

FOREST FIRE PROTECTION

Requirements for Operations On or Near Forest Land

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WILDFIRE

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INTRODUCTION

This booklet details Washington State's forest fire protection requirements and is designed to help forest operators reduce the risk of wildfires caused by spark-emitting equipment and silvicultural burning on or near forest land.

By law, the Washington Department of Natural Resources (DNR) is responsible for monitoring and assessing regional fire risk and for enforcing these requirements.

Fortunately, only a small percentage of Washington's largest wildfires are caused by operations related to silvicultural and industrial operations. Though few in number compared to other human-caused wildfires, industrial operation-caused wildfires typically occur in rugged topography with heavy natural fuels and are consequently difficult and expensive to suppress.

DNR's staff carry out fire safety inspections for all forest operations. DNR is also authorized to issue citations and order shutdowns of forest operations that do not meet requirements.

As specified in RCW 76.04.075, any person determined to be in violation of DNR fire protection regulations can be found guilty of a misdemeanor.

In addition, operators whose actions result in a landowner fire starting at an industrial operations site are required by RCW 76.04.475 to fight that fire to the full limit of available employees and equipment, and to

Introduction

continue such firefighting effort as necessary to suppress it. Forest operators are also required to be prudent and report operations-caused fires to the DNR Regional Office in which the operation is located.

Important Phone Numbers

Report an escaped fire:	1-800-562-6010
Industrial fire precaution level:	1-800-527-3305
Fire danger by county:	1-800-323-BURN (2876)

DNR Region Offices

Northeast	Colville	(509) 684-7474
Northwest	Sedro Woolley	(360) 856-3500
Olympic	Forks	(360) 374-2800
Pacific Cascade	Castle Rock	(360) 577-2025
Southeast	Ellensburg	(509) 925-8510
South Puget Sound	Enumclaw	(360) 825-1631

DNR Website

dnr.wa.gov

IFPL Information

dnr.wa.gov/ifpl

Burn Ban Information

dnr.wa.gov/burn-restrictions

**Only you can prevent wildfires with
a fire-safe operation.**

1.0 VIOLATIONS

1.1 Rules — Penalty.

RCW 76.04.075

Any person who violates any of the orders or rules adopted under this chapter for the protection of forests from fires is guilty of a misdemeanor and subject to the penalties for a misdemeanor under RCW 9A.20.021, unless another penalty is provided.

1.2 Penalty for violations.

RCW 76.04.085

Unless specified otherwise, violations of the provisions of this chapter shall be a misdemeanor and subject to the penalties for a misdemeanor under RCW 9A.20.021.

1.3 Penalty for violations — Work stoppage notice.

RCW 76.04.415

(1) Every person upon receipt of written notice issued by the department that such person has or is violating any of the provisions of RCW 76.04.215, 76.04.305, 76.04.405, or 76.04.650 or any rule adopted by the department concerning fire prevention and fire suppression preparedness shall cease operations until compliance with the provisions of the sections or rules specified in such notice.

(2) The department may specify in the notice of violation the special conditions and precautions under which the operation would be allowed to continue until the end of that working day.

1.4 Burning permit requirements — Penalty. **WAC 332-24-217**

Failure to comply with the rules in chapter 332-24 WAC voids permission to burn. Any person burning without complying with chapter 332-24 WAC is in violation of RCW 76.04.205 and chapter 70.94 RCW. Convictions or bail forfeitures in connection with illegal burning under chapter 332-24 WAC may result in refusal to issue further permits for a two-year period from the date of the illegal burning. In addition to any other fines and penalties that may be imposed, the department may charge and recover costs from the person responsible for any response to control or extinguish an illegal fire caused in part or in whole by negligent acts or omissions.

2.0 SILVICULTURAL BURNING/PERMITS

2.1 Burning permits.

RCW 76.04.205

(1) Except in certain areas designated by the department or as permitted under rules adopted by the department, a person shall have a valid written burning permit obtained from the department to burn:

- (a) Any flammable material on any lands under the protection of the department; or
- (b) Refuse or waste forest material on forest lands protected by the department.

(2) To be valid a permit must be signed by both the department and the permittee. Conditions may be imposed in the permit for the protection of life, property, or air quality and [the department] may suspend or revoke the permits when conditions warrant. A permit shall be effective only under the conditions and for the period stated therein. Signing of the permit shall indicate the permittee's agreement to and acceptance of the conditions of the permit.

(3) The department may inspect or cause to be inspected the area involved and may issue a burning permit if:

- (a) All requirements relating to fire fighting equipment, the work to be done, and precautions to be taken before commencing the burning have been met;

- (b) No unreasonable danger will result; and
- (c) Burning will be done in compliance with air quality standards established by chapter 70.94 RCW.

(4) The department, authorized employees thereof, or any warden or ranger may refuse, revoke, or postpone the use of permits to burn when necessary for the safety of adjacent property or when necessary in their judgment to prevent air pollution as provided in chapter 70.94 RCW.

2.2 **Dumping mill waste, forest debris — Penalty.**

RCW 76.04.235

(1) No person may dump mill waste from forest products, or forest debris of any kind, in quantities that the department declares to constitute a forest fire hazard on or threatening forest lands located in this state without first obtaining a written permit issued by the department on such terms and conditions determined by the department pursuant to rules enacted to protect forest lands from fire. The permit is in addition to any other permit required by law.

(2) Any person who dumps such mill waste, or forest debris, without a permit, or in violation of a permit is guilty of a gross misdemeanor and subject to the penalties for a gross misdemeanor under RCW 9A.20.021 and may further be required to remove all materials dumped.

2.3 Use of blasting fuse.

RCW 76.04.246

It is unlawful to use fuse for blasting on any area of logging slash or area of actual logging operation without a permit during the closed season. Upon the issuance of a written permit by the department or warden or ranger, fuse may be used during the closed season under the conditions specified in the permit.

2.4 Burning permit program — Requirements and exceptions.

WAC 332-24-201

Under authority granted in RCW 76.04.015 and 76.04.205, the following regulation is hereby promulgated:

- (1) The department is responsible, by law, for the granting of burning permits for burning on lands it protects; and
- (2) The department administers the protection of air quality as provided in chapter 70.94 RCW resulting from burning on lands under its protection; and
- (3) The department has determined that the effects of such burning on life, property and air quality are of year-round effect; therefore
- (4) Throughout the year, outdoor fire is prohibited on lands protected by the department where forest protection assessment is being, or is subject to being, assessed unless:
 - (a) A written burning permit is obtained from

the department and the requirements of WAC 332-24-205 and 332-24-221 are followed; or

(b) Burning meets the regulations outlined in WAC 332-24-205 and 332-24-211.

(5) This chapter applies to all burning on lands protected by the department. It does not apply to agricultural burning as defined in WAC 173-425-030(1) nor to open burning as defined in WAC 173-425-030(2).

2.5 General rules — Minimum requirements for all burning. WAC 332-24-205

The following rules apply to all burning regulated by the department:

(1) The department reserves the right to restrict, regulate, refuse, revoke or postpone outdoor fires under RCW 76.04.205 and 76.04.315, and chapter 70.94 RCW due to adverse fire weather or to prevent restriction of visibility, excessive air pollution or a nuisance.

(2) Burning shall not be allowed within nonattainment areas of the state as established by Washington department of ecology for particulate matter ten microns or less or carbon monoxide, except for:

(a) Fires for improving and maintaining fire dependent ecosystems; or

(b) Fires for training wildland fire fighters; or

- (c) Fires set for a defined research project; or
 - (d) Military training exercises; or
 - (e) The exclusive purpose of managing storm or flood-related debris; or
 - (f) Where exempted by local or state air pollution control agencies.
- (3) Burning shall not be allowed inside urban growth areas as designated under growth management plans, or in cities of greater than ten thousand population as follows:
- (a) In urban growth areas where reasonable alternatives exist.
 - (b) In cities with a population of ten thousand or more as established by the office of financial management:
 - (i) That exceed or threaten to exceed federal or state ambient air quality standards; and
 - (ii) Where reasonable alternatives to outdoor burning exist, in accordance with WAC 173-425-090.
 - (c) After December 31, 2000, burning shall not be allowed in urban growth areas or cities with a population of ten thousand or more.
- (4) No fires shall be ignited when:
- (a) The department of ecology has declared an air pollution episode for the geographic area pursuant to chapter 173-435 WAC; or
 - (b) The department of ecology or a local air

pollution control authority has declared impaired air quality for the geographic area in which the burning is to be done.

