

# SMOKE MANAGEMENT RULE PROPOSAL

In order to implement recommended changes to the Oregon Smoke Management Plan, the following administrative rules are proposed for adoption, amendment and deletion:

## ADOPT

### **OAR Chapter 629, Division 48 – Smoke Management**

629-048-0001

#### **Title and Scope**

(1) OAR 629-048-0001 through 629-048-0500 are known as the Smoke Management Rules.

(2) The Smoke Management Rules apply to prescribed burning of forest fuels for forest management purposes within any forest protection district in Oregon as described by OAR 629-041-0500 to 629-041-0575.

629-048-0005

#### **Definitions**

Unless listed below, terms used in this rule division shall have the meaning provided in ORS 477.001:

(1) “Board” means the State Board of Forestry.

(2) “Burn boss” means the person, authorized by the owner (may include the owner) or a federal land management agency to conduct and make decisions regarding the practices involved in conducting a prescribed burning operation and whom is responsible for compliance with all requirements under this rule division and related laws.

(3) “Burn registration” means the act or product of notifying the forester to the required level of detail, of intent to conduct a prescribed burning operation as required by OAR 629-048-0300.

(4) “Class I Area” means Crater Lake National Park and certain wilderness areas designated by Congress as federal Class I Areas that are subject to visibility protection under the Environmental Protection Agency’s Regional Haze Rule and the federal Clean Air Act.

(5) “Class 1 forestland” has the same meaning as given in ORS 526.324 to “timber class” and includes all forestland primarily suitable for the production of timber.

(6) “Class 2 forestland” has the same meaning as given in ORS 526.324 to “timber and grazing class” and includes all forestland primarily suitable for joint use for timber production and the grazing of livestock, as a permanent or semi-permanent joint use, or as a temporary joint use during the interim between logging and reforestation.

(7) “Class 3 forestland” has the same meaning as given in ORS 526.324 to “agricultural class” and includes all forestland primarily suitable for grazing or other agricultural use.

(8) "DBH" means the diameter of a tree at breast height as measured four and one-half feet above the ground on the uphill side of the tree.

(9) "Department" means the State Forestry Department.

(10) "Eastern Oregon" means the eighteen Oregon counties lying east of Multnomah, Clackamas, Marion, Linn, Lane, Douglas, and Jackson Counties.

(11) "Emissions" means the gaseous and particulate combustion products in smoke resulting from burning forest fuels.

(12) "Federal land management agency" means the United States Department of Agriculture's Forest Service; the United States Department of the Interior's Bureau of Land Management, National Park Service, Fish and Wildlife Service, or Bureau of Indian Affairs; or any other federal agency that may conduct prescribed burning within a forest protection district.

(13) "Field administrator" means an employee of the State Forestry Department, a forest protective association, or federal land management agency who has, among other responsibilities, an official role in determining whether a prescribed burn should proceed, continue or be suspended.

(14) "Forester" means the State Forester or authorized representative including but not limited to fire wardens appointed under ORS 477.355 and designated employees of forest protective associations.

(15) "Forest fuels" means any flammable woody material, grass or other plant matter that may constitute a wildfire hazard or that is intended for disposal by prescribed burning, but not including products that have had secondary processing such as boards, posts or paper.

(16) "Forest protection district" means an area of forestland designated by the State Forester for protection from fire pursuant to ORS 477.225. Detailed descriptions of the forest protection districts may be found in OAR 629-041-0500 to 629-041-0575.

(17) "Ground level" means at or close to the surface of the earth such that smoke at "ground level" could be inhaled by persons going about their normal business, in or out of doors. It does not include smoke that passes overhead when prescribed burning is conducted in accordance with the smoke management forecast and instructions.

(18) "Level 1 regulation" means the program of requirements that apply to all lands managed by a federal land management agency within a forest protection district statewide, and all class 1 forestland in western Oregon (OAR 629-048-0100(2)). These requirements include burn registration at least seven days in advance (OAR 629-048-0300), fee administration (OAR 629-048-0310), compliance with smoke management forecast instructions (OAR 629-048-0230), and reporting of accomplishments (OAR 629-048-0320).

(19) "Level 2 regulation" means the program of requirements that apply to all non-federal lands within a forest protection district in eastern Oregon, and all class 3 forestland in western Oregon (OAR 629-048-0100(3)). These requirements include burn registration (OAR 629-048-0300) and reporting of accomplishments (OAR 629-048-0320).

(20) "Mop-up" means action taken, usually involving the application of water or other means to eliminate heat, remove fuel or reduce the supply of oxygen, sufficient to make a fire safe or reduce residual smoke.

(21) "Other areas sensitive to smoke" means specific recreation areas not listed as SSRAs in OAR 629-048-0145 but that are intended to receive consideration for focused forecasting attention for limited times during periods of heavy use by the public such as coastal beaches on special holidays, federal mandatory Class I Areas during peak summer use, and special events. All Oregon and Washington Class I areas shall be considered as areas sensitive to smoke during the visibility protection period (July 1 to September 15), defined in the Oregon Visibility Protection Plan, OAR 340-020-0047, Section 5.2.

(22) "Prescribed burning" means the use of fire ignited as a planned management activity on forestland to meet specific objectives involving the reduction or removal of forest fuels. Prescribed burning does not include impromptu fires ignited for purposes such as warming fires, burn-out or backfire operations used in wildfire suppression, or lightning ignited "wildland fire use" as practiced by federal land management agencies.

(23) "Regional haze" means air pollution transported over long distances into Class I Areas that reduces visibility in those areas.

(24) "Residual smoke" means smoke produced after the initial fire has passed through the fuel.

(25) "Smoke management forecast unit" means any or all of the persons appointed or assigned by the State Forester to develop and interpret weather forecasts and produce smoke management instructions, usually operating from the department headquarters in Salem.

(26) "Smoke sensitive receptor area or SSRA" means an area designated for the highest level of protection under the smoke management plan, as described and listed in OAR 629-048-0140.

(27) "Underburning" means low intensity prescribed burning to maintain forest health through reduction of fuels in the understory of a forest stand while maintaining the overstory stand characteristics.

(28) "Verified smoke incident" means an occurrence of smoke into a community, other than an SSRA, investigated by the forester to:

(a) Validate claims that smoke did, in fact, enter the area described, at ground level;

(b) Determine if the smoke or a portion of it, in fact, derived from forest management prescribed burning from a legally conducted operation; and

(c) If (a) and (b) of this section were affirmed, determine the intensity and approximate duration of the smoke accumulation as defined in OAR 629-048-0110.

(29) "Western Oregon" means the eighteen Oregon counties lying west of Hood River, Wasco, Jefferson, Deschutes and Klamath Counties.

629-048-0010

**Purpose**

(1) ORS 477.013 requires the State Forester and the Department of Environmental Quality to approve a plan for managing smoke in areas that they are to designate, for the purpose of maintaining air quality. The plan must designate areas within which all burning must comply with the plan.

(2) The Smoke Management Rules are intended to establish the areas required by ORS 477.013; describe the objectives of the smoke management plan; establish procedures to be followed in administering prescribed burning; educate the public as to

the necessity of prescribed burning and the measures being taken to protect air quality, public health and visibility; and to provide enforceable mechanisms to ensure the requirements of the smoke management plan are met.

