

**ALBUQUERQUE FIRE DEPARTMENT
STANDARD OPERATING GUIDELINES**

Wildland Operations

SOG 5-4-01

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Purpose

The purpose of this guideline is to define the Albuquerque Fire Department's Wildland Division and to ensure that all members meet the minimum qualification and standards required to safely and effectively participate in wildland firefighting.

Guideline

This guideline describes how the Albuquerque Fire Department responds to wildland fires in the Albuquerque Metro Area as well as when assisting County, State, and Federal agencies.

Operational Guidance

I. AFD Wildland Division and Resources

- A. The Wildland Division Coordinator is assigned to the AFD Special Operations Division at AFD headquarters. The Wildland Division Coordinator is responsible for maintaining personnel qualifications.
- B. When staffing allows and above normal fire conditions exist, an Assistant Wildland Coordinator may be assigned to the Special Operations Division for the fire season only. This person will assist with the coordination of patrols, wildland fires and other needed activities encountered during fire season.
- C. The Wildland Duty Officer is a designation given to a Wildland Division member that is always available to field resources or outside agencies to address wildland incidents, requests for equipment or any other wildland issues. Wildland Duty Officer is (505) 768 - 9319.
- D. Designated Wildland Specialty Stations are strategically and geographically located to provide rapid response and initial attack on wildland incidents.

Battalion #1	Battalion #3	Battalion #4
Station 1	Station 16	Station 17
Station 10		

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E. AFD Wildland Apparatus

Brush 1 - Type 6 Engine

Brush 10 - Type 6 Engine

Brush 16 - Type 6 Engine

Engine 317 - Type 3 Engine

WLD Engine 22 – Type 1 Engine WE - 22 is assigned to St. 22 and may be used for wildland incidents.

F. AFD Wildland Task Force

All four wildland stations (28 personnel)

II. Training and Certification

A. Each member of the Albuquerque Fire Department is qualified to the FFT2 level. As the authority having jurisdiction, AFD follows the National Wildfire Coordinating Group Standards for Wildland Fire Qualifications 310-1. This standard states all personnel who are qualified at the wildland FFT2 level (all AFD personnel) will complete an annual wildland fire safety refresher, demonstrate fire shelter deployment and complete the pack test at the “arduous level”. All AFD personnel will be required to pass the pack test. Members will receive \$15.00 each paycheck for completing the pack test.

B. Training required of all department members NWCG FFT2

1. ICS – 100 Introduction to Incident Command System
2. S – 130 Basic Wildland Fire Fighter Training
3. S – 190 Introduction to Wildland Fire Behavior
4. L – 180 Human Factors on the Fireline
5. Annual Arduous WCT (pack test)
6. Annual RT – 130 Refresher Training

C. Training required of members assigned to a wildland station (additional to the above certifications):

1. S – 133 Look Up, Look Down, Look Around – Target Solutions
2. S – 131 Advanced Wildland Firefighter Training

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3. S – 290 Intermediate Wildland Fire Training – Target Solutions
4. Certification on the wildland apparatus at the station the individual is assigned to.

The above training will be required to be completed within the first year of being assigned to a wildland station.

D. Station assignments will be awarded based on qualifications. Listed below are the qualifications from highest to lowest that AFD personnel will be able to use for station bids. Starting in January 2016, personnel will ONLY be able to use their qualified position to bid. Members in a Trainee status will not be able to use that status to bid.

1. Task Force Leader TFLD
2. Strike Team Leader STEN
3. Engine Boss ENGB
4. Engine Operator ENOP
5. Firefighter Type 1 FFT1
6. Firefighter Type 2 FFT2

Task books will not be reinitiated unless an individual has made their best effort to complete the book and/or there were not enough opportunities to complete the book.

III. Personal Protective Equipment for Wildland Firefighting

- A. Wildland gear is issued by Logistics.
- B. Assigned Wildland PPE is the responsibility of each individual member. It is the individuals responsibility to ensure gear is complete and in good working condition at the start of each shift.
- C. Personnel must be fully prepared to respond to wildland incidents with a complete set of PPE and web gear, including fire shelter and any other issued equipment on their respective apparatus at all times while on duty.
- D. If an individual is missing or has damaged equipment that individual can go to the wildland tab in Sharepoint and click on the Wildland PPE form on the left side of the screen and submit it to Logistics for repair or replacement.
- E. It is the Driver's responsibility to check and make sure the apparatus has a fire shelter for every position on the truck and that it is in good condition. Every type

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of apparatus regardless of what station it is assigned to needs to have fire shelters (each truck should have as many fire shelters as it does SCBA's).

F. Personnel who arrive at a fire without required PPE will be removed from the hazardous area and may face disciplinary action.

G. Required PPE includes the following and meets or exceeds NFPA 1977

1. Wildland helmet with shroud and chin strap
2. Headlamp
3. Goggles or safety glasses which meet ANSI Z87.1
4. Long-sleeve Nomex fire resistant shirt
5. Fire resistant pants
6. Leather gloves
7. Leather boots
8. Fire Shelter (equipped on truck)

H. PPE for operating a chainsaw is in addition to standard wildland gear and includes the following:

- a) Chain saw chaps
- b) Hearing protection

Only personnel who are qualified Sawyers to level "A" or above may operate chainsaws at wildland fires.

