

**FEATURES OF PRESCRIBED FIRE AND SMOKE MANAGEMENT RULES
FOR WESTERN AND SOUTHERN STATES**

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Introduction

On May 15, 1998, the Environmental Protection Agency (EPA) issued the Interim Air Quality Policy on Wildland and Prescribed Fires. The policy promotes collaboration among Federal, State, tribal, and private wildland owners and air quality managers to address the air quality impacts of wildland fires that are managed to achieve resource benefits.

Fires have been an integral force in the evolution of many wildland ecosystems. Managed wildland or prescribed fires are used to duplicate the effects of natural fires under controlled conditions. Many techniques are used to manage air quality impacts caused by prescribed fires including, among other things, scheduling burning during favorable weather conditions and controlling the amount of fuel burned. Smoke management programs (SMP) provide a basic framework of procedures and requirements for managing smoke from prescribed fires. The purposes of the SMPs are to mitigate the nuisance and public safety hazards (e.g., on roadways and at airports) posed by smoke intrusion into populated areas; to prevent deterioration of air quality and National Ambient Air Quality Standard violations; and to address visibility impacts in mandatory Class I Federal areas. Many states have prescribed fire regulations and smoke management programs in place. This report was prepared to illustrate the various ways in which states have addressed smoke management.

This report summarizes certain features of the prescribed fire and smoke management rules and programs for 19 States in the west and south where fire is most often used to achieve wildland management objectives. Figure 1 illustrates the 19 states for which the programs are summarized. The report consists of a summary table for each state's program. Each summary table is organized into a series of questions and answers. The questions relate directly to the EPA's Interim Air Quality Policy on Wildland and Prescribed Fires and are listed under six

broad subject headings. The six subject headings cover topics such as burn authorization, minimizing emissions, smoke management, public education, monitoring and enforcement, program evaluation, and air quality protection.

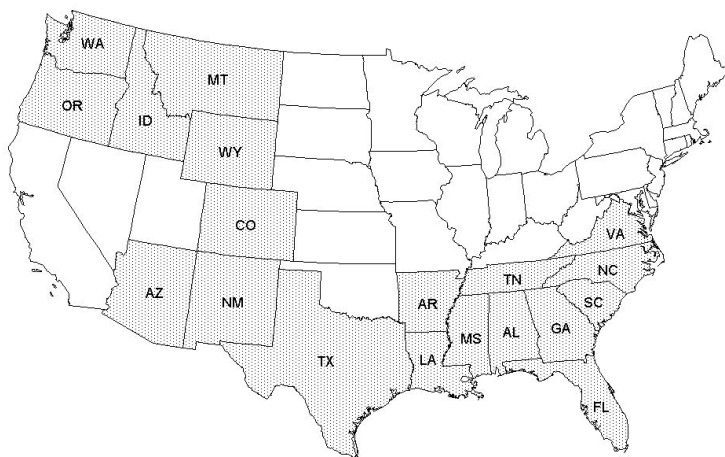


Figure 1. The 19 States for which smoke management programs were summarized.

For this report, the EPA reviewed and summarized the SMPs for 19 western and southern states, where most prescribed burning is conducted. During 1998-1999, copies of smoke management regulations and programs were obtained

through Federal, State, and local air quality and forestry personnel. In several cases, interviews were conducted with state personnel to obtain needed information. A diligent effort was made to obtain and accurately summarize the most current information; however, smoke management programs are continually evolving. In fact, summaries for the states of CA, NV, and UT are not included in this report because their programs are currently being developed or extensively revised. Draft summary tables were sent to state personnel for review and their comments were incorporated into the final summary tables which are presented in this report.

Each state's SMP is unique. Some SMPs are very detailed, and quite complex, others are voluntary and loosely defined, and some are in the development process. Several states have entered into memoranda of understanding or agreement with other concerned entities. Class I visibility protection is discussed in several SMPs.

**ALABAMA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Source of summary information:

- [1] A Smoke Screening System for Prescribed Fires in Alabama. Alabama Forestry Commission. January 24, 1992.
- [2] 1975 Code of Alabama. Section 9-13-11(c) (Alabama Forestry Commission)
- [3] 1975 Code of Alabama. Section 9-13-270 through 274 (Alabama Prescribed Burning Act)
- [4] Alabama Department of Environmental Management Regulations, Chapter 335-3-3 (Air Division)
- [5] Comments received from Alabama Forestry Commission dated August 23, 1999.

Other available information:

- Alabama Prescribed Burn Certification Program - information for new and experienced bumers and application for certification.
- Sample Prescribe Burning Plan form.
- Smoke Management Screening form.

Special note:

The Alabama Smoke Management Program is in the process of revision at this time. The answers to the questions below reflect the new program plan. The new program will be published in the Fall of 1999.

ALABAMA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Alabama
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> • The final burn/no burn decision is made by the prescribed burn manager, who is liable for the project. [1] [5] • All burning requires a permit from the Alabama Forestry Commission (AFC), which has the right to deny permits based on fire danger or air quality. [2] [5]
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> • The AFC coordinates burning permits with the State Air Quality section of the Alabama Department of Environmental Management (ADEM) September 2, 1999, and with County Health Departments. [4] [5]
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • Alabama Smoke Screening System is non-regulatory. However, fire managers who do not use the system are not covered by the State's limited liability program. [3] [5] • All prescribed burns require a permit from the AFC, which may be denied during times of poor air quality. [2] [5]
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • The AFC rules cover all burning for agricultural, silvicultural, range and wildlife management practices. [2] [5] • All other burning is covered by ADEM regulations. [4] [5]
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • All prescribed burning over 1/4 acre in size requires a burning permit from the AFC. These permits are issued by the AFC operations centers upon request. Applicants must supply location, fuel types, purpose of the fire, equipment available for fire control, and responsible person. [2] [5]
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • To receive a burning permit, the person requesting the permit must have adequate tools, equipment and man power to stay with and control the fire during the entire burning period and be responsible to keep the fire contained. [2] [5] • In order to receive liability protection under the state regulation, the following requirements must be met: (1) at least one certified prescribed burn manager must supervise the burn being conducted; (2) a written prescription must be prepared and witnessed or notarized prior to prescribed burning; (3) a burning permit must be obtained from the AFC; and (4) the burn must be conducted pursuant to state law and rules applicable to prescribed burning. [3] [5]