- (5) A person responsible for a burn at the time an episode or impaired air quality is called pursuant to chapter 173-425 WAC, shall extinguish the fire by:
- (a) Withholding fuel from the burn;
 - (b) Allowing the fire to burn down; and
 - (c) Aggressively putting out the fire until there is no visible smoke, unless otherwise allowed by the department.
- (6) Prior to lighting, the person doing the burning must telephone the department, and obtain any special instructions for the day and location of the proposed burn. Those instructions thereupon become part of the conditions of burning.
- (7) The fire must not include rubber products, plastic products, asphalt, garbage, dead animals, petroleum products, paints, or any similar prohibited materials that emit dense smoke or create offensive odors when burned, pursuant to RCW 70.94.775(1).
- (8) If the fire creates a nuisance from smoke or flying ash, it must be extinguished. For purposes of this section, a nuisance exists when emissions from any open fire cause physical discomfort or health problems to people residing in the vicinity of the burning or physical damage to property.
- (9) Burning within the department's fire

protection areas shall not:

(a) Cause visibility to be obscured on public roads and highways by the smoke from such fires; or

(b) Endanger life or property through negligent spread of fire or pollutants.

(10) A person capable of extinguishing the fire must attend the fire at all times and the fire must be completely extinguished before being left unattended.

(11) No fires are to be within fifty feet of structures, or within five hundred feet of forest slash without a written burning permit.

(12) The landowner or landowner's designated representative's written permission must be obtained before kindling a fire on the land of another.

(13) The department reserves the authority to provide waivers, exceptions, and/or to impose additional requirements through the use of written burning permits and the smoke management plan.

2.6 Specific rules for small fires not requiring a written burning permit.

WAC 332-24-211

In addition to WAC 332-24-205, the following rules shall apply to burning regulated by the department that does not require a written burning permit. A written burning permit is not required from the department under the following conditions:

- (1)** In certain geographic areas of the state as designated by the department in subsection (3) of this section and when the requirements of subsections (4), (5), and (6) of this section are met; or
- (2)** When the fire is:
 - (a)** Contained within a campfire pit, approved by the department, located in a state, county, municipal, or other campground;
 - (b)** Contained within a camp stove or barbecue;
 - (c)** A hand-built pile no larger than four feet in diameter that is being used exclusively for recreational purposes; and
 - (d)** Situated on bare soil, gravel bars, beaches, green field, or other similar areas free of flammable material for a sufficient distance adequate to prevent the escape of fires.
- (3)** A fire that does not require a written permit has established size limitations based on time of year and the county within which the burning occurs.
 - (a)** From July 1 to October 15 individual pile size in all counties shall be limited to no larger than four feet, except pile size in Clallam and Jefferson counties is limited to ten feet.
 - (b)** From October 16 through June 30 individual pile size in all counties is limited to ten feet; except pile size is limited to four feet in

Island, King, Kitsap, Mason, Pierce, San Juan, and Spokane counties.

(4) A serviceable shovel and a minimum of five gallons of water must be within the immediate vicinity of the fire. A bucket is acceptable if the outdoor fire is adjacent to an accessible body of water. A charged garden hose or other adequate water supply may be substituted for the five gallon water requirement.

(5) Only one pile may be burned at any one time and each pile must be extinguished before lighting another.

(6) Burning must be done during periods of calm to very light winds. Burning when wind will scatter loose flammable materials, such as dry leaves and clippings, is prohibited.

2.7 Specific rules for burning that requires a written burning permit.

WAC 332-24-221

Persons not able to meet the requirements of WAC 332-24-205 and 332-24-211 must apply for a written burning permit through the department. In addition to the rules outlined in WAC 332-24-205, the following are additional requirements for written permits:

(1) Fees for written burning permits will be charged and collected pursuant to chapter 70.94 RCW and shall be one hundred five dollars fifty cents for under one hundred tons of consumable debris; and for burns one hundred tons of consumable debris and greater as follows:

CONSUMABLE DEBRIS FEE SCHEDULE

100–500 tons	\$357
501–1,000 tons	\$846
1,001–1,500 tons.....	\$1,356
1,501–2,000 tons	\$1,869
2,001–2,500 tons	\$2,380
2,501–3,000 tons	\$2,893
3,001–3,500 tons	\$3,402
3,501–4,000 tons	\$3,914
4,001–4,500 tons.....	\$4,427
4,501–5,000 tons	\$4,938
5,001–5,500 tons	\$5,451
5,501–6,000 tons	\$5,962
6,001–6,500 tons	\$6,476
6,501–7,000 tons	\$6,987
7,001–7,500 tons	\$7,499
7,501–8,000 tons	\$8,011
8,001 –8,500 tons.....	\$8,523
8,501–9,000 tons	\$9,035
9,001–9,500 tons	\$9,548
9,501–10,000 tons	\$10,057
10,001–plus tons.....	\$10,395

plus \$0.50 per ton for tons over 10,000

For purposes of this section, consumable debris is the amount of debris that the department determines will be consumed by the proposed burning.

- (2)** Written burning permits are not considered valid unless all of the following conditions apply:
 - (a)** The written permit has been signed by the applicant agreeing to follow all requirements of chapter 332-24 WAC, the smoke management plan in effect at the time of the burning, and any additional terms and conditions specified by the department in writing; and
 - (b)** The required permit fee has been secured or paid according to approved department procedures; and
 - (c)** The person doing the burning has the permit in possession while burning and is complying with all terms and conditions of such permit, the smoke management plan in effect at the time of the burning, and all applicable portions of chapter 332-24 WAC.
- (3)** Permits are written only for the burn site and fuel quantity represented to the department on the permit application. Addition of fuel or changing the burn site, after the permit application has been submitted to the department, is prohibited unless a new permit application is submitted and any added permit fee is paid, if required.

2.8 Dumping mill waste, forest debris — Creation of a fire hazard — Permits.

WAC 332-24-261

(1) Forest debris or mill waste dumped in the following manner on or near forest land shall constitute a forest fire hazard and require a dumping permit:

- (a) Piles of fifty cubic yards or more; or
- (b) Two or more piles totaling fifty cubic yards or more, less than three hundred feet apart; or
- (c) A pile less than three hundred feet from a pile placed by another where such piles would total fifty cubic yards or more; or
- (d) When dumped adjacent to piles of fifty cubic yards or more which were in existence before August 9, 1971; or
- (e) When dumped in smaller quantities or greater distances than above when such dumpings are likely to support, intensify or further spread the fire, thereby threatening forest land and/or endangering life or property; however forest debris accumulated on forest land from logging or silvicultural activities on the land on which such activities took place, or activities regulated by RCW 76.04.650, shall not be subject to the permit requirement of this section, except when forest debris accumulated on land clearing or right of way projects subject to RCW 76.04.650 is taken away from such areas and dumped.

(2) No person shall dump or cause to be dumped a forest fire hazard on or threatening forest land without first obtaining a written permit from the department.

(a) Any person having legal authority to dump mill waste from forest products or forest debris, on the described property, shall make application to the department or authorized employees for a permit to do so. The application shall state and include:

(i) The location;

(ii) The approximate quantity to be dumped;

(iii) A description of the material to be dumped;

(iv) A map illustrating the proposed dump site;

(v) The name of the person by whom the dumping is to be done.

(b) Upon receipt of an application, the department will inspect the area described in the application. The department, in issuing the permit, may impose conditions in such permit to prevent the creation of a forest fire hazard.

(c) In situations as outlined in subsection (1) (e) of this section, the department may notify the appropriate persons, and such person or persons shall be required to obtain a permit

for the continued existence of the dumping of such fire hazard. This permit is required to ensure that such dumping does not create a forest fire hazard and outlines required terms and conditions to eliminate or abate any forest fire hazard that may be created by dumping.

(d) A dumping permit shall be effective only under the conditions and for the period stated therein. The department shall have the authority to rescind a permit upon failure to comply with any of the conditions or terms.

(3) Any person who dumps such mill waste or forest debris, without a permit or in violation of a permit, is guilty of a gross misdemeanor and subject to the penalties for a gross misdemeanor under RCW 9A.20.021 and may further be required to remove all materials dumped.

