

WILDLAND 101:

How to become a
wildland firefighter



It should be no surprise to anyone that the wildfire seasons of the 21st century have become far more frequent and far more devastating than the fires of the past. What used to be a season of a few months is stretching into months without end at times, with fires becoming more frequent and threatening in the wildland urban interface (WUI). Fire departments familiar with responding to the common brush or woods fire now face growing housing developments in the WUI, and in areas where community risk reduction was seldom given thought. As the probability for wildfire occurrence increases, and as everyone from scientists and politicians, environmentalists and average citizens debate the cause of wildfires, the most significant dilemma the fire service constantly faces is being able to fight these fires with properly trained and equipped firefighters.

Becoming an Everyday Hero

Wildland firefighters themselves have also seen challenges and growth since their inception. From work done by men in the Civilian Conservation Corps building fire breaks and fighting fires in the 1930's nearly every aspect of wildland fire management has seen developmental change. From hotshot crews and helitack crews to fuel managers and dozer operators, the job itself employs approximately 10,000 wildland firefighters within the USFS and has employment positions commonly available across the nation.

Becoming a wildland firefighter generally starts at the federal government level. Wildland firefighting agencies operate within the United States Forest Service (USFS), the National Park Service (NPS), the Bureau of Land Management (BLM), the Bureau of Indian Affairs, and within various state and local organizations with investment in forest lands. Some municipal fire departments also operate with a developed wildland firefighting interest that is specific to their location.

Wildland firefighting occupations within the federal level can range from full-time employment to part-time or contract employment, depending on the organization. The type of work is wide but before one can jump into the field they first must be tested to obtain the most basic of certification and pass the physical tests required. Physical fitness will be key to your success in applying for a wildland firefighter position, as well as the required certifications.

The basic employment requirements are:

U.S. Citizen and U.S. National

Registered for or exempt from Selective Service (males born after December 31, 1959)

Meet Interagency Fire Program Management qualifications

Pass a Work Capacity Test

Possess and maintain a valid driver's license

Subject to a negative drug test prior to entry

Meet Maximum Entry Age requirements, ages 18-37

Specific educational requirements will depend on the agency. Many positions may require coursework related to a specific wildland firefighting position.

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Wildland firefighting began with the establishment of the United States Forest Service (USFS) in 1905 as the agency was charged with managing national forests. It wasn't until five years later, and after several significant large forest fires in the West, that the USFS began to outfit itself with the capabilities of preventing and fighting forest fires. Over the decades, several more serious and catastrophic fires influenced policy changes and approaches to fighting wildfires. The initial belief that wildfires should be suppressed at all times became challenged by federal managers, foresters, and environmentalists. Soon fires could run their course as part of an ecological process. Letting it burn and prescribed burns became additional tactics alongside containment and suppression.

This combination of wildfire management now faces an emerging trend where current fires are more destructive and costlier. Longer summers, short winters, higher temperatures, and prolonged droughts have been contributing to drier conditions that stretch the typical wildfire season beyond its normal boundaries of the past. This climate change links the growth of wildfires to more occurrences of extreme weather. As a result, fuel potential is expected to increase while temperature change becomes a major contributor, resulting in longer wildfire seasons in some parts of the countryⁱ.

“Neither suppression nor current approaches to fuels management adequately reduce vulnerability of communities to increasing wildfire,” said Tania Schoennagel, a research scientist at the University of Colorado-Boulder’s Institute of Arctic and Alpine Research in an interview by Climate Centralⁱⁱ. Schoennagel was one of several scientists involved in a study published by Proceedings of the National Academy of Sciences of the United States of America titled “Adapt to more wildfire in western North American forests as climate changes”ⁱⁱⁱ. The research presented signals a shift in wildfire policy and management from restoring ecosystems based on past measures to adapting to the changing fire season and from unsustainable defense of the wildland urban interface to developing communities better prepared to face a wildfire.

