

A firefighter in a yellow jacket and helmet is walking away from a fire in a forest. The fire is on the left side of the image, with bright orange and yellow flames rising from the ground. The firefighter is carrying a backpack and a tool, possibly a shovel or axe. The forest is filled with tall, thin trees, and the ground is covered in dry leaves and twigs. The overall scene is one of a wildland fire suppression mission.

# Africa Fire Mission

**Fundamentals of Wildland Fire  
Suppression**



# Course Objectives

- Upon completion of this course, the student will have a basic understanding of the principles of wildland firefighting and the tools and strategies needed to do so in a safe and effective manner.

# COURSE OUTLINE

**Unit 1 – Wildfire Terminology**

Unit 2 - Safety

Unit 3 – Basic Wildland Fire Behavior

Unit 4 – Locating the Fire & Communications

Unit 5 – Wildfire Size Up

Unit 6 – Wildland Fire Suppression Methods

Unit 7 – Mop up & AAR - Wrap up & (Final Exam)

# Unit 1 – Wildfire Terminology



Speaking a common  
language

# Unit 1 Objectives

- Identify the terms used to describe the parts of a wildfire.
- Become familiarized with common wildland fire terminology.



# Importance of using a common Language

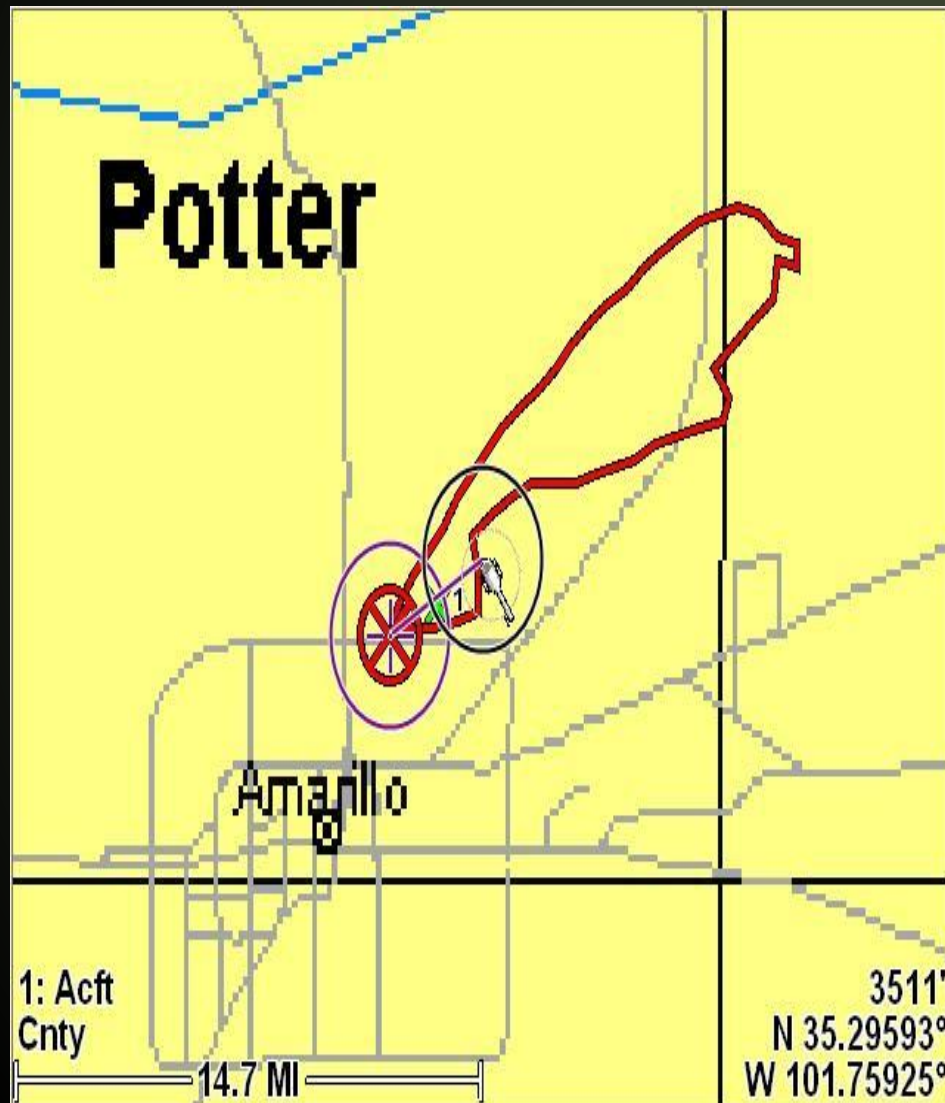
Tanker in VFD terms

Tanker in Wildland terms



*video*