3.0 FOREST CLOSURES / SUSPENSIONS

3.1 Closed to entry — Designation.

RCW 76.04.305

(1) When, in the opinion of the department, any forest land is particularly exposed to fire danger, the department may designate such land as a region of extra fire hazard subject to closure, and the department shall adopt rules for the protection thereof.

(2) All such rules shall be published in such newspapers of general circulation in the counties wherein such region is situated and for such length of time as the department may determine.

(3) When in the opinion of the department it becomes necessary to close the region to entry, posters carrying the wording “Region of extra fire hazard-CLOSED TO ENTRY-except as provided by RCW 76.04.305” and indicating the beginning and ending dates of the closures shall be posted on the public highways entering the regions.

(4) The rules shall be in force from the time specified therein, but when in the opinion of the department such forest region continues to be exposed to fire danger, or ceases to be so exposed, the department may extend, suspend, or terminate the closure by proclamation.

(5) This section does not authorize the department to prohibit the conduct of industrial operations, public work, or access of permanent residents to

their own property within the closed area, but no one legally entering the region of extra fire hazard may use the area for recreational purposes which are prohibited to the general public under the terms of this section.

3.2 Suspension of burning permits/privileges.

RCW 76.04.315

In times and localities of unusual fire danger, the department may issue an order suspending any or all burning permits or privileges authorized by RCW 76.04.205 and may prohibit absolutely the use of fire in such locations.

3.3 Closure of forest operations or forest lands.

RCW 76.04.325

(1) When in the opinion of the department weather conditions arise which present an extreme fire hazard, whereby life and property may be endangered, the department may issue an order shutting down all logging, land clearing, or other industrial operations which may cause a fire to start. The shutdown shall be for the periods and regions designated in the order. During shutdowns, all persons are excluded from logging operating areas and areas of logging slash, except those present in the interest of fire protection.

(2) When in the opinion of the department extreme fire weather exists, whereby forest lands may be endangered, the department may issue an order restricting access to and activities on forest lands. The order shall describe the regions and

extent of restrictions necessary to protect forest lands. During the period in which the order is in effect, all persons may be excluded from the regions described, except those persons present in the interest of fire protection.

(3) Each day's violation of an order under this section shall constitute a separate offense.

3.4 Industrial restrictions.

WAC 332-24-301

(1) When in the opinion of the regional manager, for the department's administrative region, weather conditions arise which present a hazard to lands protected by the department, whereby life and property may be endangered, the regional manager, through the authority granted the department in RCW 76.04.015 and 76.04.325, may designate industrial precaution levels thereby regulating logging, land clearing or other industrial operations which may cause a fire to start on or adjacent to forest lands. The restrictions shall be for periods designated and shall only affect those portions of the state under the administrative jurisdiction of the area manager.

(2) In making a decision as to when restrictions or shutdowns should occur, the area manager shall utilize available information as to current and projected fire danger, current and projected weather, current fire activity and available resources for fire suppression.

(3) All persons performing logging, land clearing or other operations which may cause a fire to start on or adjacent to forest lands shall comply with the restrictions described in the designated industrial precaution level.

(a) The industrial fire precaution levels shall be:

(i) Level 1. Closed season - Fire precaution requirements are in effect. A fire watch/security is required at this and all higher levels unless otherwise waived.

(ii) Level 2. Partial hootowl - The following may operate only between the hours of 8 p.m. and 1 p.m. local time:

- ▶ Power saws except at loading sites;
- ▶ Cable yarding;
- ▶ Blasting;
- ▶ Welding or cutting of metal.

(iii) Level 3. Partial shutdown - The following are prohibited except as indicated:

▶ **Cable yarding** - except that gravity operated logging systems employing non-motorized carriages or approved motorized carriages may operate between 8 p.m. and 1 p.m. when all block and moving lines, except for the line between the carriage and the chokers, are suspended ten feet above the ground;

▶ **Power saws** - except power saws may be used at loading sites and on tractor/skidder operations between the hours of 8 p.m. and 1 p.m. local time.

In addition, the following are permitted to operate between the hours of 8 p.m. and 1 p.m. local time:

▶ Tractor, skidder, feller-buncher, forwarder, or shovel logging operations where tractors, skidders, or other equipment with a blade capable of constructing fireline, are immediately available to quickly reach and effectively attack a fire start;

▶ Mechanized loading and hauling of any product or material;

▶ Blasting;

▶ Welding or cutting of metal.

(iv) **Level 4. General shutdown** - All operations are prohibited.

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

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

(ii) **“Cable yarding systems”** means

a yarding system employing cables and winches in a fixed position.

(iii) “Approved motorized carriages” means a cable yarding system employing a motorized carriage with two fire extinguishers, each with at least a 5 BC rating, mounted securely on opposite sides of the carriage, an emergency motor cutoff, and an approved exhaust system.

(iv) “Low hazard area” means any area where the department has determined the combination of elements reduces the probability of fire starting and/or spreading.

(v) “Closed season” is that season of the year when a fire hazard exists as declared by the department or other responsible agency.

(c) A written waiver may be issued by the department for fire-safe activities in low-hazard areas.

(d) Where hauling involves transit through more than one shutdown/regulated use area, the precaution level at the woods loading site shall govern the level of haul restriction, unless otherwise prohibited by other than the industrial precaution level system.

4.0 FIRE PROTECTION REGULATIONS

4.1 Steam, internal combustion, or electrical engines and other spark-emitting equipment regulated.

RCW 76.04.405

It is unlawful during the closed season for any person to operate any steam, internal combustion, or electric engine, or any other spark-emitting equipment or device, on any forest land or in any place where, in the opinion of the department, fire could spread to forest land, without first complying with the requirements as may be established by the department by rule pursuant to this chapter.

4.2 Unauthorized entry into sealed fire tool box.

RCW 76.04.425

It is unlawful to enter into a sealed fire tool box without authorization.

4.3 Reports of fire.

RCW 76.04.445

(1) Any person engaged in any activity on forest lands shall immediately report to the department, in person or by radio, telephone, or telegraph, any fires on forest lands.

(2) Railroad companies and other public carriers operating on or through forest lands shall immediately report to the department, in person or by radio, telephone, or telegraph, any fires on or adjacent to their right of way or route.

4.4 Lighted material, etc. — Receptacles in conveyances.

RCW 76.04.455

(1)(a) Except as otherwise provided in this subsection, it is unlawful for any person to, during the closed season:

(i) Discard any lighted tobacco, cigars, cigarettes, matches, fireworks, charcoal, or other lighted material, discharge any incendiary ammunition, release a sky lantern, or detonate an exploding target on or over any forest, brush, range, or grain areas; or

(ii) Smoke any flammable material when in forest or brush areas except on roads, cleared landings, gravel pits, or any similar area free of flammable material.

(b) The prohibitions contained in this subsection do not apply to the detonation of nonflammable exploding targets on any forest, brush, range, or grain areas if the person detonating the nonflammable exploding target:

(i) Has lawful possession and control of the land in question; or

(ii) Has prior written permission for the activity from the person who owns or has lawful possession and control of the land in question.

(c) The prohibitions contained in this subsection do not apply to suppression actions authorized or

conducted by the department under the authority of this chapter.

(2)(a) Except as otherwise provided in this subsection, it is unlawful for any person to, during any time outside of the closed season, discharge any incendiary ammunition, release a sky lantern, or detonate an exploding target on or over any forest, brush, range, or grain areas.

(b) The prohibitions contained in this subsection do not apply if the person conducting the otherwise prohibited action:

(i) Has lawful possession and control of the land in question; or

(ii) Has prior written permission for the activity from the person who owns or has lawful possession and control of the land in question.

(3) Every conveyance operated through or above forest, range, brush, or grain areas must be equipped in each compartment with a suitable receptacle for the disposition of lighted tobacco, cigars, cigarettes, matches, or other flammable material.

(4) Every person operating a public conveyance through or above forest, range, brush, or grain areas shall post a copy of this section in a conspicuous place within the smoking compartment of the conveyance; and every person operating a saw mill or a logging camp in any such areas shall post a

copy of this section in a conspicuous place upon the ground or buildings of the milling or logging operation.

