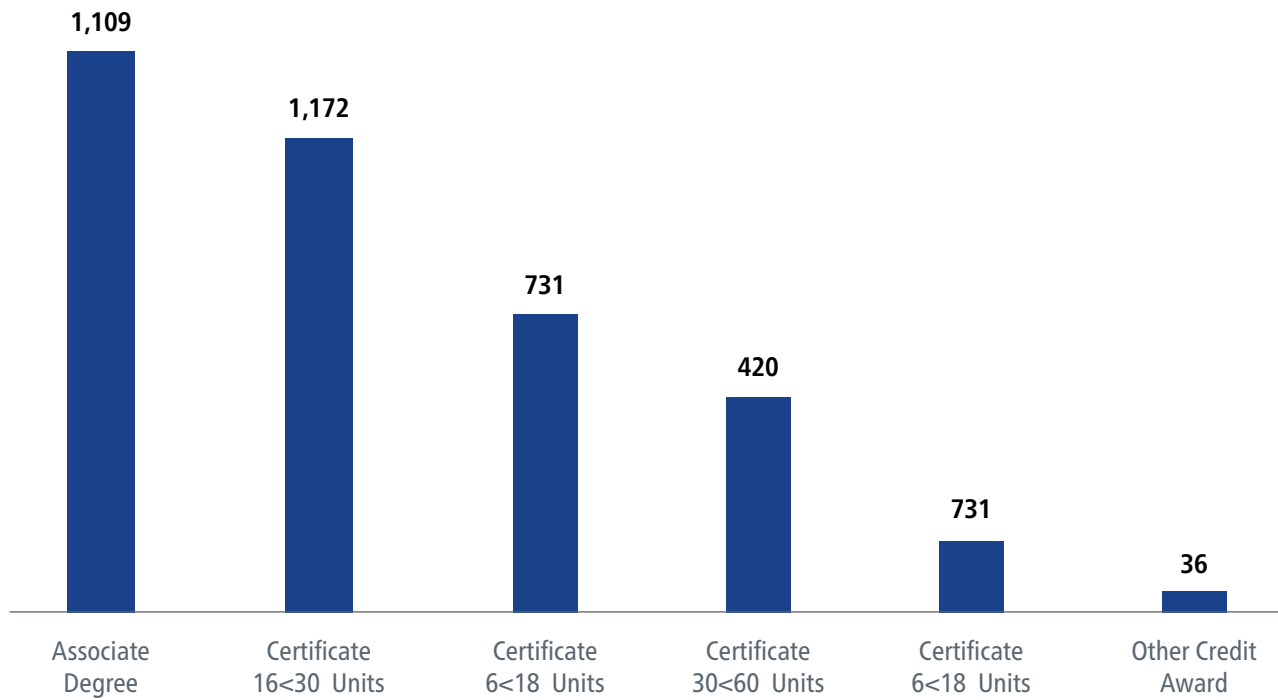
Award Type	Annual Awards 2018-19	Annual Awards 2019-20	Annual Awards 2020-21	3-Year Average	Subtotal
Associate Degree	1,130	1,075	1,121	1,109	3,326
Certificate 30 < 60 Units	390	430	439	420	1,259
Certificate 16 < 30 Units	923	1,177	1,416	1,172	3,516
Certificate 6 < 18 units	840	680	676	731	2,196
Other Credit Award	46	40	21	36	107
TOTAL	3,329	3,402	3,673	3,468	10,404

Awards are most heavily concentrated among associate degrees and long-term certificates (Exhibit 18). Short-term certificates, which are defined as certificates requiring fewer than 16 credits, confer on average a much smaller number of awards.⁴⁶ No college in California certifies individuals as FF1 or FF2. Certifications are issued by the California State Fire Marshal.

⁴⁵ Associate for Transfer Degree, Certificate > 60 Semester Units, and Noncredit award are not included in the above chart because no awards were conferred in these categories.

⁴⁶ "An Analysis of Short-Term Postsecondary Programs," National Association of Student Financial Aid Administrators, 2020, https://www.nasfaa.org/uploads/documents/Analysis_Existing_Short-Term_Postsecondary_Programs.pdf.

