



State of Nevada
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Technical Programs - Smoke Management Plan

Smoke Management Plan

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Purpose

The public policy of the State of Nevada is to achieve and maintain levels of air quality which will protect human health and safety, prevent injury to plant and animal life, prevent damage to property, and preserve visibility and the scenic and esthetic values of the state. The purpose of this program is to coordinate and facilitate the statewide management of prescribed outdoor burning on lands in the state of Nevada. This program is designed to meet the requirements of NRS445B.100 through 445B.845, inclusive which deal with air pollution, and the requirements of the EPA Interim Air Quality Policy on Wildland and Prescribed Fires (May 1998). This program in no way supersedes the authority of local governments to regulate and control smoke and air pollution under NRS244.361 and NRS268.410 or the authority of the state forester to regulate controlled fires under NRS527.122 through 527.128.

Cooperation

An ongoing cooperative effort by all organizations involved in the use of prescribed fire for accepted range, agricultural and forestry practices is essential to the success of this plan.

Goals

- Protect human health and safety from the effects of outdoor burning
- Facilitate the enjoyment of the natural attractions of the state
- Provide a burning program for the people of this state
- Provide the opportunity for forest, rangeland, and crop burning while minimizing air quality impacts
- Foster and encourage the development of reasonable alternative methods for disposing of or reducing the amount of organic refuse on lands in Nevada
- Acknowledge the role of fire in Nevada and allow the use of fire under controlled conditions to maintain healthy ecosystems while meeting the requirements of the Clean Air Act
- To encourage the development of better smoke management models and techniques
- To provide for a voluntary approach to the implementation of a statewide smoke management program
- To address interstate smoke transport issues through enhanced communication and the development of interstate/interagency agreements

Smoke Management Responsibilities

Each land manager involved in the use of prescribed fire, whether management or naturally ignited, is responsible for proper smoke management for the prescribed fires it conducts and shall identify and implement appropriate smoke management techniques to minimize the amount and/or impact of smoke produced and to avoid exceedances of the Nevada and National Ambient Air Quality Standards.

The Division of Environmental Protection will work with the land managers and air agencies in other states to ensure that interstate transport of air pollutants does not unfairly restrict the ability of Nevada's land managers to implement prescribed fire programs.

Definitions

Class I Area includes all international parks, national wilderness areas which exceed 5,000 acres in size, national memorial parks which exceed 5,000 acres in size, and national parks which exceed 6,000 acres in size and which are in existence on August 7, 1977 (CAA Section 162(a)). The only Class I area designated in Nevada is the Jarbidge Wilderness.

Land manager includes any federal, state, local or private entity that administers, directs, oversees or controls the use of public or private land, including the application of fire to the land.

National Ambient Air Quality Standards (NAAQS) refers to standards for maximum acceptable concentration of pollutants in the ambient air to protect public health with an adequate margin of safety, and to protect public welfare from any known or anticipated adverse effects of such pollutants (e.g., visibility impairment, soiling, materials damage, etc.) in the ambient air.

PM10 refers to particulate matter 10 microns in diameter or smaller.

PM2.5 refers to particulate matter 2.5 microns in diameter or smaller.

Prescribed fire includes management ignited and conducted to meet management objectives. It does not include fire training, public open burning or any other type of burning that is not specifically listed in the applicability section on page 5 of this document.

Public open burning is the burning of vegetative yard waste conducted by single family residences within the jurisdiction of and under a permit obtained by the local fire protection agency. The vegetative yard waste must be generated only from the residence conducting the burn.

Smoke management includes but is not limited to techniques to reduce emissions and smoke impacts, the identification and avoidance of smoke sensitive areas, the monitoring and evaluation of the smoke impacts of each burn, and coordination among land management agencies to minimize cumulative impacts.

Smoke sensitive areas include but are not limited to Class I areas as well as other designated scenic and/or important views especially during times of significant visitor use, urban and rural population centers, homes, schools, hospitals, nursing homes, airports, recreational areas, and other locations that may be sensitive to smoke impacts for health, safety, and/or aesthetic reasons.