4.5 Certain snags to be felled currently with logging.

RCW 76.04.465

Standing dead trees constitute a substantial deterrent to effective fire control action in forest areas, but are also an important and essential habitat for many species of wildlife. To insure continued existence of these wildlife species and continued forest growth while minimizing the risk of destruction by conflagration, only certain snags must be felled currently with the logging. The department shall adopt rules relating to effective fire control action to require that only certain snags be felled, taking into consideration the need to protect the wildlife habitat.

4.6 Willful setting of fire.

RCW 76.04.710

It is unlawful for any person to willfully start a fire, whether on his or her land or the land of another, whereby forest lands or the property of another is endangered, under circumstances not amounting to arson in either the first or second degree or reckless burning in either the first or second degree.

4.7 Removal of notices.

RCW 76.04.720

It is unlawful for any person to willfully and without authorization deface or remove any warning notice posted

under the requirements of this chapter.

4.8 Negligent fire — Spread.

RCW 76.04.730

It is unlawful for any person to negligently allow fire originating on the person's own property to spread to the property of another.

4.9 Reckless burning.

RCW 76.04.740

- (1) It is unlawful to knowingly cause a fire or explosion and thereby place forest lands in danger of destruction or damage.
- (2) This section does not apply to acts amounting to reckless burning in the first degree under RCW 9A.48.040.
- (3) Terms used in this section shall have the meanings given to them in Title 9A RCW.
- (4) A violation of this section shall be punished as a gross misdemeanor under RCW 9A.20.021.

4.10 Spark emitting equipment requirements.

WAC 332-24-405

It shall be unlawful for anyone to operate, during the closed season as defined in RCW 76.04.005, any steam, internal combustion, electric engines or any other devices which emit sparks on any forest land or any other place where, in the opinion of the department, fire could be communicated to forest land without first complying with the following requirements for equipment or operations:

- (1) Fixed-position machine:
 - (a) Two fire extinguishers, each of at least a 5 B C rating;
 - (b) An approved exhaust system;
 - (c) An appropriately mounted shovel.
- (2) Logging railroad locomotive or common carrier locomotive:
 - (a) An approved exhaust system;
 - (b) Communications between the train and dispatcher for reporting fires to the responsible protection agency;
 - (c) Each locomotive shall be followed by a speeder patrol at such times, and in such locations, as designated by the department. The speeder patrol shall be equipped with:
 - (i) Two shovels;
 - (ii) One pulaski;
 - (iii) One adze eye hoe;
 - (iv) Two serviceable five gallon back-pack pump cans filled with water;
 - (v) An approved exhaust system;
 - (vi) Communications between the speeder and the dispatcher for reporting fires to the responsible protection agency;
 - (vii) One fire extinguisher of at least a 5 B C rating.
- (3) Passenger vehicle used for industrial or commercial operations:

- (a) A fire extinguisher of at least a 5 B C rating;
 - (b) An approved exhaust system.
- (4) Portable power saw:
 - (a) A chemical fire extinguisher of at least eight ounce capacity, fully charged and in good working order. The fire extinguisher shall be kept in the immediate possession of the operator;
 - (b) An approved exhaust system;
 - (c) A shovel, which shall be kept within two minutes round-trip of the operator;
 - (d) A firewatch.
- (5) Spark-emitting engines used for purposes not specifically mentioned herein, which, in the opinion of the department, may cause a forest fire to start, unless equipped with:
 - (a) An approved exhaust system;
 - (b) One fire extinguisher of at least a 5 B C rating; however two-wheeled, three-wheeled, and four-wheeled motorcycles shall only be required to have an approved exhaust system.
- (6) Tractor or mobile machine:
 - (a) One fire extinguisher of at least a 5 B C rating;
 - (b) An approved exhaust system;
 - (c) An appropriately mounted shovel.
- (7) Truck or vehicle used for hauling:

- (a) One fire extinguisher of at least a 5 B C rating;
 - (b) An approved exhaust system;
 - (c) An appropriately mounted shovel.
- (8) During yarding, loading, milling, land clearing and right of way clearing, there must be kept at each landing, yarding tree, mill or other suitable place designated by the department, two serviceable five gallon backpack pump cans filled with water; however such operations in other areas of the state as may be designated by the department, in writing, must comply with the following additional requirements:
- (a) A pump truck or pump trailer to be kept on the landing or within five minutes round-trip of the operation;
 - (b) A firewatch;
 - (c) Adequate facilities to report a fire to the responsible protection agency within fifteen minutes of detection.
- (9) Balloon, skyline and other similar long-line or aerial logging systems with greater than a twelve hundred foot distance between the yarder and tailhold or tailblock unless complying with the following requirements:
- (a) Two serviceable five gallon backpack pump cans filled with water at each land-ing, yard-ing tree or other suitable place designated by the department;

(b) Portable water supply available and equipped in order to supply water to the furthestmost extremity of the operation within a maximum of ten minutes from the time of detection. The portable water supply shall contain a minimum of three hundred gallons of water and the complement of accessories and equipment identified in the definition of the pump truck or pump trailer. The portable water supply shall be equipped with a pump capable of delivering twenty gallons per minute, at sufficient pressure, using a one-quarter inch nozzle tip through a fifty foot length of one inch or one and one-half inch rubber-lined hose. The pump shall be plumbed with a bypass or pressure relief valve. The water supply shall be located and outfitted for immediate use at the landing, and so that it may also be readily lifted and transported by use of the rigging system or cargo hook. Logging systems which are not capable of lifting the portable water supply and the fire tool kit in one lift must accomplish this in no more than three separate lifts. The fire tool kit shall be packaged and located for ready attachment to the rigging for delivery to the portable water supply while it is in operation. The fire tool kit shall contain:

- (i)** Three axes or pulaskis;
- (ii)** Six shovels;
- (iii)** Six adze eye hoes.

- (c) Firewatch;
 - (d) Adequate facilities to report a fire to the responsible protection agency within fifteen minutes of detection.
- (10) Each helicopter used for yarding, loading and land clearing or slash burning unless equipped and complying with the following:
- (a) A VHF radio, maintained in operational use, at frequency 122.9 MHz;
 - (b) A portable water bucket of the following capacities, with necessary cargo hooks and tripping mechanism for dropping water on a fire, shall be located at the heliport serving the operation;

External Payload of Helicopter	Minimum Required Bucket Size
780 lbs. or less	50 gallons
781 lbs. to 1600 lbs.	100 gallons
1,601 lbs. to 3,900 lbs.	200 gallons
3,901 lbs. or more	300 gallons

- (c) A water source of sufficient capacity readily accessible to allow the bucket to be filled three times without refilling the source. The water source must be located within five minutes round-trip flying time of every part of the operation;
- (d) The following sized fire tool kit packaged for ready attachment to the cargo hook and

located at the heliport serving the operation:

- (i) Two axes or pulaskis;
- (ii) Three shovels;
- (iii) Three adze eye hoes.

(e) Two fire extinguishers of at least 20 B C rating shall be kept with refueling equipment. They shall be appropriately mounted, suitably marked and available for immediate use.

(11) Railroad track installation and maintenance:

(a) Crews - ten people or less:

(i) A pump truck or pump trailer as defined in WAC 332-24-005(24); however the water capacity of the pump truck or pump trailer may be less than three hundred gallons, but greater than one hundred fifty gallons when the unit is capable of producing department-approved high expansion foam;

(ii) One serviceable five gallon backpack pump can;

(iii) Communications between the crew and dispatcher for reporting fires to the responsible protection agency.

(b) Crews - greater than ten people:

(i) A pump truck or pump trailer as defined in WAC 332-24-005(24) that is also capable of producing department-approved

high expansion foam;

(ii) A fire tool box containing a minimum of:

(A) Six pulaskis;

(B) Six adze eye hoes;

(C) Six shovels.

(iii) Communications between the crew and dispatchers for reporting fires to the responsible protection agency.

(c) Track welding, cutting and grinding shall be curtained by not less than a four foot high canvas type curtain, which completely encloses the operation and prevents the escapement of sparks from welding, cutting or grinding.

(12) Prior to beginning operations, all snags, stubs and dead trees over fifteen feet in height shall be cut within fifty feet of each fixed-position machine which will operate for two consecutive days or more in one position.

The ground shall be initially cleared of all flammable debris under four inches in diameter beneath and within ten feet of each fixed-position machine which will operate for two consecutive days or more in one position.