ALABAMA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Alabama
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> Formal written agreements have not been put in place between the AFC and the 410,000 landowners in the state of Alabama. [5]
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> The AFC, in its training program for certified burners, teaches ways to use fire and alternative land management techniques. Prescribed burning, however, is seen as a minimal environmental impact land management technique. [5]
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> The guidance lists 22 practices to use for minimizing adverse effects from smoke. [1]/[5] The AFC has the right to restrict issue of permits during times of air quality degradation. [2] [5]
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> In order to come under the State's limited liability, a burn manager must use the Smoke Screening System, which identifies ways to limit smoke and smoke related problems. [5]
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> To be covered under the State's limited liability program, the prescribed burn manager must prepare a prescribed burning plan. [1] [5] The burning plan should include information about the landowner and the prescribed burn manager, size of area to be burned, fuel type, burning objectives, firing technique, and desired weather. From the charts in the guidance, the user of this non-regulatory system identify estimated distance and direction of smoke impact. [1] [5] The burn plan should include a map showing smoke impact zones and any smoke sensitive areas. [1] [5] Burners who do not want to be covered under the limited liability program, or landowners burning incidental areas on their own land do not have to have a formal burning plan, but must get a permit from the AFC [2] [5]

ALABAMA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Alabama
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • To be protected under the state limited liability program, burn managers must use the Smoke Screening System to estimate distance and direction of smoke impacts. [1] [5] • The U.S. Weather Service (NOAA) publishes a Dispersion Index, which indicates how quickly smoke moves through the atmosphere, and the mixing height and transport wind speed and direction for Alabama each day. This data is published on the AFC web-page, where it is available to all land managers. The data is also available from each operations center. [5]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • Neither the law, the regulations nor the guidance require public notification prior to a prescribed burn. Each year, land managers in Alabama prescribed burn about 30,000 tracts. A public notification system would be impractical. [5] • The Smoke Screening System suggests that the manager notify any smoke sensitive areas prior to burning. [1] [5]
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • Formal contingency plans are not required; however, when a dangerous situation occurs, either from fire escape or smoke, the burner may be required by the AFC to stop burning and plow out the fire. The criteria for such action are perceived danger to adjacent forests or smoke impacts triggering complaints. [2] [5] • The guidance lists seven steps to be taken if an incident occurs. [1] [5]
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • The impacts of prescribed burns in a region are monitored by ADEM. [4] [5] • Individual fires do not require formal monitoring. Each year land managers in Alabama prescribed burn about 30,000 tracts. A formal system for each fire would be impractical. [5] • The prescribed burn manager should observe (1) fire behavior, (2) smoke dispersion, and (3) effects on the vegetation. This information should be documented by making it part of the written plan. [1] [5]
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> • The AFC has had an on-going public education and awareness campaign on the uses of prescribed burning since the early 1980's. This campaign has included discussions about smoke management. Since the early 1990's this project has had the support of the entire environmental community in Alabama. [5] • ADEM has issued a series of public statements and releases detailing air quality problems and how to manage fire to lessen smoke impacts. [5]
<i>Surveillance and Enforcement</i>	

ALABAMA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Alabama
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> • All prescribed burns must have a permit from the AFC. The AFC monitors all fires via air patrol. [5] • ADEM monitors air quality and issues warnings as conditions warrant. [5]
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> • Any person burning without an AFC permit may be charged with a Class B misdemeanor, punishable by up to a \$1,000 fine. {2} [5] • Burn managers not in compliance with state regulations may be liable for damage and injury caused by fire or resulting smoke. [3]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> • To be covered under the state's limited liability program, the burn manager must record fire behavior, smoke dispersion and effects on vegetation as part of his burn plan and action file. [1] [5] • Burners are not required to submit any report to either AFC or ADEM. [5]
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> • The AFC and ADEM have an on-going program of continual review of their programs. Under Alabama Sunset Law, all regulations must be reviewed on a regular basis. [5]
21. What are the review criteria?	<ul style="list-style-type: none"> • The programs are reviewed by the agencies based on effectiveness and responsiveness to citizen needs. [5]

ALABAMA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Alabama
<i>Optional Air Quality Protection</i>	
22. Does the program establish any “special protection zones”? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • The Smoke Screening System, used by all burn managers who wish to be covered by the State’s limited liability program, identifies “smoke sensitive areas” where smoke can affect human health and visibility. The system recognizes hospitals, communities, airports, farms, and houses as smoke sensitive areas. [1] [5] • ADEM regulations identify “special protection zones” in areas where summer time ozone levels exceed standards. In these areas, outdoor burning is restricted and only necessary silvicultural or agricultural managed prescribed burns are allowed. [4] [5] • If smoke-sensitive areas are found within the smoke impact area, burners are given instructions on how to minimize the smoke impact. Depending on the fuel type and the nearness of the smoke-sensitive area to the probable downwind impact area, the guidance suggests that the burn manager: (1) not burn or burn with extreme caution; (2) prepare a new plan with a change in wind direction or dispersion index; (3) Create safety zones by plowing a section near the sensitive area and burning it first under careful conditions; (4) not burn stumps, larger materials, windrows or items with excessive dirt mixed in; (5) Complete the burn by 3 p.m., (6) Burn only in small blocks and monitor closely, (7) Take other steps as needed to mitigate any adverse smoke impacts. [1] [5]
23. Does the program establish any “performance standards”? What are the performance standards?	<ul style="list-style-type: none"> • Neither the law, the regulations nor the guidance establish any performance standards. [5]
24. What additional smoke management requirements apply if the performance standards have been exceeded?	Neither the law, the regulations nor the guidance establish any performance standards. [5]
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	<ul style="list-style-type: none"> • Alabama Law (Section 9-13-12) declares that uncontrolled fires are a public nuisance. There is no law identifying smoke as a nuisance. Under Alabama civil law, smoke from a fire that causes damage or injury can be the grounds of a lawsuit, unless the burn manager is covered under the Alabama Prescribed Burning law provisions. [3] [5]