# Nomenclature of a Fire



# Parts of a Fire





# Nomenclature of a Fire

- **PERIMETER**---Outside boundary of the fire.
- **HEAD**---That part of the fire moving with the wind.




*(Hottest part of the fire)*

- **FLANK**--- Side of the fire

*(Right flank is hottest flank due to quartering effects of wind; second suppression priority)*

# Nomenclature of a Fire Cont.

- **REAR**---Part of the fire backing against the wind, last suppression priority.
- **FINGERS**---Long narrow strip of fire extending from main fire. 
- **POCKETS**---Indentations in a fire edge formed by fingers or slow burning areas.



# Nomenclature of a Fire Cont.

- **SPOT FIRE**---Separate fire occurring out ahead of main fire.  
*(Can be up to 1/2 mile)*
- **ISLAND**---Area of unburned fuel inside the fire.
- **ORIGIN**---Spot where fire started.

# Nomenclature of a Fire Cont.

- **Anchor Point**--Point from which a fire control line is begun. Usually a natural or manmade barrier that will prevent fire spread and minimize the possibility of the crew being flanked while constructing the fire line.

*Examples:  
lakes, streams,  
roads, etc.*





# Parts of a Fire



# BARRIER

Any obstruction, natural or man-made, to stop the spread of the fire, typically an area or strip devoid of flammable fuel





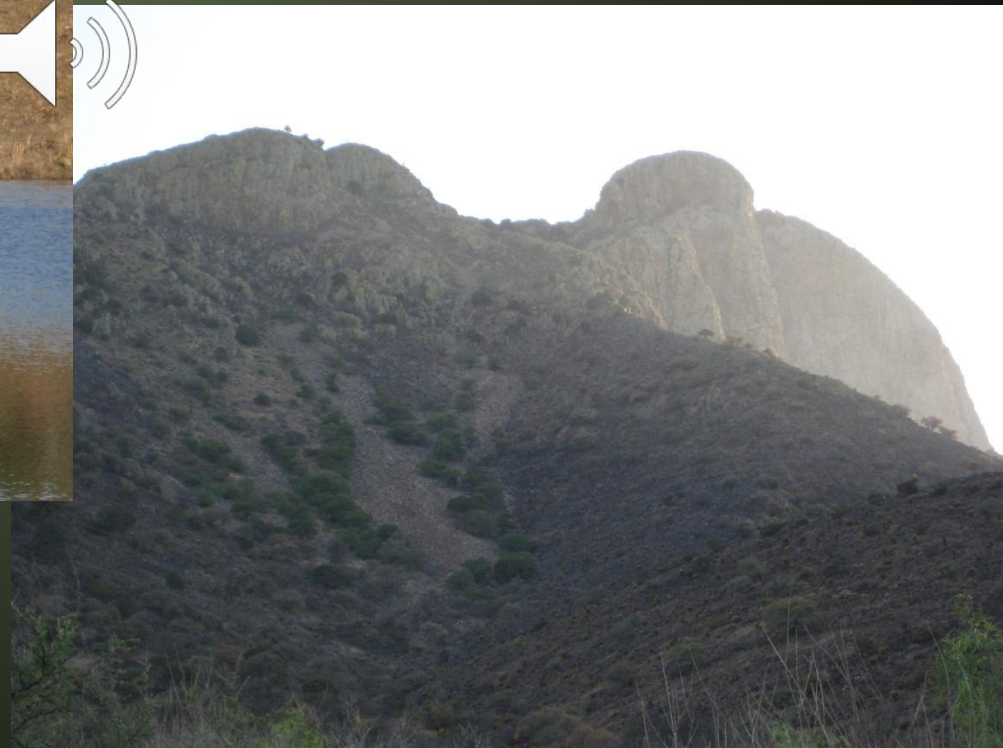
# Control Line

A comprehensive term used for all barriers used to contain the fire.