I. Wildland fires involve operations that may become very physically demanding for extended operational periods. Since heat and dehydration can be a major safety hazard, suggested personal items include the following:

1. Water bottles.
2. Food and/or power bars.
3. Extra gloves and socks.

IV. Wildland Firefighting Equipment Assigned to AFD Units

A. All AFD units have been issued the following equipment for each riding position. This gear is to remain on the truck year round.

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1. Web gear with fire shelter. It is the Driver's responsibility to check and make sure the apparatus has a fire shelter for every position on the truck and that it is in good condition. Every type of apparatus regardless of what station it is assigned to needs to have fire shelters (each truck should have

as many fire shelters as it does SCBA's). Drivers will note the inspection on the monthly apparatus inspection form in the "Notes" area.

- B. Some units have been assigned wildland tools which must be on the apparatus at all times. If stations have added district specific tools the list of additional items must be submitted to the Wildland Division Coordinator.

V. Firefighter Safety is the Highest Priority on all Wildland Fires

- G. Individuals are accountable for their own safety and that of their crew.

1. Individuals must be familiar with wildland safety parameters listed below (see SOG 5-4-04).
 - a) 10 standard fire orders.
 - b) 18 watch-out situations.
 - c) LCES
2. It is important for AFD personnel to acknowledge that hazards on a wildland incident vary from the typical hazards of a structure fire.
3. All members of a crew are encouraged to speak up should they notice a significant change in fire behavior, wind direction, weather conditions or any other hazards.

- H. Company Officers are responsible for the safety of their crews.

1. Company Officers must maintain a high level of awareness and keep accountability on all crew members.
2. Wildland firefighters have traditionally utilized the buddy system to watch out for each other. Company Officers may initiate this for their crews to improve personnel accountability.

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3. Outside temperatures can be a major safety problem on fires and crews are often required to work for a prolonged duration in this environment.
4. Personnel should keep themselves hydrated. All personnel should carry personal canteens and/or bottled water.

VI. Levels of Response to Reported Outside or Wildland Fires

- A. Most outside fire incidents within AFD's jurisdiction can be handled by a single engine company.
- B. All fires will be coded by AFD Dispatch in accordance with the Emergency Fire Dispatch System for wildland responses SOG 11-1-01.

VII. Wildland Strategies and Tactical Benchmarks

Wildland fires often spread quickly and may be difficult to engage. The critical decision is often where to attack the fire from. The basic wildland fire philosophy is to aggressively stop the forward progress of fire with always providing for life safety first. Evacuation of individuals and protection of exposures in the path of the fire is the priority when immediate fire control is not possible.

- G. The operational priorities for wildland fires are different than structural firefighting.
 1. Life safety.
 2. Property conservation.
 3. Incident mitigation.
- H. Guideline for methods of attack
 - 0 to 4' flame lengths = (direct from the black) hand tools
 - 4' to 8' flame lengths = (direct from the black) hose lines

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8' to 12' flame lengths = (indirect) line construction way in advance of fire.

12' and above = indirect = (indirect) aircraft, dozers, natural/man made barriers.
Consider point protection.

- I. The three operational strategies for a wildland fire are Direct Attack, Indirect Attacked and Point Protection.
 1. Direct Attack usually means firefighters are going directly to the seat of the fire. Tactics usually include attacking the fire with hose lines. This should be done from the black to ensure firefighter safety.
 2. Indirect Attack involves placing your control lines way out in front of the main body of fire. This strategy is most effective for faster moving fires where time is needed to complete the control measures or where natural barriers are being utilized for control measures. Remember to always post a lookout and make sure they can see the crews working and the main body of fire.
 3. Point Protection is utilized when there is not sufficient time to stop the fire before it will reach critical infrastructure or the fire intensity is too much for crews to directly fight the fire. Crews need to identify trigger points and be prepared to retreat to safety zones when using this strategy. There must be sufficient safety zones immediately accessible to the crews providing point protection.
- J. The tactical benchmarks for wildland fires must always be accompanied by the acres of the fire at the time the benchmark is reached. Benchmarks are usually not broadcasted over the air but are used for report writing and planning.
 1. Fire Engaged – This is the time which control or protection measures are initiated.
 2. Forward Progress Stopped – This is the time that the forward progress of the fire stops. This is not always by action of firefighters.

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3. Contained – This is the time at which either containment measures or natural barriers are 100% around the fire.

4. Controlled – This is the benchmark at which the fire area has been sufficiently mopped up and can be turned back to public for use. Controlled means the fire is 100% extinguished and it will hold under all circumstances.