(13) The area around the tail, corner and haul back blocks must be kept clean of all flammable debris under four inches in diameter for a distance of six feet in all directions. Suitable flame-resistant blanket devices may be substituted for the clear-

ing requirement when the six foot diameter area is covered. Each block must be equipped with one serviceable five gallon backpack pump filled with water, one shovel and one pulaski. Operations with multiple blocks must have this complement of tools and water within one hundred feet of each block.

(14) It shall be the operator's responsibility to identify points of line rub on cable logging operations during the closed season. If line rub occurs, the operator shall do what is necessary to stop, alleviate or control the line rub in order to prevent fires at these points. Satisfactory means include, but are not limited to:

- (a)** Removal of the object which the line is rubbing on;
- (b)** Changing the logging system;
- (c)** Moving the cable location.

(15) The department may designate certain areas which are known to have rapid fluctuations of extreme fire weather and/or concentrations of additional hazards. Operators in such areas may be required to monitor the humidity and/or wind speed and maintain a daily log of such readings. Relative humidity readings and wind speed must be determined and recorded by instruments and methods approved by the department.

The department may further require the operator in such areas to restrict operations when, in the opinion of the department, the recorded

readings or current conditions are such that if a fire starts in that area it would probably spread to conflagration proportions regardless of personnel and equipment available for initial fire suppression.

4.11 Substitution, reduction, or increase of requirements.

WAC 332-24-411

(1) The department may accept serviceable equivalents to any of the requirements in WAC 332-24-405. Such substitutions must be made in writing by the department.

(2) The department may, by written permission, reduce the requirements set forth in WAC 332-24-405 whenever, in the opinion of the department, the operation is of such type or location and/or weather is such that all the requirements are not needed for the protection of life and property.

(3) The department may, in writing, require additional equipment, above the requirements of WAC 332-24-405 for fire protection in those areas known to have had rapid fluctuations of extreme fire weather and/or concentrations of additional hazards.

5.0 HAZARD ABATEMENT

5.1 Disposal of forest debris — Permission to allow trees to fall on another's land.

RCW 76.04.650

Everyone clearing land or clearing right of way for railroad, public highway, private road, ditch, dike, pipe or wire line, or for any other transmission, or transportation utility right of way, shall pile and burn or dispose of by other satisfactory means, all forest debris cut thereon, as rapidly as the clearing or cutting progresses, or at such other times as the department may specify, and if during the closed season, in compliance with the law requiring burning permits.

No person clearing any land or right of way, or in cutting or logging timber for any purpose, may fell, or permit to be felled, any trees so that they may fall onto land owned by another without first obtaining permission from the owner in addition to complying with the terms of this section for the disposal of refuse. All the terms of this section and other forest laws of the state shall be observed in all clearings of right of way or other land on behalf of the state itself or any county thereof, either directly or by contract, and, unless unavoidable emergency prevents, provision shall be made by all officials directing the work for withholding a sufficient portion of the payment therefor until the disposal is completed, to insure the completion of the disposal in compliance with this section.

5.2 Additional fire hazards — Extreme fire hazard areas — Abatement, isolation or reduction — Summary action — Recovery of costs — Inspection of property.

RCW 76.04.660

(1) The owner of land on which there is an additional fire hazard, when the hazard is the result of a landowner operation or the land is within an area covered by a forest health hazard warning issued under RCW 76.06.180, shall take reasonable measures to reduce the danger of fire spreading from the area and may abate the hazard by burning or other satisfactory means.

(2) An extreme fire hazard shall exist within areas covered by a forest health hazard order issued by the commissioner of public lands under RCW 76.06.180 in which there is an additional fire hazard caused by disturbance agents and the landowner has failed to take such action as required by the forest health hazard order. The duties and liability of such landowner under this chapter are as described in subsections (5), (6), and (7) of this section.

(3) The department shall adopt rules defining areas of extreme fire hazard that the owner and person responsible shall abate. The areas shall include but are not limited to high risk areas such as where life or buildings may be endangered, areas adjacent to public highways, and areas of frequent public use.

(4) The department may adopt rules defining other conditions of extreme fire hazard with a high potential for fire spreading to lands in other ownerships. The department may prescribe additional measures that shall be taken by the owner and person responsible to isolate or reduce the extreme fire hazard.

(5) The owner or person responsible for the existence of the extreme fire hazard is required to abate, isolate, or reduce the hazard. The duty to abate, isolate, or reduce, and liability under this chapter, arise upon creation of the extreme fire hazard. Liability shall include but not be limited to all fire suppression expenses incurred by the department, regardless of fire cause.

(6) If the owner or person responsible for the existence of the extreme fire hazard or forest debris subject to RCW 76.04.650 refuses, neglects, or unsuccessfully attempts to abate, isolate, or reduce the same, the department may summarily abate, isolate, or reduce the hazard as required by this chapter and recover twice the actual cost thereof from the owner or person responsible. Landowner contingency forest fire suppression account moneys may be used by the department, when available, for this purpose. Moneys recovered by the department pursuant to this section shall be returned to the landowner contingency forest fire suppression account.

(7) Such costs shall include all salaries and expenses of people and equipment incurred therein,

including those of the department. All such costs shall also be a lien upon the land enforceable in the same manner with the same effect as a mechanic's lien.

(8) The summary action may be taken only after ten days' notice in writing has been given to the owner or reputed owner of the land on which the extreme fire hazard or forest debris subject to RCW 76.04.650 exists. The notice shall include a suggested method of abatement and estimated cost thereof. The notice shall be by personal service or by registered or certified mail addressed to the owner or reputed owner at the owner's last known place of residence.

(9) A landowner or manager may make a written request to the department to inspect their property and provide a written notice that they have complied with a forest health hazard warning or forest health hazard order, or otherwise adequately abated, isolated, or reduced an additional or extreme fire hazard. An additional or extreme fire hazard shall be considered to continue to exist unless and until the department, in its sole discretion, issues such notice.

5.3 Felling of snags.

WAC 332-24-401

(1) Snags within areas of extreme fire hazard requiring abatement, as defined by WAC 332-24-005(28), shall be felled concurrently with the logging operation, unless:

(a) Such snag contains a visible nest of a species of wildlife designated by the United States Fish and Wildlife Service as threatened or endangered; or

(b) The department, upon written request of the landowner, determines, in writing, that such snag does not represent a substantial deterrent to effective fire control action.

(2) The department may designate, in writing, that additional snags be felled concurrently with the logging operation if, in the department's opinion, they represent a substantial deterrent to effective fire control action, unless such snag contains a visible nest of a threatened or endangered species.

5.4 WAC Extreme fire hazard requiring abatement.

332-24-650

A forest landowner shall be absolutely liable for fire suppression costs for any fire that occurs and abatement is required under the following conditions:

(1) Any additional fire hazard within a distance of one hundred feet from the closest edge of the running surface of any state or federal highway, county road or railroad;

(2) Any additional fire hazard within a distance of one hundred feet from the closest edge of the running surface of any other road, as hereinafter defined, that is generally open to and frequently used by the public during periods of fire danger. For the

purpose of these rules and regulations, the term “other road” shall be defined as those roads owned or controlled by private individuals, partnerships or corporations, or by public agencies, including, without limitation, the department or the United States Forest Service, and which provide the principal access during periods of fire danger where normal use is seventy-five vehicles or more per week to geographic features of significant public interest and use such as lakes, streams, established viewpoints, lava tubes, ice caves, features of unique geological interest, recreational parks and developments or other facilities intended for frequent public use;

(3) Any additional fire hazard within a distance of two hundred feet, if required in writing by the department, and up to a maximum of five hundred feet, adjacent to public campgrounds, school grounds, other areas of frequent concentrated public use, buildings in use as residences (furnished and being occupied or available for immediate occupancy) and other buildings or structures valued at one thousand dollars or more, which are not owned by the owner of the land upon which such additional fire hazard exists;

(4) The department may identify other specific areas of additional fire hazard, with comparable high risk of ignition and/or a threat to life and property and, upon written notification, require abatement.

5.5 Extreme fire hazard — Eight hundred contiguous acres.

WAC 332-24-652

(1) A forest landowner shall be absolutely liable for fire suppression costs for any fire that occurs within an extreme fire hazard created by eight hundred or more contiguous acres of additional fire hazard when:

(a) The additional fire hazard's origin is less than five years, except when:

(i) The material is fifty percent or more Douglas fir by volume, the time of origin shall be less than eight years; or

(ii) The material is fifty percent or more cedar by volume, the time of origin shall be less than twenty years.

