Wildland Firefighting

Module 14

LCES

Lookout(s)

- Should be experienced, competent, and trusted
- Crews should have adequate lookouts, posted at good vantage points
- Lookout should have knowledge of crew locations, as well as escape routes and safety zones
- Knowledge of trigger points
- Equipped with belt weather kit, watch, and IAP

Communication(s)

- Radio frequencies confirmed
- Backup procedures and check-in times confirmed
- Provide updates on any situation change
- Sound alarm early, not late

Escape Routes

- Always try to have more than one escape route
- Avoid steep uphill escape routes
- Escape route should be scouted for loose soils, rocks, and vegetation
- Escape route should be timed considering slowest person, fatigue, and temperature factors
- Marked for day or night
- Evaluate your escape time vs rate of spread
- Park apparatus for escape

Safety Zones

- Area survivable without a fire shelter
- Should be located well back into clean burn
- Can utilize natural features such as rock outcroppings, bodies of water, or large meadows
- May also be constructed sites like a road, helispot, or bulldozer clear-cut
- Should be scouted for hazards and to account for size of crews and equipment
- If constructed upslope, downwind, or near heavy fuels, you will experience more heat impact, thus requiring a larger safety zone
- Separation distance between firefighters and flames should be four times the maximum continuous flame height

10's & 18's

18 WATCH OUT SITUATIONS

1. Fire not scouted and sized up.
2. In country not seen in daylight.
3. Safety zones and escape routes not identified.
4. Unfamiliar with weather and local factors influencing fire behavior.
5. Uninformed on strategy, tactics, and hazards.
6. Instructions and assignments not clear.
7. No communication link with crew members/supervisor.
8. Constructing fireline without safe anchor point.
9. Building fireline downhill with fire below.
10. Attempting frontal assault on fire.
11. Unburned fuel between you and the fire.
12. Cannot see main fire, not in contact with anyone who can.
13. On a hillside where rolling material can ignite fuel below.
14. Weather is getting hotter and drier.
15. Wind increases and/or changes direction.
16. Getting frequent spot fires across line.
17. Terrain and fuels make escape to safety zones difficult
18. Taking a nap near the fireline.

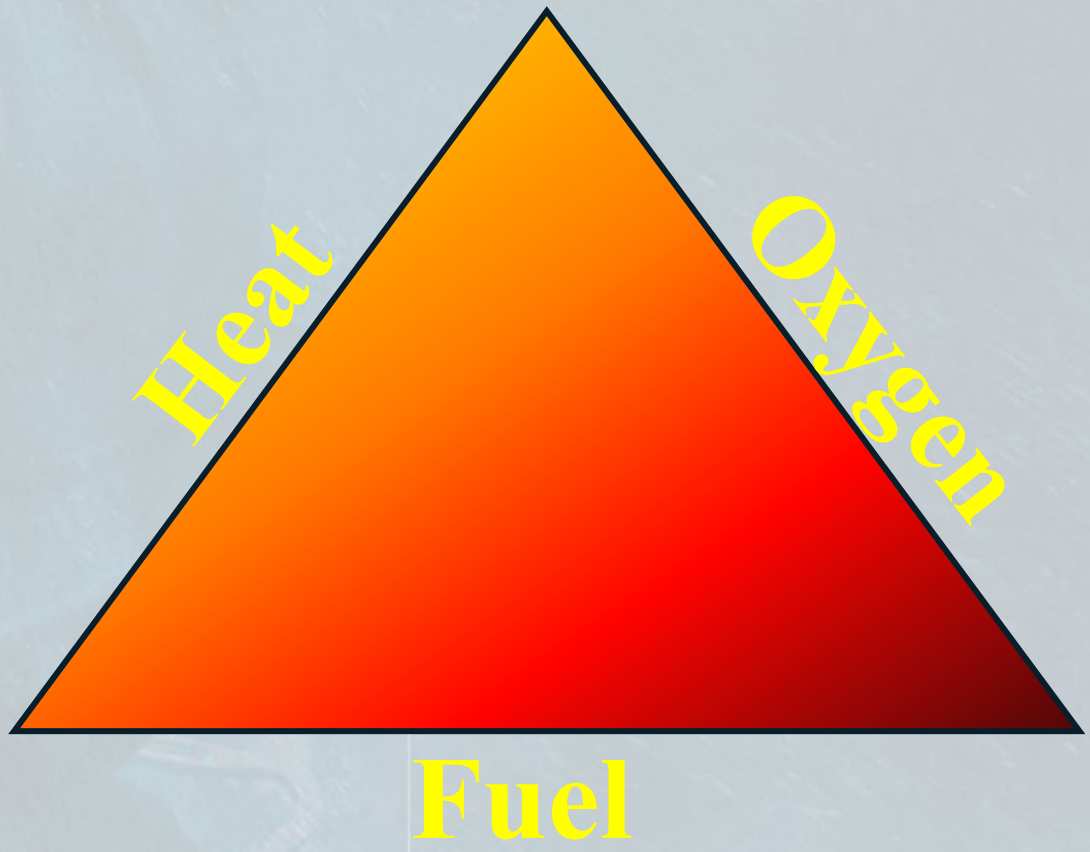
- from Missoula Rural Fire District SMOKESCREEN May 2012 Newsletter on www.mrfdfire.org

