



Industrial Fire Prevention Guide to Legal Requirements in Oregon

Controlling Fires

In Operations On and Near Forest Land in Oregon

The operation fire prevention and suppression requirements described below are established by Oregon law and Administrative Rule. This is only a digest of the basic requirements and is designed to serve as a useful guide for complying with the requirements during fire season. It is not intended to describe every requirement or every situation¹.

Fire Season Requirements

Smoking (OAR 477.510) No smoking while working or traveling in an operation area.

Power Saws (ORS 477.640, OAR 629-043-0036)

Each power saw must be equipped with an exhaust system which retains at least 90% of carbon particles and which meets certain exhaust temperature standards. Saws which meet these requirements are listed in the *Spark Arrester Guide- Multiposition Small Engine (MSE)* (0751 1802 SDTDC, April 2007 and *Spark Arrester Guide Update Sheet –Spring 2014, Part 1 – Chainsaws* or latest version).

One gallon of water or pressurized container of fire suppressant of at least eight ounce capacity and a round pointed shovel, which has a face not less than 8 inches wide and a handle not less than 26 inches long, must be kept immediately available.

Power saws must be stopped during fueling and then must be moved at least 20 feet from the place of fueling before being restarted.

Cable Logging (ORS 477.625, OAR 629-043-0026) (ORS 477.655, OAR 629-043-0025)

Clear the ground below blocks of all flammable debris for not less than 10 feet in all directions. In addition, equip each block with a pump-equipped can or bladder which contains at least five gallons of water. A round pointed shovel, which has a face not less than 8 inches wide and a handle not less than 26 inches long, is required at each block and shall be kept ready for immediate use.

Do not permit moving lines to rub on rock or woody material in such a way as to cause sparks or create sufficient heat that may cause the ignition of a fire.

Spark Arrester (ORS 477.645, OAR 629-043-0015)

All engines must be equipped with a spark arrester. Exceptions are allowed for fully turbo-charged engines, for engines of 50 cubic inch displacement or smaller, for certain trucks and for pumps used exclusively to fight fire. Engines must be equipped with a muffler and with an exhaust system which are in good operating condition.

Debris Accumulation (ORS 477.625, OAR 629-043-0026)

Power-driven machinery must be kept free of excess flammable material which may create the risk of fire.

Fire Watch Service (OAR 477.665, ORS 629-043-0030)

Fire watch personnel must be physically capable and experienced to operate firefighting equipment and have adequate facilities for transportation and communications in order to be able to make a fire report and summon needed assistance. For up to three hours after all power driven machinery used by an operator has been shut down for the day, fire watch personnel must constantly observe all portions of the area upon which operation activity occurred.

Upon discovery of a fire, fire watch personnel must: First report the fire, summon any necessary firefighting assistance, and describe intended fire suppression activities and agree on a checking system; then, after determining a safety zone and an escape route that will not be cut off if the fire increases or changes direction, immediately proceed to control and extinguish the fire, consistent with firefighting training and safety.

¹ An electronic copy of this form can be found at www.coosfpa.net/resources. References in this document are provided to the complete text of Oregon Revised Statutes (ORS) and Oregon Administrative Rules (OAR). Hyperlinks connect to

- ORS, www.oregonlegislature.gov (To find relevant section, Select *Search Oregon Revised Statutes* on left and enter the ORS number.)
- OAR, <https://secure.sos.state.or.us/oard>m. (To find relevant section, Select *Search Current Rules*, enter “select 629 – Department of Forestry, and select Division 41 – Protection Administration or Division 43 – Fire Prevention.)



Snags (ORS 477.565, 629-043-0005)

The district may require that certain snags that are a fire hazard be felled either before or concurrent with the operation of power-driven machinery. The district will direct in a written order which snags must be felled.

Hand Tools (ORS 477.655, OAR 629-043-0025)

A mix of firefighting hand tools are required on most operations. The tools must include a mix of scraping tools (such as pulaski or hazel hoe), cutting tools (such as pulaski or axe), and shovels and must be equal to or greater than the number of persons working on the operation. The chart below shows a **suggested mix** of hand tools. Required firefighting tools may be used only for firefighting and must be kept ready for immediate use.

People in Operation	1-4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Tool Box	*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Axes	*	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3
Shovels	*	2	2	3	3	3	3	4	4	5	5	6	7	7	7	7	7
Hazel Hoes or Pulaskis	*	2	3	3	4	5	5	5	6	6	7	7	7	8	8	9	10

* If there are four, or fewer, persons on the operation AND each has a round pointed shovel, which has a face not less than 8 inches wide and a handle not less than 26 inches long, available for immediate use, no tool box or tools exclusive for firefighting are required.