VIII. Fire Operations

- A. Always fully scout and size-up a wildland fire prior to committing resources. This will prevent injury to personnel.
 1. Small fires can be scouted and sized up quickly, often from the truck upon arrival and do not require the Company Officer to scout the fire.
 2. Larger and fast-moving fires require accurate assessment of fire conditions to ensure appropriate mobilization of resources as well as a safe and effective fire attack. A well-constructed and well communicated plan will help ensure firefighter safety and strategic effectiveness.
 3. If the first-arriving unit finds a large or rapidly growing fire and identifies the need for additional resources, the following steps should be taken
 - a. The Company Officer will assume command and designate a Level II Staging location over the radio then give a short size-up to include flame lengths, fuel type, size of the fire, and rate of spread. The company officer will then scout the fire and provide a complete size up.
 - b. All other resources will report to the Level II Staging location and wait for an assignment. While standing by all personnel will don the appropriate wildland PPE, including fire shelter and monitor the radio.
 - c. The Company Officer will scout the fire and give a thorough size-up according to the following parameters
 - (1) Fire location.

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- (2) Approximate size (in feet or acres).
- (3) Fuel type (grass, brush, trees).
- (4) Fire behavior.
 - (a) Flame length and speed.
 - (b) Is it creeping, running, torching, or crowning?
- (5) Identify values at risk.
- (6) Hazards (such as, propane tanks or power lines).
- (7) Any additional resources needed.
- (8) The location of escape routes and safe zones (2)
- (9) Wind direction and approximate speed.
- (10) Control measures
 - b) After scouting the fire, the first-in Company Officer will coordinate the efforts of units in staging as the Incident Commander.
 - e) The first-in Company Officer should brief the resources, communicate tactical objectives and deploy units. LCES briefing must be included. Face to face communications are well received but crews are encouraged to transmit information over the air so everyone on the incident can hear.
 - f) Specific radio channels may be assigned as needed in coordination with the Alarm Room.
 - (a) If a fire is in AFD's jurisdiction we will use one of our TAC channels and create a local patch for agencies using VHF, however a patch is not recommended for long-term incidents. If the incident becomes a long term incident and exceeds one operational period all AFD resources will switch to VHF communications and use a VHF channel specified by the Incident Commander.

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(b) If AFD is responding to an incident with Corrales Fire, Sandoval County Fire or Rio Rancho Fire, AFD crews will respond on TAC 9. This channel has been designated for communications with these agencies and it is to be used for initial response. It patches 800MHz to VHF.

- g) Fire conditions, tactical effectiveness, and condition of crew must be continually reassessed throughout the event.

IX. Mutual Aid Resources for High Complexity Wildland Incidents

- A. In the event of a large fire AFD resources will be depleted quickly. Primary units on scene should request additional mutual aid resources early. Additional resources can always be cancelled if they are not needed.
- B. Specialty resources need to be requested through the Wildland Division Coordinator (e.g. aircraft, dozers).
- C. As other agencies become involved, it will be critical to coordinate resources utilizing and possibly expanding the Incident Command System to form a unified command.

X. Mop-up.

- A. After control lines have been completed around the entire fire and the fire is declared "Contained," mop-up will begin.
- B. The objective of mop-up is to put out all hot spots inside the containment lines and make sure the fire will remain out under all conditions.

XI. Structure Triage.

- A. Many Wildland fires threaten structures. Company officers will need to quickly determine whether a structure is defensible and what resources and tactics are needed to protect these structures. Some structures may not be able to be protected.

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- B. Each structure that is triaged will be placed in one of the following categories:

Stand Alone – Has safety zone, few or no tactical challenges. Crews return after fire passes to ensure the structure is not on fire.

Prep and Hold – Has safety zone, some tactical challenges. Crews remain onsite to implement protection tactics during fire contact.

Prep and Leave – No safety zone, some tactical challenges. Rapid mitigation measures as time allows. Set trigger points to retreat to safety zone. Return after the fire passes to extinguish small fires if safe to do so.

Rescue/Drive By – Major tactical challenges, ensure evacuation if possible. Return after the fire passes to extinguish small fires if safe to do so.

These triage categories are AFD's standards for structure assessment and can be referenced in the Wildland Flagging Standards SOG 5-4-05.

Listed below are examples of trigger points to use during structure protection. Trigger points are predetermined situations crews have identified that will prompt them to move to their designated safety zones.

- a) The fire is making significant runs (especially if the distance between the structure and adjacent fuels is less than two times the flame length of approaching fire).
- b) Spot fires are igniting faster than crews can extinguish them.
- c) Water supply is running out or is already depleted.
- d) Firefighter safety is jeopardized in any way (e.g., escape route has been cut off or it is threatened by fire)
- e) The structure's roof is 25% or more involved in fire.
- f) Interior rooms are involved, windows are broken in windy conditions, or adjacent structures are threatened or involved.

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- C. Other factors to consider when making decisions about the viability of efforts to save particular structures.
1. Construction material (combustible, non-combustible), decks, gables that might trap embers, building size, arrangement, proximity to other structures, time needed to create a defensible space.
 2. Fire behavior and intensity, including flame lengths, rate of spread, spot fires and estimated time until flame front arrives.
 3. Firefighter safety including ingress/egress, identification of and access to safety zones and escape routes, hazards such as power lines or propane tanks.
 4. Availability and location of resources. If resources are limited, protect a group of structures rather than a single structure.
 5. **Firefighter safety is the number one factor** to consider when deciding whether or not to commit resources to protect a structure.

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