

A graphic featuring a yellow background with a black border. A blue outline of the state of California is centered on the left side. Overlaid on the right side of the California outline is the text "Native American Fire Prevention Alliance" in a red, cursive font.

*Native American
Fire Prevention
Alliance*



U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825

FEB 26 2008

Dear Tribal Leaders:

The Native American Fire Prevention Alliance (NAFPA) was established on September 18, 2002. The alliance obtained California non-profit organization status and the Bureau of Indian Affairs (BIA) funded the organization, to develop a fire code guide that could be used in Tribal Fire Prevention Plans. Tribes interested in developing fire prevention plans found that California Resource Regulatory Codes were in place for the State however, they did not address cultural fire management in "Indian Country".

The Pacific Regional Office was supportive of the NAFPA efforts to produce a fire code guidebook. The Fire Code Guidebook is a user friendly guide for California Tribes wanting to develop community cultural fire use and safety codes.

Should you have questions, please contact Jim Nanamkin, Regional Fire Prevention Specialist at (916) 978-6148 or Soledad Holguin, Fire Prevention Specialist, (916) 978-6020 or Ron Recker, Regional Fire Management Officer at (916) 978-6065.

Sincerely,



Acting Regional Director

TAKE PRIDE
IN AMERICA 

Introduction

Native American Fire Prevention Alliance

The Native American Fire Prevention Alliance (NAFPA) was created in the Spring of 2002, with the goal of establishing a fire prevention model for the health, safety, and welfare of Native Americans and Tribal Lands. NAFPA is a non-profit organization whose Board of Directors are either Tribal Members or are directly employed by Tribal Governments throughout California.

All California Tribes are being offered the enclosed document to assist them in developing their individual Wildland Fire Prevention Plan. NAFPA is not and does not seek to be an authoritative body over Tribal Governments.

The development of the Wildland Fire Prevention Plan will ensure that all cultural ceremonies (which could include burning) would continue to be practiced without outside interference. This is significant because future fire prevention funding will be contingent on having a Wildland Fire Prevention plan and Wildland Fire Management Plan in place.

NAFPA Board of Directors



Mission Statement

It is our mission to establish and maintain a fire prevention model for the health, safety, and welfare for our people's customs and traditions.

To preserve and protect life, property and natural resources through education and training for our communities and Indian Country.



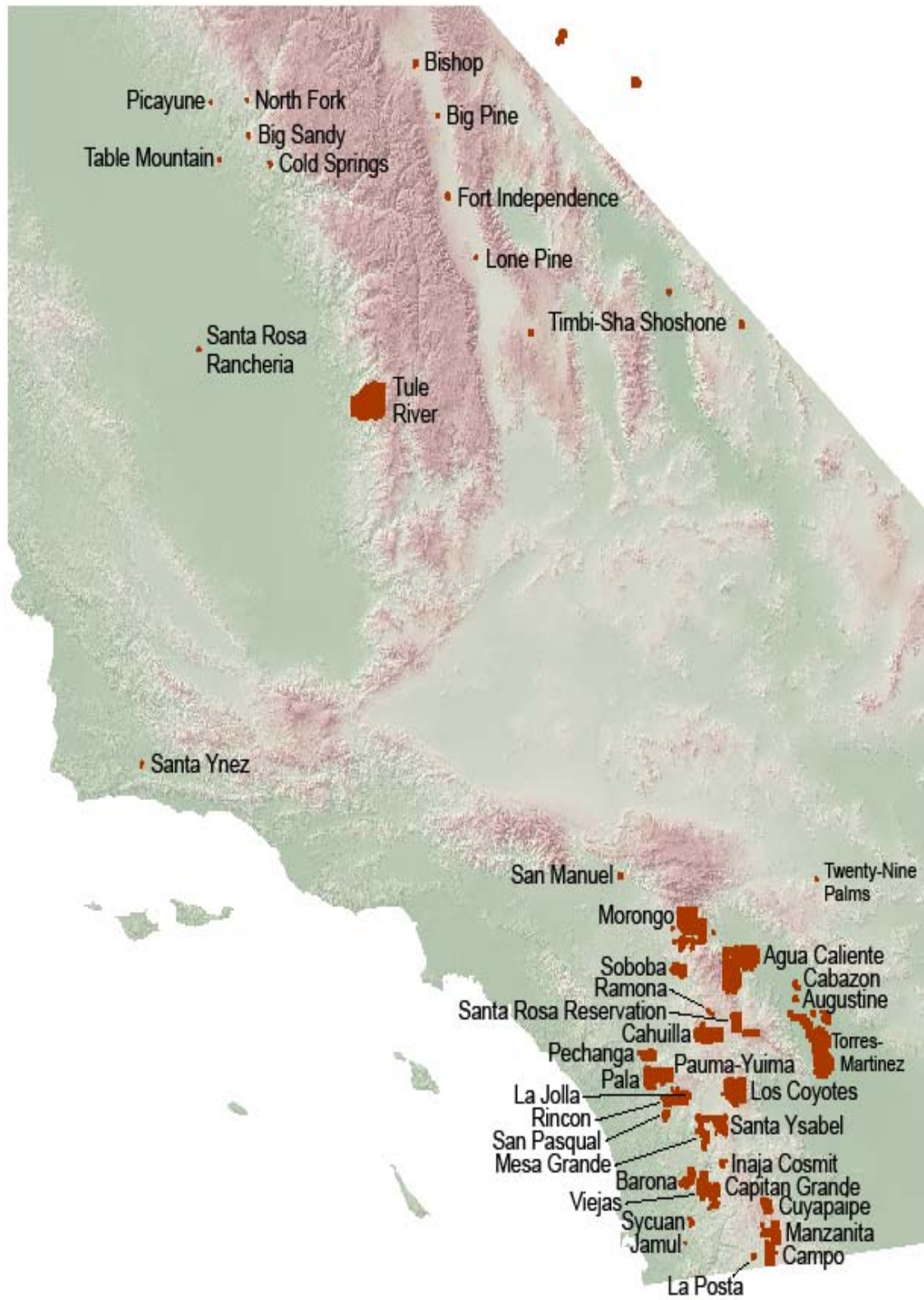


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[WeTip Arson Reporting National Hotline](#)

[Assessing Wildfire Hazards in the Home Ignition Zone](#)

[Glossary of Terms](#)

Fire Code Guide

Tribal Fire Code:

Section 1000-1050

1000. Land Owner Permission

A person shall not set fire or cause fire to be set to any forest, brush, or other flammable material which is on any land that is not his own, or under his legal control, without permission of the owner, lessee, or agent of owner or lessee of the land.

1001. Controlling Burn Area

A person shall not do any of the following:

- ❖ Willfully or knowingly allow fire to burn uncontrolled on land which he owns or controls, or to escape to the lands of any person other than that of the owner.
- ❖ Allow any fire kindled or attended by him to escape from his control or to spread to the land of any person other than from the land from which the fire originated.

1002. Obtaining Burn Permit

A person shall not burn any brush, stumps, logs, fallen timber, fallows, slash, grass covered land or other flammable material unless the person has a written permit from the Tribe or its duly authorized representative and in strict accordance with the terms of the permit. The tribal council may impose a fee for any burning permit issued.

The issuing Tribe may/does require the permittee to contact the Tribe to determine permit suspension status prior to burning (i.e. Red Flag Day).

The conditions of permits do not relieve the permittee from requirements to obtain additional permits for the use or burning of firewood, timber, or other forest products and compliance with all other laws and regulations governing the Trust Lands on which burning is to take place.

1002.1 Suspension, Restriction, Permit

Burning under permit by any person on public or private lands, except within incorporated cities, may be suspended, restricted, or otherwise respective jurisdiction.