Exhibit 19. Annual average community college awards and certificates (semester units), academic years 2018-19 through 2020-21⁴⁷



⁴⁷ Certificates requiring 18 < 30 semester units were not included in the chart because no awards were conferred in this category in the last two years.

STUDENT DEMOGRAPHICS

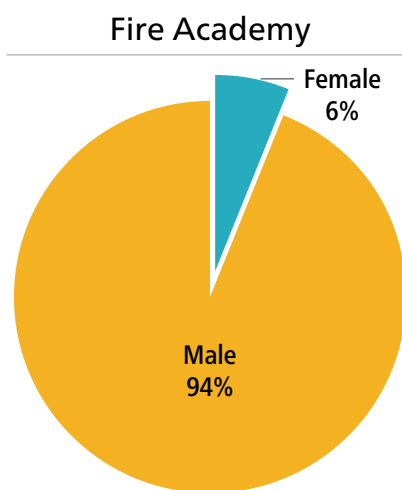
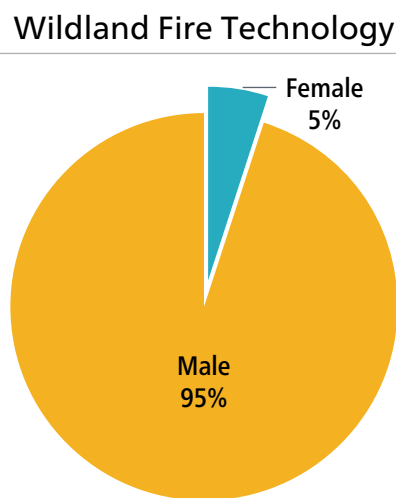
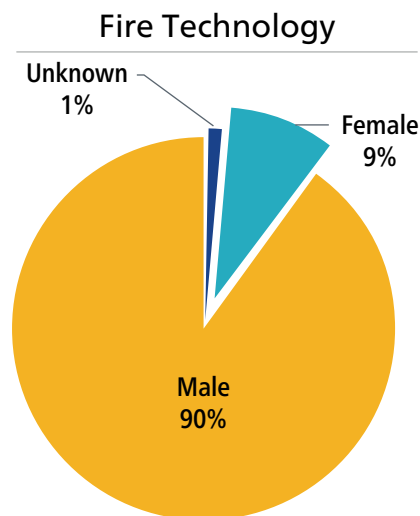
The study also explored where the greatest diversity exists in terms of gender, age, and race/ethnicity for students enrolled in community college firefighting programs.⁴⁸

Gender

Women traditionally have been underrepresented in firefighting occupations. The workforce analysis section of this report shows that women only comprise 7% of workers in firefighting occupations. Gender analysis of community college firefighting-related programs shows that men typically comprise 91% to 95% of the student population (Exhibit 20). Women account for 9% of fire technology students, the highest percentage among the three programs. They account for the smallest percentage, only 5%, in wildland fire technology programs. By comparison, across all CE programs statewide that align with the Strong Workforce Program, women comprise 51% of the student population.



Exhibit 20. Comparison of student gender by firefighting program

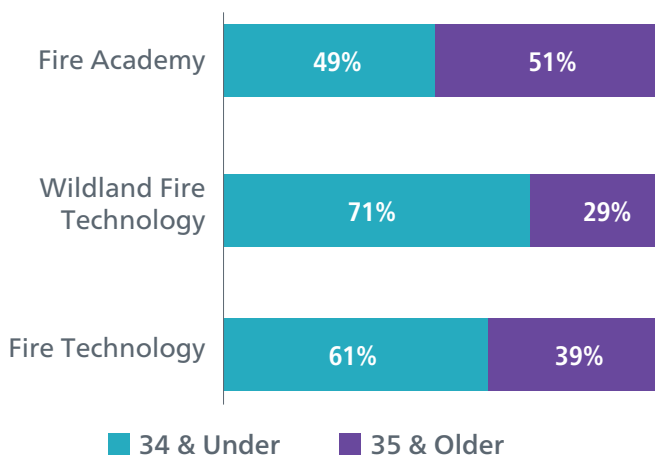


⁴⁸ Source: LaunchBoard Strong Workforce Program Dashboard, accessed 5/24/2022. Please note: Data represents “all students who took at least 0.5 units in any single credit course or who had at least 12 positive attendance hours in any noncredit course(s) in the selected year or who enrolled in noncredit course(s) in Spring 2020 and who enrolled on a TOP code that is assigned to a vocational industry sector in the selected year.”