(3) The Smoke Management Rules, promulgated by the State Forester, together with department directive 1-4-1-601, *Operational Guidance for the Oregon Smoke Management Program*, shall comprise the smoke management plan upon approval by the Department of Environmental Quality and filing with the Secretary of State.

(4) The objectives of the smoke management plan are to:

(a) Prevent smoke resulting from prescribed burning on forestlands from being carried to or accumulating in smoke sensitive receptor areas or other areas sensitive to smoke, and to provide maximum opportunity for essential forestland burning while minimizing emissions;

(b) Coordinate with other state smoke management programs;

(c) Comply with state and federal air quality and visibility requirements;

(d) Protect public health; and

(e) Promote the reduction of emissions by encouraging cost effective utilization of forestland biomass, alternatives to burning and alternative burning practices.

629-048-0020

#### **Necessity of Prescribed Burning**

(1) All of Oregon's forestlands are flammable under the right conditions of fuel dryness, heat and wind.

(2) As a part of the natural ecology of forestlands, wildfire is neither necessarily good nor bad, however, there are a number of characteristics of unplanned, uncontrolled fires that are usually regarded by humans as undesirable. Among these are the threats to public safety, destruction of natural resources, destruction of property and the adverse health effects that can occur from breathing a significant amount of fine particulate matter associated with wildfire smoke.

(3) When areas do not experience fire or other means of reducing forest fuels for extended periods, there is a greater wildfire hazard and the likelihood increases that if unplanned ignitions occur, through whatever means, that the resulting wildfire will burn at greater intensity and be more difficult to suppress.

(4) Because wildfires typically burn during hotter, drier conditions than those usually planned for prescribed fires, forest fuels are more completely consumed, producing more emissions. Also, wildfires often occur during periods of atmospheric stability and thus air stagnation, trapping smoke close to the ground where it is more likely to impact humans and less likely to be quickly carried away by higher altitude transport winds.

(5) Prescribed burning is used as a management technique to reduce forest fuels either as the primary mechanism such as in grass and brush areas for maintenance of grazing, and underburning of open forest stands for forest health purposes; or as a secondary fuel reduction method following thinning or final harvesting. It is typically conducted at a time and under planned fuel and weather conditions whereby the fine fuels that more readily ignite and carry fire across the landscape are consumed but the larger fuels are consumed to a lesser degree than in a wildfire. Resulting emissions are both

reduced overall, and more likely carried into higher altitudes and dissipated by high level winds, away from concentrations of people.

(6) When adequate forest fuel reduction can be achieved economically without the use of prescribed burning, because of other fire associated risks, that choice is usually favored. Even so, there are often silvicultural or agricultural advantages to prescribed burning such as site preparation, nutrient cycling and reduction of pests and disease that may not be achieved by simply removing the forest fuels. For all of the reasons described above, the Legislative Assembly (ORS 477.552) and the Board of Forestry have found it necessary to maintain the viability of prescribed burning as a forest management practice.

629-048-0100

### **Regulated Areas**

(1) All lands classified as “forestland” under ORS 526.305 to 526.370 and all forestland managed by a federal agency regardless of whether or not classified, within a forest protection district, are subject to regulation of prescribed burning pursuant to the direction to delineate restricted areas under ORS 477.013. The level of regulation may vary according to specific classification; e.g., Class 1, 2 or 3 forestland as described in ORS 526.305 to 526.370.

(2) Class 1 forestland in western Oregon, and all forestland managed by a federal land management agency statewide, within a forest protection district, is subject to burn registration at least seven days in advance (OAR 629-048-0300), fee administration (OAR 629-048-0310), compliance with smoke management forecast instructions (OAR 629-048-0230), and reporting of accomplishments (OAR 629-048-0320). The forestlands and applicable regulations listed in this section may be referred to as “level 1 regulation.”

(3) All other non-federal forestland within a forest protection district, including, but not limited to, private forestlands in eastern Oregon and Class 3 private forestland in western Oregon is subject to burn registration (OAR 629-048-0300) and reporting of accomplishments (OAR 629-048-0320) but is not subject to fee administration or specific smoke management forecast instructions. The forestlands and applicable regulations listed in this section may be referred to as “level 2 regulation.”

(4) All forestland prescribed burning within a forest protection district is subject to suspension of burning by the forester under ORS 477.520 due to conditions such as air stagnation or fire danger.

629-048-0110

### **Characterization of Smoke Intrusions**

(1) A smoke intrusion occurs when smoke from prescribed burning enters a smoke sensitive receptor area at ground level.

(2) When investigating or collecting information on smoke intrusions, the department will attempt to characterize the intrusion in terms of its intensity; light, moderate or heavy; and its duration in hours or minutes. To the extent it can reasonably be determined, it may also be useful to determine the amount of populated area affected (in square miles or acres) and an estimate of the number of people present during the

intrusion. Other smoke incidents may be similarly characterized when documentation is appropriate.

(3) When measurements or observations are available, intrusions are characterized in the following manner based on nephelometer values (averaged over a one hour period) above the clean air background:

(a) A light intensity intrusion is characterized by a light scattering measurement of less than  $1.8 \times 10^{-4}$  B-scat (Beta scatter);

(b) A moderate intensity intrusion is characterized by a light scattering measurement of greater than or equal to  $1.8 \times 10^{-4}$  B-scat but less than or equal to  $4.9 \times 10^{-4}$  B-scat; and

(c) A heavy intensity intrusion is characterized by a light scattering measurement of greater than  $4.9 \times 10^{-4}$  B-scat.

(4) The clean air background is the average nephelometer reading for the three hours prior to the intrusion.

(5) When no nephelometer data are available, intrusion intensity is characterized based on reduction in visibility (also averaged over a one hour period) using standard National Weather Service visibility observation criteria and a table of reductions keyed to various background visibility levels as displayed in department directive 1-4-1-601, *Operational Guidance for the Oregon Smoke Management Program*. As an example, on a day when background visibility has been greater than 50 miles, a light intensity intrusion has reduced visibility that is still greater than or equal to 11.4 miles; a moderate intensity intrusion has reduced visibility to less than 11.4 miles, but greater than or equal to 4.6 miles; and a heavy intensity intrusion has reduced visibility to less than 4.6 miles.

629-048-0120

### **Protection Objectives**

(1) When prescribed burning is conducted in proximity to, but outside communities or areas designated as smoke sensitive receptor areas, the objective of the smoke management plan is no smoke intrusions into the SSRA.

(2) When prescribed burning is conducted inside a smoke sensitive receptor area, the smoke management plan objective is to use best practices and prompt mop-up, as appropriate, along with tight parameters for burn site conditions that are intended to vent the main smoke plume up and out of the SSRA and minimize residual smoke.

(3) In all other instances of prescribed burning it is the intent under the smoke management plan to minimize the amount and duration of smoke that comes in contact with humans at their places of residence or at other places where they normally gather in numbers such as to work, conduct commerce or participate in public events.

(4) The first element in minimizing smoke contact is encouraging forestland owners to burn only those units which cannot otherwise meet ownership objectives in cost effective alternative ways such as wood or biomass utilization.

(5) When prescribed burning is used, owners are further encouraged to employ best burn practices (OAR 629-048-0210) to ensure the least emissions practicable.