Examples of those authorized to issue proclamations:

- ❖ The Tribal Council/Official or his/her designee
- ❖ An Elected Tribal Member that represents their constituency.
- ❖ Tribal Council designee:
 - Director of Fire
 - Fire Management Officer
 - Fire Chief
 - Deputy/Division/Assistant/Battalion/Chief

Fire Marshal
Fire Warden
Fire Captain
Fuels/Prevention Officer
Tribal Law Enforcement Officer

The Proclamation may be issued when, in the judgment of the issuing tribal official, the menace of destruction by fire to life, improved property, or natural resources is or is forecast to become, extreme due to critical fire weather, fire suppression forces being heavily committed to control fires already burning, acute dryness of the vegetation, or other factors that may cause the rapid spread of fire. A proclamation is effective at issuance or at a time specified therein and shall remain in effect until a proclamation removing the suspension, restriction, and prohibition is issued. The proclamation may be effective for a single day or longer. The proclamation shall declare the conditions that necessitate issuance, designate the geographic area to which it applies, require that all specified burning under permit be suspended, restricted, or prohibited until the conditions necessitating the proclamation abate, and identify the public official issuing the proclamation. The proclamation shall be in the form of a verbal or tape-recorded telephone message, a press release, or a posted order.

1002.2 Restricted Temporary Permits

Whenever the burning under permit has been suspended, restricted, or prohibited by proclamation pursuant to Section 1002.1, the Tribal officer having jurisdiction may issue a restricted temporary burning permit in instances in which the continuation of burning may be essential for reasons of public health, safety, welfare or cultural/ceremonial affiliated activities. The permit may stipulate any special precautions that are required to be followed to reduce the risk of uncontrolled fire originating from the operation.

1002.3 Campfires, Open Fires, and Cultural Fires

The use of a campfire is not restricted or prohibited by a proclamation issued pursuant to Section 1002.1, unless specifically restricted or prohibited in that or a subsequent proclamation. If restricted by proclamation, campfires shall be confined to facilities constructed for that purpose within the confines of an established campground.

- ❖ Open fires shall be approved by the Tribal Council and/or the Tribal Council's duly appointed representative.
- ❖ Locations shall be inspected by the Tribal Fire Chief, Tribal Environmental Department or Tribal Council duly appointed designee.
- ❖ Cultural Fires are excluded from section 1002.3

1002.4 Outdoor Smoking (Tobacco Products)

Outdoor smoking is not restricted or prohibited by a proclamation issued pursuant to section 1002.1 unless specifically restricted or prohibited. If restricted by proclamation, smoking shall be confined to the following:

- ❖ Within motor vehicles while operating or parked on established roads, rest stops, or parking areas cleared of flammable vegetation.

- ❖ Within established campgrounds.
- ❖ Within an area that is at least three feet or approximately one meter in diameter that has been cleared to mineral soil by removal of all flammable vegetation and duff. The exempted locations may be included within the smoking ban if specifically noticed on the proclamation.

1002.5 Areas Closed by Proclamation

Use of open fire or burning under permit within an area closed by proclamation is prohibited pursuant to the provisions of Section 1002.1, except as provided in Sections 1002.2, 1002.3, and 1002.4.

1003. Use of Backfire

A person shall not set a backfire, or cause a backfire to be set, except under the direct supervision or permission of a tribal or federal forest officer, unless it can be established that the setting of such backfire was necessary for the purpose of saving life or valuable property.

1004. In Season Use of Motorized Equipment

During any time of the year when burning permits are required no person shall use or operate any motor, engine, boiler, stationary equipment, welding equipment, cutting torches, tarpots, or grinding devices from which a spark, fire or flame may originate, which is located on or near any forest-covered land, brush-covered land, or grass-covered land, without doing both of the following:

- ❖ Clearing away all flammable material, including snags, from the area around such operation for the distance of 10 feet.
- ❖ Maintain one serviceable round point shovel with an overall length of not less than approximately forty six (46) inches and one back-pack pump water-type extinguisher fully equipped and ready for use, and/or bucket of water, fire extinguisher, or charged water hose at the immediate area during the operation.

This section does not apply to portable power saws and other portable tools powered by a gasoline-fueled internal combustion engine.

1005. In Season Use of Motorized Equipment

No contractor, except a member of an emergency crew or the driver or owner of any service vehicle owned or operated by or for, or operated under contract with, a publicly or privately owned utility, which is used in the construction, operation, removal, or repair of the property of facilities of such utility when engaged in emergency operations, shall use or operate any vehicle, machine, tool or equipment powered by an internal combustion engine operated on hydrocarbon fuels, in any industrial operation located on or near any forest, brush or grass-covered land during a Tribally declared fire season or whenever ground litter and vegetation will sustain combustion permitting the spread of fire, without providing and maintaining, for firefighting purposes only, suitable and serviceable tools in the amounts, manner and location prescribed in this section.

On any such operation a sealed box of tools shall be located, within the operating area, at a point accessible in the event of fire. This fire tool box shall contain: one backpack pump-type fire extinguisher filled with water, two pulaskis, two McLeod fire tools, and a sufficient number of shovels so that each employee at the operation can be equipped to fight fire.

- ❖ One or more serviceable chainsaws of three and one half or more horsepower with a cutting bar 20 inches in length or longer shall be immediately available within the operating area, or in the alternative, a full set of timber-felling tools shall be located within the fire tool box, including 1 crosscut falling saw six feet in length, 1 double-bit ax with a 36-inch handle 1 sledge hammer or maul with the head weight of six or more pounds and handle length of 32 inches or more, and not less than two falling wedges.
- ❖ Each rail vehicle other than locomotives and passenger vehicle, used on such operation shall be equipped with one shovel and one ax, and any other vehicle used on the operation shall be equipped with one shovel. Each tractor used in any operation shall be equipped with one shovel.
- ❖ As used in this section:
 1. “Vehicle” means a device by which any person or property may be propelled, moved, or drawn over any land surface, excepting a device moved by human power or used exclusively upon stationary rails or tracks

“Passenger vehicle” means a vehicle which is self propelled and which is designed for carrying not more than 10 persons including the driver, and which is used or maintained for the transportation of persons, but does not include any motor truck or truck tractor.

1006. Required Serviceable Tools

During any time of year when burning permits are required in an area pursuant to this article, at any camp maintained in such area for the residence of employees, or at any local headquarters in such area of any industrial, agricultural, or other operations on or near any forest, brush or grass covered land shall be maintained at all times. A specific location should be identified for firefighting purposes only, to locate a sufficient supply of serviceable tools to equip 50 percent of the able-bodied NWCG QUALIFIED personnel, residents of such camp, or working out of such headquarters. Among these tools shall be included shovels, axes, saws, backpack pumps, and scraping tools. With such tools there shall be one serviceable headlight adaptable for attachment to at least one-half of the tractor-bulldozers used on the operation, and a sufficient number of canteens and flashlights to equip a third of the able-bodied NWCG QUALIFIED personnel.

1006. Required Serviceable Tools

During any time of the year when burning permits are required in an area pursuant to this article, a person, co-partnership, firm, corporation or company, shall not use or operate in such area, any steam-operated engine, machine equipment, mill or industrial plant, located on or near forest, brush, or grass covered land, without providing one adequate force pump or water under pressure equivalent to a pump, and not less than 200 feet of hose not less than one inch and a half in diameter for each steam-operated engine or

equipment. The pump or water pressure required in this section shall be capable of applying a minimum of 40 pounds pressure at the nozzle on 200 feet of hose, such nozzle to be one-fourth inch or larger in diameter. If two steam-operated engines or steam equipment are customarily operated within 100 feet of each other, only one engine or piece of equipment need to be equipped with pump and hose.