Suppression action includes any activity in which the responsible fire control agency personnel are actively trying to confine, contain or control the fire. Use of natural fire barriers such as cliffs, rocks, or rivers, etc., to contain the fire may be regarded as suppression as long as this is part of the suppression strategy.

Wildfire is a fire occurring on wildland that is not meeting management objectives and thus requires a

suppression response (NWCG).

Wildland fire use is the management of naturally ignited wildland fires to accomplish specific prestated resource management objectives in predefined geographic areas outlined in forest management plans.

Applicability

The provisions of this smoke management program apply to all areas of the state under the jurisdiction of the Nevada Division of Environmental Protection. The Division's jurisdiction does not include Washoe or Clark Counties or any Bureau of Indian Affairs (BIA) trust lands.

Provided no reasonable alternative exists (see p. 5 -- Permit Application for Management Ignited Prescribed Fires, Section (a) for a discussion of reasonable alternatives), open burning under this smoke management program may be conducted for the following types of projects:

- a. Hazard fuel reduction;
- b. Slash disposal from timber sales and roads constructed within contract areas;
- c. Wildlife and livestock habitat improvement;
- d. Forest and rangeland improvement;
- e. Insect, weed and disease control;
- f. Site preparation for revegetation;
- g. Watershed management and water yield improvement;
- h. Maintenance and improvement of natural ecosystems;
- I. Maintenance of threatened and endangered species;
- j. Other vegetative management improvement projects; and,
- k. Agricultural practices.

The permitting requirements described below do not apply to small wood fires for recreational, ceremonial, heating or cooking purposes or to burning conducted by single-family residences, as defined under public open burning, at least one mile beyond the boundaries of the following cities towns and areas:

Babbitt, Battle Mountain, Caliente, Carlin, East Ely, Elko, Ely, Fallon, Fernley, Gabbs, Gardnerville, Gardnerville Ranchos, Genoa, Hawthorne, Johnson Lane, Lovelock, McGill, Minden, Tonopah, Topaz Ranch estates, Virginia City, Weed Heights, Wells, Winnemucca, and Yerington; and on the Nevada side of the Tahoe Basin, in Carson City and in those portions of Douglas and Lyon Counties that are within one mile of the Carson City line, provided the burning is not being conducted as an agricultural practice or for any of the other types of projects listed above.

For burns conducted by single-family residences within the cities, towns and areas listed above, the local fire protection agency must request a burn permit to allow public open burning. An open burn permit must be obtained for any fire training being conducted or any other open burns not specifically listed above regardless of size.

Smoke Management Contingency Plan

In plans for prescribed fires, each land management organization will have contingency plans identified

enabling it to reduce smoke emissions. Contingency plans will be implemented when meteorological conditions warrant, the Nevada Division of Environmental Protection, Bureau of Air Quality determines that acceptable limits of smoke accumulation are or will be exceeded, and/or the responsible land management organization anticipates that the prescription for a particular fire will be exceeded. Should prescriptive elements cease to conform to those in the approved open burn permit, the land manager shall immediately take the appropriate corrective action to reduce further impacts and shall consult with the Division as expeditiously as possible.

Permits

Authority

1. Federal Clean Air Act. Section 118(a), "Control of Pollution from Federal Facilities"; Section 110, Implementation Plans"; Section 116, "Retention of Authority"; Section 169(a), "Visibility Protection for Federal Class I Areas"; Section 176(c), "Limitations on Certain Federal Assistance".
2. Nevada Revised Statutes. Section 445B.100, Declaration of public policy; Section 445B.110, Air pollution defined; Section 445B.210, Powers of the commission; Section 445B.220, Additional powers of the commission; Section 445B.230, Powers and duties of the department; Section 445B.235, Additional powers of the department; Section 445B.240, Power of representatives of department to enter and inspect premises; Section 445B.300, Operating permit for source of air contaminant; notice and approval of proposed construction; administrative fees; failure of commission or department to act; Section 445B.595, Governmental sources of air contaminants to comply with state and local provisions regarding air pollution; permit to set a fire for training purposes; planning and zoning agencies to consider effects on quality of air.
3. Nevada Administrative Code. Section 445B.381 Open burning.
4. Implementation of this program in no way supersedes the authority of local governments to regulate and control smoke and air pollution under NRS244.361 and NRS268.410 or the authority of the state forester to regulate controlled fires under NRS527.122 through 527.128.