10 STANDARD FIREFIGHTING ORDERS

1. Keep informed on fire weather conditions and forecasts.
2. Know what your fire is doing at all times
3. Base all actions on current and expected behavior of the fire.
4. Identify escape routes and safety zones, and make them known.
5. Post lookouts when there is possible danger.
6. Be alert. Keep calm. Think clearly. Act decisively.
7. Maintain prompt communications with your forces, your supervisor, and adjoining forces.
8. Give clear instructions and ensure they are understood.
9. Maintain control of your forces at all times.
10. Fight fire aggressively, having provided for safety first.

Wildland Fires can impact any community and department

The Fire Triangle



Wildland Factors

Wildland Fire Triangle

Heat

- Lightning
- Cigarettes
- Powerlines
- Catalytic converters
- Small engine sparks
- Matches
- Magnifying glass

Fuels

- Grass
- Shrubs
- Trees
- Houses
- Propane tanks
- Wood piles
- Decks

Light Fuels

Heavy Fuels

Fuel Factors

- Type
  - (Ground, Ladder, Aerial)
- Fuel Moisture
- Size and Shape
- Fuel Loading
- Horizontal Continu
- Vertical Arrangement

Horizontal Continuity

Continuous

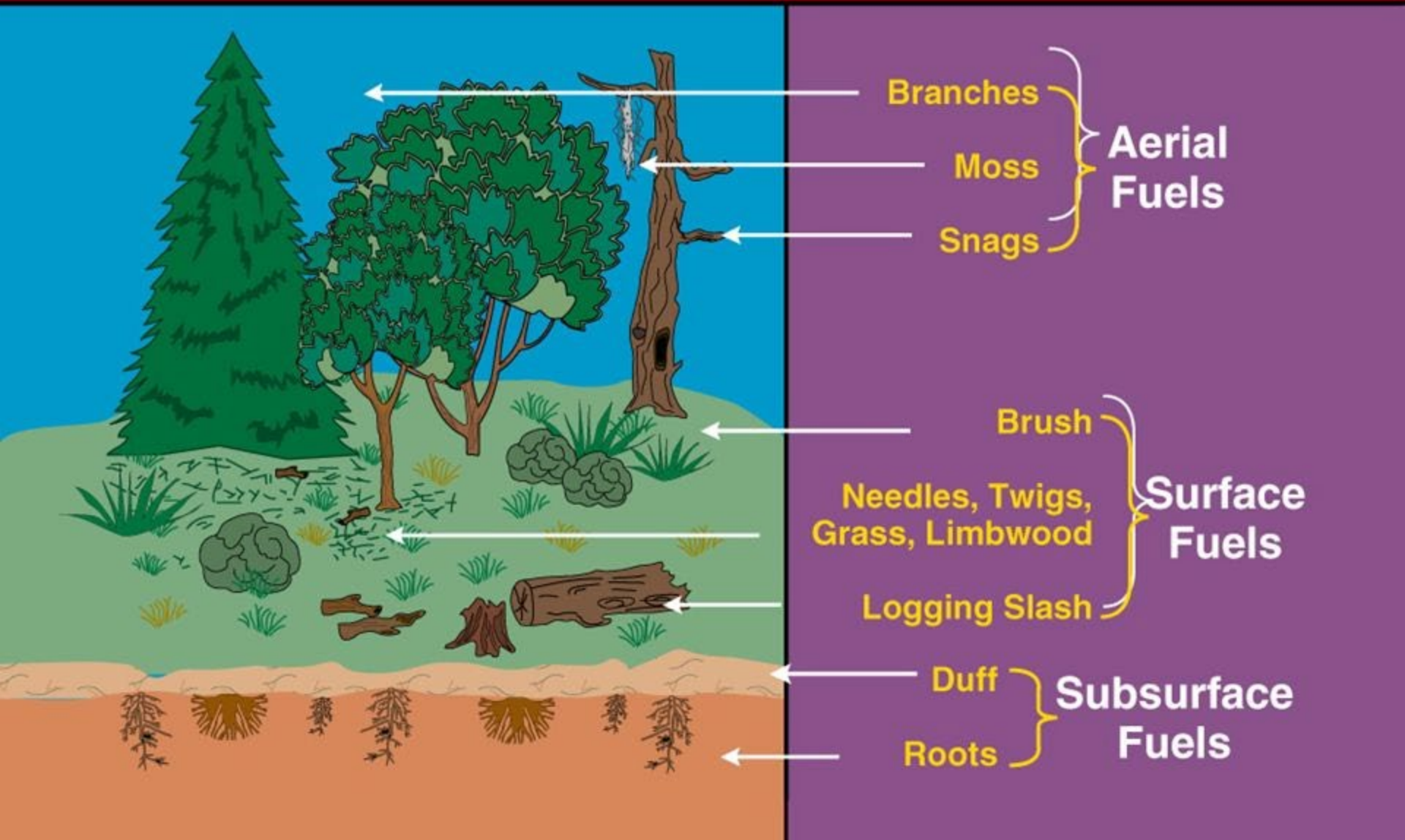
Fuels in contact with each other across land surface