1008. Required Serviceable Tools

During any time of the year when burning permits are required in an area pursuant to this article, no person shall use, operate, or cause to be operated in the area of the portable saw, auger, drill, tamper, or other portable tools powered by a gasoline-fueled internal combustion engine on or near any forest, brush or grass covered-land, within 25 feet of any flammable material, without providing and maintaining at the immediate locations of use or operation of the saw or tool, for firefighting purposes one serviceable round point shovel, with an over all length of not less than approximately 46 inches, and one serviceable fire extinguisher. The Tribal Official having jurisdiction shall by administrative regulation specify the type and size of fire extinguisher necessary to provide at least a minimum assurance of controlling fire caused by use of portable tools under various climatic and fuel conditions.

The required fire tools shall at no time be farther from the point of operation of the power saw or tool than 25 feet with unrestricted access for the operator from the point of operation.

1009. Controlling Burn Pile

A person shall not leave a campfire, kindled, burning or un-extinguished unless one of the following requirements is satisfied:

1. A responsible adult is in attendance.
2. The fire is enclosed within a stove, oven, drum or other non-flammable container, in such a manner that the fire cannot escape from the container. No person shall allow a campfire, kindled or attended, to spread after it is built.

1010. Obtaining Land Owner Permission

A person shall not light, maintain or use a campfire upon forest, brush or grass covered-land which is the property of another person unless:

1. They first obtain written permission from the owner, lessee, or agent of the owner or lessee of the property.
2. A written permit is issued by the tribal council's duly appointed designee.
3. A permit is not necessary for campsites and special use areas that are designated for camping.

1011. Negligence

The escape of any campfire from the control of any person is prima facie evidence that such person was negligent in maintaining the campfire.

1012. Negligence

Any fire originating from the operation or use of an engine, machine, barbeque, incinerator, railroad rolling stock, chimney, or any other device which may kindle a fire, is prima facie evidence of negligence. If such fire escapes from the place it originated and it can be determined which person's negligence caused such fire, such person shall be held responsible.

1013. Disposal of Flammable Materials

Outside the exterior boundaries of cities, every processor of forest products shall exercise due diligence in the disposal of flammable material resulting from the processing, so that the material does not cause the inception or spread of uncontrolled fire.

Every person, or company that operates a sawmill or plant engaged in the processing or converting of forest products into lumber or milled products, shall dispose of flammable material resulting from that operation. If such flammable material is not to be used as fuel, or as a byproduct within the operation, it shall be disposed of in a manner which effectively prevents the flammable material from constituting a fire hazard.

The tribal official may establish regulations for the storage, disposal, or use of forest product waste or residue on land as a soil amendment or soil protection measure or for its disposal by fire. Regulations shall be adopted by the tribe in accordance with the provisions of Tribal Ordinances of eliminating the potential of fire resulting from spontaneous combustion, other ignition sources, or wildfire escaping the forest product waste or residue storage, use, or disposal areas.

1014. Disposal of Flammable Materials

Flammable forest product waste material may be disposed of by means of fire in an enclosed device effective in preventing the spread of sparks or fire, situated in an area cleared of grass, grain, brush, slash, litter and snags for a distance of 30.5 meters (100 feet) surrounding the device or by landfill or other methods which meet applicable local fire safety, air and water quality standards.

A burning permit shall be obtained for the use of the device pursuant to Section 1002 and all other provisions of this ordinance.

1015. Disposal of Flammable Materials

Flammable forest product waste material and waste residue may be disposed of by means of fire in an area which is cleared of grass, grain, brush, slash, litter, snags and forest cover for a distance of 100 feet of cleared area around any lumber pile or structure which may be situated within 100 feet of the fire. Sound and living trees beyond 100 feet from the periphery of the fire may be left standing within the required area to be cleared, provided the following requirements are met:

1. Wildfire cannot travel into the canopy of any tree left standing.
2. Any tree left standing does not pose a fire safety threat or prevents fire equipment access to and near the flammable waste material.
3. All limbs and dead limbs are removed within 10 feet of the ground are removed from any tree left standing.

The disposal by fire in the cleared area is the responsibility of the operator or landowner or of the operator and land owner jointly, and shall be in conformance with Section 1002 and all other provisions of this ordinance.

Any pile being burned larger than 4' x 4' x 10' shall be approved under a tribal burn plan.

1016. Disposal of Flammable Materials

Flammable forest product waste residue may be accumulated in piles in any trust responsibility area when the area surrounding the piles is cleared and kept clear of all flammable vegetation and debris, including trees, snags, brush, grass, slash, and litter in accordance with one of the following procedures;

1. Flammable forest product waste material and waste residue may be disposed of by means of fire in an area which is cleared of grass, grain, brush, slash, litter, snags and forest cover for a distance of 100 feet from the periphery of the fire and for any greater distance necessary to provide 100 feet of cleared area around any lumber pile or structure which may be situated within 100 feet of the fire.
2. Sound and living trees beyond 100 feet from the periphery of the fire may be left standing within the area to be cleared. Providing the following requirements are met:
 - (a) Wildfire cannot travel into the canopy of any tree left standing.
 - (b) Any tree left standing does not pose a fire safety threat or prevents fire equipment access to and near the flammable waste material.
 - (c) All limbs and dead limbs are removed within 10 feet of the ground from any tree left standing.
3. The disposal by fire in the cleared area is the responsibility of the operator or land owner or of the operator and land owner jointly, and shall be in conformance with Section 1002 and all other provisions of this ordinance.
4. Any pile being burned larger than ten feet by four feet in height (10' X 10' X 4') will be approved under a tribally approved burn plan.
5. Sound and living trees may be left standing within the areas required to be cleared of flammable residue, provided the following requirements are met:
 - (a) Wildfire cannot travel into the canopy of any tree left standing.
 - (b) Any tree left standing does not pose a fire safety threat or prevents fire equipment access to and near the flammable waste material.
 - (c) All limbs and dead limbs are removed within 10 feet of the ground from any tree left standing.
 - (d) Diseased or dead trees are removed entirely.

1017. Punishable Violations

Any person who permits or allows accumulation of waste material or residue in violation of the provisions in Section 1013 to 1016, inclusive shall be held responsible in accordance to Section 1050.

1018. Internal Combustion Engines

1. Except as otherwise provided in this section, no person shall use, operate, or allow to be used or operated, any internal combustion engine which uses hydrocarbon fuels on any forest, brush or grass covered-land unless the engine is equipped with a spark arrester, as defined in sub-division 3. below, maintained in effective working order or the engine is constructed, equipped and maintained for the prevention of fire pursuant to Section 1019
2. Spark arrester affixed to the exhaust system of engines or vehicles subject to this section shall not be placed or mounted in such a manner as to allow flames or heat from the exhaust system to ignite any flammable material.
3. A spark arrester is a device constructed of non flammable materials specifically for the purpose of removing and retaining carbon and other flammable particles over 0.0232 of an inch in size from the exhaust flow of an internal combustion engine that uses hydrocarbon fuels or which is qualified and rated by the United States Forest Service.
4. Engines used to provide motive power for trucks, truck tractors, buses and passenger vehicles, except motorcycles, are not subject to this section if the exhaust system is equipped with a muffler as defined in the Vehicle Code.
5. Turbo charged engines are not subject to this section if all exhausted gases pass through the rotating turbine wheel, there is no exhaust bypass to the atmosphere, and the turbo charger is in effective mechanical condition.
6. Motor vehicles when being operated in an organized racing or competitive event upon a closed course are not subject to this section if the event is conducted under the auspices of a recognized sanctioning body and by permit issued by the fire protection authority having jurisdiction.