# TOPOGRAPHY

The physical features of the land surface, both natural and man-made. Examples, rivers, mountains, roads, swamps, rock outcrops, etc.





# FUEL

The substance upon which the fire feeds. In the case of a wildland fire, it is the flammable materials in the forest or rangeland.

A photograph of a firefighter in a field. The firefighter is wearing a helmet and a yellow jacket, and is looking towards a fire in the distance. The fire is producing a large plume of white smoke that rises into the sky. The field is filled with tall, dry grasses.

**Always Remember:**

**If you are in front of the fire  
YOU are a FUEL!**



# Snag

A standing, dead tree



# CONVECTION COLUMN

The thermally produced ascending column of gases, smoke, and debris produced by a fire.





# FIRE BEHAVIOR

The manner in which fuel ignites, flames develop, fire spreads and exhibits other phenomena. The combined effects of the fire's environment on how the fire acts or behaves.





# Backing Fire

*Fire moving away from the head or against the wind.*





# Creeping Fire

*Fire Burning with a low flame and spreading slowly.*



# Running Fire

*Fire spreading rapidly with a well-defined head.*





# Video



9:00 pm Feb 2008 Johnson Road Fire – NE Mason, TX Mason County.  
Footage taken by Kimble County Fire Chief Cecil M. Conner.

# Torching

Fire burning on the surface, but periodically igniting the crown of a single or small group of trees or shrubs before returning to the surface. Although sometimes confused with crowning this behavior is not as serious as a crown fire.