Patchy

Gaps with no fuels

WILDLAND FIRE FUELS

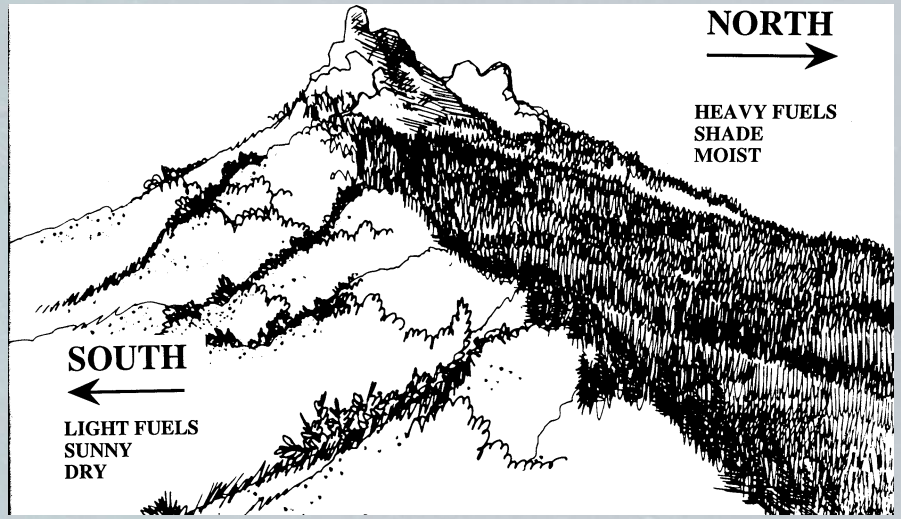
14-20



Aspect

Slope

- Fires will usually spread faster uphill than down; steeper the slope, faster fire spreads