As the climate change has affected the wildfire season, it has also led to an increased call for firefighters. According to the latest employment data from Recruiter, the job outlook for wildland firefighting positions has been positive since 2004^{iv}. Positive employment projections are based employment data from previous years, but this also being influenced by the longer fire season and agencies being forced to use its firefighters for longer periods and as a result increasing overtime cost.



The Capacity Test, The Card, The Job

You should not be surprised that physical fitness will be a major, non-negotiable requirement. To ensure you meet the requirements, the USFS stresses that before you take the WCT you honestly assess your level of physical fitness. The WCT begins with Medical Qualification Standards^v that establish a minimum level of fitness for the strenuous activity to be encountered. These standards ensure that the wildland firefighter can work under arduous and at times unusual conditions for irregular and extended hours while exposed to great physical danger. The tests also include a psychiatric standard to account for the potential wildland firefighter's judgement, mental aptitude and social/behavior skills. The firefighter may find him or herself working with large or small teams, in helicopters or fixed-wing aircraft, in rapid movement towards a safety zone, or in a base camp with limited or disrupted sleep. In addition to various psychiatric conditions, the exam considers applicants with prosthetics and immune system/allergy disorders. It is a thorough process with the intention of making sure that the fittest applicants can be deployed on the fire line. Hiring is typically done in the off-season, or the winter months. A potential applicant can take advantage of the warmer months to work on physical fitness in preparation for the medical exam and the WCT. The FireFit Program is valuable site to help you get into shape^{vi}. This program offers information to start out becoming physically fit and does so in a well-rounded manner covering everything from aerobic fitness and mental preparation to nutrition and a three-part season fitness program.

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Once these preliminary tests have been completed applicants must complete the physical Work Capacity Test (WCT)^{vii}. It is used by the National Park Service and measures three areas:

- Aerobic activity
- Muscular strength
- Muscular endurance

The WCT qualifies individuals at three levels: arduous, moderate, and light. Arduous is a 3-mile hike with a 45-pound pack in 45 minutes. Moderate is a 2-mile hike with a 25-pound pack in 30 minutes. Light is a 1-mile hike in 16 minutes. Specific, detailed information about the WCT can be found with the USFS^{viii}.

Cardiovascular fitness needs to be maintained throughout your career. Heart problems during exertion are associated with several risk factors, including age (over 45 years), gender (male), obesity, smoking, and inactivity. A National Institute of Occupational Safety and Health (NIOSH) study of firefighter fatalities indicates that most heart attack victims had multiple coronary risks (hypertension, high cholesterol, smoking, overweight, inactivity) and many had been diagnosed with heart disease. Some had even undergone major medical procedures such as coronary angioplasty or a coronary bypass operation.

Even with a high level of physical fitness and wellness you could experience signs of heart trouble that you do not want to ignore. These are:

- Fluttering in your chest
- Racing heartbeat
- Slow heartbeat
- Chest pain or discomfort
- Shortness of breath
- Lightheadedness
- Dizziness
- Fainting (or near fainting)

Following the WCT, the Red Card is the next certification to obtain on the journey to be a wildland firefighter. The card is officially an Incident Qualification Card. This card comes from a training and qualification database run by federal and state agencies in cooperation with the National Wildfire Coordinating Group (NWCG). The card works as a type of license indicating where you are qualified to operate in.^{ix} The NWCG presents the minimum training, experience, and fitness standards for wildfire positions and the steps to take in obtaining your Red Card^x.

Finding and applying for a wildland firefighting job is commonly done through the USFS. They and other federal agencies hire at different times of the year depending on the position location. To find this list of positions go to USA JOBS, type in “wildland firefighter” in the Keywords box and click Search. There you will find a wide range of positions from the apprentice, entry level jobs to more senior management positions. Each will provide a summary of the duties and responsibilities as well as the qualifications needed and means of evaluation.