(b) Its unisolated compartments comprise eight hundred acres or more regardless of ownership or logging pattern;

(c) Its composition comprises an average tonnage greater than nine tons per acre of material, three inches or less in diameter.

(2) The department may identify additional acres comprising eight hundred acres or more of additional fire hazard extending beyond these limitations of time, with comparable high hazard and/or a threat to life or property and, upon written notification, place absolute liability for fires with the forest landowner(s).

(3) Areas of additional fire hazard will be considered as one contiguous area, unless one of the following conditions are satisfied:

(a) The areas are separated by natural barriers of at least three hundred feet in width at their narrowest point. Natural barriers can include streams, ridge tops and/or areas not comprising an additional fire hazard;

(b) The areas are separated by a constructed barrier as provided in the definition of isolation;

(c) A combination of (a) and (b) of this subsection.

5.6 WAC Extreme fire hazard — Liability — Responsibility.

332-24-654

(1) Liability for the existence of an extreme hazard arises upon creation of the extreme hazard. No written notification by the department of its existence is required. Liability shall include any department suppression costs incurred during the act(s) of isolating, reducing or abating the extreme hazard.

(2) The owner(s) and/or person(s) responsible for the existence of an extreme fire hazard requiring abatement, as defined in WAC 332-24-650, shall abate the extreme fire hazard. The obligation to abate shall extend equally to all acreages of the extreme fire hazard, regardless of the number of

owner(s) and/or person(s) responsible for its existence. The liability for the existence of the extreme fire hazard continues until the extreme fire hazard is abated.

(3) The owner(s) and/or person(s) responsible for the existence of an extreme fire hazard, as defined in WAC 332-24-652, may isolate and/or reduce the extreme fire hazard to remove the absolute liability associated with its existence. The liability assumed for the existence of the extreme fire hazard shall extend equally to all acreages involved, regardless of owner(s) and/or person(s) responsible for its existence. Isolation, when used, must be maintained for a period of eight years from creation of the extreme fire hazard, unless the extreme fire hazard is otherwise eliminated prior to that time. Isolation and/or reduction may be performed in any manner consistent with existing statutes, these regulations or as approved in writing by the department.

5.7 Recovery of costs.

WAC 332-24-658

The department may, following ten days notice to the owner(s) and/or person(s) responsible for an extreme fire hazard that must be abated, summarily cause it to be abated, except that broadcast burning shall not be used by the department as an abatement procedure without prior written consent of all the owner(s) and/or person(s) responsible. This summary action may be taken ten days after notice as required by RCW 76.04.660. Obligations for

recovery of costs incurred by the department shall be in accordance with RCW 76.04.660 and shall be prorated by the department to the owner(s) and/or person(s) responsible for the extreme fire hazard on the ratio of their acres of involvement to the total acres involved.

5.8 Approved isolation, reduction, or abatement — Relief of liability.

WAC 332-24-660

The owner(s) and/or person(s) responsible for an extreme fire hazard may identify, in writing, the procedures, or the natural or other processes which were taken to abate, isolate or reduce the extreme fire hazard and request the department to declare, in writing, whether the area does or does not constitute an extreme hazard. Absence of such a request on the part of the owner(s) and/or person(s) responsible for an extreme fire hazard will not prejudice their defense in the event of a fire.

As an alternative, the owner(s) and/or person(s) responsible may implement a plan of increased protection, which has received prior written approval of the department, for the specific location.

6.0 DEFINITIONS

6.1 Definitions in RCW 76.04

RCW 76.04.005

As used in this chapter, the following terms have the meanings indicated unless the context clearly requires otherwise.

(1) **“Additional fire hazard”** means a condition existing on any land in the state:

(a) Covered wholly or in part by forest debris which is likely to further the spread of fire and thereby endanger life or property; or

(b) When, due to the effects of disturbance agents, broken, down, dead, or dying trees exist on forestland in sufficient quantity to be likely to further the spread of fire within areas covered by a forest health hazard warning or order issued by the commissioner of public lands under RCW 76.06.180. The term “additional fire hazard” does not include green trees or snags left standing in upland or riparian areas under the provisions of RCW 76.04.465 or chapter 76.09 RCW.

(2) **“Closed season”** means the period between April 15 and October 15, unless the department designates different dates because of prevailing fire weather conditions.

(3) **“Commissioner”** means the commissioner of public lands.

(4) **“Department”** means the Department of Natural Resources, or its authorized representatives, as defined in chapter 43.30 RCW.

Definitions

- (5) **“Department protected lands”** means all lands subject to the forest protection assessment under RCW 76.04.610 or covered under contract or agreement pursuant to RCW 76.04.135 by the department.
- (6) **“Disturbance agent”** means those forces that damage or kill significant numbers of forest trees, such as insects, diseases, wind storms, ice storms, and fires.
- (7) **“Emergency fire costs”** means those costs incurred or approved by the department for emergency forest fire suppression, including the employment of personnel, rental of equipment, and purchase of supplies over and above costs regularly budgeted and provided for nonemergency fire expenses for the biennium in which the costs occur.
- (8) **“Exploding target”** means a device that is designed to marketed to ignite or explode when struck by firearm ammunition or other projectiles.
- (9) **“Forest debris”** includes forest slash, chips, and any other vegetative residue resulting from activities on forest land.
- (10) **“Forest fire service”** includes all wardens, rangers, and other persons employed especially for preventing or fighting forest fires.
- (11) **“Forest land”** means any unimproved lands which have enough trees, standing or down, or flammable material, to constitute in the judgment of the department, a fire menace to life or property. Sagebrush and grass areas east of the summit of

the Cascade Mountains may be considered forest lands when such areas are adjacent to or intermingled with areas supporting tree growth. Forest land, for protection purposes, does not include structures.

(12) “Forest landowner,” “owner of forest land,” “landowner,” or “owner” means the owner or the person in possession of any public or private forest land.

(13) “Forest material” means forest slash, chips, timber, standing or down, or other vegetation.

(14) “Incendiary ammunition” means ammunition that is designed to ignite or explode upon impact with or penetration of a target or designed to trace its course in the air with a trail of smoke, chemical incandescence, or fire.

(15) “Landowner operation” means every activity, and supporting activities, of a forest landowner and the landowner’s agents, employees, or independent contractors or permittees in the management and use of forest land subject to the forest protection assessment under RCW76.04.610 for the primary benefit of the owner. The term includes, but is not limited to, the growing and harvesting of forest products, the development of transportation systems, the utilization of minerals or other natural resources, and the clearing of land. The term does not include recreational and/or residential activities not associated with these enumerated activities.

Definitions

(16) “Local fire suppression assets” means fire-fighting equipment that is located in close proximity to the wildland fire and that meets department standards and requirements.

(17) “Local wildland fire liaison” means the person appointed by the commissioner to serve as the local wildland fire liaison as provided in RCW 43.30.111.

(18) “Participating landowner” means an owner of forest land whose land is subject to the forest protection assessment under RCW 76.04.610.

(19) “Sky lantern” means an unmanned self-contained luminary device that uses heated air produced by an open flame or produced by another source to become or remain airborne.

(20) “Slash” means organic forest debris such as treetops, limbs, brush, and other dead flammable material remaining on forest land as a result of a landowner operation.

(21) “Slash burning” means the planned and controlled burning of forest debris on forest lands by broadcast burning, under burning, pile burning, or other means, for the purposes of silviculture, hazard abatement, or reduction and prevention or elimination of a fire hazard.

(22) “Suppression” means all activities involved in the containment and control of forest fires, including the patrolling thereof until such fires are extinguished or considered by the department to pose no further threat to life or property.

(23) **“Unimproved lands”** means those lands that will support grass, brush and tree growth, or other flammable material when such lands are not cleared or cultivated and, in the opinion of the department, are a fire menace to life and property.

6.2 Definitions in WAC 332-24

WAC 332-24-005

Items defined herein have reference to chapter 76.04 RCW and all other provisions of law relating to forest protection and have the meanings indicated unless the context clearly requires otherwise.

(1) **“Abatement”** means the elimination of additional fire hazard by burning, physical removal, or other means.

(2) **“Additional fire hazard”** means additional fire hazard as defined in RCW 76.04.005.

