Standard Operating Procedures

100.05.02 WILDLAND FIRE TACTICS



Adopted: 12/20/16
Reviewed: 11/09/22
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Purpose: To establish tactical guidelines that can be used on interface wildland fires, natural vegetation fires, and crop fires.

References: NWCG Incident Response Pocket Guide

Procedure:

- Attack Plan: To make an operational mode decision, a systems approach should be considered.
 - a) Fuel, weather, and topography dictate fire behavior.
 - b) Decide what the fire will do based on predicted spread, perimeter location, and intensity of the fire.
 - c) Determine what effect the fire will have on people, structures, and vegetation.
 - d) Determine actual fire behavior.
 - e) Determine actual human behavior.
 - f) Take action.
 - g) Go back to the first step, and continually evaluate fuel, weather, and topography.

2. Attack Methods.

- a) There are three basic methods of attacking a wildland fire:
 - i. <u>Direct Attack</u>: Firefighters attack the fire directly on its edge using water, throwing dirt on it or cutting a line to pull the fire into the burn. Another method of direct attack is to apply Class A foam or retardant directly on the fire. The advantages of the direct attack are less area burned, less mop-up time, and possible escape into the burn. The disadvantage of a direct attack is that firefighters are exposed to heat, smoke, and flames. Also, the control line can be irregular, and there is a chance that slopovers and spot fires may occur.
 - ii. <u>Indirect Attack</u>: This method is used when the fire is too hot to approach. Instead, barriers are established to control the fire from a distance. The fire is allowed to burn into a natural or manmade barrier, or burning out and backfiring are used. Laying down retardant from aircraft or applying Class A foam to stop the fire are also considered indirect attacks. The advantage of the indirect attack is less exposure to direct heat, flames, and smoke. There is also more time to develop coordination between attacking forces. With the indirect attack, there is less danger of slopovers and spot fires.

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iii. Combination Attack: If some parts of the fire are too hot to approach, yet others are relatively safe, a combination attack will protect exposures by controlling the edges of the fire, while at the same time making a fast, aggressive attack on other parts of the fire. The advantage of the combination attack is having the option to attack the fire with the best method to protect lives and property. The disadvantage of the combination attack is the difficulty of coordinating forces. This attack needs to be carefully coordinated to prevent confusion.

3. Tactics Using Apparatus.

- a) Mobile Attack.
 - i. The mobile attack is a fast, aggressive attack on the fire's edge. In a mobile attack, the nozzle operator moves with the engine along the fire's edge. The nozzle operator usually walks from 15 to 20 feet in front of the engine on either side using a booster line.
 - ii. Mobile attack can also be done from a seated position inside the cab using a booster line or jump line from the window. A reverse attack (from the head to the rear of the fire) may need to be done for the tactic to work. Riding on top of the apparatus is not permitted.
 - iii. The firefighter in the firefighting mode also works as a lookout for the driver of the fire apparatus. The firefighter should be watching for ditches, large rocks, stumps, power lines, and other hazards that may damage the apparatus or cause the apparatus to be trapped in a dangerous situation.
 - iv. Extra slack in the booster line or jump line can get caught under the apparatus tires cutting off your water source or breaking the hose line. Firefighters must keep an eye behind them to keep the extra slack from getting run over.
 - v. The hose stream protects the firefighter as he/she fights the fire. If the fire gets too hot or he runs out of water, the firefighter can step into the burn or climb into the engine for protection. The 1-1/2" or 1-3/4" hoseline will provide better penetration at critical parts of the fire. A combination nozzle can provide a fog pattern for crew protection and a straight stream for reach.

4. Things to Remember (Tactics):

a) If possible, always have a backup operation (tandem operation) follow the mobile attack with another hoseline. This can be accomplished by a booster

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on the same apparatus or, if resources allow, a second apparatus can follow the first acting in the tandem role. If not possible, hand tools will do.