Age

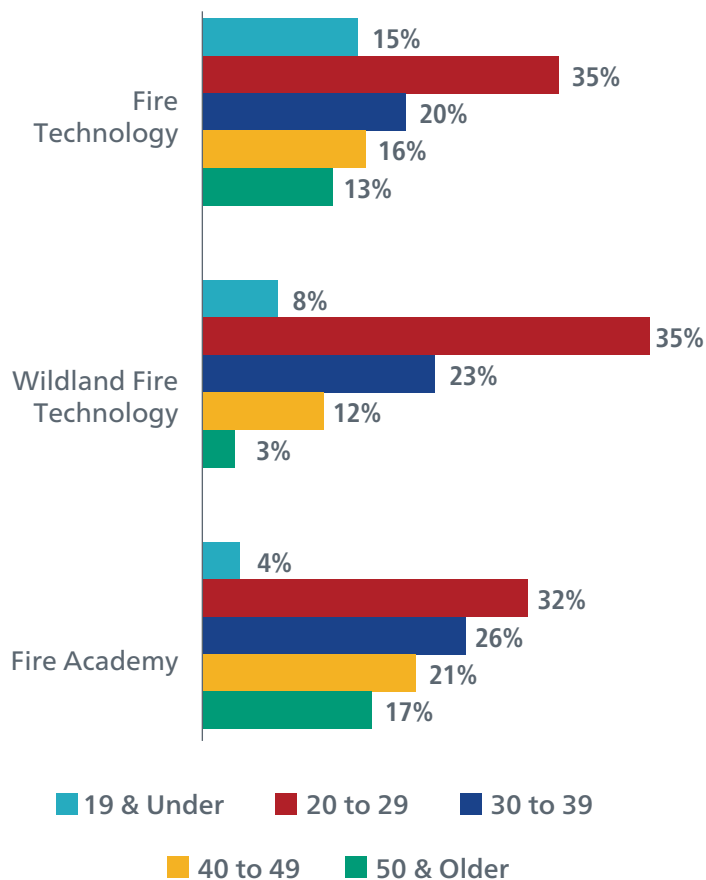
While employer hiring preferences as expressed by SMEs in interviews may lean towards younger, more physically fit individuals, analysis of student demographics in fire programs shows that older students comprise a sizeable share of the population. Surprisingly, students 35 and older account for 51% of fire academy students (Exhibit 21). Wildland fire technology has the largest share of students age 34 and under, 71%.

Exhibit 21. Comparison of students age 34 and under with students age 35 and older for programs related to fire fighting



Closer analysis of student age cohorts shows that students under the age of 24 comprise about a third of students in all programs, except fire academy where they only account for 20% of the student population (Exhibit 22). Fire academy students over the age of 40 comprise 38% of the student population, the highest percentage for that age group among all three programs. By comparison, 51% of all CE students statewide are under the age of 25. One SME said that it has become more common for students above the age of 30 who are considering a mid-career change to enroll in community college fire academies once they learn about the good benefits and relatively high pay offered through municipal/county agencies and Cal Fire.