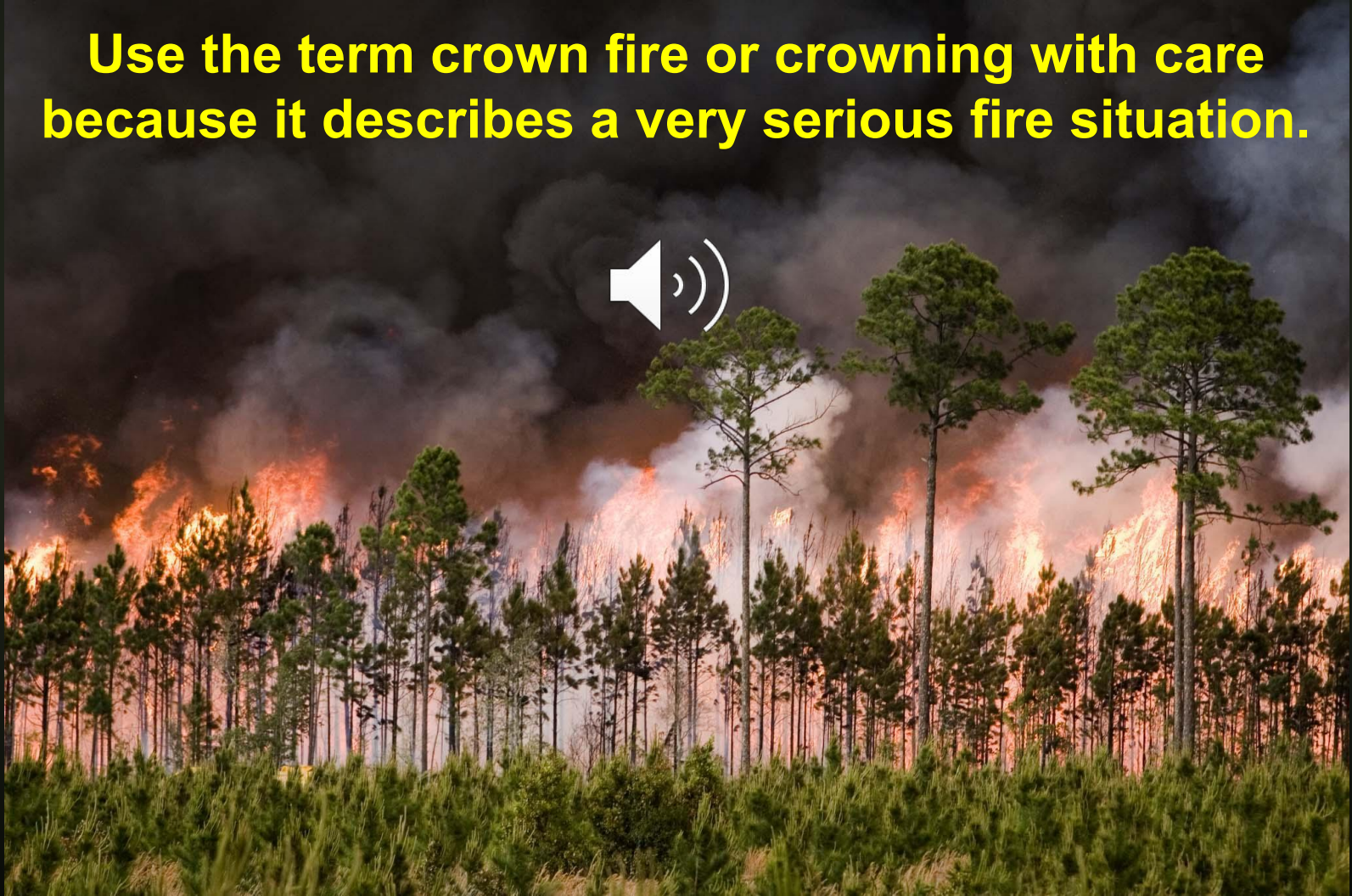




# Crowning

Fire that advances across the tops of trees or shrubs more or less independent of surface fire. High fire intensity and high forward rate of spread.