- b) Always check to see if the hose is charged and you have proper pressure at the nozzle before starting the mobile attack.
- c) Always start at an anchor point during any suppression action at a wildland
- d) If a firefighter cannot see, stop! If the driver/operator cannot see a firefighter, he/she should stop until the smoke clears.
- e) If a firefighters becomes trapped, or the fire gets too hot, step into the black or get into the engine.
- f) Watch out for power lines, fences, holes and soft ground, or any other obstacle that may injure the crew or damage the engine.
- g) Only move as fast as it takes for complete extinguishment.
- h) Be aware of other operations in progress near your part of the fire.
- i) Have a back-up engine follow firefighters.

*See Figure 100.05.02A

5. Progressive Hoselays.

a) The progressive hoselay is used for advancing hose along the fire's edge and extinguishing fire as additional hose is added. The hose remains charged; additional hose is added using hose clamps. Every 200 feet, a tee is added so that 1" hose can be installed along the progressive hoselay. This is used for mop-up and protection for the crew in the event that a flare-up or slopover occurs. The nozzle operator starts a fast aggressive attack at an anchor point and is followed by other firefighters, who pull hose, carry hose packs, clamp the hose to add additional lengths and install tees. As each length is added, the hose is clamped about 18 to 20 inches behind the nozzle, the nozzle is removed and bled, a tee is added, the next length of hose is added and the nozzle is connected to the next length of hose.

6. Things to Remember (Hoselays):

- a) Extinguish fire towards the burn, if possible, so the fire is not pushed into the unburned fuel.
- b) Use a straight stream to knock the fire down ahead of the firefighter, and return to a fog pattern to extinguish the fire.
- c) Give crewmembers a pre-assigned task such as nozzle operator, hose handler, or appliance handler. Tasks may vary based on crew size.
 - i. The nozzle operator fights the fire, removes and connects the nozzle.
 - ii. The hose handler deploys the hose, pulls up the slack, and clamps

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the hose.

- iii. The appliance handler disconnects the hose, reattaches it, and adds tees into the hoselay.
- d) If possible, firefighters should operate with one foot in the burn so that if the fire gets too hot, he/she can escape into the burned area.
- e) Conserve water. Use small lines for mop-up and big lines to attack fire.
- f) Wear protective clothing, and fire shelter. Establish communications with the attacking crew.
- g) Rotate crewmembers as often as necessary to reduce heat-related injuries and fatigue.
- h) Use apparatus that can pump high pressure and carry enough water to support the hoselay for long periods.
- i) Always start the attack at an anchor point.
- j) Do not use hose smaller than 1-1/2" on initial attack. Attach 1" hose to tees for mop-up operations.

* See Figure 100.05.02B

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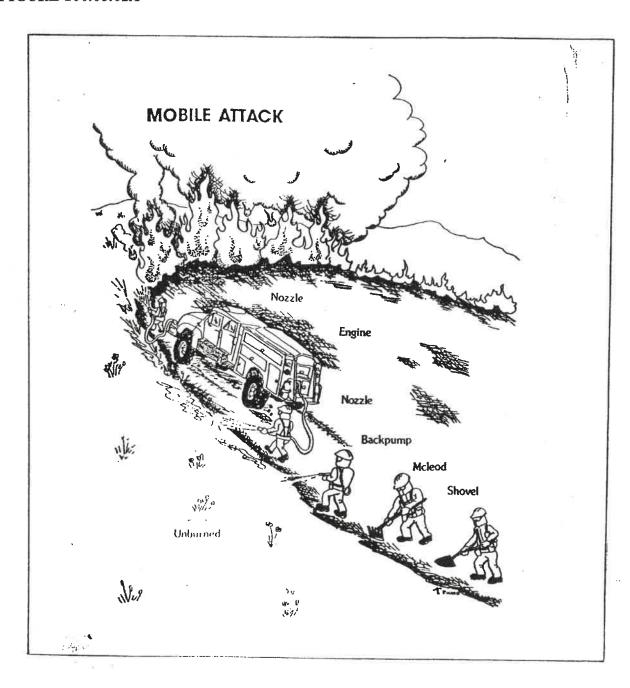


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FIGURE 100.05.02A



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FIGURE 100.05.02B

