

Forestry - Fire Terminology

Term	Definition
absorption	Act of soaking up and retaining a gas in liquid or in a solid; also retention of radiant energy.
accelerant	Material (usually a flammable liquid) used to initiate or increase the spread of a fire.
acceptable fire risk	The potential fire loss a community is willing to accept rather than provide resources to reduce such losses.
azimuth [measurement technique]	Horizontal angle or bearing of a point measured clockwise from true (astronomic) north.
backburn	Used in some localities to specify fire set to spread against the wind in prescribed burning.
backdraft	Instantaneous explosion or rapid burning of superheated gases that occurs when oxygen is introduced into an oxygen-depleted confined space. It may occur because of inadequate or improper ventilation procedures.
backfire	A fire set along the inner edge of a fireline to consume the fuel in the path of a wildfire or change the direction of force of the fire's convection column.
backfire torch	A flame generating device (e.g., a fount containing diesel oil or kerosene and a wick, or a backpack pump serving a flame-jet).
backfiring	A tactic associated with indirect attack, intentionally setting fire to fuels inside the control line to slow, knock down, or contain a rapidly spreading fire. Backfiring provides a wide defense perimeter and may be further employed to change the force of the convection column. Backfiring makes possible a strategy of locating control lines at places where the fire can be fought on the firefighter's terms. Except for rare circumstance meeting specified criteria, backfiring is executed on a command decision made through line channels of authority.
Burned Area Emergency Response Team	BAER teams are formed to analyze post-fire conditions and to take immediate emergency stabilization action to prevent loss of life and property and critical and natural resources. It is the Agency Administrator's responsibility to order or designate a BAER Team.

burned area rehabilitation	The post-fire activities prescribed and implemented to rehabilitate and restore fire damaged lands.
burning	Decomposition of material by the application of heat and oxidation. Also applied to propellants and other pyrotechnic mixtures, though the proper term there is "reacting". Also often an element of the crime of arson.
burning ban	A declared ban on open air burning within a specified area, usually due to sustained high fire danger.
burning conditions	The state of the combined factors of the environment that affect fire behavior in a specified fuel type.
burning index (fire behavior)	A relative number related to the contribution that fire behavior makes to the amount or effort needed to contain a fire in a specified fuel type. Doubling the burning index indicates that twice the effort will be required to contain a fire in that fuel type as was previously required, providing all other parameters are held constant.
burning index (flame length)	An estimate of the potential difficulty of fire containment as it relates to the flame length at the head of the fire.
cold line	Fireline that has been controlled. The fire has been mopped up for a safe distance inside the line and can be considered safe to leave unattended.
cold trailing	A method of controlling a partly dead fire edge by carefully inspecting and feeling with the hand for heat to detect any fire, digging out every live spot, and trenching any live edge.
consumption	The amount of a specified fuel type or strata that is removed through the fire process, often expressed as a percentage of the preburn weight.
contact email (data creation)	Email of the incident-based contact responsible for data creation.
contact name (data creation)	Name of the incident-based contact responsible for data creation.
contact phone (data creation)	Phone number for the incident-based contact responsible for data creation.
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.

containment (hazardous materials)	The act of controlling hazardous spilled or leaking materials.
containment (wildfire)	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.
continental climate	Climate that is characteristic of the interior of a land mass of continental size, marked by large annual diurnal and day-to-day ranges of temperature, low relative humidity and irregular precipitation.
Contracting Officer	Agency personnel with specific delegation of procurement authority.
Contracting Officer's Technical Representative	An individual designated by the Contracting Officer to provide technical support for the contract within specific authority and limitations as specified in the delegation. The COTR/COR must be agency certified.
contractor	Private sector personnel, vendor or business contracted to provide goods and services to a government agency.
control force	Personnel and equipment used to control a fire.
control line	An inclusive term for all constructed or natural barriers and treated fire edges used to control a fire.
control time	The time a fire is declared controlled.
control	The completion of control line around a fire, any spot fires therefrom, and any interior islands to be saved; burned out any unburned area adjacent to the fire side of the control lines; and cool down all hotspots that are immediate threats to the control line, until the lines can reasonably be expected to hold under the foreseeable conditions.
controlled airspace	Airspace of defined dimensions within which air traffic control service is provided to IFR (Instrument Flight Rules) and VFR (Visual Flight Rules) flights in accordance with the airspace classification.
controlling nozzle	Shut-off nozzle that permits the nozzle operator to open or close the nozzle or adjust the pattern of the stream.
convection (energy transfer)	The transfer of heat by the movement of a gas or liquid; convection, conduction, and radiation are the principal means of energy transfer.