Shape of Country

- Box Canyons, Drainages

Elevation

Weather

Main Influence on Wildland Fires

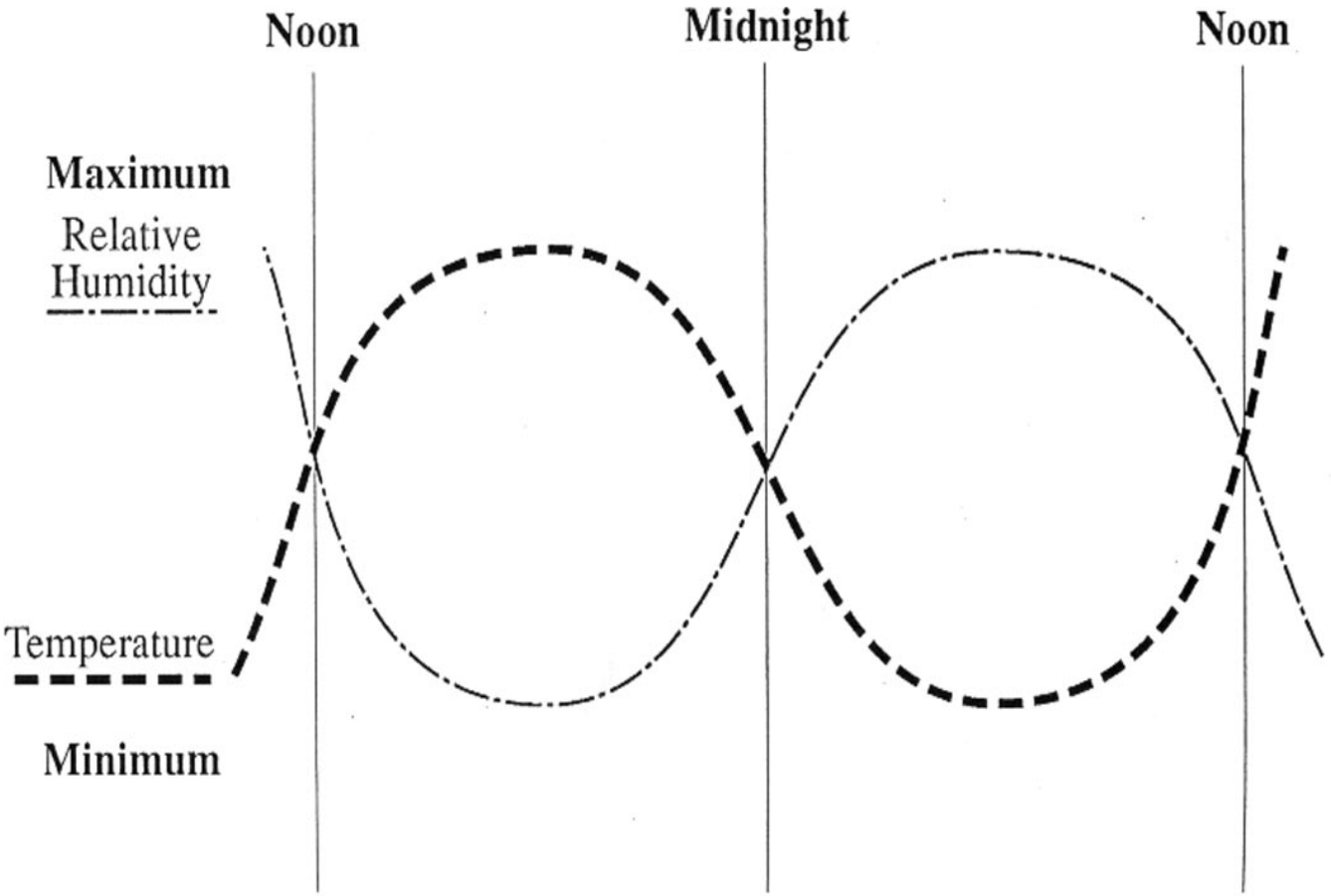
Wind

Temperature

Relative Humidity

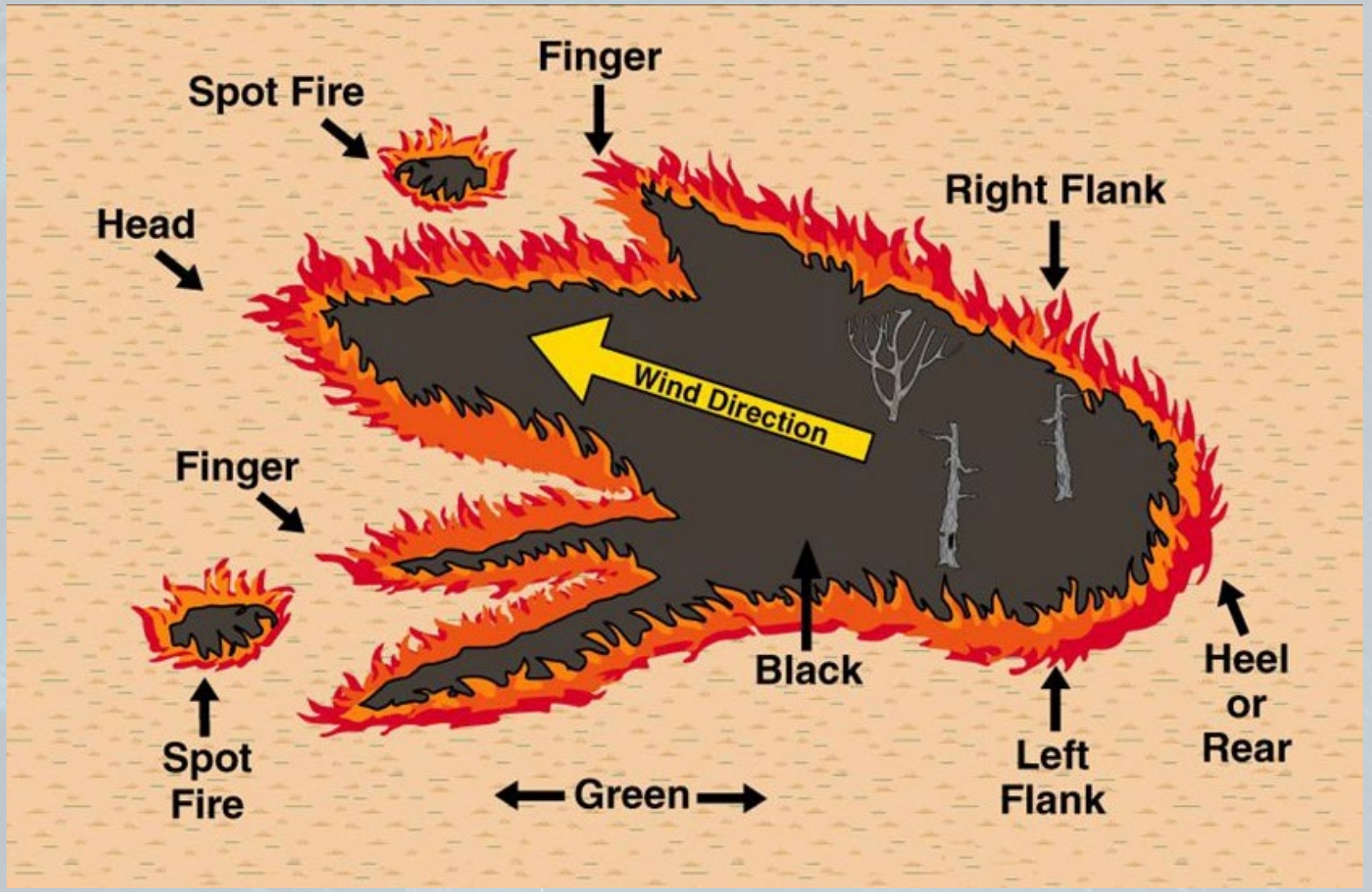
Relative Humidity

Moisture in the Air



Terms and Vocabulary

Parts of a Wildland Fire



Attacking Wildland Fires

PPE

Direct Attack

Direct attack is action taken directly against flames at edge or closely parallel – most common method of attack

Indirect Attack

Indirect attack is action taken away from the flames. Typically to establish the perimeter of the fire.

Firing or Backfires

Indirect Attack

A fire that is set deliberately in the path of an oncoming fire. As it burns, it consumes fuel, thereby depriving the primary fire of fuel when it reaches the site.

Air Operations

Helicopters and Airplanes are used to drop water or retardants.

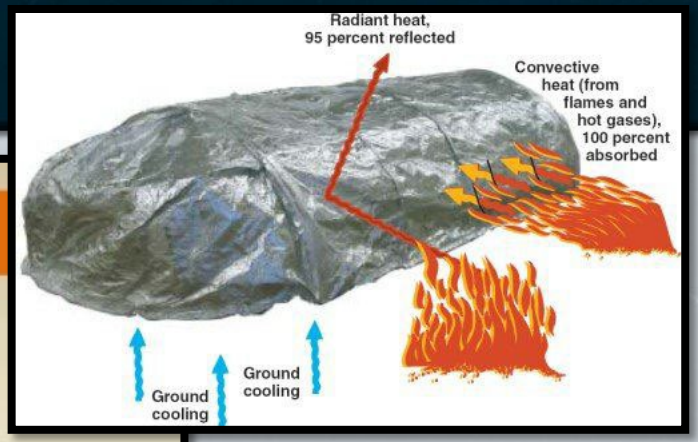
Incident Responses

Resources: Individual or Strike Teams

Typing of Resources:

- **Based on capabilities**
- **Based on personnel**

Wildland Shelter



Wildland Fire PPE

Fire Shelter

- *New generation fire shelter*

The fire shelter is considered the most important part of wildland firefighters PPE. It resembles a mummy sleeping bag. There are two layers. The outer later is aluminum foil bonded to woven silica cloth. The inner layer is made up of aluminum foil laminated to fiberglass.

The outer layer reflects 95 percent of radiant heat, and the silica material slows the passage of heat to the inside of the shelter. Convective heat is slowly absorbed by the exterior layer of the shelter. The inner layer is designed to prevent heat from reradiating to the person on the inside of the shelter.


Shelter is cut away to show body position.

Deployment:

1. **Clear area**
2. **Safe Location**
3. **Radio/Water**
4. **Feet to Fire**
5. **Group Up**
6. **Stay In**

https://www.youtube.com/watch?v=P8zU1MjZSnE