1018.1. Equipment Maintenance

No person shall sell, offer for sale, lease or rent to any person any internal combustion engine subject to Section 1018 or 1019, and not subject to the Health and Safety Code, unless the person provides a written notice to the purchaser or bailee, at the time of sale or at the time of entering into the lease or rental contract. The person selling, offer for sale, or lease shall state that it is in violation of Section 1018 or 1019 to use or operate the engine on any forest, brush or grass covered-land unless the engine is equipped with a spark arrester, as defined in Section 1018. The equipment shall be maintained in effective working order or the engine is constructed, equipped and maintained for the prevention of fire pursuant to Section 1019.

1019. Equipment Maintenance

No person shall use, operate or cause to be operated on any forest, brush or grass covered-land any handheld portable, multi position, internal combustion engine manufactured after June 30, 1978, which is operated on hydrocarbon fuels, unless it is

constructed and equipped and maintained for the prevention of fire. The tribal council shall, by regulation, specify standards for construction, equipment and maintenance of such engines for the prevention of fire and shall specify a uniform method of testing to be used by engine and equipment manufacturers, governmental agencies and equipment users. The regulations shall include specification of exhaust system standards for carbon particle retention or destruction, exposed surface temperature, gas temperature, flammable debris accumulation, durability and serviceability.

Portable power saw and other portable equipment described in this section, which were manufactured prior to July 1, 1978, shall be subject to fire safety design specifications as prescribed by the tribal council.

1020. Use of Firearms

A person shall not fire or cause to be fired from any rifle or other device capable of discharging ammunition, any bullets, projectile, or other ammunition which contains the components capable of causing fire and commonly known as tracer or incendiary ammunition within any forest, brush, grass or grain covered area.

1021. Disposal of Flammable Materials

Every person shall exercise reasonable care in the disposal of flammable material so that the material does not cause the inception of or spread of uncontrolled fire. A person shall not burn any flammable material in an incinerator within any tribal lands, within any area receiving fire protection unless:

1. The area within 10 feet of the exterior of the incinerator is maintained free and clear of all flammable material and vegetation.
2. A screen constructed of a non-flammable material, with no greater than ¼ inch mesh, or metal doors, should close or cover each opening in the exterior of an incinerator to prevent the escape of flames, sparks, ashes or other burning material which might cause an uncontrolled fire.
3. A permit is obtained prior to burning for the use of the incinerator pursuant to Section 1002 and all applicable provisions of law. This section does not apply to the disposal of flammable material resulting from the processing of forest product.

1022. Household Trash Burning

No person shall knowingly set or permit house hold rubbish or trash burning in any residential area. This would include boxes, newspaper, furnishings etc.

1023. Warming Fires

A person may have an open warming fire on their property as long as there is adequate clearance and attendance. However, during a declared fire season there shall be no open warming fires allowed.

1023.1. Proper Notification

The owner/lessee must notify the local fire department and/or the Tribal Council prior to any control fire commencing.

1050. ANY VIOLATIONS OF CODES SHALL:

Violation shall be punished by a fine of not less than two hundred fifty dollars (\$250) and/or community service, as determined by the appropriate tribal authority. In addition, the tribal authority may permit the fines, assessments, and/or restitutions prescribed by this section to be paid in installments if the tribal authority determines that the defendant is unable to pay the fine in one lump sum. Any violations of the terms of a burning permit issued pursuant to section 1002, a restricted temporary burning permit issued pursuant to section 1002.2, or a campfire permit issued pursuant to Section 1010 renders the permit null and void.

**Tribal Agricultural Code
Sections 2000-2001**

2000. Agricultural Burning

1. "Agricultural burning" means open outdoor fires used in agricultural operations in the growing of crops or raising of fowl, animals, or open outdoor fires used in forest management wildlife and game habitat, disease or pest prevention, or cultural plant species, "ie hazel, willow, bear grass, etc".
2. "Agricultural burning" also means open outdoor fires used in the operation or maintenance of a system for the delivery of water for the purposes specified in subsection 1 above.
3. "Agricultural burning" also means open outdoor fires used in wildland vegetation management burning. Wildland vegetation management burning is the use of prescribed fire by a Tribal agency, or through a cooperative agreement or contract involving a Tribal agency, (to burn vegetation such as chaparral, trees, grass, slash or standing brush). Prescribed burning is the planned application of fire to vegetation to achieve any specific objective on lands selected in advance of that application. The application of fire may also include natural ignition if the fire presents a benefit to the land without furthering the loss of life or property and the area is covered by an existing Management Plan which allows the use of prescribed natural fire.

2001. Air Contaminant

"Air contaminant" or "air pollutant" means any discharge, release, or other propagation into the atmosphere and includes, but is not limited to, smoke, charred paper, dust, soot, grime, carbon, fumes, gases, odors, particulate matter, acids, or any combination thereof.

2002. Ambient Air Quality

"Ambient air quality standards" means specified concentrations and durations of air pollutants which reflect the relationship between the intensity and composition of air pollution to undesirable effects established by the Tribal Council or, where applicable, by the federal government.

2003. Required Burn Permit

A burning permit is required for any of the above sections. The burning permit shall be issued by the Tribal Council designee (section 1002.1).

2004. Permit Violation

Failure to comply may result in revoking of burn permit and imposition of penalties as defined in Section 1050 of the Tribal Resource Code.

Tribal Health and Safety Code Sections 3000-3015

3000. Adopting rules and Regulations

The Tribal Council and the appropriate fire agency shall take into consideration, in adopting rules and regulations for purposes of this article, various factors, including, but not limited to, the population in an area, the geographical characteristics, the meteorological conditions, the economic and technical impact of such rules and regulations, and the importance of a viable agricultural economy.

3001. Obtaining a Permit

No person knowingly shall set or permit agricultural burning unless a valid permit has been issued by the agency designated by the Tribal Council or designee to issue such permits in the area where the agricultural burning is to take place.

3002. Permit Exemption

The Tribal Council may, after holding a public hearing, authorize an exemption from the permit requirement of Section 3001 for a Rancheria/Reservation, or a portion of a Rancheria/Reservation, where agricultural burning does not significantly affect air quality.

3003. Permit Issuing

The Tribal Council shall designate public fire protection agencies or other designee to issue permits under Section 3002, and shall adopt rules and regulations to provide a procedure for the issuance of the permits. Each agency or designee so designated by the Tribal Council shall issue permits subject to the rules and regulations of the Tribal Council.

3004. Permit Contents

1. No permit issued pursuant to Section 3003 shall be valid for any day during which agricultural burning is prohibited by the Tribal Council pursuant to Section 3005.
2. Each permit shall bear a statement of warning containing the following words or words of like or similar import: "This permit is valid only on those days during which agricultural burning are not prohibited by the Tribal Council pursuant to Section 3005 of the Health and Safety Code."
3. Failure to comply may result in revoking of burn permit and imposition of penalties as described in section 1050 of the Tribal Fire Codes.

3005. Burn / No Burn Days

The Tribal Council or designee shall determine and designate from meteorological data the days when agricultural burning shall be prohibited within each air basin.

3006. Air Basing Guidelines

The Tribal Council shall promulgate guidelines for the regulation and control of agricultural burning for each of the air basins established by the Tribal Council.

3007. Air Basing Guidelines

The guidelines promulgated by the Tribal Council shall be based on meteorological data, the nature and volume of materials to be burned, and the probable effect of such burning on the ambient air quality within the air basins affected.

3008. Guideline Considerations

In adopting such guidelines, the Tribal Council shall consider their economic and technical feasibility, including their probable effect on agricultural production in the air basin affected.