downloading	A calculated reduction in actual payload to provide a margin of safety.
dozer	Any steel tracked vehicle equipped with a front mounted blade used for exposing mineral soil.
dozer company	A resource that includes a dozer, its transportation unit and a standard complement of personnel for its operation.
dozer line	Fireline constructed by the front blade of a dozer.
dozer tender	Any ground vehicle with personnel capable of maintenance, minor repairs, and limited fueling of dozers.
draft	Drawing water from static sources such as a lake, pond, cistern, river, etc. into a pump which is above the level of the water supply. This is done by removing the air from the pump and allowing atmospheric pressure [14.7 psi (101 kPa) at sea level] to push water through a noncollapsible suction hose into the pump.
drain time	The time (minutes) it takes for foam solution to drop out from the foam mass; for a specified percent of the total solution contained in the foam to revert to liquid and drain out of the bubble structure.
draped fuels	Needles, leaves, and twigs that have fallen from above and have lodged on lower branches or brush. Draped fuels are part of aerial fuels.
drift	Effect of wind on smoke, retardant drops, paracargo, smokejumper streamers, etc.
drift smoke	Smoke that has drifted from its point of origin and is no longer dominated by convective motion. May give false impression of a fire in the general area where the smoke has drifted.
drip torch	Hand-held device for igniting fires by dripping flaming liquid fuel on the materials to be burned; consists of a fuel fount, burner arm, and igniter. Fuel used is generally a mixture of diesel and gasoline.
drive axle	An axle that supports a portion of the vehicle weight and transmits a driving force to the wheels.

drive wheels	Wheels powered by all of the vehicle's drive axles. Dual tires are considered as single wheels. The number of wheels is commonly referenced by the terms "4x2", "4x4", etc. where the first figure indicates the total number of wheels on the ground and the second figure, the number of drive wheels.
drizzle	Precipitation composed exclusively of water drops smaller than 0.02 inches (0.5 mm) in diameter.
drop configuration	The type of retardant drop selected to cover a ground target. Terms that can specify the type of drop configuration include Salvo Drop and Trail Drop.
entrapment avoidance	A process used to improve the safety of personnel on the fireline, which emphasizes tools and tactics available to prevent being trapped in a burnover situation. This process includes appropriate decision making through risk management, application of LCES, use of pre-established trigger points, and recognition of suitable escape routes and safety zones.
evaluate	To review and compare outcomes with management and incident objectives desired for a wildland fire. One of the six component activities in an adaptive management process that may lead to adjusting future actions.
fire agency	Official group or organization compelled and authorized under statutes or law to control fires within a designated area or upon designated lands.
fire behavior	The manner in which a fire reacts to the influences of fuel, weather, and topography.
fire behavior context	The fuels, weather and topographical conditions of a specific fire scene or area of the fire scene at the time of fire passage.
fire behavior forecast	Prediction of probable fire behavior, usually prepared by a fire behavior analyst, in support of fire suppression or prescribed burning operations.
fire behavior prediction model	A set of mathematical equations that can be used to predict certain aspects of fire behavior when provided with an assessment of fuel and environmental conditions.
fire behavior prediction system	A system that uses a set of mathematical equations to predict certain aspects of fire behavior in wildland fuels when provided with data on fuel and environmental conditions.

fire pattern indicator, u or v	Fire pattern that resembles a U or V shape and indicates the direction of fire progression in that area. One of the 11 NWCG categories of fire pattern indicators.
fire pattern indicator, white ash	There are two subsets of the white ash fire indicator, deposits and exposure.
fire perimeter	The entire outer edge or boundary of a fire.
fire planning	The process of developing and interpreting goals and objectives necessary to guide wildland fire management actions.
Fire Planning Unit	The geographic scope of the landscape defined for the fire management analysis. A Fire Planning Unit consists of one or more Fire Management Units. FPUs may relate to a single administrative unit, a sub-unit, or any combination of units or sub-units. FPUs are scalable and may be contiguous or non-contiguous. FPUs are not predefined by agency administrative unit boundaries, and may relate to one or more agencies. They may be described spatially.
fire size class code	A code that corresponds to one of several ranges of fire size based on the number of acres within the final fire perimeter.
fire sketch	A not to scale drawing.
fire spread model	A set of physics and empirical equations that form a mathematical representation of the behavior of fire in uniform wildland fuels.
fire storm	Violent convection caused by a large continuous area of intense fire. Often characterized by destructively violent surface indrafts, near and beyond the perimeter, and sometimes by tornado-like whirls.
fire suppressant	Any agent used to extinguish the flaming and glowing phases of combustion by direct application to the burning fuel.
fire suppression	All work and activities connected with control and fire-extinguishing operations, beginning with discovery and continuing until the fire is completely extinguished.
fire suppression organization (area)	The personnel responsible for fire suppression within a specified area.
fire suppression organization (fire)	The personnel and equipment collectively assigned to the suppression of a specific fire or group of fires.