ALABAMA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Alabama
26. Is the smoke management program, or the regulations authorizing the program, part of the State's implementation plan (SIP)?	<ul style="list-style-type: none"> • Yes, the SIP is presently undergoing revision by ADEM, including a revision to the Smoke Management Program. Those revisions are reflected in this document. [5]
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	<ul style="list-style-type: none"> • The smoke management program is funded as a part of the agency budgets of the AFC and ADEM. These budgets are funded by the State Legislature. Over the past several years, these funds have decreased, to the point that this is a minimal program. [5]
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	<ul style="list-style-type: none"> • No. Prescribed burning is considered a minimal impact on a statewide, year round basis. [5]
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	<ul style="list-style-type: none"> • No. [5]

**ARIZONA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Source of summary information:

- [1] Rules for Smoke Management Program. Arizona Department of Environmental Quality, Air Quality Assessment Section. Title 18, Chapter 2, Article 15, available at www.adeq.state.az.us/air/assess/smp.htm
- [2] Comments received from Arizona Department of Environmental Quality dated August 20, 1999.

Other available information:

- Electronic copies of the Burn Plan Form, Burn Request Form, and a Burn Accomplishment Form are available at www.adeq.state.az.us/air/
- Electronic copies of the Arizona Administrative Code, guidelines, and permit application form regarding open burning are available at www.adeq.state.az.us/air/permit/openburn.htm

Smoke Management Program Component	State
	Arizona
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> • The Department of Environmental Quality (DEQ) has the central authority to make burn/no burn decisions. [1]

**ARIZONA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Arizona
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> • The DEQ may enter into a memorandum of agreement with any Indian tribe. [1]
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • Federal and state land managers are required to conduct prescribed burning according to Arizona Administrative Code, R18-2 Article 15 which applies to all areas of the state except Indian Trust lands. [1]
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • Prescribed/controlled burning of nonagricultural fuels on federally managed lands and all state lands, parks and forests. [1] • Prescribed natural fires (wildland fire that is ignited by natural causes and allowed to continue burning using the same controls as for prescribed burning) projected to attain a size of 50 acres of timber fuel or 250 acres of brush or grass fuel. [1]
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • Each year land managers must register with the DEQ all planned burn projects for the following year. Each planned year extends from August 1 of the registration year to July 31 of the following year. Managers should register burn projects before August 1 of each year. [1] • Next, the manger must submit a Burn Plan form to DEQ no later than 14 days before the date on which the manager requests permission to burn or have a burn plan on file from the previous year. [1] [2] • Lastly, the manager must complete and submit to DEQ a Burn Request form and receive approval from DEQ to burn by 2 p.m. local time of the business day preceding the burn day. [1] [2] • The DEQ then makes a decision on the request issuing by 5 p.m. of the business day prior to the burn day, a notice of approval, approval with conditions, or disapproval. [2]

ARIZONA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Arizona
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • The manager must have registered with the DEQ, submitted a Burn Plan form (no later than 14 days before the manager requests permission to proceed with a registered burn project), and submitted a Burn Request form (by 2 p.m. of the business day preceding the burn). [1] • The DEQ will evaluate a burn on based on a smoke dispersion evaluation which considers the following: (1) emissions from burns in progress and previous burns on a day-to-day basis, (2) emissions from active prescribed natural fires, (3) emissions from wildfires greater than 100 acres, (4) local burn conditions, (5) burn and smoke management prescriptions from the Burn Plan, (6) Local air quality, (7) Local meteorological conditions, (8) Type and location of area to be burned, (9) Protection of visibility in Class I Areas, and (10) Smoke impacts in Class I Areas, roads, highways, airports, PM and carbon monoxide nonattainment areas. [1] [2] • The DEQ will approve, approve with conditions, or disapprove a burn on the same business day as the Burn Request submittal based on the DEQ's Smoke Dispersion Evaluation. [1] • The manager must receive burn approval from the DEQ, however if the manager does not receive approval by 10 p.m. of the business day preceding the burn, the burn is deemed approved. [1] • All burns must be conducted by trained personnel. Requirements are stated in the rule. [1] [2]
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • The smoke management program rules are applicable only to Federal and state land managers. [1] Therefore, the program rules are essentially an operating agreement between the DEQ and the Federal and State land managers. • Indian tribes may opt to enter into a memorandum of agreement to implement the program rules. [1] • Daily interaction occurs between DEQ and land managers through the Interagency Smoke Management Coordinator (ISMC). [2]
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • The regulations do not discuss specific alternatives to fire as a land management tool; however, one of the BMP that managers must consider is reducing biomass by using techniques such as yarding or consolidation of unmerchandiseable material, multi-product timber sales or public firewood access, when economically feasible. [1]
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • The manager must implement as many best management practices (BMP) for emission reduction as are feasible for the specific burn. A list, of 15 measures considered BMPs, is included in the program rules. See attached pages B-7 and B-8 for the list. [1] • The Burn Accomplishment form must include the BMPs used to manage smoke from the burn. [1]