Permit Application for Management Ignited Prescribed Fires

Land managers must obtain a permit from the Nevada Division of Environmental Protection for all management ignited prescribed fires which emit greater than 1.0 tons of PM₁₀. The permit must be obtained prior to ignition. For each project emitting between 1.0 and 10 tons of PM₁₀, a one - page permit application form must be completed and submitted to the Division at least two weeks prior to the planned date of ignition. For fires emitting more than 10 tons of PM₁₀, the complete application package must be submitted at least 30 days prior to the planned ignition date. Completed applications will be reviewed by the Division and, if approved, signed and returned to the applicant as soon as possible, but at least one week prior to the planned date of ignition. Should circumstances occur which will not allow the land manager to submit a completed permit application 14 or 30 days prior to the burn, the Division will make a good faith effort to work with the land manager to issue the permit as soon as possible. Concerns raised about this approach by the agricultural community will be addressed after survey results have been

evaluated.

The issuance of a permit does not constitute final approval. Final approval must be obtained 24 hours prior to ignition (see "Pre-ignition Notification and Authorization" p. 8). Final approval will be based on ambient air quality conditions. If a request for final approval is denied, the Division will provide the land manager with written record of that denial within 10 days after the verbal denial was issued.

In reviewing the application for an open burning permit, the Division will consider the following factors:

a. Consideration and evaluation of alternatives to burning. When one management objective is to maintain a fire dependent ecosystem the effects of fire cannot be duplicated by other tools. Fire may be the preferred management tool even when other treatments may be equally effective for meeting other objectives. Fire can also be used to reduce heavy fuel loads and prevent catastrophic wildfires. Wildland owners/managers may have an array of tools, including fire, that can be used to accomplish land use plans, depending on the resource benefits to be achieved. Several factors should be considered when selecting appropriate treatments. Those factors include the environmental impacts (e.g. air and water quality, soil, wildlife, etc.), whether fire must be used to meet management objectives and the costs of treatment. The best combination of treatments are those that meet management goals with the most favorable environmental impacts at the most reasonable costs.

A detailed description of the alternatives considered and the rationale for rejecting them must be submitted for all projects estimated to emit more than 10 tons of PM10.

The Division recognizes that alternatives are not without potential negatives and that multiple resources must be weighed along with air quality benefits. However, a permit will not be issued if this information has not been submitted. For smaller projects, the certification signed by the responsible party indicating that alternatives have been considered will suffice. However, the responsible signatory should be prepared to discuss the alternatives considered should Division staff request the information. Once the Division determines that the description of alternatives considered and the rationale for rejecting them has not been submitted, the Division will immediately notify the permit applicant and request the information. If the applicant is unable to provide the information, the Division will notify the applicant in writing that the application is incomplete and that the permit cannot be issued.

b. Proximity to populated areas and points of nearest public access. For any project generating more than 10 tons of PM10, the applicant shall provide information regarding the proximity of smoke sensitive areas to the planned project and the points of nearest public access. Procedures for notifying the public of burn dates in smoke sensitive areas shall be included with the applicant's burn plan.

c. Climatic conditions on the day or days of burning. Where burn plans are required, burns must be conducted within the meteorological conditions indicated in the burn plan, but the Division may limit projects in certain geographic areas during "high pollution periods" when existing air quality or cumulative impacts may warrant such limitations.

d. Potential contribution to area air pollution For projects that will emit more than 25 tons

of PM10 or greater than 10 tons of PM10 if located within 15 miles of a Class I area, an area that is in non-attainment for CO or particulate matter, or a smoke sensitive area, the applicant shall demonstrate that the project shall not violate applicable ambient air quality standards (within and outside of Nevada). This demonstration shall be conducted using currently accepted models. The model output shall explicitly show conditions under which the burn will be conducted so as to minimize impacts of emissions.