(6) In addition to compliance with smoke management instructions issued in the daily forecast and compliance with all conditions of the burn permit required under ORS 477.515, burn bosses and field administrators are encouraged to closely observe local conditions at the burn site and to light, manage, suspend lighting if necessary, and mop-

up burns, when appropriate, in a manner that takes into consideration the possible smoke effects from the main smoke plume or significant residual smoke on residences or businesses that may be in close proximity to the burn site.

(7) For communities not designated as smoke sensitive receptor areas or known events such as fairs or festivals that may gather large numbers of people in areas not normally so inhabited, smoke management instructions in the daily forecast are designed to minimize the likelihood of smoke effects to these areas.

629-048-0130

### **Visibility Objectives**

(1) It is the intent under the smoke management plan to comply with the Oregon State Implementation Plan for Visibility Protection (OAR 340-200-0040, Section 5.5).

(2) It is the intent under the smoke management plan to operate in a manner consistent with the Oregon Regional Haze Plan, including the Enhanced Smoke Management Program (ESMP) criteria contained in the plan, for the purpose of protecting Class I Area visibility. These ESMP criteria include:

- (a) Actions to minimize emissions;
- (b) Evaluation of smoke dispersion;
- (c) Alternatives to fire;
- (d) Public notification;
- (e) Air quality monitoring;
- (f) Surveillance and enforcement;
- (g) Program evaluation;
- (h) Burn authorization; and
- (i) Regional coordination.

(3) During the visibility protection period (July 1 to September 15), an objective of the smoke management plan when prescribed burning is conducted outside any Class I Area is to minimize any smoke that impairs visibility inside the Class I Area.

(4) When prescribed burning is conducted inside a Class I Area, the smoke management plan objective is to use best practices along with tight parameters for burn site conditions that will vent the main smoke plume up and out of the Class I Area and minimize residual smoke.

(5) When prescribed burning is conducted outside the visibility protection period in proximity to, but outside and upwind of Class I Areas, in addition to compliance with smoke management instructions issued in the daily forecast and compliance with all conditions of the burn permit required under ORS 477.515, burn bosses and field administrators are encouraged to closely observe local conditions at the burn site to avoid the main smoke plume entering a Class I Area at ground level.

(6) The Class I Areas in Oregon include Crater Lake National Park, Diamond Peak Wilderness, Eagle Cap Wilderness, Gearhart Mountain Wilderness, Hells Canyon Wilderness, Kalmiopsis Wilderness, Mountain Lakes Wilderness, Mount Hood Wilderness, Mount Jefferson Wilderness, Mount Washington Wilderness, Strawberry Mountain Wilderness and Three Sisters Wilderness.

629-048-0140

**Smoke Sensitive Receptor Areas**

A smoke sensitive receptor area (SSRA) is an area designated by the board, in consultation with the Department of Environmental Quality, that is provided the highest level of protection under the smoke management plan because of its past history of smoke intrusions, density of population or other special legal status related to visibility such as the Columbia River Gorge Scenic Area.

The following are smoke sensitive receptor areas:

(1) The area within the State of Oregon commonly understood to be the Willamette Valley that specifically lies east of the forest protection district boundaries of the Northwest Oregon, West Oregon and Western Lane Forest Protection Districts, west of the forest protection district boundaries of the North Cascade and South Cascade Forest Protection Districts and north of where the Western Lane and South Cascade Forest Protection Districts come together in southern Lane County (for detailed district boundary descriptions, see OAR 629-041-0500 to 629-041-0575);

(2) Within the acknowledged urban growth boundaries of the following cities:

- (a) Astoria;
- (b) Baker City;
- (c) Bend;
- (d) Burns;
- (e) Coos Bay;
- (f) Enterprise;
- (g) Grants Pass;
- (h) John Day;
- (i) Klamath Falls;
- (j) LaGrande;
- (k) Lakeview;
- (l) Lincoln City;
- (m) Newport;
- (n) North Bend;
- (o) Oakridge;
- (p) Pendleton;
- (q) Redmond;
- (r) Roseburg;
- (s) The Dalles; and
- (t) Tillamook;

(3) The area within the Bear Creek and Rogue River Valleys described in OAR 629-048-160, including the cities of Ashland, Central Point, Eagle Point, Jacksonville, Medford, Phoenix and Talent;

(4) The area within the Columbia River Gorge Scenic Area (as described in 16 U.S.C. Section 544b); and

(5) Within the acknowledged urban growth boundary of any city, not listed above, that is within 30 miles of a forest protection district, and that has a population within the city limits exceeding 10,000 according to the Population Research Center, Portland State University, as listed in the Oregon Blue Book, published by the Secretary of State.

629-048-0150

**Criteria for Future Listing of Smoke Sensitive Receptor Areas**

(1) Cities with a population greater than 10,000 that are also within 30 miles of a forest protection district qualify as smoke sensitive receptor areas.

(2) Cities with a population of less than 4,000 will generally not be considered for designation as an SSRA unless the board, in consultation with the Department of Environmental Quality, finds that there are circumstances that create an increased likelihood that the community will be subject to entry of prescribed burning smoke at ground level despite the application of the smoke management plan.

(3) For cities with populations between 4,000 and 10,000, other unincorporated areas with a population density greater than 1600 people per square mile over at least 2.5 square miles, or those cities that meet the exception in section (2) of this rule, the board, in consultation with the Department of Environmental Quality, may determine the need for designation as an SSRA based on the following criteria:

(a) A recent history of verified smoke incidents in the community, as described in section (4) of this rule; and

(b) Information that suggests there will be continuing frequent use of prescribed burning as a forest management activity within 30 miles of the area being considered for SSRA protection.

(4) One heavy intensity smoke accumulation and one moderate or light intensity smoke accumulation, or two moderate intensity smoke accumulations, or three or more smoke accumulations of any combination of intensity (using the intrusion intensity parameters described in OAR 629-048-0110) in a three year period, from lawfully conducted forest management prescribed burning, is sufficient reason for the board to consider whether SSRA protection is warranted for a location described in section (3) of this rule.

(5) If the board determines it is necessary to add a community to the SSRA list, it shall also then determine the extent of the SSRA, such as the city limits, urban growth boundary or other clearly distinguishable area, based on population distribution, any geographic features that may influence the distribution or concentration of smoke, and any other factors related to accomplishing the overall objectives of the smoke management plan.

629-048-0160

**Bear Creek/Rogue River Valley SSRA**

The Bear Creek and Rogue River Valleys smoke sensitive receptor area listed in OAR 629-048-0140 (3) is defined as beginning at a point approximately one mile NE of the town of Eagle Point, Jackson County, Oregon, at the NE corner of Section 36, T35S, R1W; thence south along the Willamette Meridian to the SE corner of Section 25, T37S, R1W; thence SE along a line to the SE corner of Section 9, 39S, R2E; thence SSE to the SE corner of Section 22, T39S, R2E; thence south to the SE corner of Section 27, T39S, R2E; thence SW to the SE corner of Section 33, T39S, R2E; thence west to the SW corner of Section 31, T39S, R2E; thence NW to the NW corner of Section 36, T39S, R1E; thence west to the SW corner of Section 26, T39S, R1E; thence NW along a line to the SE corner of Section 7,

T39S, R1E; thence west to the SW corner of Section 12, T39S, R1W; thence NW along a line to the SW corner of Section 20, T38S, R1W; thence west to the SW corner of Section 24, T38S, R2W; thence NW along a line to the SW corner of Section 4, T38S, R2W; thence west to the SW corner of Section 5, T38S, R2W; thence NW along a line to the SW corner of Section 31, T37S, R2W; thence north along a line to the Rogue River, thence north and east along the Rogue River to the north boundary of Section 32, T35S, R1W; thence east along a line to the point of beginning.