fire suppression organization (management structure)	The management structure, usually shown in the form of an organization chart of the persons and groups having specific responsibilities in fire suppression.
fire swatter	A fire tool that consists of a thick, flat piece of rubber on a long handle used to drag over or smother out flames of grass fires.
fire tool cache	A supply of fire tools and equipment assembled in planned quantities or standard units at a strategic point for exclusive use in wildland operations.
fire trap (material accumulation)	An accumulation of highly combustible material, rendering firefighting dangerous.
fire trap (situational)	Any situation in which it is highly dangerous to fight fire.
fire treatment	The use of fire to accomplish a specified objective.
fire triangle	Instructional aid in which the sides of a triangle are used to represent the three factors (oxygen, heat, fuel) necessary for combustion and flame production; removal of any of the three factors causes flame production to cease.
fire type	A management distinction, made to satisfy legal and budget constraints, based on whether the ignition source was planned or unplanned. Under the implementation guidance, only two types of wildland fire - wildfire and prescribed fire - are recognized.
fire vector	The direction of fire spread identified as one of three categories: advancing, lateral, or backing.
hazard	Any real or potential condition that can cause injury, illness or death of personnel, or damage to, or loss of equipment or property. The root cause of an unwanted outcome.
hazard assessment	Assess hazards to determine risks. Assess the impact of each hazard in terms of potential loss, cost, or strategic degradation based on probability and severity.
hazard fuel	A fuel complex defined by kind, arrangement, volume, condition, and location that presents a threat of ignition and resistance to control.
hazard map	Map of the area of operations that shows all of the known aerial hazards, including but not limited to power lines, military training areas, hang gliding areas, etc.

hazard pay	A salary differential that compensates employees for exposure to hazards in the course of their duties.
hazard reduction	Any treatment of living and dead fuels that reduces the potential spread or consequences of fire.
hazardous areas	Those wildland areas where the combination of vegetation, topography, weather, and the threat of fire to life and property create difficult and dangerous problems.
hazardous conditions (event)	An event, usually managed by organizations external to the fire community, for which the primary focus is for dealing with a hazardous situation that poses an unreasonable risk to health, safety, and property.
hazardous materials (regulated)	Substances that are identified, classified, and regulated in the Code of Federal Regulations, Title 49 and Hazardous Materials Regulations 175.
hazardous materials (transported)	A substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce and which has been so designated.
long-range spotting	Large glowing firebrands are carried high into the convection column and then fall out downwind beyond the main fire starting new fires. Such spotting can easily occur 1/4 mile or more from the firebrand's source.
long-term fire danger	The results of those factors in fire danger affecting long-term planning; involves consideration of past records and conditions and probable future trends.
monitor	A turret-type nozzle usually mounted on an engine.
monitoring	The orderly collection, analysis, and interpretation of environmental data to evaluate management's progress toward meeting objectives, and to identify changes in natural systems. Monitoring is also conducted on wildland fires to observe fire effects, fire behavior, or both. For example, the work done by Fire Effects Monitor (FEMO) or Field Observer (FOBS) positions.

monsoon climate	Climate characterized by (a) a long winter-spring dry season which includes a "cold season" followed by a short "hot season" immediately preceding the rains, (b) a summer and early autumn rainy season which is usually very wet (but highly variable from year to year), and (c) a secondary maximum of temperature immediately after the rainy season.
mop up	Extinguishing or removing burning material near control lines, felling snags, and trenching logs to prevent rolling after an area has burned, to make a fire safe, or to reduce residual smoke.
mop up crew	A portion or all of a regular fire crew assigned to mop up work after the fire or a portion of the fire has been contained or controlled.
mop up time	Elapsed time from containment or control of a fire until mopup is complete.
mosaic	The intermingling of plant communities and their successional stages in such a manner as to give the impression of an interwoven design.
motor vehicle accident (event)	An event dealing with an accident or mishap involving on- or off-highway vehicles.
move up	System of redistributing remaining personnel and equipment following dispatch of other forces among a network of fire stations to provide the best possible response within the fire department's direct protection area in the event of additional calls for emergency assistance.
multiple points of origin	Two or more separate points of fire origins at a fire scene; strong indication of arson.
Off-road Vehicle	Any motorized vehicle designed for, or capable of, cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other terrain.
off-shift	Non-compensable time, e.g., eating, sleeping or other activities of a personal nature.
offshore flow	Wind blowing from land to water.
off-site/remote assignment	Work performed by an individual employee in support of an incident while remaining at the employee's duty station or other designated off-site location.
parallel tandem pumping	Procedure by which the flow from two fire pumps is combined into a third pump.