Fire Tool Box (OSR 477.655, OAR 629-043-0025)

If there are five or more persons working on the operations, all required firefighter hand tools will be stored in a clearly identified tool box.

Water Supply / Equipment (ORS 477.650, OAR 629-043-0020)

Water Supply: Must be 300 gallons or larger when it is a self-propelled motor vehicle, or 500 gallons or larger when it is not self-propelled.

Water Pump: Pump size and capacity must discharge 20 gallons or more per minute at a pressure of at least 115 pounds per square inch at pump level.

Hose and Nozzle: Must have a nozzle and enough serviceable hose of ¾ inch or larger inside diameter to reach from the water supply to any location in the operation area affected by power driven machinery – OR - 500 feet, whichever is greater.

The water supply, pump, at least 250 feet of hose, and the nozzle, as required by this rule, shall be maintained as a connected, operating unit and kept ready for immediate use.

All hose, motor vehicles, nozzles, pumps and tanks shall be kept ready for immediate use.

Fire Extinguishers (ORS 477.655, OAR 629-043-0025)

Most equipment powered by an internal combustion engine must be equipped with a 2 A:10 BC or higher (5 pound or equivalent) rated fire extinguisher. It must be approved by a nationally recognized testing laboratory and be ready for immediate use.

Fire Tools on Trucks (ORS 477.655, OAR 629-043-0025)

Each truck used to conduct an operation must be equipped with a 2 A:10 BC or higher (5 pound or equivalent) rated fire extinguisher approved by a nationally recognized testing laboratory, a round pointed shovel, which has a face not less than 8 inches wide and a handle not less than 26 inches long, and a pulaski or an axe which has a handle not less than 26 inches long. All must be ready for immediate use.

Alternate Methods (ORS 477.650, ORS 477.655)

In some situations, the district may allow alternate methods or equipment which are proposed by the operator and which provide equal or better suppression of fire than the requirements above.



Permits (ORS 477.515)

An annual **Permit to use Fire or Power-Driven Machinery** must normally be obtained from the district, prior to commencement of an operation. Districts may waive the permit requirement when, in their judgement, the operation will not constitute a sufficient fire hazard. Waiver of the permit requirement, however, does not relieve the operator of complying with all other applicable fire prevention and suppression requirements.

Action to Control Fires (ORS 477.066)

The Landowner and operator must immediately proceed to control and extinguish any fire started in an operation while the operation is active, any fire which results from operation activity, and any fire which results from burning.

Close Downs for Fire (OAR 629-041-005)

A four level **Industrial Fire Precaution Level (IFPL)** system is used by all wildland fire protection agencies in Oregon and Washington to regulate operation activity during fire season. The IFPL system does not apply on lands east of the summit of the Cascade Mountains, which are protected by the Oregon Department of Forestry. However, other special closedown requirements may apply. The level of IFPL closedown is based on the fire danger in the area surrounding the operation. Additional information on specific closedown times, locations and requirements can be obtained from the district.

Definitions (sources: Oregon Revised Statutes 477.001, Oregon Administrative Rules 629-41-005)

Some words and phrases used in this guide have specific legal definitions, including:

District means a forest protection district. (ORS 477.001)

Forestland means any woodland, brushland, timberland, grazing land or clearing that, during any time of the year, contains enough forest growth, slashing or vegetation to constitute, in the judgment of the forester, a fire hazard, regardless of how the land is zoned or taxed. (ORS 477.001)

Good operating condition means fully ready for intended use, maintained in accordance with any manufacturer's recommendations and, where appropriate, properly installed and free of leaks. (OAR 629-041-0005)

Immediate use means: (a) In good operating condition; (b) Requires the addition of no components, fuel, oil, parts or water to be made operational; and (c) Maintained in a known location which is easily and rapidly accessible by the operator. (OAR 629-041-0005)

Operation means any industrial activity, any development, or any improvement on forestland inside or within one-eighth of one mile of a forest protection district, including but not limited to the harvesting of forest tree species, the clearing of land, the use of power-driven machinery and the use of fire, excluding, however, the culture and harvesting of agricultural crops. (ORS 477.001)

Operator means any person who, either personally or through employees, agents, representatives, or contractors, is carrying on or has carried on any operation. (ORS 477.001)

Operation Area means the area on which an operation is being conducted and the area on which operation activity may have resulted in the ignition of a fire. (ORS 477.001)

Spark arrester means an exhaust system device which traps or pulverizes exhaust carbon particles to a size below 0.023 inches in diameter before they are expelled from an exhaust system. Mufflers are not spark arresters. (OAR 629-041-0005)

Truck means a motor vehicle designed primarily for carrying loads other than passengers. (OAR 629-041-0005)

NOTICE: These are minimum standards by law. Landowners may have additional requirements.