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Types of Wildland Firefighting Jobs

The various federal agencies employ a wide variety of firefighting positions. The basic ones are:

- HAND/FUEL CREWS
- ENGINE CREW
- HOTSHOT CREW
- HELITACK CREW
- SMOKEJUMPER

Most firefighters begin working as Handcrews, Hotshots, or Engine Crews. As they gain experience they can move into Helitack and Smokejumper positions. Hand and Fuel Crews are assigned suppression and prescribed burn duties. They will create fire lines, run prescribed burns to reduce fuel, and work on rehabilitation of burned areas as well as monitor post-fire effects.

Engine Crews can be utilized for initial and extended fire suppression, support of prescribed burns, and patrol areas. They utilize fire apparatus and hose lays in addition to hand tools. Like the Hand and Fuel Crews they also will work on post-fire duties.

Hotshot Crews are primarily used for fire suppression, fuel reduction, and other fire duties. They work the same as Hand and Fuel Crews, but they are generally placed in rugged terrain along the most active and difficult areas of the wildfire. Hotshot Crews are specialized and used throughout the county. They are typically used on large, high-priority fires and are deployed in remote areas with little logistical support^{xi}. They place a great deal of emphasis on physical fitness. "In the world of wildland firefighting today, the hotshot crews are similar to the Special Forces in the military," said Dick Smith, a retired firefighter who spent over 30 years fighting wildfires with the U.S. Forest Service. "They're highly trained and can meet the highest physical requirements."^{xii}

Helitack Crews are wildfire suppression crews that are inserted into the wildfire by helicopter. By being able to reach fires in remote locations, Helitack Crews use their helicopter to support suppression operations by conducting water drops. They also rely on the helicopter for equipment and additional personnel.

Smokejumpers are highly trained and experienced wildland firefighters who parachute into remote areas to begin the initial attack on wildfires. Alongside fire suppression, Smokejumpers also provide fuel reduction services. Smokejumpers can operate from any airport that has the physical capabilities to support their aircraft, payload, and response. A common prerequisite to be a Smokejumper is to have previous firefighting experience in the various crews previously mentioned.

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Dressing the Part

As with structural firefighting, the wildland firefighter also has an ensemble of Personal Protective Equipment (PPE) required to operate properly and protected on the fire line. National Fire Protection (NFPA) Standard 1977 lists the minimum required PPE for wildland firefighting. Outfitting a wildland firefighter can be done within a budget so long as it focuses on the minimum requirements.

Quality wildland PPE may cost more but without the NFPA standards your safety is compromised. The basics of what to buy cover you head to toe. Shirt, pants, helmet, gloves, boots, face and eye protection, and the fire shelter, are the must-haves. Begin your selection of outerwear with a supplier that has products of a high quality and that meet the necessary standards to keep you safe. True North offers a wide range of clothing and outerwear^{xiii} that meet these important demands. Their SLAYER™ shirts and pants are NFPA 1977 certified and carry many features focused on durability, comfort, and functionality. Once your PPE ensemble is complete, you will need the necessary packs and travel bags to carry your gear. The type of pack you chose will depend on the gear and tools you will carry. Several designs are available based on the functions of the wearer^{xiv}. True North packs are designed for minimal heat stress, maximum air flow, ease of load-bearing, and durability. All of these are significant for the wildland firefighter as your pack will likely be on you for hours. You will need to select a pack that will not fail you on the fire line.

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SLAYER™ BRUSH SHIRT – NOMEX® YELLOW

Sizes: SM – 3XL

Combining the comfort you need with the toughness you depend on; this shirt blends trusted materials with innovative features. You will appreciate the attention to detail in the construction of the stand-up collar for complete neck cover, and zippered chest pocket with a port in the back to allow headphones to be connected inside the shirt to reduce snagging. It is designed with a tailored fit and extra-long, square-cut tails for maximum mobility and comfort. Made from flame-resistant Nomex® IIIA, the Brush Shirt is NFPA 1977 Certified.