partial risk	Contribution of a specific source to human-caused risk, derived from the daily activity level assigned a risk source and its risk source ratio.
partial risk factor	Contribution to human-caused risk made by a specific risk source; a function of the daily activity level assigned that risk source and the appropriate risk source ratio.
partial-thickness burn	A burn where the outer layer of skin is burned through and the second layer of skin (dermis) is damaged and is typically, a painful injury. Burns of this type cause reddening, blistering, and a mottled appearance.
particle size	The size of a piece of fuel, often expressed in terms of size classes.
particulate matter	Any liquid or solid particles. "Total suspended particulates", as used in air quality, are those particles suspended in or falling through the atmosphere. They generally range in size (diameter) from 0.1 to 100 micrometers.
parts of a fire	Different areas of the fire usually determined by the predominant direction of fire spread and delineated from the fastest moving area (head) to the slowest moving area (base or tail). The most rapidly moving portion is designated the head of the fire, the adjoining portions of the perimeter at right angles to the head are known as the flanks, and the slowest moving portion is known as the rear or the base of the fire.
passenger	Any person aboard an aircraft who does not perform the function of a flight crew member or qualified non-crew member.
perimeter access	Any road, trail, or route that will allow firefighting forces to reach the perimeter of a wildland fire.
perimeter date time	The date and time that the fire perimeter was collected (mapped).
permafrost	A short term for "permanently frozen ground"; any part of the earth's crust, bedrock, or soil mantle that remains below 32° F (0° C) continuously for a number of years.
perpendicular lane technique	A search technique dividing the specific origin area into lanes that are perpendicular to the advancing fire progression for the purpose of a systematic examination.

Personal Protective Equipment	That equipment and clothing required to mitigate the risk of injury from or exposure to hazardous conditions encountered during the performance of duty. PPE includes but is not limited to: fire resistant clothing, hard hat, flight helmets, shroud, goggles, gloves, respirators, hearing protection, chainsaw chaps, and shelter.
personnel accountability	The ability to account for the location and welfare of personnel, accomplished when supervisors ensure that the ICS principles and processes are functional and personnel are working within these guidelines.
preparedness level	Increments of planning and organizational readiness dictated by burning conditions, fire activity, and resource availability.
preparedness plan	A written plan providing for timely recognition of approaching critical fire situations, priority setting, the deployment of forces, and other actions to respond to those situations.
preparedness/preposition (event)	An event dealing with effective and efficient response by the wildland fire community to planned, anticipated or event activity. This category includes activities such as move-up and cover, fire menace standby, and severity activities.
prescribed burning	Application of prescribed fire.
prescribed fire	A wildland fire originating from a planned ignition in accordance with applicable laws, policies, and regulations to meet specific objectives.
prescribed fire (event)	An event, where a wildland fire originating from a planned ignition in accordance with applicable laws, policies, and regulations to meet specific objectives.
prescribed fire burn plan	A plan required for each fire application ignited by management. Plans are documents prepared by qualified personnel, approved by the agency administrator, and include criteria for the conditions under which the fire will be conducted (a prescription). Plan content varies among the agencies.
prescribed fire escape indicator	Indicates whether the wildfire resulted from an escaped prescribed fire. Y or N.
prescribed fire module	A team of skilled and mobile personnel dedicated primarily to prescribed fire management that can ignite, hold and monitor prescribed fires.