629-048-0200

### **Alternatives to Burning**

(1) When planning forest management prescriptions and particularly final harvests (prior to reforestation), owners are encouraged to use practices that will eliminate or significantly reduce the volume of prescribed burning necessary to meet their management objectives. Some practices to consider include, but are not limited to:

- (a) Maximizing the cost-effective use of woody material for manufacture of products;
- (b) Where cost-effective, using wood or other biomass for energy production or mulch;
- (c) Lopping and scattering limbs and other woody material, or operating machinery over the wood to maximize contact with the soil in order to speed its breakdown; or

(d) Re-arranging woody materials, as necessary to accomplish reforestation through the slash (from a fire prevention standpoint, this may not be desirable in areas of heavy fuel concentrations or where soil moistures are not conducive to breakdown of fuels).

(2) When prescribed burning is determined to be necessary to achieve management objectives, owners are encouraged to use "best burn practices" as described in OAR 629-048-0210 below to reduce overall emissions.

(3) The following publications are recommended reading for forestland managers who frequently engage in prescribed burning:

- (a) "Non-burning Alternatives to Prescribed Fire on Wildlands in the Western United States" (*provide source information*); and
- (b) "Annual Emission Goals for Fire Policy" (*provide source information*).

629-048-0210

### **Best Burn Practices; Emission Reduction Techniques**

(1) "Best burn practices" as used in this rule refers to those practices designed to minimize emissions from prescribed burning or accomplish burning at times and under such conditions as to minimize the likelihood that emissions will have adverse effects to the protection or visibility objectives (OAR 629-048-0120 and 629-048-0130). Additional practices not described may be necessary to ensure against the escape of fire or protection of forest resources.

(2) In general, best burn practices involve methods that ensure the most rapid and complete combustion of forest fuels while nearby, "non-target" fuels are prevented from burning, such as:

- (a) Physical separation of “target” and “non-target” fuels;
  - (b) Burn prescriptions, particularly for broadcast burns, that recognize and utilize the natural differences in fuel moistures of larger and smaller pieces of woody material;
- or
- (c) Covering of piles sufficient to facilitate ignition and complete combustion, and then burning them at times of the year when all other fuels are damp, when it is raining or there is snow on the ground.

(3) Rapid combustion is well served by rapid ignition which may involve the use of petroleum accelerants (with appropriate safety precautions) and by maintaining an adequate air supply to the forest fuels being burned. Piles and windrows should be mostly free of soil, rocks and other non-combustible materials and should be loosely stacked to promote aeration. Where practicable, re-stacking or “feeding” the burn pile is encouraged to complete combustion and avoid smoldering.

(4) When piles are covered as a best burn practice and the covers are to be removed before burning, any effective materials may be used, as long as they are removed for re-use or properly disposed of. When covers will not be removed and thus will be burned along with the piled forest fuels, the covers must not consist of materials prohibited under OAR 340-264-0060(3), except that polyethylene sheeting that complies with the following may be used:

- (a) Only polyethylene may be used. Other plastics are prohibited;
- (b) The size of each polyethylene cover must not exceed 100 square feet. For small piles, covering only an area necessary to achieve rapid ignition and combustion, instead of the entire pile, is encouraged;
- (c) The thickness of the polyethylene cover must not exceed 4 mil; and
- (d) Layering or multiple covers (exceeding 100 square feet combined) within a pile is prohibited, unless authorized in writing, by the forester to meet ignition and combustion needs.

(5) The use of petroleum accelerants and polyethylene covers as “best burn practices” described in this rule is expressly intended as an exception to OAR 340-264-0060(3) as allowed by OAR 340-264-0060.

(6) In general, rapid mop-up of prescribed burning is not needed to meet the objectives of the prescribed burn and protect air quality, however, in instances of prescribed burning within an SSRA or when conditions change significantly from those forecasted or present at the time of ignition, rapid mop-up may become necessary to prevent excessive residual smoke or entry of smoke into an SSRA or other area sensitive to smoke. Burn plans required under OAR 629-043-0026(4), prescribed fire plans required by federal land management agency policy, or burn permits required under ORS 477.515, when appropriate, should address conditions that may require mop-up of the prescribed burn and to what extent.

(7) Prescribed burn operations with large tonnages (2000 tons or more) or burns that will occur over multiple days should be adequately planned to provide opportunities to cease lighting and hold the existing burn within smaller compartments to mitigate undesirable smoke effects or changes in the actual burn conditions from those that were forecasted.

(8) When local conditions for smoke dispersal appear to be better than forecasted, burn bosses and field administrators are encouraged to communicate such information to

the smoke management forecast unit, to further the objective of accomplishing burning during the most optimal conditions.

629-048-0220

### **Forecast Procedures**

(1) There are several concepts and procedural steps involved in accomplishing the smoke management plan objectives, designed to maximize opportunities for accomplishing burning while minimizing the likelihood of public health effects or visibility impairment. The following sections of this rule attempt to explain some of these concepts.

(2) The basic underlying mechanism in smoke management is the use of an understanding of atmospheric dynamics and combustion processes, in concert with current weather forecasts, to ensure that the bulk of emissions from prescribed burning are transported to areas of low or no adverse effect by:

(a) In the case of broadcast or large pile burning, generating heat rapidly so that the fuel is quickly consumed and emissions rise sufficiently above ground level to either:

(A) Become diluted, and dispersed in the atmosphere via transport winds to areas of minimal impact; or

(B) Mix with the moisture in clouds and fall back to earth as precipitation; or

(b) In the case of low intensity underburning or small piles under the forest canopy, managing the volume of material burned per unit of time and paying careful attention to surface winds to keep total emissions low and disperse the smoke to unpopulated areas.

(3) For each day that prescribed burning is planned on forestland with level 1 regulation, a weather forecast is prepared by meteorologists specializing in smoke management. By examining the atmospheric conditions predicted for the burn day, such as vent heights, mixing layers, wind speed and direction, as well as information about what level of pollutants may already be present in a given area, the meteorologists determine if and where conditions will be favorable to accomplish burning.

(4) In addition to the weather forecast, specific information is required on the location of planned burns, and the tonnage of fuel that is expected to be consumed in a burn. This information is provided on a per unit basis at the time that burns are registered and planned with the forester (see OAR 629-048-0300).

(5) With knowledge of the information described above, and based on dispersion models that have been developed through time and experience, forecasters are able to reasonably predict how much smoke, and at what locations, can be put into the atmosphere without likelihood of threat to air quality objectives. This information is then converted into instructions to field administrators and burn bosses as to what tonnages, in what weather zones and at what distances from SSRAs prescribed burning may be permitted.

(6) The forecast and instructions are made available to field administrators and any interested parties by 3:15 p.m. each day, as necessary. Locally, planned burns are compared against the forecast and instructions, as well as any local prioritization of burns, to determine which burns, if any, will be permitted on the following day. If there are any changes in the forecast for the day of the burn, the smoke management forecast

unit will make every effort to place a message on an automatic answering phone by 8:00 a.m.