Exhibit 22. Student age comparison for programs related to fire fighting⁴⁹



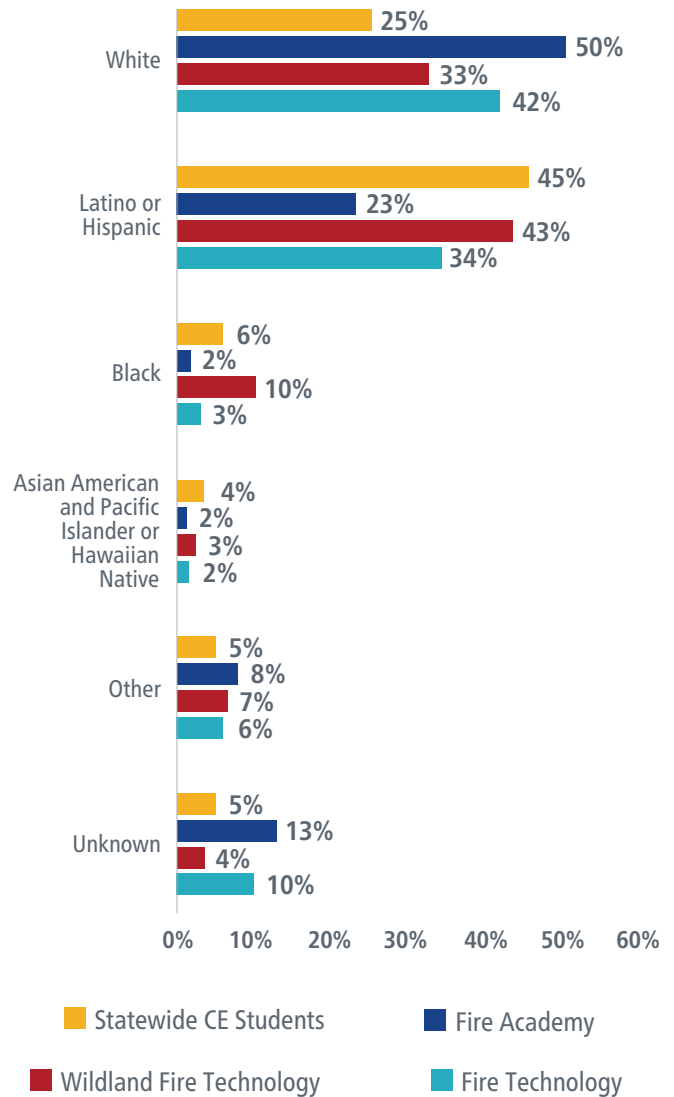
⁴⁹ A direct comparison with workforce age demographics is not possible due to different age groupings between Lightcast and LaunchBoard data.

Race/Ethnicity

Just as in the firefighting workforce, a lack of diversity in terms of race/ethnicity appears to exist for some community college programs. White students comprise 25% of all career education (CE) students statewide but are overrepresented in all three types of firefighting programs (Exhibit 23). In fire technology programs, they account for 42% of students, and in fire academies they account for 50% of students. Of the three types of programs, fire academy programs have the highest percentage of white students, 50%, and the lowest percentage of Latino/Hispanic students, 23%, and Black students, 2%.

Race/ethnicity diversity is greatest among students enrolled in wildland fire technology programs with 43% of students identifying as Latino/Hispanic, 10% as Black, and 6% as Other, a category which includes individuals who identify as two or more races or who selected multiple categories. Four community colleges offer wildland fire technology programs. All are located in southern and central California; Antelope Valley, Bakersfield, Porterville, and Rio Hondo. For agencies seeking to improve the representation of traditionally underrepresented race or ethnicity groups, wildland fire technology programs could serve as an important pipeline for recruitment and retention. Colleges seeking to improve diversity in their fire academy programs may wish to examine existing outreach and retention practices and compare those with wildland fire technology programs.

Exhibit 23. Race/ethnicity of students enrolled in firefighting programs⁵⁰



⁵⁰ The category "Asian American" includes Filipino. Due to low percentages, the "Other" category includes American Indian/Alaska Native, two or more races, and multiple values reported.

CONCLUSION & NEXT STEPS

Firefighting training requirements and the responsibilities assigned to entry-level firefighting occupations have changed greatly in the last few decades, with the path to becoming a firefighter growing more complex.

Of the four types of firefighting employers studied, municipal/county fire departments have the most stringent entry-level training requirements, followed by Cal Fire. By comparison, federal agencies and private contractors typically have lower requirements, about 79 hours of training required for seasonal wildland firefighters.

Findings pertaining to the study's initial questions are as follows:

Which agencies employ the most firefighters and is workforce demand being met by community college fire programs?

This study's qualitative research reveals that municipal/county agencies appear to be grappling with a scarcity of qualified job seekers and that federal agencies, unable to offer competitive wages and benefits, continue to lose workers to state, municipal/county, and private employers.

From a quantitative research perspective, traditional labor market data estimating firefighting occupational employment does not adequately capture seasonal firefighter positions at Cal Fire and, as a result, appears to be understating current workforce totals and future workforce needs. However, based on interviews, Cal Fire appears to be adequately supplied with entry-level applicants who meet the agency's requirements.