3009. Guideline Modification

The Tribal Council shall review the guidelines promulgated under this article, and may modify, repeal, or alter such guidelines if scientific and technological data indicates that such changes are warranted. Before adopting any such changes, the Tribal Council may hold a public hearing and shall consider the criteria set forth in Section 3007.

3010. Agricultural Heaters

The Tribal Council or duly appointed designee shall adopt and publish a list of orchard and citrus grove heaters which it finds produce no more than one gram per minute of unconsumed solid carbonaceous material. No new orchard or citrus grove heater produced or manufactured shall be sold for use against frost damage unless it has been approved by the Tribal Council. No person shall use any orchard or citrus grove heater manufactured after January 1, 1975, unless it has been approved by the Tribal Council or does not produce more than one gram per minute of unconsumed solid carbonaceous material.

3011. Wildlife for Game Habitat Burning

No burning shall be conducted for the improvement of land for wildlife or game habitat unless the person desiring to conduct such burning obtains from the Tribal Council a written statement certifying that the burning is desirable and proper for the improvement of land for wildlife or game habitat and such statement is filed with the Tribal Council designee (section 1002.1) having jurisdiction in the area in which the burning is to take place. As to burning conducted by the Tribe, the department shall, on its own behalf, issue and file such statements.

3012. Burning on Non-Burn Days

The Tribal Council designee may issue a permit to authorize agricultural burning on days designated by the Tribal Council pursuant to Section 3005 as non-burning days when denial of such a permit would threaten imminent and substantial economic loss. The Tribal Council shall require the tribal designee to transmit regular reports of permits issued authorizing agricultural burning on non-burning days. The report shall include the number of such permits issued, the date of issuance of each permit, the person to whom each permit was issued, and any other information requested by the Tribal Council.

3013.Regulation and Control of Agricultural Burning

Tribal Council designee shall, as part of the implementation plans and programs prepared, include a component for the regulation and control of agricultural burning pursuant to guidelines adopted by the Tribal Council therefore.

WeTip Arson Reporting Hotline Brochure

WeTip Arson Programs

WeTip specializes in anonymous tip programs dealing with sensitive issues including wildland arson, juvenile firesetters and juvenile arson offenders, school arson fires, bombs, explosive devices, municipal fires and threats, weapons, and illegal fireworks.

Total Anonymity

When you call the WeTip hotline, the first words that you hear from the tip operator will be, "This is the WeTip crime hotline, please do not give your name." They will then ask a series of questions designed to obtain the maximum amount of information about the reported crime. After the information is taken, a code name and number are assigned to the information. The caller always remains absolutely anonymous.

WeTip information is immediately conveyed to the appropriate BIA/Tribal Fire and Law Enforcement Agencies. Arrests are never made on the basis of a telephone call alone. Arrests are only the result of a verified law enforcement investigation.



P.O. BOX 1296
Rancho Cucamonga, CA 91729-1296
Business Office (909) 987-5005
Fax (909) 987-2477

If you have information ...



...regarding any arson fire, you are urged to contact the WeTip Arson hotline...

**1-800-47-ARSON
(27766)**

www.wetip.com
ANONYMOUS

1. Call the WeTip number. Do not give your name. A code name and number will be assigned to you.
2. The WeTip operator will take the information and pass it on to the appropriate law enforcement agency who will then conduct their own investigation. Only calls directly to WeTip will be eligible for reward.
3. If your information results in an arrest and conviction, you may be given up to \$10,000 cash, depending upon the importance of the crime solved and the relevance of the information given. Again, you will not give your name. Your identity will never be known to anyone.

Join the
War on Arson
By Calling



Anonymously!

**1-800-47-ARSON
(27766)**

24 Hours a Day, 365 Days a Year
or visit www.wetip.com

UP TO \$10,000 REWARD!



**“WETIP”
Arson Reporting Hotline**

1-800-47-ARSON
or
1-800- 472-7766

WHAT IS “WETIP”?

- WeTip was founded in 1972; it is a privately owned organization.
- Citizens can use this system to REPORT crime in their communities.
- WeTip provides a toll-free hotline to citizens who have FIRST HAND INFORMATION, and want to report a crime without giving their name.
- The National Interagency Fire Center (NIFC) supports the program and pays the annual dues to protect Indian Country.

**HOW DOES THIS SERVICE HELP
COMMUNITIES?**

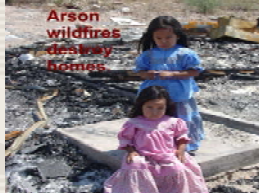
- Creates AWARENESS of Arson Crime.
- Provides a toll free number for local citizens to call; give information and REMAIN ANONYMOUS.
- Citizens who call DO NOT HAVE TO APPEAR IN COURT, unless they wish to testify in court.

COMMUNITY AWARENESS IS KEY

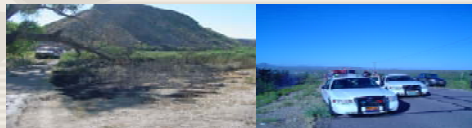
Public
Education



Posting & Campaigning



Fire Investigation



Law Enforcement

WHEN TO USE “WETIP”

- WHEN YOU HAVE INFORMATION ABOUT AN ARSON CRIME
 - Arson is when a person is using fire to hurt or scare people and/or to destroy property
- WHEN AN ARSON CRIME IS DONE IN
 - Indian Country
 - Reservation
 - Rancheria
 - Indian Colony
 - Bureau of Indian Affairs, “trust lands”

HOW DOES THIS SERVICE HELP LAW ENFORCEMENT?

Develops on-going DOCUMENTATION that provides valuable history of suspects for future use.

Money rewards are paid and based on GOOD DETAILED INFORMATION and not gossip, hearsay, or third party information.

Provides leads from witnesses who do not want to testify.

WHAT HAPPENS WHEN I CALL WETIP?

- The first words you will hear from the tip operator will be, "This is the WeTip Arson Hotline please, DO NOT GIVE YOUR NAME."
- You will then be asked a series of questions designed to obtain the maximum amount of INFORMATION ABOUT THE CRIME.
- Mention WERE IT HAPPENED, (Trust Land; name of Reservation).

WHAT HAPPENS THEN....?

- After the information is taken, a code name and number is assigned to the caller. The caller REMAINS ANONYMOUS OR UNKNOWN.
- DO NOT FORGET THE CODE, the information you give, should help fire investigators get an arrest.
- If your information helps in a conviction, you can receive UP TO \$10,000 REWARD for an Arson crime solved in Indian Country.

REWARD MONEY IS PAID UP TO \$10,000 WHEN THERE IS AN.....

- ARREST
- CONFESSION
- CONVICTION

When the case is solved it will be announced over the radio or local newspaper. Look for the key words, that say the crime was solved using the Wetip phone number. Call Wetip again and they will tell you if you get reward money

WHAT IF I CALLED AND MY INFORMATION HELPED SOLVE THE CRIME?

- CALL 1-800-472-7766, if you gave first hand information.
- Give the operator your CODE. The operator will tell you if your code was chosen to receive a reward.
- Remember If your information leads to an ARREST, CONFESSION, CONVICTION, the caller can receive UP TO \$10,000.00 "CASH" REWARD.

HOW DO I CLAIM MY REWARD?

- The reward is paid at a POST OFFICE or Bank chosen by the caller.
- Go to the post office or bank speak ONLY to the Post Master, or Bank Manager and GIVE YOUR CODE.
- The Post Master or Bank Manager will hand over an envelope with "CASH" REWARD MONEY.
- NO IDENTIFICATION IS REQUESTED and no personal contact is made with the person claiming the money.