SLAYER™ BRUSH SHIRT – TECASAFE® YELLOW

Sizes: SM – 3XL

Combining the comfort you need with the toughness you depend on; this shirt blends trusted materials with innovative features. You will appreciate the attention to detail in the construction of the stand-up collar for complete neck coverage, and zippered chest pocket with a port in the back to allow headphones to be connected inside the shirt to reduce snagging. It is designed with a tailored fit and extra-long, square-cut tails for maximum mobility and comfort. Made from flame-resistant Tecasafe Plus, the Brush Shirt is NFPA 1977 Certified.



SLAYER™ WILDLAND PANTS – ADVANCE® TAN

Sizes: SM 28" – 2XL 36"

Optimized for mobility, the innovative True North Gear® design makes it easier to move when working on a steep side-slope, while reducing chaffing at the same time. Durability has been worked into every detail of the design and construction to ensure a long service life. Made from flame-resistant Advance® fabric, the pants feature multiple pockets including two well-sized rear pockets, snag-proof side cargo pockets, and front wrangler-style pockets with a reinforced patch for clip-knives.

Do the features of a pack really matter? Of course, they do. Just as much as your cardiovascular health is important in meeting the physical qualifications of being a firefighter, the gear you carry with you needs to be constructed in a manner that does not add more stress and wear to your body. One example of this is the True North Bushwhacker™ pack^{xv}. NFPA 1977 certified, the Bushwhacker has been redesigned to make the most of air flow and less heat stress. It carries several storage options for hydration and your shelter.

Hydration is crucial on the fire line and you will need to rely on the water you will carry with you. Like with your clothing and gear, you will need to select one that is durable and certified. It seems obvious that hydration would be important among wildland firefighters. It is crucial to be properly hydrated. Studies on wildland firefighters show that during suppression activities firefighters need to drink a minimum of one quart of fluid each hour of work. Before work you should take extra fluids to prepare for the heat. Drink as much as you can during your breaks but in moderation; hyponatremia (abnormally low concentration of sodium in the blood) as a result of excessive water intake is a potentially life-threatening complication. It can be prevented when rehydration is enhanced by fluids containing sodium and potassium, or when foods with these electrolytes are consumed along with water. After work it is important to continue to replace fluid losses.



BUSHWHACKER™ PACK

The back-country pack that out hikes them all. Everything about the Frontline™ Bushwhacker Fire Pack has been rethought and redesigned. Air-Pocket™ back panel design guarantees maximum air flow to minimize heat stress. New H-style harness provides rock-solid load control and stability. Six mesh organizer pockets inside extend storage options to quickly find what you need, while side pockets each hold two 1L Bottles. Covered 12 Fusee carrying capacity and removable New Generation Fire Shelter case fits standard and large shelters. 100oz (3L) Hydration pocket (reservoir not included). True MOLLE attachment system.



SLAYER™ WILDLAND PANTS – NOMEMEX® SPRUCE

Sizes: SM 28" – 2XL 36"

Optimized for mobility, the innovative True North Gear® design makes it easier to move when working on a steep side-slope, while reducing chaffing at the same time. Durability has been worked into every detail of the design and construction to ensure a long service life. Made from flame-resistant Nomex® IIIA, the pants feature multiple pockets including two well-sized rear pockets, snag-proof side cargo pockets, and front wrangler-style pockets with a reinforced patch for clip-knives.



SLAYER™ WILDLAND PANTS – TECASAFE® SPRUCE

Sizes: SM 30" – 2XL 36"

Optimized for mobility, the innovative True North Gear® design makes it easier to move when working on a steep side-slope, while reducing chaffing at the same time. Durability has been worked into every detail of the design and construction to ensure a long service life. Made from flame-resistant Tecasafe® Plus, the pants feature multiple pockets including two well-sized rear pockets, snag-proof side cargo pockets, and front wrangler-style pockets with a reinforced patch for clip-knives.



SPYDER GEAR PACK

Everything quickly attaches with our hybrid Spyder Gear attachment system. Now offers superior ergonomic support harness for comfort and true MOLLE system compatibility on the hip belt that conforms to the 1" MOLLE webbing standard. The small gear bag is designed to carry items like Powerbar®, mobile phone, GPS, wallet, keys, map, weather meter, headlamp, etc. Approved for use by the Cal Fire Personal Protective Equipment (PPE) Working Group and NFPA 1977 Certified.