629-048-0230

### **Burn Procedures**

(1) Before any prescribed burning is initiated, burn bosses should have a well thought out plan that takes into account:

(a) How weather will be monitored and changes in conditions will be communicated;

(b) Resources necessary to accomplish ignition and ignition sequences;

(c) Resources and methodology necessary to contain and control the fire and prevent its escape, including communications to access additional resources, if necessary; and

(d) How the burn will be conducted to avoid smoke entering smoke sensitive receptor areas or other areas sensitive to smoke and to minimize smoke effects on other communities.

(2) The forester may require that a written burn plan be prepared for approval under OAR 629-043-0026 (4), prior to issuance of a burn permit. A prescribed fire plan is required for all prescribed burning on federal lands.

(3) For prescription burn units on forestland subject to level 1 regulation, burn bosses must provide specific information to be transmitted to the smoke management forecast unit in a format acceptable to the forester, regarding unit location, method of burning, and fuel loading tonnages prior to the issuance of the forecast and instructions that will apply to the burn.

(4) (a) Prior to ignition of any prescribed burning in a closed fire season, the burn boss must obtain a permit to burn from the forester as required by ORS 477.515 (not required for federal land management agencies). Federal land management agencies must follow agency policies that provide for an affirmative "go-no go decision" prior to ignition of any prescribed burning prior to ignition of any prescribed burning as documented and approved by the federal land management agency's line officer.

(b) A permit to burn from the forester is also required for all prescribed burning on non-federal Class 1 forestland in western Oregon at any time of the year.

(c) Under ORS 477.515 (1)(a), the forester may waive the requirement for a burn permit in instances of burning other than described in subsections (a) and (b) of this section, so burn bosses should check with the forester locally to determine whether permits are required outside closed fire season.

(5) Prior to ignition of any prescribed burning on forestland subject to level 1 regulation, the burn boss must obtain the current smoke management forecast and instructions and must conduct the burning in compliance with the instructions. Burn bosses must make provisions to be informed if the forecast or instructions are subsequently changed. Through communication among the burn boss, field administrator and the smoke management forecast unit, based on information specifically relevant to the burn location, a burn boss may obtain a variance to the instructions, but must document the time and method of communication and adhere strictly to the conditions of the variance.

(6) For prescribed burn operations with large tonnages (greater than 2000 tons) or burns that will occur over multiple days, burn bosses may request at least two days in advance that a special forecast and instructions be issued to ensure adequate attention to meeting program objectives. Issuance of a special forecast and instructions will be solely within the discretion of the smoke management forecast unit based on workload and sufficient local information to support the forecast.

(7) The smoke management forecast unit, in developing instructions, and each field administrator issuing burn permits are directed to manage the prescribed burning on forest land in connection with the management of other aspects of the environment in order to maintain a satisfactory atmospheric environment in smoke sensitive receptor areas. Likewise, this direction is to be applied in situations that are not defined as SSRAs but are considered other areas sensitive to smoke.

(8) Each burn boss or field administrator must validate that forecasted weather conditions are consistent with actual on-site conditions prior to ignition of burns. If a burn boss determines, or is advised by a field administrator, that smoke or other pollutants in an SSRA, or other area sensitive to smoke is already adversely affected or would likely become so with additional burning, or upon notice from the forester through the Protection Division, or upon notice from the forester following consultation with the Department of Environmental Quality that air in the entire state or portion thereof is, or would likely become adversely affected by smoke, the affected burn boss must terminate ignition. Upon termination, any burning already under way should be completed, residual burning should be extinguished as soon as practicable, and no additional burning may be attempted until approval has been received from the forester.

629-048-0300

#### **Registration of Intent to Burn**

(1) In all instances of prescribed burning on forestland within a forest protection district, the operator, federal land manager, landowner, or timber owner must first register with the forester all forestland that is intended to be burned. For forestland subject to level 1 regulation, burn registration must be at least seven days prior to the first day of ignition.

(2) The forester may waive the seven day waiting period required in section (1) of this rule contingent upon a burn plan or conditions of federally prescribed fire policies having already been approved.

(3) Information provided for burn registration must be complete and recorded in a standard format approved by the forester.

(4) No operator, federal land management agency, landowner or timber owner shall be allowed to register additional forestland for burning if payment for their previous registration or burning, when required pursuant to OAR 629-048-0310, is more than 90 days past due.

629-048-0310

#### **Fee Structure**

(1) Any prescribed burning on forestland subject to level 1 regulation (OAR 629-048-0100) is subject to a non-refundable registration fee of \$.50/acre and upon

accomplishment (see section (3) of this rule), a burn fee of \$3.75/acre, except as provided in section (5) of this rule.

(2) Fees for the burning of piled debris, including, but not limited to, whole-tree yarded debris or unmerchantable material debris on landings, shall be assessed against the acres from which the debris was accumulated.

(3) Burn fees for piled burning, broadcast burning or underburning shall be assessed against the total acres within the registered area after the first time that fire is applied to the area regardless of the number of acres actually burned. Subsequent burning in the same registered area shall not be subject to additional registration or burn fees in the same calendar year or in the following two calendar years.

(4) Areas burned as a result of escaped fires that are outside the boundaries of the registered burn area shall not be assessed fees if the area outside of the boundaries is immediately attacked for wildfire suppression. If the area outside of the boundaries is managed as a prescribed fire then the fee provisions in section (1) of this rule shall apply.

(5) Notwithstanding sections (1) and (3) of this rule, underburning shall be exempt from fees when the primary intent of the burning is for forest health reasons to:

(a) Maintain the natural vegetative species of a site; or

(b) Alter the vegetative species on the site to the natural vegetative species of the area; and

(c) When there are no piled forest fuels on the site.

(6) To qualify for the underburning exemption in section (5) of this rule:

(a) When such burning is done in eastern Oregon, the forest stand must have at least 15 trees per acre that are well-distributed over the unit and must measure at least ten inches DBH; or

(b) When such burning is done in western Oregon the forest stand must have at least 50 trees per acre that are well-distributed over the unit and must measure at least 11 inches at DBH.

(7) The forester shall prepare monthly billings to collect the appropriate registration and burn fees from the operator, federal land manager, landowner or timber owner whose name is recorded on the registration form for billing purposes.

(8) Any burning identified in section (5) of this rule as being exempt from fees still must be registered and reported in a manner consistent with other requirements of the Smoke Management Plan (OAR 629-048-0300 and 629-048-0320).