NATIONAL INTERAGENCY FIRE CENTER (NIFC)

Supports the WeTip Arson Hotline and pays annual dues.

Arson Crimes

Fire Investigation

Fire Prevention

Indian Country

COLLABORATION

Tribal Council

Local Law Enforcement Agencies

Local Fire Protection Districts

Community



ARSON CRIME

- ❖ Protect the scene
- ❖ Investigation
- ❖ Documentation

FIRE INVESTIGATION

All Documentation

SECURE

Develop Case File

Request Assistance

Law Enforcement and Fire Protection

Memorandum of Understanding

Give information on WeTip

BE CREATIVE WHEN POSTING

PUBLIC AREAS:

Schools
Food Banks
Health Department

Casino
Post Office

HIGH TRAFFIC AREAS

Cruising Locations
Recreational Areas

Reader Boards
Bulletin Boards

“WETIP”, BUSINESS CARD

FOLLOW UP !!!!!



The FIRE SCENE SHOULD BE POSTED soon after ignition, before information is forgotten.



Place HIGHLY VISIBLE SIGN BOARD near well traveled roads.

ARSONIST WILL OFTEN RETURN TO CRIME SCENE and take down the WeTip posters.



Placing a WeTip SIGN AT THE EXACT “POINT OF ORIGIN” can let the arsonist know we are “on to them”.

REMIND CALLER

Don't tell people you called.

Don't share your code name and number (memorize it if you can or put it away in a safe place).

Call back if you hear that someone was arrested.

The amount of reward is going to depend on how good your information was to help in the arrest.

If you get a very large reward, it will be in CASH ONLY.

THIS INFORMATION IS VAGUE

GOSSIP is when it is told and repeated by several people; we don't know who started the information or rumor.

HEARSAY is, "I heard it from a friend who heard it from a friend, but I didn't see it or I wasn't there"

THIRD PARTY, one person saw it and told it to me and now I am telling you

Remember that this program will be a community effort. People need to know that they will be safe, after they provide information.

You need to have secure areas where information will not be viewed by all personnel in your office; this information needs to be shared with only the persons involved in the investigation.

In close knit communities this can be difficult; you may need outside assistance from non resident investigators or law enforcement.

Any small discrepancies or leaks within your organization can put an end to getting public cooperation

Any questions contact

Bureau of Indian Affairs
Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825
(916) 978-6000

Jim L. Nanamkin, Regional Fire Prevention Specialist

Soledad Holguin, Fire Prevention Specialist

Assessing Wildfire Hazards in the Home Ignition Zone



Pine needles piled against structure, tree should be limbed up.



Brush against trailer skirting.



Birds nest on rain gutters.



Gutters should be kept clean.



Excessive fuel load near structure.



Removal of excessive fuel

A fence can be a potential fuel that brings the fire to your home



Home does not have the minimal clearance of 100 feet.



Pine needles and wood shingles can easily ignite.



Shrubs too close to home.



Embers can easily get underneath in this home.
This house should have protection around the foundation.



Wood stacked against house.



Home does not have the minimal 100feet clearance.





Examples of good clearance.



GLOSSARY

Aerial Fuels- all live and dead vegetation located in the forest canopy or above the surface fuels, including tree branches and crowns, snags, moss, and high brush.

Anchor Point – an advantageous location or point, usually a barrier to fire spread, from which to start constructing fireline. It is used to minimize the chance of being flanked by the fire while the line is being constructed.

Aspect – the direction a slope is facing, i.e., its exposure in relation to the sun.

Available Fuels – those fuels which will burn during a passage of a flaming front under specific burning and fuel conditions.

Backfiring – when attack is indirect intentionally setting fire to fuels inside the control line to contain a fire. Backfiring is a tactic which makes possible a strategy of locating control lines at places advantageous to the firefighter.

Barrier – any obstruction to the spread of fire; typically an area or strip devoid of flammable fuel.

Blackline Concept – fuels that remain between the main fire and a fireline are burned out to insure safety of control forces and security of control lines.

Burning Out – when attack is direct, or parallel and the control line touches points of the fire. Burning out is intentionally setting fire to fuels inside the control line to strengthen the line. Burning out is almost always done by the crew boss as a part of line construction. The control line is considered incomplete unless there is no fuel between the fire and the control line.

Burning Period – that part of each 24-hour period when fires will spread most rapidly. Typically, this is from about mid-morning to about sundown, or late afternoon.

Canopy – the stratum containing the crowns of the tallest vegetation present, (living or dead) usually above 20 feet.

Celsius (centigrade) – a temperature scale with the 0 °C as the melting point of ice and 100 °C as the boiling point of water.

Chain – a measuring instrument consisting of 100 wire links each 7.92 inches long, or 792 inches, or 66 feet.

Chinook, or Chinook Wind – a foehn wind blowing down the eastern slopes of the Cascades, Rocky Mountains, and over the adjacent plains in the United States and Canada. In winter, this warm, dry wind causes snow to disappear with remarkable rapidity, and hence it has been nicknamed the “snoweater.” In hot dry weather, Chinook winds can quickly extend fire weather conditions to the “extreme.

Cirrus – a form of high cloud, composed of ice crystals, which often does not obscure the sun.

Climate – the prevalent or characteristic meteorological conditions of any place or region, and their extremes.

Cloud – visible cluster of minute water and/or ice particles in the atmosphere above the earth's surface.

Cold Front – the leading edge of a relatively cold air mass that displaces warmer air. The heavier cold air may cause some of the warm air to be lifted. If the lifted air contains enough moisture, cloudiness, precipitation, and even thunderstorms may result. In case both air masses are dry, there may be no cloud formation. Following a cold front passage (in the Northern Hemisphere), often westerly or northwesterly winds of 10 to 20 mi/h, or more, continue for 12 to 24 hours.

Combustion – the rapid oxidation of combustible materials that produces heat energy.

Combustion Period – total time required for a specified fuel component to be completely burned.

Compactness – the spacing between fuel particles. This can be especially important in the surface layers of fuels, where the amount of air circulation affects rate of drying, a rate of combustion, etc.

Condensation – the process by which a vapor becomes a liquid.

Conduction – the transfer of heat between molecules in contact with one another.

Conflagration – a raging destructive fire. Often used to denote such a fire with a moving front as distinguished from a fire storm.

Continuity of Fuels – the proximity of fuels to each other that governs the fire's capability to sustain itself. This applies to aerial fuels as well as surface fuels.

Contour Map – a map having lines of equal elevation that represent the land surface.

Control Line – an inclusive term for all constructed or natural fire barriers and treated fire edges used to control a fire.

Control Line Standards – the dept and width to which fuels must be treated or removed to control any portion of a wildfire perimeter.

Convection – vertical air movement resulting in the transport of atmospheric properties. In meteorology, atmospheric motions that are predominantly vertical; i.e., usually upward.

Convection Column – the thermally –produced ascending column of gases, smoke, and debris produced by a fire.

Convective Winds – all winds – up, down, or horizontal- that have their principal origins in local temperatures differences.

Creeping – fire burning with a low flame and spreading slowly.

Crown Closure – the spacing between tree crowns; usually expressed as the percent of area covered by tree crowns in the forest canopy region as viewed from above.

Crown Fire – a fire that advances from top-to-top of trees or shrubs. Crown fires are classed as passive, active, or dependent to distinguish the degree of dependence on the surface fire.

Cumulonimbus – the ultimate growth of a cumulus cloud into an anvil ship, with considerable vertical growth, usually fibrous ice crystal tops, and probably accompanied by lightning, thunder, hail, and strong winds.

Cumulus – a principle, low cloud-type in the form of individual cauliflower-like cells of sharp nonfibrous outline and less vertical development than cumulonimbus.