ARIZONA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Arizona
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> • The manager must implement as many BMP for emission reduction as possible for the specific burn and include the techniques used in the Burn Accomplishment report. [1]
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> • The manager must complete and submit to DEQ a Burn Plan form no later than 14 days before the date on which the manager requests permission to burn. The Burn Plan form must contain (1) an emergency telephone number that is answered 24 hours a day, (2) burn prescription, (3) smoke management prescription, (4) the number of acres to be burned, the type of fuel and the ignition technique to be used, (5) a map depicting the potential impact of the smoke. (6) modeling of smoke impacts for burns greater than 250 acres in size or greater than 50 acres in size if within 15 miles of a Class I area, (7) the name of the official submitting the burn plan on behalf of the Federal or state land manager, and (8) any other information needed by the DEQ. [1] • A burn plan must also be submitted for a prescribed natural fire. [1]

ARIZONA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Arizona
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • The burn plan must include a map depicting the potential impact of the smoke and a map, with smoke-sensitive areas delineated, of the daytime and nighttime smoke path and down-drainage flow for an area of 15 miles from the burn site. [1] • The burn plan must include modeling of smoke impacts for burns greater than 250 acres per day, or greater than 50 acres per day, if the burn is within 15 miles of a Class I Area, a PM or carbon monoxide nonattainment area, or other smoke sensitive area. [1] • A Smoke Dispersion Evaluation is prepared by the DEQ and considers the following factors: (1) analysis of the emissions from burns in progress and residual emission from previous burns on a day-to-day basis, (2) an analysis of emissions from active prescribed natural fires and consideration of potential long-term emissions, (3) analysis of emissions from wildfires greater than 100 acres and consideration of potential long-term growth, (4) local burn conditions, (5) burn and smoke management prescription from burn plan, (6) existing and predicted local air quality, (7) local and synoptic meteorological conditions, (8) type and location of areas to be burned, (9) protection of visibility in Class I areas, and (10) minimization of smoke impacts in Class I areas, roads or highways, airports, PM nonattainment areas, CO nonattainment areas, and other smoke-sensitive areas. [1] • The DEQ may require the manager to monitor weather and air quality before or during a prescribed burn to accurately predict smoke impacts. [1] • For burns greater than 250 acres per day, or greater than 50 acres per day if the burn is within 15 miles of a Class I area, a PM or carbon monoxide nonattainment area or other smoke sensitive area, the manager must employ the following types of monitoring to predict smoke impacts: (1) The release of pilot balloons at the burn site to verify needed wind speed, direction or stability, (2) Establishment of burn site or area-representative remote automated weather stations (RAWS) or their equivalent, having telemetry that allows retrieval on a real-time basis by the DEQ, and (3) Smoke plume measurements using a format supplied by the DEQ. [1]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • Information on approved burns is available on the www. [2] • Local land management agencies have lists of contacts/concerned public they communicate with when burning. • Most agencies also use local radio to inform the public of fire activity. [2]
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • For prescribed natural fires, consultation with DEQ is required if smoke intrusions occur or are predicted. [2] • For prescribed fires, land managers report smoke impacts on the accomplishment form and are trained to communicate to DEQ when smoke intrusions occur. The ISMC tracks the status of burns and smoke effects through public complaints and direct interaction with the burners. [2]

ARIZONA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Arizona
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • The DEQ may require Federal or State land managers to monitor weather and air quality before and during a burn if necessary to accurately predict smoke impacts. • For burns greater than 250 acres per day, or greater than 50 acres per day if the burn is within 15 miles of a Class I area, an area that is nonattainment for PM or carbon monoxide, or other smoke-sensitive area, monitoring must employ: (1) the release of pilot balloons at the burn site to verify needed wind speed, direction or stability, and (2) smoke plume measurements. [1] • The DEQ may use remote automated weather station (RAWS) data to verify current and previous meteorological conditions at or near the burn site. [1] • The manager must make the monitoring information available to the DEQ on the business day following the burn ignition. [1] • The number and location of public complaints are used to monitor air quality impacts of fires. [2]
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> • The DEQ and Federal and State land managers may cooperate to inform the general public of the smoke management program. The program must include smoke impacts from prescribed fire and the role of prescribed fire in natural ecosystems. [1]
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> • The DEQ may conduct unannounced burn site inspections to verify the accuracy of Daily Burn request data and to match burn approval with actual conditions and smoke dispersion. [1] • The DEQ may use remote automated weather station data to verify current and previous meteorological conditions at or near the burn site. [1] • The DEQ may audit burn accomplishment data, smoke dispersion measurements, or weather measurements from previously conducted burns, if necessary to verify conformity with, or deviation from, procedures and authorizations approved by DEQ. Deviation from DEQ's procedures and authorizations constitute a violation of the rules; violations may include a 5-day moratorium on ignitions by the responsible manager. [1] • Aerial surveillance is frequently used to monitor compliance. [2]

ARIZONA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Arizona
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> • Noncompliance may cause (1) containment or mop-up of any active burns, (2) a 5-day moratorium on ignitions of the responsible party, and (3) civil penalties of not more than \$10,000 per day per violation. [1]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> • For each burn approval, the manager must submit a Burn Accomplishment form by 2 p.m. of the business day following the approved burning. [1] • The Burn Accomplishment form must contain (1) any known conditions or circumstances that could impact the daily burn decision process, (2) subsequent acreage accomplishments, and (3) the BMP used to manage the smoke from the burn. [1]
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> • The regulations do not specifically include provisions to periodically review their effectiveness; however, the DEQ maintains a record of Burn Requests, Burn Approvals/Conditional Approvals/Denials and Burn Accomplishments for 5 years. [1] • Complaints about smoke from burning are tracked and investigation of complaints is required to determine the cause of complaint. [2] • Program assessment occurs through annual evaluation of ISMC position. Daily interactions between DEQ and land managers through the coordinator keep program review on a constant basis. [2]
21. What are the review criteria?	<ul style="list-style-type: none"> • The regulations do not contain any review criteria.
<i>Optional Air Quality Protection</i>	
22. Does the program establish any “special protection zones”? How are these zones described? What addition smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • Smoke-sensitive areas must be delineated on a map (included in the Burn Plan) depicting the potential impact of the smoke for 15 miles from the burn site. [1] • The Burn Plan requires modeling of smoke impacts for burns greater than 50 acres per day, if the burn is within 15 miles of a Class I Area, roads, highways, airports, areas that are nonattainment for PM and carbon monoxide and other smoke-sensitive areas. [1] • The DEQ will approve, approve with conditions or disapprove a daily Burn Request based on a DEQ Smoke Dispersion Evaluation which takes into consideration protection of the national visibility goal for Class I Areas pursuant to 169A(a)(1) of the Act, and minimization of smoke impacts in Class I Areas, roads, highways, airports, areas that are nonattainment for PM and carbon monoxide and other smoke-sensitive areas. [1]