*Alternate 629-048-0310 (To be proposed instead, if LC 629-02 becomes law)*

***Fee Structure***

*(1) Any prescribed burning on forestland subject to level 1 regulation (OAR 629-048-0100) is subject to a non-refundable registration fee of \$.50/acre and upon accomplishment (see section (3) of this rule), a burn fee of \$3.75/acre, except as provided in sections (5) and (7) of this rule.*

*(2) Where required, fees for all forms of prescribed burning, including but not limited to, broadcast burning or burning of piles, whether in-unit, on a landing, or from rights-of-way shall be assessed against the acres from which the forest fuels were accumulated.*

*(3) Burn fees shall be assessed against the total acres within the registered area after the first time that fire is applied to the area regardless of the number of acres*

*actually burned. Subsequent burning in the same registered area shall not be subject to additional registration or burn fees in the same calendar year or the two following calendar years.*

*(4) Areas burned as a result of escaped fires that are outside the boundaries of the registered burn area shall not be assessed fees if the area outside of the boundaries is immediately attacked for wildfire suppression. If the area outside of the boundaries is managed as a prescribed fire then the fee provisions in section (1) of this rule shall apply.*

*(5) Notwithstanding section (1) of this rule, forest health maintenance burning on forestland subject to level 1 regulation, where significant fuel reduction has been accomplished through underburning within the last five years and where there are no slash piles on the site, shall be charged a burn fee of \$1.50/acre.*

*(6) The forester shall prepare monthly billings to collect the appropriate registration and burn fees from the operator, federal land manager, landowner or timber owner whose name is recorded on the registration form for billing purposes.*

*(7) Notwithstanding Section (1) of this rule, burn units of seven acres or less shall be charged a combined registration and burn fee of \$30.00. To reduce processing costs, the forester may elect to collect both registration and burn fees for units less than 20 acres on one combined billing.*

*(8) Notwithstanding section (6) of this rule, any person or entity described in ORS 477.406 (1) with a prior record of timely payment may, at the discretion of the forester, enter into a cooperative agreement for the efficient administration and payment of registration and burn fees provided all payments equal no less than the registration rate described in section (1) of this rule times the number of acres registered plus the burn fee rate in sections (1) or (5) of this rule, as appropriate, times the number of acres accomplished.*

629-048-0320

### **Reporting of Accomplishments**

(1) Accomplishment information for all prescribed burning that takes place on forestland within the regulated area described in OAR 629-048-0100 must be recorded in a manner that attributes the amount of burning and emissions produced for each day of burning and must be reported to the department according to the schedule described below and in standard formats prescribed by the forester.

(2) Prescribed burning on forestland subject to level 1 regulation must be reported the next business day following each day's ignition as described in department directive 1-4-1-601, *Operational Guidance for the Oregon Smoke Management Program*, Appendix 1.

(3) Prescribed burning on forestland subject to level 2 regulation must be reported by the first business day of the week following ignition as described in department directive 1-4-1-601, *Operational Guidance for the Oregon Smoke Management Program*, Appendix 1.

629-048-0330

**Emission Inventories**

(1) In addition to the emissions information collected from prescribed burning under OAR 629-048-0320, the forester will annually estimate, using appropriate models and the best available information on acres burned and fuel type, the emissions produced by wildfires in Oregon. At a minimum, the forester will attempt to collect information about wildfires that burn on forestlands within a forest protection district.

(2) Emissions information from prescribed burning and from wildfires will be maintained as distinct inventories, in appropriate forms, for analysis and distribution to improve the overall understanding of the relationships of wildfire versus prescribed fire emissions.

(3) The forester may include as much information on wildfires as may be readily available from the various protection agencies and other cooperators, provided the gathering of such information does not create an unfunded cost to the smoke management program.

629-048-0400

**Coordination with Other Regulating Jurisdictions and for Other Pollutants**

(1) In order to meet the protection and visibility objectives (OAR 629-048-0120 and 629-048-0130) of the smoke management plan, it is important that the forester, field administrators and other cooperators be well informed as to the existence of, or potential for smoke or other airborne pollutants other than that which will be produced by any planned prescribed burning in the affected airshed. Local field administrators are encouraged to maintain working relationships with other local jurisdictions that authorize open burning or monitor air quality so that all parties may be adequately informed of planned burns or conditions that cumulatively might exceed standards or objectives.

(2) The forester is required to report the weather forecast, planned and accomplished burning and smoke intrusions, if any, to the Department of Environmental Quality for each applicable day, on a timely basis.

(3) Any wildfire that has the potential for smoke input into an SSRA or other area sensitive to smoke must be reported immediately by the local unit of the state or federal agency with jurisdiction for fire suppression to the State Forester's office.

(4) The smoke management forecast unit will communicate periodically with appropriate prescribed burning regulators in the surrounding states for the purpose of coordination and information sharing, as appropriate.

629-048-0450

**Periodic Evaluation and Adaptive Management**

(1) The department is responsible for analysis and evaluation of the prescribed burning operations conducted under the smoke management plan.

(2) Reports summarizing annual activities of the program shall be published by the department addressing:

(a) The level of burning activity;

(b) Results with regard to avoiding smoke into SSRAs and other areas sensitive to smoke and reports of any intrusions or significant mishaps;

(c) Accomplishment of alternatives to burning and the use of emission reduction techniques;

(d) Evaluation of overall program accomplishment;

(e) Evaluation of adequacy of listed SSRAs and protection measures; and

(f) Any other pertinent information related to program evaluation and improvement.

(g) Revenues generated from burn fees and related program costs.

(3) Copies of the reports described in section (2) of this rule will be made available to all interested parties.

(4) Upon publication of a report in accordance with section (2) of this rule, the forester will consult with the Smoke Management Advisory Committee created under ORS 477.556 as to any smoke management plan implementation issues that may need attention including, but not limited to, any fee changes that may be appropriate.

629-048-0500

### **Enforcement**

(1) Violations of the smoke management plan may be enforced either as violations of the fire prevention statutes and rules (ORS 477.980 to 477.993) or as violations of the forest practice rules (ORS 527.680 to 527.690 and 527.990).

(2) (a) When a violation is related primarily to an act or omission that has caused or might cause fire to burn uncontrolled, in the judgment of the forester, enforcement under the provisions of the fire prevention statutes and rules is appropriate.

(b) When a violation is related primarily to an act or omission that has caused or might cause deterioration of air quality, in the judgment of the forester, enforcement under the provisions of the Forest Practices Act and rules (specifically, OAR 629-615-0300) is appropriate.

(3) Enforceable standards within the smoke management plan include requirements to:

(a) Register burns prior to ignition (OAR 629-048-0230(3) and OAR 629-048-0300);

(b) Obtain approval for and follow a burn plan (OAR 629-048-0230(2) and OAR 629-043-0026(4));

(c) Obtain a burn permit and comply with any conditions included therein (OAR 629-048-0230(4) and ORS 477.515);

(d) Obtain and comply with daily smoke management instructions and updates (OAR 629-048-0230(5));

(e) Comply with restrictions regarding use of plastic covers on burn piles (OAR 629-048-0210(4));

(f) Cease burning when directed by the forester (OAR 629-048-0100(4) and OAR 629-048-0230(8));

(g) Report accomplishments (OAR 629-048-0320); and

(h) Pay fees (OAR 629-048-0310).

(4) While Section 118 of the federal Clean Air Act provides for enforcement of state air quality regulations against federal agencies, it will be the policy of the Board of Forestry, in the event of a failure of a federal land management agency to comply with the smoke management plan, that the forester will inform the responsible agency of the

failure and coordinate efforts to ensure timely correction of any breakdowns in procedure that may have resulted in the failure.