Dew Point – the temperature to which air must be cooled, at constant pressure and moisture content, in order for saturation to occur.

Direct Attack – a method of suppression that treats the fire as a whole, or all its burning edge, by wetting, cooling, smothering, or by chemically quenching it or mechanically separating it from unburned fuel.

Diurnal – daily, especially pertaining to cyclic actions which are completed with 24 hours, and which recur every 24 hours.

Dry Bulb- a name given to an ordinary thermometer used to determine the temperature of the air (to distinguish it from the wet bulb).

Dry Lightning Storm – a lightning storm with negligible precipitation reaching the ground.

Duff – a mat of partially decomposed organic matter immediately above the mineral soil, consisting primarily of fallen foliage, herbaceous vegetation and decaying wood (twigs and small limbs).

Eddy – a whirl or circling current of air or water, different and differentiated from the general flow.

Elevation – the height of the terrain above mean sea level, usually expressed in feet.

Equilibrium Moisture Content (EMC) – the level at which dead fuels neither gain nor lose moisture with time, under specific constant temperature and humidity. The water vapor pressure in the air is equal to the vapor pressure in the fuel. A fuel particle, at EMC, will have no net exchange of moisture with its environment.

Equilibrium Vapor Pressure – occurs when there is no net gain or loss of water molecules between the air and a solid or liquid.

Evaporation – the transformation of a liquid to the gaseous state. Heat is lost by the liquid during this process.

Extreme Fire Behavior – implies a level of wildfire behavior characteristics that ordinarily precludes methods of direct control action. One or more of the following is usually involved: high rates of spread; prolific crowning and/or spotting; presence of fire whirls; a strong convection column. Predictability is difficult because such fires often exercise some degree of influence on their environment, behaving erratically and sometimes dangerously.

Fahrenheit – a temperature scale on which 32 °F denotes the temperature of melting ice, and 212 °F the temperature of boiling water, both under standard atmospheric pressure.

Fine Fuels – fuels that are less than ¼ inch in diameter such as grass, leaves, draped pine needles, fern, tree moss, and some kinds of slash which, when dry, ignite readily and are consumed rapidly. (Also call Flash Fuels.)

Fire Perimeter – the entire outer edge or boundary of a fire.

Fire Storm – violent convection caused by a large continuous area of intense fire. It's often characterized by destructively violent surface in drafts near and beyond the perimeter, and sometimes by tornado-like whirls.

Firebrand – any source of heat, natural or manmade, capable of igniting wildland fuels. Flaming or glowing fuel particles that can be carried naturally by wind, convection currents, or by gravity into unburned fuels.

Firebreak – a natural or constructed barrier used to stop or check fires that may occur, or to provide a control line from which to work.

Firing Out – also called firing. The act of setting fire to fuels between the control line and the main fire in either a backfiring or burning out operations.

Fireline – the part of a control line that is scraped or dug to mineral soil. Sometimes called Fire trail.

Firewhirl – a spinning, moving column of ascending air which carries aloft smoke, debris and flames. These range from a foot or two to diameter to small tornadoes in size and intensity.

Flanking – attacking a fire by working along the flanks either simultaneously or successively from a less active or anchor point and endeavoring to connect the two lines at the head.

Flanks of a Fire – the parts of a fire's perimeter that are roughly parallel to the main direction of spread.

Flare-up – any sudden acceleration of fire spread or intensification of the fire. Unlike blowup, a flare-up is of relatively short duration and does not radically change existing control plans.

Flash Fuels – fuels such as grass, leaves, draped pine needles, fern, tree moss, and some kinds of slash that ignite readily and are consumed rapidly when dry. (Also called Fine Fuels.)

Flashover – rapid combustion and/or explosion of unburned gases trapped at some distance from the main fire front. Usually occurs only in poorly ventilated topography. More commonly associated with structural fire behavior.

Foehn (Pronounced “fern”)- a type of general wind that occurs when stable, high pressure air is forced across and then down the lee slopes of a mountain range. The descending air is warmed and dried due to adiabatic compression. Locally called by various names such as Santa Ana, Mono, Chinook, etc.

Fog – a cloud at or near the earth’s surface. Fog consists of numerous droplets of water which individually are so small that they cannot readily be distinguished by the naked eye.

Front – the transition zone between two different air masses.

Frost – crystals of ice formed and deposited like dew, but at a temperature below freezing.

Fuelbreak – a wide strip or block of land on which the native or preexisting vegetation has been permanently modified so that fire burning into it can be more readily extinguished. It may or may not have fire lines constructed in to prior to fire occurrence.

Fuel Moisture Content – the amount of water in a fuel, expressed as a percentage of the oven dry weight of that fuel.

General Winds – large scale winds caused by high- and low – pressure systems but generally influenced and modified in the lower atmosphere by terrain.

Gradient Wind – a wind that flows parallel to the isobars or contours and has a velocity such that the pressure gradient, Coriolis, and centrifugal forces acting in the area are in balance. It does not occur at the earth’s surface due to frictional influence, but occurs at a height of roughly 1,500 feet above mean terrain height. Nearly synonymous with “Free Air” winds.

Gound fire – all combustible materials lying beneath the ground surface including deep duff, roots, rotten buried logs, peat and other woody fuels.

Gus – a sudden, brief increase in the speed of the wind.

Head of a Fire – the most rapidly spreading portion of a fire’s perimeter, usually to the leeward or upslope.

Heavy fuels – fuels of large diameter such as snags, logs, and large limb wood that ignite and are consumed much more slowly than flash fuels. (Also called course fuels.)

High – an area of relatively high atmospheric pressure that has a more or less closed circulation; an anticyclone. Winds around a high move clockwise in the Northern Hemisphere, while spiraling out from the high toward lower pressure.

Horizontal continuity – the horizontal distribution of fuels at various levels or planes.

Hotspotting – checking the spread of fire at points of more rapid spread, or special threat. It is usually the initial step in prompt control with emphasis on first priorities.

Humidity – the measure of water vapor content in the air.

Ignition – the initiation of combustion.

Indirect Attack – a method of suppression in which the control line is mostly located along natural firebreaks, favorable breaks in topography, or at considerable distance from the fire, and all intervening fuel is backfired or burned out. The strip to be backfired is wider than in the parallel method and usually allows a choice of the time when burnout or backfiring will be done.

Isolation – solar radiation received at the earth's surface.

Instability – a state of the atmosphere in which the vertical distribution of temperature is such that an air particle, if given either an upward or downward impulse, will tend to move vertically away with increasing speed from its original level. (Unstable air.)

Inversion – a layer in the atmosphere where the temperature increases with altitude.

Ladder Fuels – fuels which provide vertical continuity between strata. Fire is able to carry from surface fuels by convection into the crowns with relative ease.

Lightning – a sudden visible flash of energy and light caused by electrical discharges from thunderstorms.

Litter – the uppermost layer of loose debris composed of freshly fallen or slightly decomposed organic materials such as dead sticks, branches, twigs, and leaves or needles

Local Winds – small-scale convective winds of local origin caused by temperature difference.

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 ¼ mile or more from the firebrands' source.

Low – an area of relatively low atmospheric pressure in which winds tend to move in a counterclockwise direction, spiraling in towards the low's center.

Precipitation – the collective name for moisture in either liquid or solid form large enough to fall from the atmosphere and reach the earth's surface.

Pressure Gradient – the change in atmospheric pressure per unit of horizontal distance.

Psychrometer – an instrument for measuring atmospheric temperature and humidity, consisting of a dry-bulb thermometer and a wet-bulb thermometer (bulb covered with a muslin wick); used in the calculations of dew point and relative humidity.