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Smoke Management Program Component	State
	Arizona
23. Does the program establish any “performance standards”? What are the performance standards?	<ul style="list-style-type: none"> • Operationally, prevention of consecutive day smoke impacts of sensitive areas are the goal of the decision making process. [2]
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> • The regulations do not specify any additional smoke management requirements if the performance standards have been exceeded.
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	<ul style="list-style-type: none"> • Yes, we use complaints from the public as the criteria to establish that smoke from a fire is a nuisance. [2] • DEQ tracks these complaints, as a mean to review how well the program is working. [2]
26. Is the smoke management program, or the regulations authorizing the program, part of the State’s implementation plan (SIP)?	<ul style="list-style-type: none"> • Arizona’s SMP is part of our Payson PM₁₀ SIP. [2]
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	<ul style="list-style-type: none"> • DEQ does not use fees to run our program. [2] • The budget for DEQ Program comes from a MOA with Fed/State land managers, the BIA and the State. [2]

ARIZONA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Arizona
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	<ul style="list-style-type: none"> • DEQ tracks burning actions on a daily basis. [2] • From post burning reports, due within 24 hours of the burn, DEQ calculates the emissions from each burn. [2] • DEQ uses: acres burned, fuel moisture, fuels <3" in diameter, fuels > or equal to 3" in diameter, fuel type and AP42 emission factors to calculate air pollutant emissions. [2]
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	<ul style="list-style-type: none"> • We do not have a way to track this information at this time. [2]

ARKANSAS
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Source of summary information:

Voluntary Smoke Management Guidelines. Arkansas Forestry Association. 1998.

Smoke Management Program Component	State
	Arkansas
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> • The burner has the authority to make burn/no burn decisions based on the results of applying the smoke screening process and the smoke dispersal Category Day. • All open burning in Arkansas is regulated by the Division of Air Pollution Control, Department of Pollution Control and Ecology. • The State Forester administers the voluntary smoke management plan for burning related to forestry programs. • The District Forester performs the day-to-day prescribed burning activities. • During periods of stagnant air, the National Weather Service, at the request of the Department of Pollution Control and Ecology, will issue an Air Stagnation Advisory. • When an Air Stagnation Advisory is issued, the Arkansas Forest Commission (AFC) district forester will notify the cooperators (those forest landowners or managers who agree to adhere to the voluntary guidelines) not to ignite new fires and to attempt to control any fires burning.
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> • The Voluntary Smoke Management Guidelines (guidelines) do not discuss if the AFC coordinates with any adjacent State, local or tribal jurisdictions.
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • The smoke management program for burning related to forestry programs, as outlined in the guidelines, is voluntary.

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Smoke Management Program Component	State
	Arkansas
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> The voluntary guidelines cover prescribed forestry burns.
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> On the day of the planned burn, cooperators must (1) Inform the appropriate forestry district office, (2) Provide all required information (including how the cooperator's designee can be contacted at the burn site should sudden adverse weather conditions arise), and (3) Request information on the category day. For cooperators participating in the voluntary program it is recommended that the cooperator follow the following five-step screening system: (1) Determine a Category Day, which is a scale from 1 to 5 based on ventilation rates, (2) Determine the Screening Distance, which is the area to examine for possible sensitive targets, (3) Determine the trajectory of the smoke plume, (4) Identify smoke-sensitive and other impacted areas, and (5) Evaluate the results.
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> If no impacted areas are identified through the five-step screening system, burning may take place within the guidelines established for category days: Category Day 1 - No burning, Category Day 2 - No burning until after 11 a.m. and not before surface inversion has lifted. Fire should be substantially burned out by 4 p.m., Category Day 3 - Burn only after surface inversion has lifted, Category Day 4 - Burn anytime, and Category Day 5 - "Unstable" and windy. Excellent smoke dispersal. Burn with caution. No Air Stagnation Advisory should be in effect.
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> The guidelines do not specifically mention any operating agreements established between the Division of Air Quality and large land managers.
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> The guidelines do not specifically discuss or suggest any alternatives to fire as a land management tool. If critical smoke-sensitive areas are threatened with adverse smoke impact, the cooperator is advised to use an alternative other than burning. If the information necessary for a successful burn is not available, or if the burner does not wish to use the recommended prediction system, the burner is advised to consider some alternative other than burning to

ARKANSAS
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Arkansas
9. What actions are required to minimize emissions from fires?	The guidelines do not discuss what actions are required to minimize emissions from fires.
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> • The guidelines do not specify whether actions taken to minimize emission before and during fires be documented.
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> • While the voluntary guidelines do not specify whether written burn plans are required, they do suggest that the burn be planned. • On the day of the burn the cooperator must provide “all the required information,” however, the guidelines do not indicate what information is required (other than how the cooperator’s designee can be contacted at the burn site).