Valid permit dates. Although the Division would like to monitor potential burns as closely as possible, we recognize that land managers must be able to respond to meteorological conditions appropriate for the burn being permitted. Permits will be issued that are valid for up to three months. If more time is required, the applicant can request additional time when the application is submitted. Each permit shall be valid for the dates listed on the permit. The permittee must note the expiration date of each permit. Requests for an extension or modification of dates may be made verbally, but must be approved by the Division in writing prior to the burn taking place.

Permit Application Requirements

1. For prescribed fires emitting more than 1.0 but less than 10 tons of PM10, the permit applicant need only complete the application form provided by the Division (Appendix 1).
2. For prescribed fires emitting more than 10 tons of PM10 and located more than 15 miles from a smoke sensitive area, Class 1 area or carbon monoxide or particulate matter non-attainment area, the completed application must be accompanied by a burn plan. The burn plan must include the following:
 - a. The specific location and description of the area to be burned;
 - b. The responsible personnel;
 - c. An emergency telephone number that is answered 24 hours a day;
 - d. The property owner;
 - e. The agency/contractor conducting the burn;
 - f. The burn prescription;
 - g. The number of acres to be burned, the type of fuel, fuel loading estimates and the ignition technique to be used;
 - h. A list of agencies and private parties involved;
 - i. A model predicting the impact of smoke (both visibility and PM10) on smoke sensitive receptors. The model shall incorporate all known smoke sensitive receptor within 15 miles of the fire;
 - j. Discussion of public notification to be conducted; and,
 - k. Evaluation of alternative treatments.
3. For prescribed fire projects emitting more than 25 tons of PM10, or more than 10 tons if the burn is within 15 miles of a Class I area, an area that is non-attainment for particulates, a carbon monoxide non-attainment area, or other smoke sensitive area, the following information must also be submitted with the burn plan:
 - a. A smoke management plan including actions taken to minimize emissions before, during and after the fire;
 - b. Emission estimates including the models, methods and emission factors used;
 - c. Identification of smoke sensitive areas;

- d. Safety and Contingency plans;
- e. List of potential affected air regulators to be notified; and,
- f. Air monitoring to be conducted.

Permit Conditions

The following permit conditions shall apply to permits issued by the Division of Environmental Protection for open burning:

1. Air pollution emergencies and alerts: Permits will not be valid during periods of air pollution emergency or alert in the area of burning. At the determination by the Division of such a period, the Division shall notify each permit holder.
2. Pre-ignition notification and approval: For projects emitting more than 1.0 tons of PM10, the land manager must notify the Division on the business day preceding the burn and received final approval before the prescribed burn can be ignited.
3. Smoke Management: In order to minimize smoke impacts and emissions, each permittee shall apply the best smoke management and emission reduction techniques. It is recognized that no two fires are alike in terms of smoke emissions and impacts. Neither are any two fires alike in the smoke management options available. Therefore, the land manager will select appropriate smoke management techniques on a case-by-case basis. While the application of smoke management is required in order to obtain a permit from the Division, it is a general goal and responsibility of the land manager to select the appropriate emission reduction and impact minimization techniques for each fire.
4. Precautions: Prescribed fires shall be supervised by one or more responsible persons dependent on the type of burning. Precautions shall be taken to localize the burning and to, in no way, constitute a fire hazard to persons or property within or adjacent to the burn area. The granting authority and the employees or agents thereof, in the issuing of a permit, do not assume any responsibility or liability for any hazardous condition created by the permittee which results in damage to the person or property of the permittee, or the person or property of any third person.
5. Availability of Permit: The approved permit or copy thereof shall be available at the burn site.
6. Inspection by the Division: All open burning operations shall be subject to inspection by the Division.
7. Local Regulations: The permit is for compliance with state air pollution control requirements only and is not a permit to violate any existing local laws, rules, regulations, or ordinances regarding fire, zoning, or building.
8. Revocation of Permit: If at any time the Division determines that any condition of the permit is not being complied with, the permit may be revoked for the specific project where non-compliance is occurring. At such time, all burning activities at the site of the non-compliance shall be terminated. In addition to revocation of the permit, the Division may take any other enforcement action authorized under state statutes, rules and regulations.