## AMEND

### OAR Chapter 629, Division 43 – Fire Prevention

629-043-0040

#### ~~[Burning]~~ **Burn Permits**

(1) Pursuant to ORS 477.515, holders of permits for burning [~~shall~~] **must**:

(a) Prior to burning, clear the area immediately around and above the [~~burning~~] **burn** site of material that may carry fire[-] ;

(b) When burning in a barrel or similar [~~burning~~] container, completely cover the container openings with a screen constructed of not less than 14-gauge wire and [~~which~~] **that** has openings which are no larger than one-fourth inch in diameter[-] ;

(c) [~~Constantly attend the burning until it is extinguished.~~

(~~d~~) Not allow the **uncontrolled** spread of fire away from the [~~burning~~] **permitted burn** site[-];

~~[(e) Not burn any material which results in dense smoke or noxious odors including, but not limited to, wet garbage, plastic material, wire insulation or rubber products.~~

(~~f~~) (d) Not burn on a day when burning has been prohibited **by the forester** because of increased fire danger or because of air quality conditions[-];

(~~g~~) (e) Not burn without complying with all conditions, hours and dates set forth on the permit[-]; **and**

(~~h~~) (f) Not burn without complying with the open burning prohibitions set forth in OAR [~~340-023-0055 to 340-023-0090~~] **340-264-0050 to 340-264-0170**.

(2) The requirements of this rule do not apply to [~~the burning of slashing~~] **prescribed burning** conducted in compliance with ORS 477.013, OAR 629-043-0026(4)[-~~OAR 629-043-0041 and OAR 629-043-0043~~] **and OAR 629-048-0001 to 629-048-0500**.

(3) The forester may, in **a** written order, reduce or waive any requirement of this rule if:

(a) In the [~~judgement~~] **judgment** of the forester, conditions so warrant; and

(b) The burning complies with the requirements of ORS 477.515, ORS chapter 468, ORS chapter 468A and OAR chapter 340 division [~~023~~] **264**.

## DELETE

[629-043-0041

### ***Burning in Restricted Areas***

*Pursuant to ORS 477.013, burning on forestland within the boundaries of a forest protection district and lying within a restricted area as set forth in the plan for managing smoke, on file with the Secretary of State (OAR 629-043-0043), shall be subject to the following conditions:*

*(1) A permit to burn from the Forester shall be required for applicable prescribed burning on non-federal lands during any time of the year within the restricted area as set forth in Exhibit 2 of the above referenced plan. Applicable prescribed burning is that which is regulated by the Oregon Smoke Management Plan (OAR 629-043-0043).*

*(2) Any prescription burning on forestland assessed at Class I timber rates or on federal forest land in the restricted area subject to provisions of the Smoke Management Plan (OAR 629-043-0043) shall be subject to an annual (calendar year) non-refundable registration fee of \$.50/acre and a burning fee of \$5/acre for broadcast burns, underburns and pile burns, except as noted in section (3) of this rule:*

*(a) Any burning identified in sections (3) of this rule as being exempt from fees still must be reported in a manner consistent with other requirements of the Smoke Management Plan (OAR 629-043-0043);*

*(b) The operator, federal land manager, landowner, or timber owner shall register with the Forester all forestland that is intended to be burned at least seven days prior to the day of burning;*

*(c) The Forester may waive the seven day waiting period required in subsection (2)(b) of this rule contingent upon a burning plan or conditions of Federal prescribed fire policies having already been approved;*

*(d) In no event shall an operator, landowner, federal land manager, or timber owner burn without having registered the forestland for burning;*

*(e) Information for registering acres and recording acres burned shall be recorded on forms approved by the Forester;*

*(f) The Forester shall prepare monthly billings to collect the appropriate registration and burning fees from the operator, federal land manager, landowner or timber owner whose name is recorded on the registration form for billing purposes;*

*(g) No operator, federal land manager, landowner or timber owner shall be allowed to register additional forestland for burning if payment for previous registration or burning is more than 90 days past due.*

*(3)(a) Areas two acres or less in size shall not be subject to registration or burning fees, except for landing burning noted in subsection (3)(c) of this rule;*

*(b) Burning of right-of-way slashing shall not be subject to registration or burning fees;*

*(c) Landings shall not be subject to registration or burning fees, except if in the opinion of the Forester the landing debris includes a significant amount of debris from whole-tree yarding or the yarding of unmerchanted wood (YUM). If the majority of the landing debris from whole-tree yarding or YUM yarding is reduced by utilization, then the registration and burning fees shall not apply. If the fire from a landing not subject to*

~~fees spreads to other areas identified in a burn plan the total acres listed in the burn plan shall then be subject to the fees;~~

~~(d) Underburning shall be exempt from fees when the primary intent of the burning is for forest health reasons to:~~

~~(A) Maintain the natural vegetative species of a site; or~~

~~(B) Alter the vegetative species on the site to the natural vegetative species of the area; and~~

~~(C) When such burning is done in eastern Oregon on stands that have at least 15 trees per acre that are well-distributed over the unit and that measure at least ten inches DBH; or~~

~~(D) When such burning is done in western Oregon on stands that have at least 50 trees per acre that are well-distributed over the unit and that measure at least 11 inches at DBH; and~~

~~(E) When there are no slashing piles on the site.~~

~~(e) Fees for the burning of piled debris, including whole tree yarded debris and YUM debris on landings, shall be assessed against the acres from which the debris was accumulated;~~

~~(f) Burning fees for piled burning or broadcast burning or underburning shall be assessed against the total acres within the registered area after the first time that fire is applied to the area regardless of the number of acres actually burned. Subsequent reburning in the same registered area shall not be subject to additional registration or burning fees in the same calendar year or the following calendar year;~~

~~(g) Areas burned as a result of escaped fires that are outside the boundaries of the registered burn area shall not be assessed fees if the area outside of the boundaries is managed as a wildfire. If the area outside of the boundaries is managed as a prescribed fire then the fee provisions in sections (2) and (3) of this rule shall apply.]~~

**[629-043-0043**

### **Smoke Management Plan**

~~(1) Objective: To prevent smoke resulting from burning on forest lands from being carried to or accumulating in designated areas (Exhibit 2) or other areas sensitive to smoke, and to provide maximum opportunity for essential forest land burning while minimizing emissions; to coordinate with other state smoke management programs; to conform with state and federal air quality and visibility requirements; to protect public health; and to encourage the reduction of emissions.~~

~~(2) Definitions:~~

~~(a) "Deep mixed layer" extends from the surface to 1,000 feet or more above the designated area ceiling;~~

~~(b) "Smoke drift away" occurs where projected smoke plume will not intersect a designated area boundary downwind from the fire;~~

~~(c) "Smoke drift toward" occurs when the projected smoke plume will intersect a designated area boundary downwind from the fire or when wind direction is indeterminate due to wind speed less than 5 MPH at smoke vent height;~~

~~(d) "Smoke vent height" — Level, in the vicinity of the fire, at which the smoke ceases to rise and moves horizontally with the wind at that level;~~

(e) "Stable layer of air"—A layer of air having a temperature lapse rate of less than dry adiabatic (approximately 5.5° F. per 1,000 feet) thereby retarding upward mixing of smoke;

(f) "Tons available fuel"—An estimate of the tons of fuel that will be consumed by fire at the given time and place;

(g) "Residual smoke"—Smoke produced after the initial fire has passed through the fuel;

(h) "Field administrator"—A forest officer or federal land administrator who has the direct responsibility for administering burning permits on a unit of forest land within the boundaries of an official fire district;

(i) "Restricted area"—That area delineated in **Exhibit 2** for which permits to burn on forest land are required year round, pursuant to OAR 629-043-0041;