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Smoke Management Program Component	State
	Arkansas
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • All burners are encouraged to use the voluntary guidelines to minimize particulate concentrations and smoke resulting from forestry prescribed burning operations. • Cooperators are asked to comply with the recommended five-step screening system to keep the smoke's impact on the environment within acceptable limits. The guidelines offer details to evaluate smoke from forestry prescribed burning operations by determining the category day, determining the screening distance, determining the trajectory of the smoke plume, identifying smoke sensitive and other impacted areas, and evaluating the results. • To determine the category day the cooperator should receive the fire weather forecast, category day and surface inversion lifting temperature from the nearest Arkansas Forestry Commission district office. • To determine the screening distance the cooperator should place their burn into one of the following categories: (1) Backing fire, (2) Head fire, (3) More than 1,000 acres, or (4) Piles/windrows. The cooperator should then use the "Type of Burn" table to determine the minimum number of miles downwind from the burn to screen. • To determine the trajectory of the smoke plume the cooperator should locate the burn on a map and plot the predicted wind direction. • To identify smoke sensitive areas cooperators should: (1) plot all known smoke sensitive areas on the map, (2) plot potential smoke sensitive areas that already have an air pollution or visibility problem on the map, and (3) Plot any potential area where emission of SO₂ will merge with the smoke plume. Likely sources are smelters, electric power plants and factories where coal is burned. • If the cooperator identifies any smoke-sensitive areas that could be adversely impacted by smoke production, they are requested to take necessary precautions, consider burning under more favorable conditions, or use an alternative other than burning. • For night burns, cooperators are advised to follow the following guidelines: (1) Burn in light fuels, (2) Use backing fire, (3) Burn when humidity is 80% or less, (4) Burn with surface wind speed of 4 MPH or more.
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • The guidelines do not specify if the public must be notified when fires occur.
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • The guidelines do not discuss contingency plans to reduce exposure to smoke if smoke intrusions occur. • The cooperator must provide information on how the cooperator's designee can be contacted at the burn site should sudden adverse weather conditions arise.

**ARKANSAS
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Arkansas
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> The guidelines do not specifically discuss monitoring the air quality impacts
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> The guidelines do not discuss establishing a public education and awareness program.
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> Since the guidelines are voluntary, they do not discuss actions to be taken to monitor compliance.
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> Since the guidelines are voluntary, they do not discuss penalties for non-compliance.
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> The guidelines do not discuss post-burn reports.
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> The guidelines do not contain provisions to review its effectiveness.
21. What are the review criteria?	<ul style="list-style-type: none"> The guidelines do not specify any review criteria.

ARKANSAS
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Arkansas
<i>Optional Air Quality Protection</i>	
22. Does the program establish any "special protection zones"? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • The guidelines identify smoke sensitive areas as areas that can be adversely affected by smoke. Examples given are airports, highways, communities, Class I recreation areas, schools, hospitals, nursing homes, factories where coal is burned, smelters, and electric power plants. • If smoke sensitive areas are identified, and could be adversely impacted by smoke production, it is recommended that the manager take necessary precautions, consider burning under more favorable conditions, or use an alternative other than burning.
23. Does the program establish any "performance standards"? What are the performance standards?	<ul style="list-style-type: none"> • The guidelines do not specify any performance standards.
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> • The guidelines do not specify any additional criteria to use when performance standards have been exceeded.
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	

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SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Arkansas
26. Is the smoke management program, or the regulations authorizing the program, part of the State's implementation plan (SIP)?	
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	

ARKANSAS
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Arkansas
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	

COLORADO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Source of summary information:

- [1] Colorado Smoke Management Memorandum of Understanding & Plan. Prepared by the Air Pollution Control Division. January 1, 1995. The Colorado Smoke Management Memorandum of Understanding & Plan includes: a summary of responsibilities of the signatories, a timeline of activities, the Colorado smoke management plan, permit application forms APC-95A and APC-95B, vista data base, and local health agency contact list.
- [2] Comments received from the Colorado Department of Public Health and Environment dated August 27, 1999.

Smoke Management Program Component	State
	Colorado
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> The Colorado Air Pollution Control Division (APCD) is responsible for making burn/no burn decisions by approving or disapproving permit applications. [1]
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> The following organizations are signatories to the Colorado Smoke Management Memorandum of Understanding and Plan (MOU): Colorado Air Pollution Control Division, Colorado Division of Wildlife, Colorado State Forest Service, U.S. Air Force Academy, U.S.D.A. Forest Service, U.S.D.I. Bureau of Indian Affairs, U.S.D.I. Bureau of Land Management, U.S.D.I. Fish and Wildlife Service, and U.S.D.I. National Park Service. [1]
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> The signatories of the MOU agree to abide with the Colorado SMP, which includes ensuring proper smoke management of prescribed fires conducted by the signatories. [1]

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Smoke Management Program Component	State
	Colorado
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • Acceptable burning projects within the MOU are: (1) Hazardous fuel reduction, (2) Slash disposal from timber sales and roads constructed within contract areas, (3) Wildlife and livestock habitat improvement, (4) Forest stand improvement, (5) Insect and disease control, (6) Water yield improvement, (7) Maintenance of natural ecosystems, (8) Maintenance of threatened and endangered species, and (9) Other vegetative management improvement projects. [1] • The APCD is prohibited by state law from requiring permits for agricultural burning. [1]
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • No planned ignition prescribed fire may be initiated without first obtaining a permit from the APCD. For planned ignition prescribed fires, an application for a permit for each planned burn must be completed using Form APC-95A. An application may be submitted at any time, but must be submitted at least 20 days prior to the burn date. Many district offices submit permit applications in November or December for all potential prescribed burning areas during the upcoming year. The APCD, after review and decision, will inform the applicant of the granting of the permit in total or in part or the denial of the permit within 20 days after receipt of a complete application. The permit application must contain simple approach smoke estimation model (SASEM) output, explicitly showing those conditions under which the burn will be conducted and visibility impacts on smoke sensitive areas. [1] • Applications for prescribed natural fire are made on an annual basis using Form APC-95B. The application will be reviewed and approved or denied. The permit application must contain a plan and a map showing the area for natural fire. [1] • Projects not considered part of forest and public land management projects must submit Form APC-24 for specific projects. The APCD will process those complete applications within 20 days as they are received throughout the year. [1]