Community college supply data shows that:

- Fire technology programs confer nearly 2,500 awards each year
- Fire academies confer 972 each year on average
- Wildland fire technology programs confer 36 awards

Workforce demand likely exceeds projections by Lightcast which estimates 3,428 annual job openings for firefighters in the state. Students who complete fire academy programs are largely considered job-ready to be hired by municipalities, Cal Fire, and the federal government. Given that 972 fire academy awards are conferred each year, there may be an undersupply of students who are prepared to enter firefighting occupations.

Additionally, the study finds that women and minority groups are underrepresented within the firefighting workforce and within community college firefighting programs. Additional steps may be needed to address these disparities.

Which entry-level firefighting occupations lead to promising careers for students?

Municipal/county firefighting positions and Cal Fire firefighting positions offer the highest wages and broadest benefits of the four types of firefighting employers studied.

Do workforce preparation needs exist that are not being addressed by community college training programs?

SME interviews conducted by the research team indicate that a mismatch may exist between employer training needs and community college preparation, and improved coordination may be beneficial in addressing this. Specifically, multiple SMEs commented that the content and rigor of community college programs do not appear to be sufficient based on their experiences in vetting former students as job candidates for employment by municipal/county fire agencies. Additional interviews with representatives involved in training and recruitment across all four types of agencies may be warranted to further explore the issue of the perceived value and effectiveness of community college programs.

From the viewpoint of the SMEs interviewed for this study, community college fire academies may be meeting the educational requirements but may be coming up short in preparing students adequately for positions at municipal/county departments and Cal Fire—in terms of number of qualified students as well as job-readiness. Moreover, SMEs reported that discussions have been initiated among municipal/county fire departments to provide all training in-house (firefighter and EMT/paramedic), bypassing community college programs altogether.

Additionally, the qualitative portion of the study revealed a number of themes that apply to the preparation of entry-level firefighters.

A need for workforce diversity

A looming concern among firefighting leadership is the lack of diversity, in terms of race/ethnicity and gender, within the workforce. Another concern is declining effectiveness in recruiting and retaining young firefighters. Unfortunately, since seasonal employment is not integrated into the data, the demographics of the existing workforce are predominantly reflecting those workers employed by municipal/county agencies. Access to employment data from federal agencies and Cal Fire could clarify the pipeline of workers that may be available to move into full-time positions and could help to illuminate barriers that may be preventing underrepresented groups from ascending the career ladder.

The community college student population is primarily young and culturally varied and can serve as a pipeline to help diversify the ranks of the fire service workforce. However, as an aggregate, community college programs related to firefighting do not reflect this diversity in terms of race/ethnicity. Similarly, representation of women in the firefighting workforce and firefighting programs remains limited. The study finds that women comprise a small minority, only 5-9%, of students enrolled in firefighting programs, and comprise only 7% of the firefighting workforce statewide. Closer analysis of demographics at specific community colleges that offer firefighting programs could clarify where female and minority students are most underrepresented.

Assessing program delivery models

Many community college firefighting programs are currently delivered as long-term, for-credit programs, but other formats might be more suitable for meeting training requirements, such as short-term certifications or noncredit programs. Noncredit program offerings may offer more flexibility for students and could be created to mirror Cal Fire's year-round, 7-week training course model. Furthermore, in interviews, little value was attributed to certificate and degree programs in fire technology and wildland technology, which points to a need to thoroughly assess the value of these credentials in the labor market.

A statement from Cal Fire in response to this study notes, however, that the "community colleges have prepared countless current firefighters for future success by providing the critical training classes and certifications which are required by most fire departments in the state. Any classes or training that prepares candidates to meet Cal Fire's specific needs can only serve to further increase the candidate pool and prepare future generations for success with the state's largest fire department."

Reconciling training needs for disparate job requirements

Since training requirements vary substantially among municipal/county fire departments, Cal Fire, and federal agencies, many community college fire academies try to combine all these training requirements into one program. Discussions involving municipal/county fire departments, Cal Fire, California's Fire Marshal, and federal agencies could address whether it is realistic for fire academy programs to endeavor to meet the wide-ranging requirements for entry-level firefighting positions across these agencies.