(j) "Designated area"—Those areas delineated in **Exhibit 2** as principal population centers;

(k) "Heavy use"—Unusual concentrations of people using forest land for recreational purposes during holidays, and special events;

(l) "Major recreation area"—Areas of the state subjected to concentrations of people for recreational purposes;

(m) "State Forester" means the State Forester or delegated Department of Forestry employee representative;

(n) "Instructions" means the specific burn authorizations and weather discussions issued and disseminated as needed by the State Forester;

(o) "Smoke Management Plan" means the administrative rule approved by the State Forester and the Department of Environmental Quality and administered by the State Forester to control prescribed burning on forest lands;

(p) "Smoke Management Directive 1-4-1-601", as approved by the Department of Environmental Quality, is the Department of Forestry's operational guidance for administration of the Oregon Smoke Management Program;

(q) "Other Areas Sensitive to Smoke" are intended to consider specific recreation areas during periods of heavy use by the public such as coastal beaches on special holidays, federal mandatory Class I areas during peak summer use, and special events. All Oregon and Washington Class I areas shall be considered as areas sensitive to smoke during the visibility protection period, defined in the Oregon Visibility Protection Plan, OAR 340-020-0047, Sec. 5.2.

(3) Control:

(a) The State Forester is responsible for the coordination and control of the Smoke Management Plan. The plan applies to the restricted area set forth in **Exhibit 2** with full interagency cooperation with the U.S.D.A., Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service, Bureau of Indian Affairs, private forest landowners, and the Department of Environmental Quality. The smoke management plan, Department of Forestry Directive 1-4-1-601 and the Smoke Management instructions (and authorized variances) issued pursuant to the plan, shall be strictly complied with;

(b) Certain "designated areas" are established in consultation with the Environmental Quality Commission. **Exhibit 2** delineates designated areas and specified ceilings;

~~(c) During periods of heavy use, major recreation areas in the state shall be provided the same consideration as "designated areas". Other areas sensitive to smoke shall be provided the same consideration as designated areas;~~

~~(d) The Smoke Management Plan shall be operated in a manner consistent with the requirements of the Oregon Visibility Protection Plan for Class I areas (OAR 340-020-0047, Sec. 5.2).~~

~~(4) Administration:~~

~~(a) The State Forester, in developing instructions, and each field administrator issuing burning permits under this plan shall manage the prescribed burning on forest land in connection with the management of other aspects of the environment in order to maintain a satisfactory atmospheric environment in designated areas (Exhibit 2). Likewise, this effort shall be applied in special situations where local conditions warrant and that are not defined as designated areas but nevertheless are sensitive to smoke. The development of instructions and accomplishment of burning will entail consideration of air quality conditions and weather forecasts (including burning forecasts and plans of the Department of Environmental Quality and the Washington Department of Natural Resources), acreages involved, amounts of material to be burned, evaluation of potential smoke column vent height, direction and speed of smoke drift, residual smoke, mixing characteristics of the atmosphere, and distance from the designated area of each burning operation;~~

~~(b) The State Forester and each field administrator shall evaluate down wind conditions prior to implementation of burning plans. When the State Forester or a field administrator determines that visibility in a designated area, or other area sensitive to smoke is already seriously reduced or would likely become so with additional burning, or upon notice from the State Forester through the Protection Division, or upon notice from the State Forester following consultation with the Department of Environmental Quality that air in the entire state or portion thereof is, or would likely to become adversely affected by smoke, the affected field administrator shall terminate burning. Upon termination, any burning already under way will be completed, residual burning will be mopped up as soon as practical, and no additional burning will be attempted until approval has been received from the State Forester.~~

~~(5) Reports: Field administrators shall report daily at such times and in such manner as required by the State Forester covering their daily burning operations. Any wildfire that has the potential for smoke input into a designated or smoke sensitive area shall be reported immediately to the State Forester's office. The State Forester shall report to the Department of Environmental Quality each day on a timely basis its forecast, planned and accomplished burning, and smoke intrusions.~~

~~(6) Key to Smoke Drift Restrictions:~~

~~(a) Smoke drift away from designated area: No specific acreage limitation will be placed on prescribed burning when smoke drift is away from designated area. Burning should be done to best accomplish maximum vent height and to minimize nuisance effect on any segment of the public;~~

~~(b) Smoke drift toward designated area:~~

~~(A) Smoke plume height below designated area ceiling. Includes smoke that for reasons for fire intensity, location, or weather, will remain below the designated area~~

~~ceiling. Also included are fires that vent into layers of air, regardless of elevation, that provide a downslope trajectory into a designated area:~~

~~(i) Upwind distance less than ten miles outside designated areas. No new prescribed fires will be ignited;~~

~~(ii) Upwind distance 10-30 miles outside designated area boundary. Burning limited to 1,500 tons per 150,000 acres on any one day;~~

~~(iii) Upwind distances 30-60 miles outside designated area boundary. Burning limited to 3,000 tons per 150,000 acres on any one day;~~

~~(iv) Upwind distances more than 60 miles beyond designated area boundary. No acreage restriction unless otherwise advised by the Forester.~~

~~(B) Smoke will be mixed through the deep layer at the designated area. This section includes smoke that will be dispersed from the surface through a deep mixed layer when it reaches the designated area boundary:~~

~~(i) Upwind distance less than ten miles from designated area boundary. Burning limited to 3,000 tons per 150,000 acres on any one day;~~

~~(ii) Upwind distance 10-30 miles from designated area boundary. Burning limited to 4,500 tons per 150,000 acres on any one day;~~

~~(iii) Upwind distances 30-60 miles outside designated area boundary. Burning limited to 9,000 tons per 150,000 acres on any one day;~~

~~(iv) Upwind distances more than 60 miles beyond designated area boundary. No acreage restriction unless otherwise advised by the Forester.~~

~~(C) Smoke above a stable layer over the designated area. Smoke in this group will remain above the designated area, separated from it by a stable layer of air:~~

~~(i) Upwind distance less than ten miles outside designated area. Burning limited to 6,000 tons per 150,000 acres on any one day;~~

~~(ii) Upwind distance 10-30 miles outside designated area. Burning limited to 9,000 tons per 150,000 acres on any one day;~~

~~(iii) Upwind distances 30-60 miles outside designated area. Burning limited to 18,000 tons per 150,000 acres on any one day;~~

~~(iv) Upwind distances more than 60 miles beyond designated area boundary. No acreage restriction unless otherwise advised by the Forester.~~

~~(D) Smoke vented into precipitation cloud system. When smoke can be vented to a height above the cloud base from which precipitation is falling, there will be no restrictions to burning, unless otherwise advised by the Forester.~~

~~(e) Changing conditions: When changing weather conditions, adverse to the Smoke Management objective, occur during burning operations, aggressive mop up shall be initiated as soon as practical and no additional burning shall be initiated.~~

~~(7) Analysis and Evaluation: The State Forester shall be responsible for the annual analysis and evaluation of burning operations under this plan. Copies of the summaries will be provided to all interested parties.~~

~~(8) The Department of Environmental Quality, in cooperation with the State Forester, federal land management agencies, and private forest landowners shall develop maximum annual and daily emission limits in accordance with federal PSD (Prevention of Significant Deterioration) regulations.]~~