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Smoke Management Program Component	State
	Colorado
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • For planned ignition prescribed fires: (1) The application must be approved, (2) The project must be acceptable within the MOU, (3) There should not exist any practical alternative to open burning, (4) The applicant must demonstrate that the project does not violate applicable ambient air quality standards, (6) The applicant must comply with applicable fire protection and safety requirements, and (7) The permits must be valid for the dates listed on the permit. Extension or modification of dates must be approved by the APCD. The APCD will consider (1) potential contribution to area air pollution, (2) Climatic conditions on the day or days of burning and (3) proximity to populated areas. [1] • Each land management organization signatory to the MOU is responsible for proper smoke management for prescribed fires it conducts and, on a case-by-case basis, identifies and implements the best smoke management techniques appropriate to minimize the amount and /or impact of smoke produced. [1] • The APCD reserves the right to limit projects in certain geographic areas during “high pollution” seasons when the probability of poor dispersion conditions are increased. Permits will not be valid during periods of air pollution emergency or alert in the area of burning. [1] • If the APCD determines that the burn is degrading air quality to levels expected to violate air quality standards, suppression action will be promptly initiated. [1] • To the degree practical, all burning must be done during periods conducive to smoke dispersal, to be determined by using the best meteorological information reasonably available. [1] • For prescribed natural fire: (1) an annual application must be approved, (2) The APCD must be notified by telephone as soon as possible, but no later than two hours after the start of the next working day of the prescribed natural fire area if the fire exceeds one acre. [1] • For projects not covered by the MOU, and that are not agricultural burns, an open burning permit is required. [1]
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • A MOU exists between the APCD and large land managers in which the signatories agree to follow the SMP. [1]

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SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Colorado
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> Although specific alternatives are not discussed, the signatories of the MOU must consider practical alternatives to burning and may conduct prescribed burning only if there are no practical alternatives. The APCD reserves the right to reject a project for which there appears to be a reasonable alternative to burning. [1]
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> All piled material must be reasonably dry and free of dirt. [1]
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> The permit application for planned ignition prescribed fires must include a demonstration that the project will not violate applicable ambient air quality standards. [1]
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> For planned ignition prescribed fire, signatories must complete one permit application using Form APC-95A, for each planned burn. This permit application requests the following information: (1) The name of the organization applying for the permit and the contact's name, address, telephone number, (2) Location of the burn, total acreage or description of piles, and the type of project, (3) Information regarding the proximity of populated areas to the planned project, (4) Procedures for notification of smoke sensitive areas, and (5) The planned burn dates and the meteorological/climatic conditions under which the burn is planned. In addition the following information must accompany the permit application: (1) Model output from Simple Approach Smoke Estimate Model (SASEM) or a refined model, which has prior approval of the APCD, (2) A demonstration, conducted with SASEM, that the project will not violate applicable ambient air quality standards, and (3) Procedures to ensure compliance with applicable fire protection and safety requirements. [1] For prescribed natural fire, the signatories must complete a permit application on an annual basis using Form APC-95B. This permit application must include: (1) The name of the organization applying for the permit and the contact's name, address, telephone number, (2) Location of the burn, (3) Information regarding the proximity of populated areas to the burn. In addition, a plan and a map showing the area for natural fire, must accompany the initial permit application. [1] For projects not covered by the MOU and that are not agricultural burns, burners must submit Form APC-24

COLORADO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Colorado
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • The permit application for planned ignition prescribed fires must include a demonstration, conducted with SASEM, that the project will not violate applicable ambient air quality standards.. [1] • For planned ignitions, a single test fire may first be ignited to indicate local mixing depths. [1] • Burners are required to use the National Weather Service information. [1]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • For prescribed planned fire, burners must contact local agencies and provide the burn's location, date, and duration. Procedures for notification of smoke sensitive areas of burning date(s) for planned ignition projects must be included in the applicant's prescribed burning management plan. [1]
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • The land management organization must have a prescribed fire contingency plan in place that will identify how the organization will reduce fire emissions, eliminate ignitions in certain areas, or take appropriate suppression action. [1] • The contingency plans will be implemented when meteorological conditions warrant, or the APCD 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. [1]
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • 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. [1] • If pollutant levels are anticipated to create a significant threat to human health, the APCD may require the responsible land management agency to monitor and/or model pollutants in or near population centers impacted by smoke generated from a particular prescribed fire or wildfire. The APCD will assist in identification of instrumentation, site selection, installation of instrumentation, operation, calibration, quality assurance, quality control, laboratory analysis, data interpretation, and supplies. [1]

COLORADO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Colorado
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> While the SMP does not specifically discuss establishing a public education and awareness program, for prescribed planned fire, bumers must contact local agencies and provide the burn's location, date, and duration. [1]
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> All prescribed burning operations are subject to inspection by the APCD. [1]
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> If at any time the APCD determines that any condition of the permit is not being complied with, the permit may be revoked for the specific project where the non-compliance is occurring. At such time, all burning activities at the site of the non-compliance will be terminated. In addition to revocation of the permit, the APCD may take any other enforcement action authorized under state statutes, rules and regulations. [1]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> The signatories must report burning activity annually to the APCD by completing and returning the back page of Form APC-95A or 95B (Actual Fire Activity Forms). The forms must be submitted by March 1st of the year following the permit date. The form reports fire activity for the previous calendar year's permitted planned ignitions and permitted prescribed natural fires. [1] The Actual Fire Activity Forms request information on: (1) Actual beginning and ending burn dates, (2) Actual acreage burned, (3) Fuel loading determination method, and (4) fuel types. [1] Signatories are asked to annually share information on individual wild fires, the number of acres consumed, the location and other available information that occurred on their lands or on land about which they receive information during the previous calendar year. [1]
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> The MOU signatories agree to meet annually and evaluate the prescribed fire program, permitting and data collection system, and review and modify the Smoke Management Plan where necessary. [1]