prescribed fire plan	A plan required for each fire application ignited by management. Plans are documents prepared by qualified personnel, approved by the agency administrator, and include criteria for the conditions under which the fire will be conducted (a prescription).
prescription	In the context of wildland fire, a prescription is measurable criteria that define conditions under which a prescribed fire may be ignited. Prescriptions may also be used to guide selection of management responses to wildfire to define conditions under which management actions are most likely to achieve incident management objectives. Prescription criteria typically describe environmental conditions such as temperature, humidity and fuel moisture, but may also include safety, economic, public health, geographic, administrative, social, or legal considerations.
rotor	Assembly of airfoils (rotor blades), together with a hub and attachments, that rotates about an axis to provide lift and/or thrust on a helicopter.
safety briefing	A safety briefing emphasizes key safety concerns on the incident and is presented at each briefing session. The safety briefing should contain information to alert incident personnel of potential risk/hazard considered to be most critical.
safety circle	An obstruction-free circle around the (helicopter) landing pad.
Safety Warning	A time-sensitive alert to the wildland fire community addressing wildland fire safety hazards that pose an imminent threat, or have potential to pose a threat, to life or property. Red hash-marked bordered stationary will be associated with this type of alert.
smog	Generally considered only photochemical air pollution. Originally meant a combination of smoke and fog.
smoke	Small particles of carbon, tarry and water vapor resulting from the incomplete combustion of carbonaceous materials such as wood, coal or oil.
smoke concentration	The amount of combustion products found in a specified volume of air, commonly expressed as micrograms of emission per cubic meter of air.

smoke intrusion	Smoke from prescribed fire entering a designated area at unacceptable levels.
smoke management	The policies and practices implemented by air and natural resource managers directed at minimizing the amount of smoke entering populated areas or impacting sensitive sites, avoiding significant deterioration of air quality and violations of National Ambient Air Quality Standards, and mitigating human-caused visibility impacts in Class I areas.
smoke pall	Extensive, thick blanket of smoke spreading more or less horizontally from a fire.
smoke plume	The gases, smoke, and debris that rise slowly from a fire while being carried along the ground because the buoyant forces are exceeded by those of the ambient surface wind.
Smoke Sensitive Area	Area in which smoke from outside sources is intolerable, for reasons such as heavy population, existing air pollution, or intensive recreation or tourist use.
smoke target	An area that may be adversely affected by smoke from a prescribed burn.
smoke vent height	Level, in the vicinity of the fire, at which the smoke ceases to rise and moves horizontally with the wind at that level.
Smoke-Induced Fog	A dense fog (water droplets suspended in the atmosphere) that forms away from a fire site when surface smoke comprised of increased fine particulates and water vapor, combines with ambient air that is already prone to natural fog formation.
Smokey Bear	The symbol of the Cooperative Forest Fire Prevention Program since 1945. Smokey's image is protected by US Federal Law and is administered by the USDA Forest Service, the National Association of State Foresters and the Ad Council.
smoking (as a fire cause)	Wildfires caused by smokers from matches, lighters, tobacco, or other smoking material.
sortie	Single round trip made by an airtanker from a tanker base to a fire and return.
spot change	The second continuous day of an incident, a regular government employee's normal daily tour of duty is "spot changed" to where the first 8, 9, or 10 hours worked are base hours.

spot fire	Fire ignited outside the perimeter of the main fire by a firebrand.
spot fire technique	A method of lighting prescribed fires where ignition points are set individually at a predetermined spacing and with predetermined timing throughout the area to be burned.
spot weather forecast	A special forecast issued to fit the time, topography, and weather of a specific incident. These forecasts are issued upon request of the user agency and are more detailed, timely, and specific than zone forecasts. Usually, on-site weather observations or a close, representative observation is required for a forecast to be issued.
test fire	A prescribed fire set to evaluate such things as fire behavior, fire effects, detection performance, or control measures.
volunteer firefighter	Legally enrolled firefighter under the fire department organization laws who devotes time and energy to community fire service without compensation other than Worker's Compensation or other similar death and injury benefits.
vortex turbulence	Miniature whirlwinds trailing from the wingtips of any aircraft in flight. Vortex will be in the form of a horizontal whirlwind with velocities up to 25 mph (40 km) per hour or more. Also created by action of rotor blades on helicopters; these whirlwinds tend to move downward toward the ground. If an aircraft flies low over a fire, vortices may reach the ground and suddenly cause violent and erratic fire behavior.
walk test	The walk test is designed to determine the ability to carry out light duties. It consists of a one-mile test with no load that approximates an aerobic fitness score of 35. A time of 16 minutes, the passing score for this test, ensures the ability to meet emergency and evacuate to a safety zone.
warm front	The leading edge of a relatively warm air mass which moves in such a way that warm air replaces colder air that moves away from a region. Winds associated with warm frontal activity are usually light and mixing is limited. The atmosphere is relatively stable when compared to cold front activity.

warrant	The official delegation of authority to contracting officers and procurement officers establishing the dollar amount and type limits for acquisitions.
water bar	A shallow channel or raised barrier, e.g., a ridge of packed earth or a thin pole laid diagonally across the surface of a road or trail so as to lead off water, particularly storm water. (Frequently installed in firelines on steep slopes to prevent erosion.)