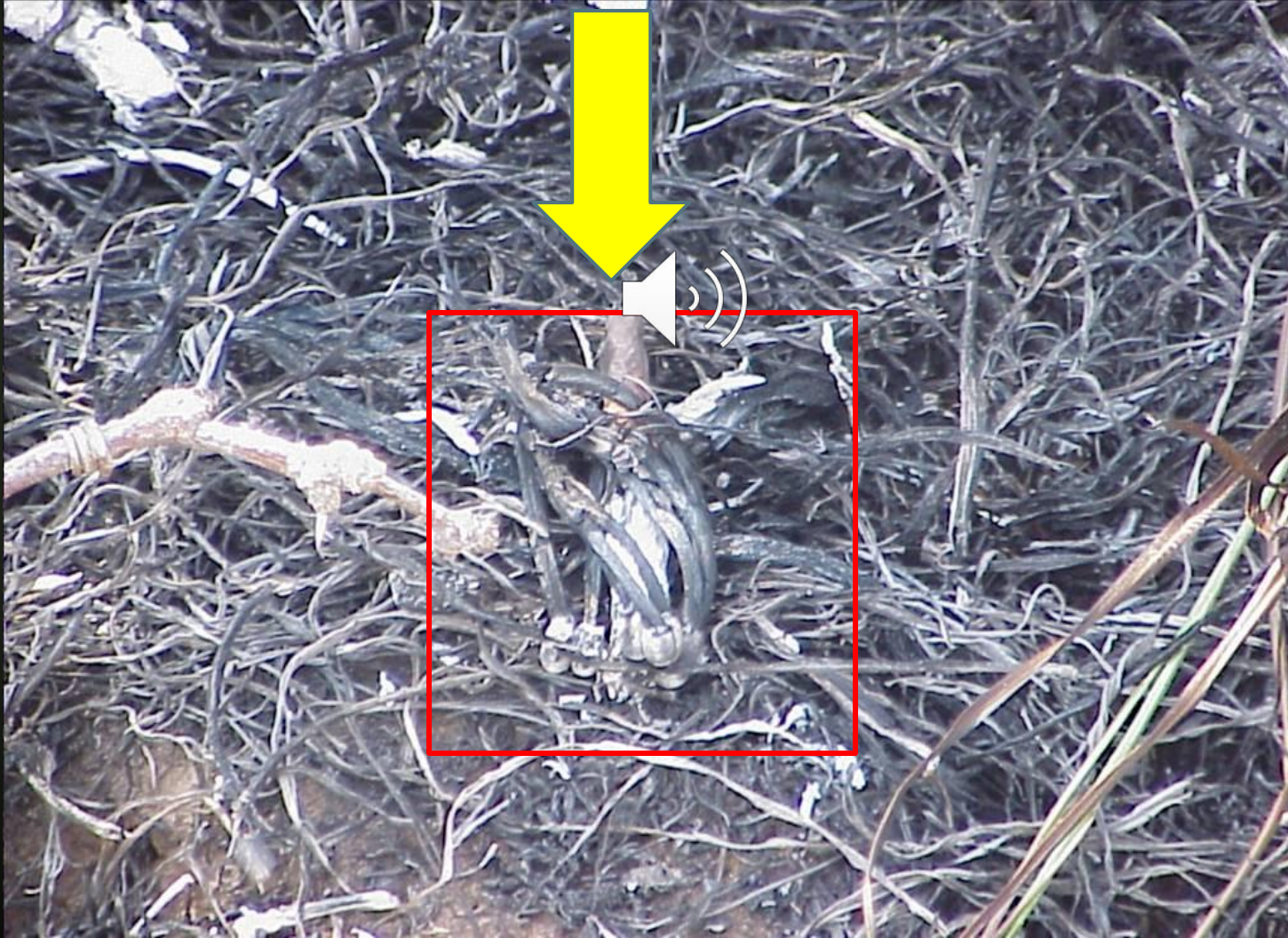
**Use the term crown fire or crowning with care because it describes a very serious fire situation.**





# INCENDIARY FIRE (Arson)

A fire set deliberately by someone to burn property not owned or controlled by him and without the consent of the owner or his agent.





# Railroad Bridge Fire

*video*



Colorado River near San Saba, TX - May 2013  
Video by Jamie Smart - Lometa VFD

# INCIDENT COMMANDER

The person responsible for all suppression and service activities on a fire.





# Mutual Aid

Two-way assistance freely given under prearranged plans or agreements by fire departments/agencies of two or more areas on the basis that each will aid the other in time of emergency, providing for joint or cooperative response to alarms near their boundaries.





# Suppression

Any action taken to extinguish a wildfire.





# BACKFIRE

A fire set along the inner edge of a fireline to consume the fuel in the path of a wildfire and/or change the direction or force of the fire's convection column.





# BURNOUT

A fire set between the main fire and control line or barrier to burnout any unburned fuels between the wildfire and the control line.





# DIRECT ATTACK

A series of related actions to cool, drown, smother, starve, beat out, or otherwise extinguish the flames of an on going fire. All control action is carried on directly against the fire edge.



# INDIRECT

# ATTACK

Control action conducted at a variable distance from and usually parallel to the edge of a wildland fire in such a manner as to deprive the advancing fire of fuel and thereby halting its further progress.





# MOP-UP

The process of making a contained fire safe by extinguishing all remnants of fire within a specified strip adjacent to the control line.