Additionally, colleges have found that there is a need to train students on the very different hiring applications for the four types of employers—municipal/county, Cal Fire, federal, and private contractors. Familiarizing students with CalJobs and USAJobs portals is recommended to avoid application missteps.

SME interviews also revealed that while Cal Fire’s internal training program meets most of its needs, there may be a need for community colleges to provide a short-term credential to address “1c Wildland” coursework which is part of the state’s Firefighter I requirement.

Collecting targeted workforce data

As previously discussed, existing employment data does not accurately represent the entirety of the state’s firefighting workforce, specifically seasonal workers employed by Cal Fire and the federal government. Additionally, while their employment data is captured, municipal/county employers report experiencing their own workforce challenges. In addition, migration of firefighters from lower-paid to higher-paid positions may be exacerbating workforce needs.

To inform short-term planning, a statewide employer survey to gauge workforce size and training needs could prove valuable, in particular to better clarify municipal/county and federal workforce needs. A survey would provide an opportunity to capture firefighting employment in all its forms, measure the labor market value employers place on community college degrees and certificates, and elucidate the areas of training employers feel are most relevant to preparing qualified job candidates for today’s firefighting positions. These insights could, in turn, help community colleges adapt their programs to better meet employer needs.

To address long-term workforce planning, state and federal data agencies, such as California’s Employment Development Department (EDD) and the U.S. Bureau of Labor Statistics (BLS), should work to improve employment estimates, such as how to better document the seasonal firefighting workforce and reconcile federal employment estimates.

All of these efforts appear merited to help California’s workforce systems understand the extent of the firefighting shortage and the implications for emergency services and disaster response in the face of climate change.⁵¹

Coordination and communication key to moving forward

Future discussions may choose to address the following themes raised in SME interviews such as the value and efficacy of fire academy programs, the specific skillsets being sought by the various agencies, and whether training students to meet the combined standards of city/municipal, Cal Fire, and federal firefighting agencies within a single program is most beneficial to students.

Since the State Fire Marshal accredits these programs, municipal/county fire departments and community colleges may choose to work more closely with the State Fire Marshal to ensure existing training programs are aligned with hiring needs.

To improve coordination between employers and community colleges, discussions among the state’s fire service leadership and counterparts from the community college system should address the most effective means of delivering training to meet workforce needs at the federal, state, and local levels as well as the adoption of efficiencies of scale. Increased collaboration would prove beneficial and help ensure the quality and standards of community college programs are meeting hiring needs.



⁵¹ Additional attention by the California Community Colleges and their strategic partners is currently being devoted toward providing workforce preparation for students entering careers related to forest management.

APPENDIX A: DATA SOURCES

Data Sources:

- Cal-PASS Plus LaunchBoard. California Community Colleges Chancellor's Office. <https://www.calpassplus.org/LaunchBoard/Home.aspx>.
- Chancellor's Office Curriculum Inventory System (COCI). <https://coci2.ccctechcenter.org/>.
- Lightcast. <https://www.economicmodeling.com/>.
- Labor Market Information Division. California Employment Development Department. <https://labormarketinfo.edd.ca.gov/>.
- Management Information Systems (MIS) Data Mart. California Community Colleges Chancellor's Office. <https://datamart.cccco.edu/>.
- Occupational Employment Statistics (OES). Bureau of Labor Statistics. <https://www.bls.gov/oes/home.htm>.
- Taxonomy of Programs. California Community Colleges Chancellor's Office. June 2012, 6th Edition. <https://www.cccco.edu/-/media/CCCCO-Website/About-Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.ashx>.



APPENDIX B:

INTERVIEW TOOL & SUBJECT MATTER EXPERTS

Interview tool

Introduction

The Far North Center of Excellence is conducting a study of the training required for wildland firefighters in the state.

These executive interviews will help the research team clarify how careers are structured, workforce challenges (recruitment and retention), and partnerships supporting workforce development.

The interviews should take no longer than 20 minutes.

Thank you for agreeing to take the time to share your insights. Your name, position, and company will be included in a list of interviewees in an appendix at the end of the report.

