Introduction

- Defined by NFPA:
  - Unplanned and uncontrolled fires burning in vegetative fuel that sometimes includes structures
- Referred to by different terms – ground cover fire, wildfires, field fires, grass fires, etc
- Can consume grasses, shrubs/brush, natural forest, plantation forest, logging slash, ground litter and farm/ranch plantings.
- Ground cover fires burn loose debris on the surface of the ground.
- Many structural fire fighters are called on to extinguish wildland and ground fires at some point.
- When manmade improvements come in contact with wildland fuels - wildland-urban interface
  - Residential
  - Commercial
  - Recreational
- Public Infrastructure

Wildland Fire and the fire triangle

- Wildland and ground fires require the same three elements as structural fires.
  - Conditions under which elements come together to produce a fire are different.
- Wildland fire behavior
  - Fuel
  - Weather
  - Topography
Fuel
- Primary fuel is area vegetation.
  - GRASS
  - SHRUB/BRUSH
  - TIMBER/LITTER
  - LOGGING SLASH
- Vegetative fuels can be located:
  - Under the ground – subsurface fuels
  - On the surface – surface fuels
  - Above the ground-aerial/canopy fuels
  - Fine versus heavy fuels

Fuel Continued
- Fuel Type
- Fuel Moisture
- Size and shape
- Fuel loading
- Horizontal continuity
- Vertical arrangement

Weather
- Temperature
- Relative Humidity
- Atmospheric Stability
- Precipitation
- Wind
- Predictive Service
  - Spot weather forecast
  - Smart Phones
  - Kestrel Device
  - Weather Belt Kit

Topography
- Aspect - direction a slope faces
- Slope - Steepness.
- Position of Fire - Top, middle, or bottom of slope.
- Shape of Country - Narrow canyons & box canyons.
- Elevation - Relates to curing of fuels, precipitation, length of fire season

Containment & Suppression Methods

Cooling the Fuel

Removing the Fuel
- Can be accomplished with:
  Fire broom  Steel fire rakes
  McLeod fire tool  Adze and axe
  Council rakes  Drip Torch
- Sometimes saws are used to remove heavy brush and trees from the fire.
- Backfiring can create an area devoid of vegetation.
Remove Oxygen
  • Smothering
    • Most commonly used when overhauling the last remnants of a fire
    • Not as useful during the more active phases of a fire
  • Compressed air foam systems (CAFS)
    • Combines foam concentrate, water, and compressed air to produce a foam
    • Extinguishes with less water
    • Reduces rekindling

Methods of Attack
  • Direct Attack
  • Indirect Attack
  • Parallel Attack

PPE

Risk Management
  Step 1 – Situational Awareness
  Step 2 – Hazard Assessment
  Step 3 – Hazard Control
  Step 4 – Decision Point
  Step 5 – Evaluate

Wildland Fire Safety
  LCES
    • Look Outs
    • Communication
    • Escape Routes
    • Safety Zones

10 Standing Firefighting Orders
  1. Keep informed on fire weather conditions and forecasts.
  2. Know what your fire is doing at all times.
  3. Base actions on the behavior of the fire.
  4. Identify escape routes and safety zones.
  5. Post lookouts when there is danger.
  6. Be alert, calm, clear, and decisive.
  7. Maintain prompt communications.
  8. Give clear instructions and ensure they are understood.
  9. Maintain control of your forces.
 10. Fight fire aggressively, having provided for safety first.
Wildland Fire Safety
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 OR 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 SOMEONE 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

Burn demo