Oregon Department of Forestry Industrial Fire Precaution Levels (IFPLs)



These IFPLs apply to lands protected by ODF west of the summit of the Cascades.

IFPL I. Fire Season

Fire season requirements are in effect. In addition to other fire prevention measures, a Firewatch is required at this and all higher levels unless otherwise waived.

IFPL II. Limited Shutdown

The following may operate only between 8 P.M. and 1 P.M.:

- ◆ Power saws except at loading sites;
- ◆ Feller-bunchers with rotary head saws;
- ◆ Cable yarding;
- ◆ Blasting;
- ◆ Welding, cutting, or grinding of metal.

IFPL III. Restricted Shutdown

The following is prohibited except as indicated:

- ◆ Cable yarding - except that gravity operated logging systems employing non-motorized carriages or approved motorized carriages (defined below), may operate between 8 P.M. and 1 P.M. when all blocks and moving lines are suspended 10 feet above the ground except the line between the carriage and the chokers and during rigging.

The following are permitted to operate between the hours of 8 p.m. and 1 p.m. where mechanized equipment capable of constructing fireline is immediately available to quickly reach and effectively attack a fire start:

- ◆ Ground-based operations
- ◆ Power saws on ground-based operations;
- ◆ Rotary head saw feller-bunchers with a continuous Firewatch;
- ◆ Non-rotary head saw feller-bunchers;
- ◆ Tethered logging systems.

The following are permitted to operate between the hours of 8 p.m. and 1 p.m.:

- ◆ Power saws at loading sites;
- ◆ Loading or hauling of any product or material;
- ◆ Blasting;
- ◆ Welding, cutting, or grinding of metal;
- ◆ Any other spark emitting operation not specifically mentioned.

IFPL IV. Complete Shutdown

All operations are prohibited.

NOTE: Where hauling involves transit through more than one shutdown/regulated use area, the precaution level at the loading site shall govern the level of haul restriction, unless otherwise prohibited by other than the IFPL system. Under IFPL III, all trucks must be loaded and leaving the loading site no later than 1 p.m.

The following definitions shall apply to these industrial fire precaution levels:

Approved motorized carriage: a cable yarding system employing a motorized carriage with two fire extinguishers, each with at least a 2A:10BC rating, mounted securely on opposite sides of the carriage, an emergency motor cutoff, and an approved exhaust system.

Cable yarding system: a yarding system employing cables, and winches in a fixed position.

Fire Season (Fire precautionary period): that season of the year when a fire hazard exists as declared by the responsible agency official.

Ground-based operations: mobile and stationary equipment operations other than cable yarding systems, including but not limited to tractor/skidder, feller-buncher, forwarder, processor, and shovel operations.

Loading sites: a place where any product or material (including, but not limited to logs, firewood, slash, soil, rock, poles, etc.) is placed in or upon a truck or other vehicle.

Tethered logging system: winch-assisted, cable-assisted, traction-assisted, etc., which enable ground-based timber harvesting machines to operate on steep slopes.

Best Management Practices for Forest Operations Checklist

- ✓ Assure good communications are established with protection district.
- ✓ Keep all equipment clean of flammable material and debris.
- ✓ Utilize and keep in good working condition manufacturer recommended non-sparking clamping jaws on braking systems on carriages.
- ✓ Clean out spark arrester ports.
- ✓ Assure Hydraulic and fuel lines are in good condition.
- ✓ Assure Battery hold-downs are in good repair and positive terminal is insulated;
- ✓ Assure Electrical wiring and circuit breakers are in good working order according to manufacturer specifications;
- ✓ Assure Pumps and fire trucks are in good working condition;
- ✓ Eliminate Line rub is eliminated;
- ✓ Where possible, and when not in use, park equipment overnight in location clear of flammable material.
- ✓ Monitor relative humidity hourly and consider shut down when relative humidity drops below 30 percent.

Waivers

Waivers, written in advance, may be used for any and all activities. Activities for which waivers may be issued include, but are not limited to:

- ◆ Mechanized loading and hauling.
- ◆ Road maintenance such as sprinkling, graveling, grading, and paving.
- ◆ Ground-based or tethered operations where cable yarding using gravity systems or suspended lines and blocks, or other yarding systems where extra prevention measures will significantly reduce the risk of fire.
- ◆ Power saws at loading sites or in felling and bucking where extra prevention measures will significantly reduce the risk of fire.
- ◆ Maintenance of equipment (other than metal cutting welding, and grinding) or improvements such as structures, fences, and powerlines.

Industrial Fire Precaution Levels also available at
<https://www.oregon.gov/ODF/Fire/Documents/2019%20IFPL.pdf>

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