Please state your:

Name _____

Title _____

Organization _____

Questions

1. Please briefly tell us about your organization, such as the size of your company and how many employees you have.
2. What are the entry-level requirements for wildland firefighters?
3. Please describe how a firefighter might advance and ascend a career ladder with experience and training.
4. What are the most common positions you are seeking to fill or that you know are generally difficult to fill in your region?
5. What retention challenges are there for wildland firefighters, if any? And why do these challenges exist?

6. What skills, personality type, or education typically contribute to a person's success in their career?
7. Are there any local, state, or federal policies or regulations impacting hiring?
 - a. Will there be new job opportunities resulting from the state's Fire Resiliency legislation?
 - b. Will new types of fire prevention, fire recovery, fire mitigation, or forest management jobs be created as a result of this legislation?
8. What are the other main ways that your industry finds and hires wildland firefighters?
9. What is the main way that these firefighters are trained?
10. Do you have any key relationships with workforce partners, including local community colleges, in your region that serve as a pipeline for hiring employees?
11. Are there other sources for hiring that are key to your industry?
12. What are your thoughts on current course and degree offerings by community colleges related to wildland fire in the state? Are there enough programs? Is there a need for this type of education or is the in-house training provided by Cal Fire and USFS sufficient?

In closing, thank you for taking the time to participate in this phone interview. Is there anything else you would like to add? Did we miss anything important that should be included in our study?

We welcome suggestions for additional people we should interview who can shed light on employment trends affecting wildland firefighting employment.

Interview subjects

- Mike Alder, chief of Crafton Hills College's Fire Academy and retired division chief of training for the city of San Bernardino Fire Department
- Robert "Dale" Barnett, master instructor for the California Fire Marshal, retired Cal Fire deputy chief in charge of training for Northern California, and supervisor/ coordinator of Butte College's Fire Academy
- Yvonne De La Pena, executive director, California Firefighter Joint Apprenticeship Committee
- Chris Dunn, leadership for Hotshot crews, hand crews, engines, and prescribed fire for the U.S. Forest Service, and assistant professor at Oregon State University
- Robert Meeds, volunteer Firefighter I for Fire Station 14, Silverado Canyon, Orange County
- Jeff Meston, executive director, California State Fire Chiefs Association, 43 years of firefighting experience

- Dan Sullivan, associate professor of fire technology for Crafton Hills College and a firefighter of 25 years for the city of Los Angeles Fire Department
- Lawrence Troxler III, staff services manager I, Workforce Planning and Recruitment Unit, Human Resources, Cal Fire (position at time of interview)

Additional Contributors

In 2020, the following individuals participated in a very early effort to frame a Public Safety sector profile. Information about fire-related occupations from those conversations inspired this report.

- Holly Bow, coordinator, Public Safety Joint Venture
- Matthew Jewett, SMFD Engineer (Retired) Fire Academy Director, Instructor, Miramar College Fire Fighter Academy Program
- Linda Vaughn, former regional director of employer engagement, public safety sector, Bay Area Community College Consortium (position at time of interview)



APPENDIX C:

CALIFORNIA COMMUNITY COLLEGE DISTRICTS CORRESPONDING TO CAL FIRE REGIONS

Community College Region	Cal Fire Administrative Units	Community College Districts
Far North	Butte County (BTU) Humboldt-Del Norte (HUU) Lassen-Modoc (LMU) Mendocino (MEU) Shasta-Trinity (SHU) Siskiyou (SKU) Tehama-Glenn (TGU) Sonoma-Lake-Napa (LNU)	Butte-Glenn Feather River Lassen Mendocino-Lake Redwoods Shasta-Tehama-Trinity Siskiyou Joint
North (Greater Sacramento)	Amado-El Dorado (AEU) Nevada-Yuba-Placer (NEU)	Lake Tahoe Los Rios Sierra Joint Yuba
Bay	San Mateo-Santa Cruz (CZU) Santa Clara (SCU) (Marin County does not have any Cal Fire Units)	Cabrillo Chabot-Las Positas Contra Costa Foothill-DeAnza Gavilan Hartnell Marin Monterey Peninsula Napa Valley Ohlone Peralta San Francisco San Jose-Evergreen San Mateo County Solano County Sonoma County West Valley-Mission
Central Valley/Mother Lode	(Kern County does not have any Cal Fire Units) is a contract county.) Fresno Kings (FKU) Madera-Mariposa-Merc (MMU) San Benito-Monterey (BEU) Tulare (TUU) Tuolumne-Calaveras (TCU)	Kern Merced San Joaquin Sequoias State Center West Hills West Kern Yosemite

