

# 13. Glossary of Wildfire Terms

<b>Aerial Fuels</b>	Standing and supported live and dead combustibles not in direct contact with the ground and consisting mainly of foliage, twigs, branches, stems, cones, bark, and vines.
<b>Aspect</b>	Cardinal direction towards which a slope faces.
<b>Chain</b>	Unit of measure in land survey, equal to 66 feet (20 M) (80 chains equal 1 mile). Commonly used to report fire perimeters and other fireline distances, this unit is popular in fire management because of its convenience in calculating acreage (e.g., 10 square chains equal one acre).
<b>Chimney</b>	A steep gully or canyon conducive to channeling strong convective currents, potentially resulting in dangerous increases in rates of fire spread and fireline intensity.
<b>Crown Fire</b>	A fire that advances from top to top of trees or shrubs more or less independent of a surface fire. Crown fires are sometimes classed as running or dependent to distinguish the degree of independence from the surface fire.
<b>Dead Fuels</b>	Fuels with no living tissue in which moisture content is governed almost entirely by absorption or evaporation of atmospheric moisture (relative humidity and precipitation).
<b>Defensible Space</b>	An area either natural or manmade where material capable of causing a fire to spread has been treated, cleared, reduced, or changed to act as a barrier between an advancing wildland fire and the loss of life, property, or resources. In practice, “defensible space” is defined as an area a minimum of 30 feet around a structure that is cleared of flammable brush or vegetation.
<b>Direct Attack</b>	Any treatment applied directly to burning fuel such as wetting, smothering, or chemically quenching the fire or by physically separating the burning from the unburned fuel.
<b>Fire Behavior</b>	The manner in which a fire reacts to the influences of fuel, weather, and topography.
<b>Fire Danger</b>	Sum of constant danger and variable danger factors affecting the inception, spread, and resistance to control, and subsequent fire damage; often expressed as an index.
<b>Fire Front</b>	The part of a fire within which continuous flaming combustion is taking place. Unless otherwise specified, the fire front is assumed to be the leading edge of the fire perimeter. In ground fires, the fire front may be mainly smoldering combustion.
<b>Fire Hazard</b>	A fuel complex, defined by volume, type condition, arrangement, and location, that determines the degree of ease of ignition and of resistance to control.
<b>Fire Intensity</b>	A general term relating to the heat energy released by a fire.

<b>Fire Regime</b>	Description of the patterns of fire occurrences, frequency, size, severity, and sometimes vegetation and fire effects as well, in a given area or ecosystem. A fire regime is a generalization based on fire histories at individual sites. Fire regimes can often be described as cycles because some parts of the histories usually get repeated, and the repetitions can be counted and measured, such as fire return interval.
<b>Fire Risk</b>	The chance of fire starting, as determined by the presence and activity of causative agents.
<b>Fire Severity</b>	Degree to which a site has been altered or disrupted by fire; loosely, a product of fire intensity and residence time.
<b>Fire Weather</b>	Weather conditions that influence fire ignition, behavior, and suppression.
<b>Flame Length</b>	The distance between the flame tip and the midpoint of the flame depth at the base of the flame (generally the ground surface), an indicator of fire intensity.
<b>Flaming Front</b>	That zone of a moving fire where the combustion is primarily flaming. Behind this flaming zone combustion is primarily glowing or involves the burning out of larger fuels (greater than about 3 inches in diameter). Light fuels typically have a shallow flaming front, whereas heavy fuels have a deeper front.
<b>Fuel</b>	Any combustible material, especially petroleum-based products and wildland fuels. Combustible material that includes vegetation such as grass, leaves, ground litter, plants, shrubs, and trees that feed a fire. Not all vegetation is necessarily considered fuel. Deciduous vegetation such as aspen actually serve more as a barrier to fire spread and many shrubs are only available as fuels when they are drought-stressed.
<b>Fuelbreak</b>	A natural or manmade change in fuel characteristics that affects fire behavior so that fires burning into them can be more readily controlled.
<b>Fuel Loading</b>	The amount of fuel present expressed quantitatively in terms of weight of fuel per unit area. This may be available fuel (consumable fuel) or total fuel and is usually dry weight.
<b>Fuel Type</b>	An identifiable association of fuel elements of a distinctive plant species, form, size, arrangement, or other characteristics that will cause a predictable rate of fire spread or difficulty of control under specified weather conditions.
<b>Ground Fire</b>	Fire that consumes the organic material beneath the surface litter ground, such as a peat fire.
<b>Ground Fuel</b>	All combustible materials below the surface litter, including duff, tree or shrub roots, punky wood, peat, and sawdust that normally support a glowing combustion without flame.
<b>Indirect Attack</b>	A method of suppression in which the control line is located some considerable distance away from the fire's active edge. Generally done in the case of a fast-spreading or high-intensity fire and to utilize natural or constructed firebreaks or