Rainfall – a term sometimes synonymous with rain, but most frequently used in reference to amounts for precipitation (including snow, hail, etc.).

Rain Gage – an instrument for measuring precipitation.

Rate of Spread – the relative activity of a fire in extending its horizontal dimensions. It is expressed as rate of increase of the total perimeter of the fire; or as rate of forward-spread of the fire front; or as rate of increase in area, depending on the intended use of the information. Usually its (forward) rate of spread is expressed in chains or acres per hour.

Reburn –

1. Subsequent burning of an area in which fire has previously burned but has left flammable fuel that ignites when burning conditions are more favorable.

2. An area that has reburned.

Relative Humidity – the ratio of the amount of moisture in the air to the amount which the air could hold at the same temperature and pressure if it were saturated; usually expressed in percent.

Resistance to Control – the relative difficulty of constructing and holding a control line as affected by resistance to line construction and fire behavior. (Also called Difficulty of Control.)

Ridge – an elongated area of relatively high pressure extending from the center of a high-pressure region.

Roll Cloud – a turbulent altocumulus-type cloud formation found in the lee of some large mountain barriers. The air in the cloud rotates around an axis parallel to the range. Also sometimes refers to part of the cloud base along the leading edge of a cumulonimbus cloud; it is formed by rolling action in the wind shear region between cool downdrafts within the cloud and warm updrafts outside the cloud. (Sometimes called Roto Cloud.)

Running – behavior of a fire that is spreading rapidly, usually with a well-defined head.

Safety Island – an area for escape in the event the line is outflanked or in case a spot fire causes fuels outside the control line to render the line unsafe. In firing operations, crews progress so as to maintain a safety island close at hand, allowing the fuels inside the control line to be consumed before going ahead.

Saturated Air – air that contains the maximum amount of water vapor it can hold at a given pressure and temperature (relative humidity of 100 percent).

Scratch line – an unfinished preliminary control line hastily established or constructed as an emergency measure to check or slow the spread of fire.

Sea Breeze – a daytime breeze in which cooler, higher pressure air from over coastal waters moves on shore to replace heated air rising off the warmer land mass.

Short-Range Spotting – firebrands, flaming sparks, or embers are carried by surface winds, starting new fires beyond the zone of direct ignition by the main fire. The range of such spotting is usually less than ¼ mile.

Size and Shape – fuel characteristics affecting the fuel moisture time lag, the amount of heat required for ignition and to sustain combustion, and the burnout time of fuels. The surface-area-to-volume ratio is a representation of size and shape.

Slash – debris left after logging, pruning, thinning, or brush cutting; also debris resulting from thinning, wind, or fire. It may include logs, chucks, bark, branches, stumps, and broken understory trees or brush.

Slope Winds – small scale convective winds that occur due to local heating and cooling of a natural incline of the ground.

Slope Percent – the ratio between the amount of vertical rise of a slope and horizontal distance as expressed in a percent. One hundred feet of rise to 100 feet of horizontal distance equals 100 percent.

Smoldering – behavior of a fire burning with flame and barely spreading.

Snag – a standing dead tree or part of a dead tree form which at least the leaves and smaller branches have fallen. (Often called Stub, if less than about 20 feet tall.)

Spot Fire – fire set outside the perimeter of the main fire by flying (or rolling) sparks or embers.

Spotting – behavior of a fire producing sparks or embers that are carried by convection columns and/or the wind and which start new fires beyond the zone of direct ignition by the main fire.

Stability – a state of the atmosphere in which the vertical distribution of temperature is such that an air particle will resist vertical displacement from its level. (Stable Air.)

State of Weather – a brief description of current weather that expresses the amount of cloud cover, kind of precipitation, and/or restrictions to visibility being observed at a weather observation site.

Subsidence – an extensive sinking motion of air in the atmosphere, most frequently occurring in polar highs. The subsiding air is warmed by compression and becomes more stable. Of particular importance due to the heating and drying of the air. It is often the cause of very rapid drying of fuels in the smaller size classes.

Suppress a Fire - to extinguish a fire or confine the area it burns with fixed boundaries.

Surface-Area-to-Volume Ratio – the ratio of the surface area of a fuel to its volume, using the same linear unit for measuring volume; the higher the ratio, the finer the particle.

Surface Fire – a fire that burns surface litter, debris, and small vegetation.

Surface Fuels – all materials lying on, or immediately above, the ground, including needles or leaves, duff, grass, small dead wood, downed logs, stumps, large limbs, low brush and reproduction.

Surface Wind – the wind measured 20 feet above the average top of the vegetation. It is often a combination of local and general winds.

Temperature – a measure of the degree of hotness or coldness of a substance.

Temperature lapse Rate – the amount of temperature change with altitude change, expressed as degrees Fahrenheit per 1,000 feet of rise or fall.

Thermal Belt – an area of a mountainous slope that typically experiences the least variation in diurnal temperatures, has the highest average temperatures, and thus, the lowest average relative humidity.

Thermometer – an instrument for measuring temperature; in meteorology, generally the temperature of the air.

Thunder – the sound emitted by rapidly expanding gases along the channel of a lightning discharge.

Thunderstorm – a storm invariably produced only by a cumulonimbus cloud, and always accompanied by lightning and thunder; usually attended by strong wind gusts, heavy rain, and sometimes hail. It is usually of short duration, seldom over 2 to 3 hours for any storm.

Topography – the configuration of the earth’s surface, including its relief and the position of its natural and manmade features.

Torching – fire burning principally as a surface fire that intermittently ignites the crowns of trees or shrubs as it advances.

Vertical Arrangement – the relative heights of fuels above the ground and their vertical continuity, which influences fire reaching various levels or strata. (Surface fuels vs. aerial fuels, and their relationships to one another.)

Vertical Development of Column – depending on fire intensity and atmospheric conditions, the smoke or convection column might rise a hundred feet or many thousands of feet. A low intensity fire with a low smoke column might be termed “two-dimensional,” whereas a high intensity fire with a well-developed convection column rising thousands of feet into the atmosphere can be termed a “three dimensional” fire. (See Convection Column.)

Virga – Wisps or streaks of water or ice particles falling out of a cloud but evaporating before reaching the earth’s surface.

Visibility – the greatest distance those prominent objects can be seen and identified by unaided, normal eyes. (Usually expressed in miles, or fractions of a mile.)

Warm Front – the discontinuity at the forward edge of an advancing current (or mass) of relatively warm air which is displacing a retreating colder air mass.

Weather – the short-term variations of the atmosphere in terms of temperature, pressure, wind, moisture, cloudiness, precipitation, and visibility.

Wet Bulb Temperature – the lowest temperature to which air can be cooled by evaporating water into it at a constant pressure when the heat required for evaporation is supplied by the cooling of the air. It is measured by the wet bulb thermometer, which usually employs a wetted wicking on the bulb as a cooling (through evaporation) device.

Wet Line – a fire control line, usually temporary, preparing by treating the fuels with water and/or chemicals which will halt the spread of fire.

Wildfire – 1. an unplanned wildland fire requiring suppression action, or other action according to agency policy, as contrasted with a prescribed fire burning within prepared liens enclosing a designated area, under prescribed conditions. 2. a free burning wildfire unaffected by fire suppression measures.

Wildland Fuels – any organic material, living or dead, in the ground, on the ground, or in the air, that will ignite and burn.

Wind – the horizontal movement of air relative to the surface of the earth.

Wind-driven Wildfire – a wildland fire that is controlled by a strong consistent wind.

Windspeed Meter – a handheld device which indicates wind speed, usually in miles per hour. (See Anemometer.)

Definitions from Instructor's Guide May 1994 NFES 1859
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