9. Other Conditions may be added to the permit if deemed necessary by the Division and approved by the SMP working group.

Pre-ignition Notification

The land manager shall not ignite a prescribed burn for which a permit is required without receiving the approval of the Division. The land manager must notify the Division as expeditiously as practicable, but no later than 10 am of the business day preceding the burn. Notifications must be made to the Smoke Management Coordinator at (775) 687-4670, ext 3083. If the coordinator is unavailable, the land manager will leave a message including the date of the proposed burn, the permit number, location, responsible agency, estimated number of acres to be burned and a contact name and phone number. The Division shall issue a final decision, either approval, approval with conditions, or disapproval, of the burn, on the same business day. If the Division does not communicate its decision by 5 pm of the same business day, the burn is deemed approved. If ambient air quality conditions are poor enough that no burning will be allowed on a specific day in certain areas of the state, and land managers are unable to reach the coordinator directly, his/her voice mail message will specify the areas of the state where no burning is allowed and land managers calling in to request authorization to burn should assume that their request has been denied. If a land manager wishes to receive a written notice of the denial, a message to that effect should be left on the coordinator's voice mail.

Affected Agency Notification

For prescribed fire projects that emit more than 10 tons of PM10 and are within 15 miles of the state border, BIA trust lands managed under the jurisdiction of a tribal air quality agency, or the borders of Washoe or Clark counties, the air regulators of those counties, tribes or bordering states must be notified prior to the burn. A list of the agencies and individuals to be notified must be included in the burn plans. Appendix 2 provides a listing of state, local and BIA/tribal contacts. This list will be updated by the Division at least annually.

Wildland Fire Use

1. Permit application:

Application for wildland fire use areas shall be made on an annual basis on a form provided by the Division. A burn plan and map showing the area where prescribed fire will be allowed shall be included with each initial application. The burn plan must include a list of the conditions under which burning would be allowed rather than suppressed, and a list of the criteria for determining when suppression should be implemented in response to smoke impacts. The application will be reviewed within 30 days after the application is received and approved or denied. Subsequent annual applications for approved areas need not include the plan and maps. Minor necessary changes for that area should be indicated on the annual permit application, however, any substantial changes in the wildland fire use area or plan will require a full submittal.

2. Daily Evaluation of Fire:

If a wildland fire occurs, the responsible land management agency shall evaluate the burn daily to determine if the conditions meet the prescription of the permitted burn and that ambient air quality standards are not being violated.

Wildfire

Wildfire will not require a permit.

Wildland Fire Use and Wildfire Reporting

The land manager in whose jurisdiction a naturally ignited prescribed fire or a wildfire occurs shall report all such fires when it is expected to attain a size of greater than 300 acres for rangeland and 100 acres for forest land on a daily basis to the Division. The land manager shall include in the report the location, estimated control date, and estimated incident size of each wildfire. For wildland fire use, the land manager shall report the location, the daily anticipated growth in the number of acres potentially burned, the maximum allowable perimeter or size, the type or types of fuels involved, the actual acres burned on the previous day, and the anticipated duration of the fire. The land manager shall also provide information on projected smoke and air quality impacts if requested by the Division. This may include mapping the daytime and nighttime smoke path and down-drainage flow for 15 miles from the burn site, with smoke sensitive areas delineated; modeling; or, air quality monitoring. If this information can be made available to the Division through regional dispatch centers, no additional reporting will be required. In areas where burns under 100 acres may have significant air quality and public health impacts (e.g. the Tahoe Basin), the Division will work with land managers in those areas to develop additional reporting requirements as necessary.