You can assess your hydration by observing the volume, color, and concentration of your urine. Low volumes of dark, concentrated urine or painful urination indicate a serious need for rehydration. Other signs include a rapid heart rate, weakness, excessive fatigue, and dizziness. Rapid loss of several pounds of body weight is a certain sign of dehydration. Rehydrate before returning to work; continuing to work in a dehydrated state can lead to serious consequences, including heat stroke, muscle breakdown, and kidney failure.

Just as important as water is communication. You may not have given much thought to carrying a radio, and maybe you thought it would be as simple as sticking it in a pocket. Not minding where your radio is can lead to missed communications, especially ones where you may be directed to immediately move to your designated safety zone. Having a radio harness keeps your communication lifeline in one secure spot on your body. Harnesses exist for various ways of carry, from a simple single radio harness to more sophisticated ones for multiple radios.

As you now see, becoming a wildland firefighter is a combination of physical standards and certifications for yourself and the gear you will wear and carry. You cannot short-change any of these and operate professionally and responsibly.



LYNX™ HYDRATION

Don't mess with bulky canteens or water bottles. Attach a hands-free hydration system to your pack. Snap-tite straps attach easily to our Spyder Gear, FSS web gear, and other web gear brands. This system also attaches to the Aero-Vest in the Transformer Series. Approved for use by the Cal Fire PPE Working Group.



FIREFLY™ PACK

With two quick zips, you can drop the gear bag and carry just the essentials - 100oz. hydration reservoir, fire shelter, fuseses, and all the gear you can stuff in the 300 cu in stash pocket. So, whether you're working near equipment or out in the wilderness, the Firefly does it all. Now offers superior ergonomic support harness for comfort and true MOLLE system compatibility on the hip belt that conforms to the 1" MOLLE webbing standard.



CAMPAIGN BAG

Travel bag with a new waterproof DrySafe™ dry bag, large exterior pocket for tents, and new removable toiletry bag means no more squashed toiletries. Collapsible laundry pocket keeps worn items apart while not taking away from storage. Updated padded, detachable shoulder strap with metal hardware makes this bag easier and more comfortable to carry on those short distances and the storable padded backpack straps make the long hauls more bearable.



SINGLE UNIVERSAL RADIO HARNESS

Our collection of best-selling Radio Harnesses features all the bells and whistles that our customers expect from True North® products. With adjustable pockets designed to fit all makes and models of radios and our internal suspension system that keeps harness fit stable, to upgraded, lightweight low-profile back harnesses, our re-designed Radio Harnesses are even more comfortable, durable and functional than ever.

The Single Universal Radio Harness features hook and loop closure front pocket for spare battery clamshell or other small items. Half-moon zippered opening allows easy access to main pocket which features an internal organizer pocket. Elastic straps keep radios in place when bending over.

Maintaining a career in wildland firefighting is limited only to your desire to stay healthy and grow in your career. After gaining experience as a crew member you may choose to become staff officer or manager in any of the crew jobs or in the aviation area. A wide variety of positions are also available within the incident command level of wildland firefighting^{xvii} You could also move into the private wildfire sector. There has been an increased privatization of wildland firefighting efforts by state and local governments as they have struggled financially to maintain wildfire operations.

No matter what the specific position you aspire to, every job in wildland firefighting provides you with a lifetime of experiences and friends closer than family. The bonds you share are unlike any other. Winema Interagency Hotshot Crew's Lead Sawyer, Richard "Wally" Ochoa, Jr. shared how great it felt to return to his crew after an injury, "Being a hotshot makes you proud of who you are and what you do," Wally says. "During that time with Winema, I loved it. That's why I kept going back, because of the integrity and the ability, and because we were just one big family. I always looked at it like that. Those are all my brothers and sisters out there and we have to watch out for each other. We're not there to impress. We're not there to make ourselves look good. We're just there to do our job."^{xvii}

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