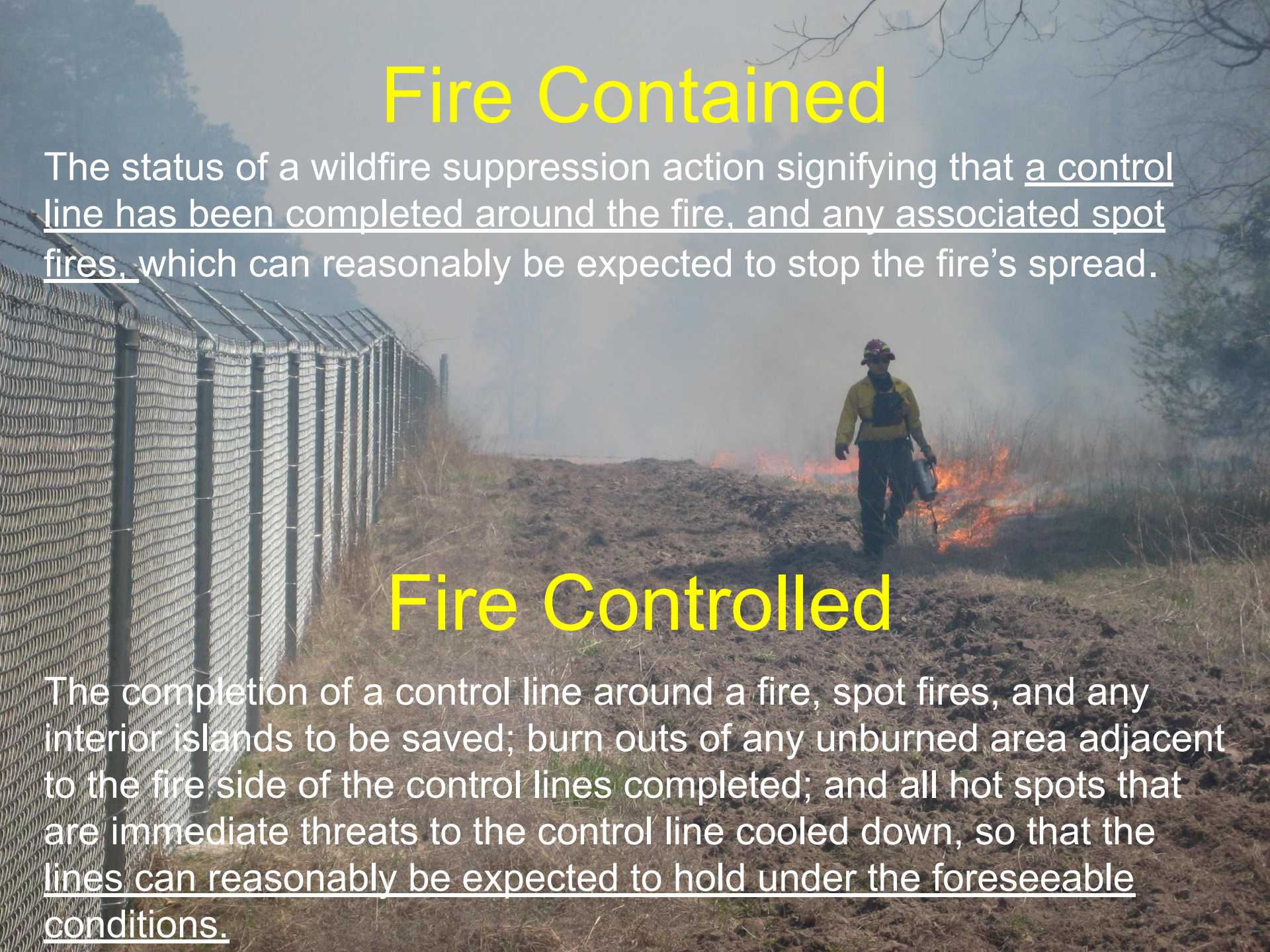


# Fire Contained

The status of a wildfire suppression action signifying that a control line has been completed around the fire, and any associated spot fires, which can reasonably be expected to stop the fire's spread.

# Fire Controlled

The completion of a control line around a fire, spot fires, and any interior islands to be saved; burn outs of any unburned area adjacent to the fire side of the control lines completed; and all hot spots that are immediate threats to the control line cooled down, so that the lines can reasonably be expected to hold under the foreseeable conditions.





# Wildland / Urban Interface

The area where structures and other human development meet or intermingle with undeveloped wildland.