Annual Reporting of Fire Activity

Each permitted user of prescribed fire who emits more than 10 tons of PM10 per year shall provide the Division with an annual reporting of fire activity by March 31 for the previous calendar year's (January through December) activities. Information to be reported includes: the permit number, the name of the individual conducting the burn or the agency name and contact, date and time ignition began, date and time the fire is declared out, actual acreage burned, fuel type, fuel loading, emissions estimates, emission factors used and their source, names of air quality regulators notified and the notification date, and the emission reduction techniques used. All permitted ignitions must be reported, even if they were not carried out. The emissions inventory shall be made available to all interested Working Group members.

Fire Behavior and Environmental Monitoring

1. Prescribed Fire -- Management Ignited and Wildland Fire Use

- a. If at any time the responsible land management agency determines that the prescription for a particular prescribed fire has been exceeded (including impacts on visibility) and/or conditions of the permit are not being met (i.e., designated areas for burn, proper notification, etc.) the responsible parties shall promptly initiate suppression action unless, after consultation with the Division, the prescription is modified, or other appropriate actions are taken.

The responsible signatory must monitor the actual fire to a sufficient level to provide information regarding whether or not the fire is within prescription. Monitoring data collected before, during and after the burn should be used to evaluate the achievement of specific smoke management objectives, and to provide feedback for refinement of future

prescriptions.

b. If at any time it is determined by the Division, in consultation with the responsible land management agency, that the prescribed fire, whether begun as a planned ignition or a wildland fire being managed for resource benefit is degrading air quality to levels expected to violate air quality standards and/or permit conditions, the responsible parties shall promptly initiate suppression action unless, after consultation with the Division, the prescription is modified, or other appropriate actions are taken. Factors that the Division will consider in this determination include, but are not limited to:

- i. Modeled data that indicates expected violations of any Ambient Air Quality Standard (e.g. carbon monoxide (CO), particulate matter under 10 microns in diameter (PM10), or particulate matter under 2.5 microns in diameter (PM2.5).
- ii. Air quality monitoring data that indicates expected violations of any Ambient Air Quality Standard.
- iii. Proximity of the fire to smoke sensitive areas
- iv. Citizen complaints
- v. National Weather Service Fire Weather Forecast predictions.
- vi. Fuel conditions
- vii. Existing and predicted size of the fire.

Air Quality Monitoring

The extent of the monitoring should match the size of the fire and potential human health impacts. For small fires or fires that are remote enough to result in no noticeable impact on the public, visual monitoring of the direction of the plume and monitoring nuisance complaints by the public may be sufficient. Other monitoring techniques include posting personnel on vulnerable roadways to look for visibility impairment and initiate safety measures for motorists; posting personnel at other smoke sensitive areas to look for smoke intrusions; using aircraft to track the progress of smoke plumes; and continued tracking of meteorological conditions during the fire. For large fires expected to last more than one day, locating real-time particulate matter monitors at smoke sensitive areas may be warranted to facilitate timely response to smoke impacts.

If pollutant levels are anticipated to create a significant threat to human health, the Division may require the responsible land management agency to monitor in or near population centers impacted by smoke generated from a particular prescribed fire or wildfire. The Division will assist in identification of instrumentation, site selection, installation of instrumentation, operation, calibration, quality assurance, quality control, laboratory analysis, data interpretation and supplies. Impact from wildfire will be monitored by the Division.

Due to the cooperative interagency nature of this Smoke Management Plan, cost sharing and pooling of resources associated with monitoring and/or modeling is understood. However, especially with respect to prescribed fires, the ultimate responsibility and financial burden is on the land management agency consistent with the principle that the source of pollution should internalize the costs of its pollution, the so called "polluter pays" principle that is applied to other sources of air pollution as well. The Division may therefore ask the responsible land management agency for financial reimbursement as negotiated and mutually agreed upon on a case-by-case basis between the Division and the responsible land management

agency before resources are expended on modeling or monitoring.