(3) **“Adze eye hoe”** means a serviceable forest fire fighting hoe with a blade width of at least five and three-quarters inches and a rectangular eye. The blade shall be sharpened, solid, and smooth. The handle shall be hung solid with no more than three-quarters of an inch nor less than one-eighth of an inch extending beyond the head, smooth, aligned, and at least thirty-two inches long.

(4) **“Approved exhaust system”** means a well-mounted exhaust system free from leaks and equipped with spark arrester(s) rated and accepted under United States Department of Agriculture Forest Service current standards.

- (a)** Turbochargers qualify as an approved exhaust system when all gases pass through the turbine wheel. The turbine must be turning at all times, and there must be no exhaust bypasses. A straight mechanical-driven supercharger does not qualify as an approved exhaust system in lieu of an approved spark arrester.
- (b)** Passenger vehicles and trucks may be equipped with an adequately baffled muffler in lieu of a spark arrester.
- (c)** General purpose spark arresters for use on equipment, vehicles, and motorcycles operating on forest land must meet the performance levels set forth in the Society of Automotive Engineers (SAE) Recommended Practice SAE J350, “Requirements of Single Position Application General Purpose Arresters.” The spark arrester shall be permanently marked with the model number and the manufacturer’s identification or trademark. When the inlet and outlet of an arrester are not easily identified, they must be marked. Arresters on mobile equipment shall not be mounted more than forty-five degrees from the qualified position.
- (d)** Portable power saws purchased after June 30, 1977, and used on forest land, must meet the performance levels set forth in the Society of Automotive Engineers (SAE) Recommended Practice SAE J335b, “Multi-Positioned Small Engine Exhaust Fire Ignition Suppression.”

Requirements to obtain the SAE J335b specifications are as follows:

- (i)** The spark arrester shall be designed to retain or destroy ninety percent of the carbon particles having a major diameter greater than 0.023 inches (0.584mm).
- (ii)** The exhaust system shall be designed so that the exposed surface temperature shall not exceed five hundred fifty degrees Fahrenheit (288 degrees Centigrade) where it may come in direct contact with forest fuels.
- (iii)** The exhaust system shall be designed so that the exhaust gas temperature shall not exceed four hundred seventy-five degrees Fahrenheit (246 degrees Centigrade) where the exhaust flow may strike forest fuels.
- (iv)** The exhaust system shall be designed in such a manner that there are no pockets or corners where flammable material might accumulate. Pockets are permissible only if it can be substantiated by suitable test that material can be prevented from accumulating in the pockets.
- (v)** The exhaust system must be constructed of durable material and so designed that it will, with normal use and maintenance, provide a reasonable service life. Parts designed for easy replacement as

a part of routine maintenance shall have a service life of not less than fifty hours. Cleaning of parts shall not be required more frequently than once for each eight hours of operation. The spark arrester shall be so designed that it may be readily inspected and cleaned.

(vi) Portable power saws will be deemed to be in compliance with SAE J335b requirements if they are certified by the United States Department of Agriculture, Forest Service, and the San Dimas Equipment Development Center.

(e) Portable power saws which were purchased prior to June 30, 1977, and which do not meet the Society of Automotive Engineers Standards, must meet the following requirements:

(i) The escape outlet of the spark arrester shall be at an angle of at least forty-five degrees from a line parallel to the bar;

(ii) The configuration of spark arrester shall be such that it will not collect sawdust no matter in what position the saw is operated;

(iii) Spark arrester shall be designed and made of material that will not allow shell or exhaust temperature to exceed eight hundred fifty degrees Fahrenheit;

(iv) The arrester shall have a screen with a maximum opening size of 0.023 inches

(0.584mm.);

(v) The arrester shall be capable of operating, under normal conditions, a minimum of eight hours before cleaning is needed;

(vi) The screen shall carry a manufacturer's warranty of a minimum of fifty-hour life when installed and maintained in accordance with the manufacturer's recommendation;

(vii) The arrester shall be of good manufacture and made so that the arrester housing and screen are close fitting;

(viii) The arrester shall be at least ninety percent efficient in the destruction, retention or attrition of carbon particles over 0.023 inches (0.584mm.);

(ix) Efficiency is to be measured as described in Power Saw Manufacturer's Association Standard, Number S365;

(x) Construction of the arrester shall permit easy removal and replacement of the screen for field inspection and cleaning.

(f) Multipositioned engine powered tools, other than power saws, used on forest land must meet the performance levels set forth in the Society of Automotive Engineers (SAE) Recommended Practice J335b, "Multi-Positioned Small Engine Exhaust Fire Ignition Suppression."

(g) Locomotive spark arresters for use on logging, private or common carrier railroads operating on or through forest land must meet the performance levels set forth in the Association of American Railroads (AAR) Recommended Practice, “Standard for Spark Arresters for Non-Turbo Charged Diesel Engines Used in Railroad Locomotives.”

(5) “**Axe**” means a serviceable, double-bitted, swamping axe or single-bitted axe of at least a three-pound head and thirty-two inch handle. The blades shall be sharpened, solid and smooth. The handle shall be hung solid, smooth and straight.

(6) “**Certified electrical fence controller**” means an electrical fence controller that meets the standards for fire safety developed by Underwriters Laboratories (UL) and indicates approval by bearing the UL label on the controller.

(7) “**Currently with the logging**” and “**current with the felling of live timber, or with the current logging operation**” means during the logging operation or associated activities on any landing, setting or similar part of the operation.

(8) “**Debris disposal fire**” means an outdoor fire for the elimination of a fire hazard and for the purpose of clean-up of natural vegetation and residue of a natural character such as leaves, clippings, prunings, trees, stumps, brush, shrubbery, and wood so long as it has not been treated by an appli-

cation of prohibited material or substance in a pile no larger than that allowed in WAC 332-24-211.

(9) “Department” means the department of natural resources, or its authorized representatives, as defined in chapter 43.30 RCW.

(10) “Dump” includes, without limitation, dumping, depositing, or placing.

(11) “Electrical fence controller” includes any controller, equipment, appliance, device, or apparatus used as an electrical fence controller, energizer, or pulsator which uses or conveys an electrical current.

(12) “Fire extinguisher” means, unless otherwise stated, a fully charged and operational chemical fire extinguisher rated by underwriters’ laboratory or factory mutual, appropriately mounted in either a vertical or horizontal position, and located so as to be readily accessible to the operator. When two fire extinguishers are required, they are to be appropriately mounted and located so that one is readily accessible to the operator and the other is separate from the operator and readily accessible to other personnel. The fire extinguisher shall be equipped with a gauge to determine the level of charge present to propel the chemical from the extinguisher; however fire extinguishers required for use with portable power saws are not required to be equipped with a gauge to determine the level of charge.

(13) “Fire hazard” means the accumulation of

combustible materials in such a condition as to be readily ignited and in such a quantity as to create a hazard from fire to nearby structures, forest areas, life and property.

(14) “Fire tool box” means a compartment of sound construction with a waterproof lid, provided with hinges and hasps and so arranged that the box can be properly sealed and the contents kept dry. The box shall be red in color and marked “fire tools” in white or black letters at least three inches high. The fire tool box shall contain a minimum of:

- (a) Two axes or pulaskis;
- (b) Three adze eye hoes;
- (c) Three shovels.

(15) “Firewatch” means at least one competent person to be at the site(s) for one hour following the operation of spark-emitting equipment on class 3L days or above, or as determined by the department based on the national fire danger rating system and other fire danger conditions. The firewatch shall be vigilant and so located or positioned to be able to detect within five minutes fires which may originate at the site(s) of the equipment operation. The firewatch shall report a fire to the responsible protection agency within fifteen minutes of detection.

(16) “Fixed-position machine” means any machine used for any portion or phase of harvesting, thinning, site preparation, land clearing, road, railroad and utility right of way clearing or mainte-

nance, mineral or natural resources extraction, or other operation that performs its primary function from a fixed-position. This definition applies even though said machine is capable of moving under its own power to a different fixed position.

(17) “Forest debris” means forest debris as defined in RCW 76.04.005.

(18) “Forest land” means forest land as defined in RCW 76.04.005.

(19) “Isolation” means the division or separation of an additional fire hazard into compartments by a constructed barrier of at least one hundred feet in width at its narrowest point. The constructed barrier must be free and clear of forest debris as defined in RCW 76.04.005 and must be approved, in writing, by the department.