	fuelbreaks and favorable breaks in the topography. The intervening fuel is usually backfired; but occasionally the main fire is allowed to burn to the line, depending on conditions.
<b>Intensity</b>	A measure of the rate of heat released by a fire. It includes both radiant and convectional heat.
<b>Initial Attack</b>	A planned response to a wildfire given the wildfire's potential fire behavior. The objective of initial attack is to stop the fire and put it out in a manner consistent with firefighter and public safety and values to be protected.
<b>Ladder Fuels</b>	Fuels which provide vertical continuity between strata, thereby allowing fire to carry from surface fuels into the crowns of trees or shrubs with relative ease. They help initiate and assure the continuation of crowning.
<b>Live Fuels</b>	Living plants, such as trees, grasses, and shrubs, in which the seasonal moisture content cycle is controlled largely by internal physiological mechanisms, rather than by external weather influences.
<b>One-Hour Timelag Fuels</b>	(a.k.a., one-hour fuels) Fuels consisting of dead herbaceous plants and roundwood less than about ¼ inch (6.4 mm) in diameter. Also included is the uppermost layer of needles or leaves on the forest floor.
<b>One-Hundred Hour Timelag Fuels</b>	(a.k.a., hundred-hour fuels) Dead fuels consisting of roundwood in the size range of 1 to 3 inches (2.5 to 7.6 cm) in diameter and very roughly the layer of litter extending from approximately ¾ of an inch (1.9 cm) to 4 inches (10 cm) below the surface.
<b>One-Thousand -Hour Timelag Fuels</b>	(a.k.a., thousand-hour fuels) Dead fuels consisting of roundwood 3 to 8 inches in diameter and the layer of the forest floor more than about 4 inches below the surface.
<b>Prescribed Fire</b>	Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist, and NEPA requirements (where applicable) must be met, prior to ignition.
<b>Rate of Spread</b>	The relative activity of a fire in extending its horizontal dimensions. It is expressed as a rate of increase of the total perimeter of the fire, rate of forward spread of the fire front, or rate of increase in area, depending on the intended use of the information. Usually it is expressed in chains or acres per hour for a specific period in the fire's history.
<b>Surface Fire</b>	Fire that burns loose debris on the surface, which includes dead branches, leaves, and low vegetation.
<b>Surface Fuel</b>	Fuels lying on or near the surface of the ground, consisting of leaf and needle litter, dead branch material, downed logs, bark, tree cones, and low stature living plants.
<b>Ten-Hour</b>	(a.k.a. ten-hour fuels) Dead fuels consisting of roundwood ¼ to 1 inch (0.6 to 2.5 cm)

## Glossary

<b>Timelag Fuels</b>	in diameter and, very roughly, the layer of litter extending from immediately below the surface to ¾ inch (1.9 cm) below the surface.
<b>Topography</b>	The configuration of the earth's surface including its relief and the position of its natural and man-made features.
<b>Torching</b>	The burning of the foliage of a single tree or a small group of trees, from the bottom up.
<b>Wildfire</b>	An unplanned, unwanted wildland fire including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out.
<b>Wildfire Susceptibility Index</b>	A metric that defines the probability of wildfire occurrence and its predicted rate of spread once an ignition occurs.
<b>Wildfire Intensity Index</b>	A measure for the potential for high-intensity wildfire occurrence as defined by flame length and crown fire.
<b>Wildland Fire</b>	Any non-structure fire that occurs in the wildland. Three distinct types of wildland fire have been defined and include wildfire, wildland fire use, and prescribed fire.
<b>Wildland Fire for Resource Benefit</b>	The application of the appropriate management response to naturally-ignited wildland fires to accomplish specific resource management objectives in pre-defined designated areas outlined in Fire Management Plans.