Program Support

Land managers and air regulators will work together to assess program implementation needs and to develop a mechanism for providing adequate program support. Program support may be in the form of in-kind services, equipment and space. Program support agreements will be formalized under an MOU and an Interagency Agreement between the Nevada Division of Environmental Protection and the land management agencies. The agreement will be evaluated periodically to ensure that implementation needs continue to be met.

Smoke Management and Emission Reduction Techniques

Each land manager conducting prescribed burning shall implement as many smoke management and emission reduction measures as are feasible for the specific burn and shall include a description of the emission reduction techniques used in the annual fire activity report submitted. The following smoke management and emission reduction techniques are considered best management practices. However, the Division understands that emission reduction techniques (or best available control measures) are not without potential negatives and must be prescribed and used with careful professional judgment and full awareness of possible tradeoffs.

Techniques include:

1. Reducing the biomass by use of techniques such as yarding or consolidation of unmerchandisable material, multi-product timber sales or public firewood access, when economically feasible. When allowing public firewood access, the public must also be informed of the adverse impacts of using green or wet wood as fuel;
2. Burning in seasons characterized by meteorological conditions that allow for good smoke dispersion;
3. Using mass ignition techniques such as aerial ignition by helicopter to produce high intensity fires with short duration impacts;
4. Igniting burns under good-to-excellent ventilation conditions and suspending operations under poor smoke dispersion conditions;
5. Considering smoke impacts on activities conducted by local communities and land users;
6. Burning only those fuels essential to meet resource management objectives;
7. Minimizing duff consumption and smoldering through fuel moisture considerations;
8. Minimizing dirt content when slash piles are constructed by using a root rake on material-moving equipment and by constructing piles under dry soil conditions or by using hand piling methods;
9. Burning piles when other burns are not feasible, such as when snow or rain is present;

10. Using all opportunities that meet the burn prescription and all burn locations to spread smoke impacts over a broader time period and geographic area;
11. Burning during optimum mid-day dispersion hours, with all ignitions in a burn unit completed by 3 p.m. to prevent trapping smoke in inversions or diurnal wind flow patterns;
12. Using chunking of piles and other consolidations of burning material to enhance fuel consumption and to minimize smoke production;
13. Implementing maintenance burning in a periodic rotation mimicking natural fire cycles to reduce excessive fuel accumulations and subsequent excessive smoke production through smoldering or wildfire; and,
14. Managing smoke impacts as follows:
 - a. Limiting smoke impacts to roads, highways, and airports to the amounts, frequencies, and durations consistent with any guidance provided by highway and airport personnel;
 - b. Using appropriate signing if smoke will impact any point of public access, i.e. highways, dirt roads, trails, campgrounds, etc.;
 - c. Notifying the public at potentially impacted smoke sensitive areas; and,
 - d. Determining nighttime impacts and taking appropriate precautions.

Burner Qualifications

All burns conducted by state and federal land managers shall be conducted by personnel trained in prescribed fire and smoke management techniques to the minimum level required by the land management agency in charge of the burn.

The local fire management officer of the state or federal land management agency having jurisdiction over the prescribed burn shall have had smoke management training obtained through successful completion of a National Wildfire Coordinating Group (or equivalent) course dedicated to smoke management.

Surveillance and Enforcement

A land manager conducting a prescribed burn shall permit Division staff to enter and inspect burn sites unannounced, before, during and after burns, to verify the accuracy of the permit information and compliance with the burn plan and smoke management plan, if appropriate. Site inspections conducted by the Division during and after fires shall be coordinated with the appropriate the land manager as necessary to ensure the safety of Division employees and land managers. Should protective equipment be required, Division employees will have been properly trained in its use prior to entering any restricted area. Except under extraordinary circumstances, inspections will be conducted during reasonable business hours. Inspections on private property will be limited to valid permit days and within one week following the prescribed fire.

Failure to comply with the procedures and conditions specified in the permit may result in enforcement action. Penalties of up to \$10,000 per day per violation may be assessed.

-- End --