Community College Region	Cal Fire Administrative Units	Community College Districts
South Central Coast	San Luis Obispo (SLU) (Santa Barbara and Ventura counties do not have any Cal Fire Units)are contract counties.)	Allan Hancock Joint Antelope Valley Santa Clarita San Luis Obispo County Ventura County Santa Barbara
Los Angeles	(Los Angeles County is a contract county.) does not have any Cal Fire Units)	Cerritos Citrus Compton El Camino Glendale Long Beach Los Angeles Mt. San Antonio Pasadena Area Rio Hondo Santa Monica
Orange County	(Orange County is a contract county.) does not have any Cal Fire Units)	Coast North Orange South Orange County Rancho Santiago
Inland Empire/Desert	San Bernardino (BDU), Riverside (RRU)	Barstow Chaffey Copper Mountain Desert Mt. San Jacinto Palo Verde Riverside San Bernardino Victor Valley
San Diego/Imperial	San Diego (MVU)	Grossmont-Cuyamaca Imperial MiraCosta Palomar San Diego Southwestern

APPENDIX D:

ADDITIONAL INFORMATION ON FEDERAL FIREFIGHTING PAY

Federal wages for firefighters:

Per the Office of Personnel Management's 2022 Salary Table for Sacramento:

- GS3 Step 1 = \$15.10, overtime rate= \$22.65
- GS4 Step 1 = \$16.95, overtime rate= \$25.43

There is a biweekly pay limitation that limits the amount of premium pay that can be paid during a biweekly pay period. Under 5 U.S.C. 5547(a) and 5 CFR 550.105, premium pay cannot be paid to General Schedule employees (including law enforcement officers and other covered employees) to the extent that doing so would cause an employee's basic pay, overtime pay, the dollar value of compensatory time off, night pay, annual premium pay, Sunday premium pay, and holiday premium pay to exceed the greater of the biweekly rate for:

1. GS-15, step 10 (including any applicable special salary rate or locality rate of pay), or level V of the Executive Schedule
2. Level V of the Executive Schedule



Provisions in the federal infrastructure bill may result in changes to firefighter pay. The bill directs USDA and DOI to establish a new "wildland firefighter" occupational series:

"Employees would have the choice of switching to the new series. ...Using the amounts made available under subsection (c)(2), starting in FY22, FS and DOI will seek to a) convert no fewer than 1,000 seasonal wildland firefighters to wildland fire managers that are full-time, permanent and year-round while also holding responsibilities for reducing hazardous fuels on federal land (no fewer than 800 hours per year) and (b) increase the base salary of a Federal wildland firefighter by the lesser of an amount that is commensurate with an increase of \$20,000 per year or an amount equal to 50 percent of the base salary, if the Secretary concerned, in coordination with the Director of the Office of Personnel Management, makes a written determination that the position of the Federal wildland firefighter is located within a specified geographic area in which it is difficult to recruit or to retain a Federal wildland firefighter."⁵²

The legislation would reclassify these positions, which some unions object to, in order to "increase the salary of wildland firefighters by \$20,000, or 50 percent of their base salary, whichever is less."⁵³ However, "a complicating factor is that the legislation restricts it to geographic areas in which it is difficult to recruit or retain a Federal wildland firefighter."⁵⁴

⁵² "Update: Wildland firefighter pay, classification in infrastructure law," USDA Forest Service, June 16, 2022, accessed June 20, 2022, <https://www.fs.usda.gov/inside-fs/delivering-mission/excel/wildland-firefighter-pay-classification-infrastructure-law>.

⁵³ Bill Gabbert, "US Forest Service briefs firefighters on pay and new job classification," Wildfire Today, May 24, 2022, accessed June 20, 2022, <https://wildfiretoday.com/2022/05/24/us-forest-service-briefs-firefighters-on-pay-and-new-job-classification/?sfw=pass1655766901>.

⁵⁴ Ibid.



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