(20) “Mill waste” means waste of all kinds from forest products, including, but not limited to, sawdust, bark, chips, slabs, and cuttings from lumber or timber.

(21) “Operation” means the use of equipment, tools, and supporting activities on or adjacent to forest land that may cause a forest fire to start. Such activities may include, but are not limited to, any phase of harvesting, thinning, site preparation, land clearing, road, railroad, and utility right of way clearing and maintenance, and mineral or natural resource extraction. The operating period shall be that time period when the activity is taking place and includes that time when a firewatch

would be required to be in attendance.

(22) “Outdoor fire” means the combustion of material in the open, or in a container, with no provisions for the control of such combustion or the control of the emissions from the combustion products.

(23) “Person” shall mean any individual, partnership, private, public, or municipal corporation, county, the department or other state or local governmental entity, or association of individuals of whatever nature.

(24) “Prohibited material or substance” includes rubber products, plastics, asphalt, garbage, dead animals, petroleum products, paints, or any similar materials that emit dense smoke or create offensive odors when burned, pursuant to RCW 70.94.775(1).

(25) “Pulaski” means a serviceable axe and hoe combination tool with not less than a three and one-half pound head and thirty-two inch handle. The blades shall be at least two and one-half inches wide, sharpened, solid and smooth. The handle shall be hung solid, smooth and straight.

(26) “Pump truck or pump trailer” means:

(a) A serviceable truck or trailer which must be able to perform its functions efficiently and must be equipped with a water tank of not less than a three hundred gallon capacity, filled with water. The complete pump truck or pump trailer shall be kept ready for instant use for suppressing forest fires. If a trailer is used, it shall be equipped with a hitch

to facilitate prompt moving. A serviceable tow vehicle shall be immediately available for attachment to the trailer. The pump truck, or pump trailer with its tow vehicle, must be available throughout the operating and watch-person periods.

(b) The pump may be a portable pump or suitable power take-off pump. It shall be plumbed with a bypass or pressure relief valve. The pump shall develop, at pump level, pressure sufficient to discharge a minimum of twenty gallons per minute, using a one-quarter inch nozzle tip through a fifty foot length of one inch or one and one-half inch rubber-lined hose.

(c) The pump truck or pump trailer shall be equipped with the following:

(i) A minimum of five hundred feet of one or one and one-half inch cotton or synthetic jacket hose;

(ii) A fully stocked fire tool box.

(d) The tank shall be plumbed so that water may be withdrawn by one person by gravity feed. This outlet shall be adapted to accept the hose used with the pump truck or pump trailer. The outlet shall be located for easy filling of pump cans.

(e) The pump truck or pump trailer must be equipped with fuel, appropriate tools, accessories and fittings to perform its functions for a

continuous period of four hours. A recommended list of tools, fittings and accessories may be obtained from the department.

(27) “Recreational fire” means an outdoor fire for the purpose of sport, pastime or refreshment, such as camp fires, bonfires, cooking fires, etc., in a hand-built pile no larger than four feet in diameter and not associated with any debris disposal activities related to fire hazard elimination or yard and garden refuse clean-up.

(28) “Reduction” means the elimination of that amount of additional fire hazard necessary to produce a remaining average volume of forest debris no greater than nine tons per acre of material three inches in diameter and less.

(29) “Shovel” means a serviceable, long-handled or “D”-handled, round-point shovel of at least “0” size with a sharpened, solid and smooth blade. The handle on the shovel shall be hung solid, smooth and straight.

(30) “Snag” means a standing dead conifer tree over twenty-five feet in height and sixteen inches and over in diameter, measured at a point four and one-half feet above the average ground level at the base.

(31) “Tractor or other mobile machine” means any machine that moves under its own power when performing any portion or phase of harvesting, thinning, site preparation, land clearing, road, railroad

and utility right of way clearing or maintenance, mineral or natural resource extraction, or other operation. This definition includes any machine, whether crawler or wheel-type, whether such machine be engaged in yarding or loading, or in some other function during the operation.

(32) “Uncertified electrical fence controller” includes all electrical fence controllers that do not meet the standards for fire safety developed by Underwriters Laboratories (UL) and does not have the UL label on the controller.

DNR-RECOMMENDED TOOLS AND ACCESSORIES FOR A PUMP TRUCK/TRAILER

1. Minimum of 500 feet of 1 or 1 1/2 inch cotton or synthetic jacket hose. (Required in definition of pump truck)
2. One shutoff nozzle with 3/16 inch or 1/4 inch aperture.
3. Twenty feet of suction hose and a strainer suitable for pump use.
4. Sufficient quantity of appropriate fuel to operate the pump for a period of four hours.
5. One grease gun, filled with grease, if the pump requires periodic lubrication.
6. One fuel tank and hose line, if required for pump.
7. Six extra hose washers for each hose size.
8. One or more spanner wrenches of sizes suitable to fit the hose.
9. One reducer, 1 1/2 to 1 inch if both hoses are used.
10. One or more 1/4 turn adapters of appropriate size and thread type to enable national standard or iron pipe hose fittings to be connected to the Department of Natural Resources 1/4 turn couplings.
11. If the pump is operated by an engine other than the truck engine, it must be equipped so that it can be started with a starter rope and the following additional accessories are required:
 - a. Two quarts of crankcase oil, if required for pump engine.
 - b. Two starter ropes.
 - c. Sufficient extra spark plugs to replace all spark plugs in the pump engine.
 - d. One spark plug wrench unless crescent is suitable.
 - e. One slip joint pliers, 6 inch.
 - f. One screwdriver, 4 inch.
 - g. One crescent wrench, 10 inch.

MOBILE FIRE FOAM SYSTEMS

The Department of Natural Resources will accept 30 gallon or larger Mobile Fire Foam Systems or their functional equivalent as a substitute for the pump truck/trailer and portable water supply requirements under the following conditions:

1. The system will be kept fully charged with air, of water, and foam concentrate as recommended by the manufacturer;
2. There will be kept with the system enough extra compressed air, foam concentrate, and appropriate tool to recharge the unit at least once;
3. Units with less than 60 gallons water capacity must have enough water immediately available to recharge the unit at least once;
4. Five hundred feet 1 inch or smaller rubber lined hose connected to the system;
5. One shut off nozzle;
6. Fifty gallons of water will be available on the landing to refill backpack pump cans;
7. The system will be located and outfitted for immediate use at the landing, and equipped for undamaged delivery to any portion of the operation by use of the rigging system or by tractor.

If, in the opinion of the Department, it becomes apparent that this equipment cannot provide fire protection equal to the pump truck/trailer or portable water supply listed in WAC 332-24-405, the Department will rescind this Substitution of Requirements.

BEST MANAGEMENT PRACTICES GUIDELINES FOR MOTORIZED CARRIAGES

(FIRE PRECAUTION LEVEL III)

1. Keep carriage clean of flammable material and debris.
2. Utilize manufactured recommended non-sparking clamping jaws for braking system.
3. Perform daily maintenance checks to assure:
 - USDA Forest Service approved exhaust system is in compliance.
 - Fire extinguishers are securely mounted on opposite sides of the carriage and fully charged.
 - Emergency motor cutoff is in good working order.
 - Battery hold-downs are in good repair and positive terminal is insulated.
 - Electrical wiring and circuit breakers are in good working order, according to manufacturer specifications.
 - Non-sparking clamping jaws are in good working order.
4. For operations in western Washington (summit of the Cascade Mountains west), monitor relative humidity hourly. Shut down operations when relative humidity is less than 30%.

TETHERED LOGGING SYSTEMS AND IFPL APPLICABILITY

The Department of Natural Resources interprets tethered logging systems involving winch assisted, cable assisted, traction assisted, etc. operations that enable ground based timber harvesting machines to operate on steep slopes, to fall under the provisions of WAC 332-24-301. This suspends operations when fire danger levels as expressed through the IFPL system so direct.

WAC 332-24-301(3)(a)(iii), creates an exception during IFPL level 3 shutdowns when, "tractors, skidders, or other equipment with a blade capable of constructing fireline, are immediately available to quickly reach and effectively attack a fire start." Tethered systems cannot be "immediately available" to attack a fire start due to its deployment methodology. Therefore, DNR interprets WAC 332-24-301(3)(a)(iii) to apply only when untethered tractors, skidders, or other equipment with a blade are on site and capable of immediately constructing fireline.

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