COLORADO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Colorado
21. What are the review criteria?	<ul style="list-style-type: none"> • The MOU does not specify review criteria.
<i>Optional Air Quality Protection</i>	
22. Does the program establish any “special protection zones”? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • The SMP defines smoke sensitive areas as Class I areas, scenic and/or important views, especially during times of significant visitor use, urban and rural population centers, schools, hospitals, nursing homes, transportation facilities such as roads and airports, recreational areas, and other locations that may be sensitive to smoke impacts for health, safety, and/or aesthetic reasons. [1] • Smoke sensitive areas that are scenic and/or important views are identified by the APCD and provided to the signatories. [1] • The APCD may require additional information and permit conditions for projects that are proximate to population areas. [1] • Procedures for notification of smoke sensitive areas of burning date(s) for planned ignition projects are included in the applicant’s prescribed burning management plan. [1] • Suppression action may be initiated if the APCD determines that the fire will affect smoke sensitive areas especially rural or urban population centers. [1]
23. Does the program establish any “performance standards”? What are the performance standards?	<ul style="list-style-type: none"> • The MOU identifies six objectives: (1) To minimize the generation and/or impacts of smoke when prescribed burning is necessary for the conduct of accepted range and forest practices, (2) To assure that the Colorado Ambient Air Quality Standards are not exceeded., (3) To minimize visibility impacts from smoke in smoke sensitive areas, such as, important and scenic view including those in Class I areas, (4) To minimize the generation and/or impacts of smoke when prescribed burning is necessary to maintain the natural ecosystem, (5) To demonstrate compliance with applicable “conformity” requirements described in Federal law and regulations, as well as Colorado regulation, and (6) To maintain and improve a system to inventory emissions from prescribed fires and wildfires. [1]
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> • Neither the SMP nor the MOU discusses any additional smoke management requirements which apply if the performance standards are exceeded.

COLORADO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Colorado
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	<ul style="list-style-type: none"> • Colorado Air Pollution Prevention and Control Act. (Act) § 25-7-11.3 allows APCD to investigate and take action on air pollution emergencies that endanger public welfare. This portion of the Act has not been used in recent history for any pollution source. All complaints or elevated particulate matter concentrations are investigated and appropriate actions taken. [2]
26. Is the smoke management program, or the regulations authorizing the program, part of the State's implementation plan (SIP)?	<ul style="list-style-type: none"> • Regulation #1, Section II.C. and the MOU are not part of the SIP. The long-term strategy portion of the Class I visibility SIP requires that smoke management be addressed. The MOU is a key component of Colorado's smoke management program. Smoke management is one of the programs Colorado considers meet the long-term strategy requirements for preventing future impairment of visibility in any Class I area. [2]
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	<ul style="list-style-type: none"> • The current smoke management program is funded from the Air sources Account Fund and the Air Partnership Performance Grant, the vehicle for EPA grant funds. In the future it is anticipated the funding source will be shifted to fees assessed for prescribed fire projects. [2]
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	<ul style="list-style-type: none"> • An annual inventory is maintained for prescribed fire projects covered by the MOU. A daily air pollutant emissions inventory can be reconstructed for projects that last a single day. Multiple day projects are reported as project total emissions. Emission calculations are based on post burn reports of acres burned, fuel type, estimated consumption and fuel loading. [2]

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Smoke Management Program Component	State
	Colorado
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	<ul style="list-style-type: none"> • There is not a mechanism in place to calculate and record the air pollutant emission reductions achieved from efforts to minimize emissions. [2]

FLORIDA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Source of summary information:

- [1] 1996 Florida's Forest Fire Laws and Open Burning Regulations [Florida Administrative Code (Excerpted)], Chapter 589 Forestry, Chapter 590 Forest Protection, Chapter 823 Public Nuisance, Chapter 877 Miscellaneous Crimes, Chapter 403 Environmental Control, Chapter 5I-2 Rural Open Burning, Chapter 51-3 Railroad Rights-of-Way, and Chapter 62-256 Open Burning and Frost Protection Fires.

- [2] Personal communication between K. Woodard, EPA/OAQPS and J. Brenner, Florida DOACS.

- [3] Comments received from Florida Department of Agriculture & Consumer Services, Division of Forestry, Forest Protection Bureau dated August 24, 1999.

Smoke Management Program Component	State
	Florida
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> • The Division of Forestry (DOF) oversees and authorizes prescribed burning. [1]

FLORIDA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Florida
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> • The DOF coordinates with the Department of Environmental Protection (DEP) to prohibit open burning during an air stagnation advisory, or a DEP air pollution episode. [1] • The Governor may declare a drought emergency to exist making open burning unlawful. [1] • The DOF has delegated its authority to authorize burns to several counties in the State. [2] • Local governing bodies determine the training and qualifications of their employees to enforce the State regulations. [1] • Agreements have been reached with Federal land management agencies and large private and commercial land owners on prescribed fire procedures. [2]
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • Yes, all land owners must get authorization to conduct prescribed burns. Non-certified burners must maintain control of their fire and smoke impacts, and are liable for the impacts that result from the fire. Certified burners agree to meet additional requirements for which they are given some protection from liability. [2]
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • Prescribed burning, carried out for agricultural, silvicultural, ecological, wildlife management, and rural land clearing purposes, is covered by the program. [1]
5. How do land managers apply for authorization to burn?	<p>For open burning in general:</p> <ul style="list-style-type: none"> • Authorization must be received from the DOF prior to igniting the burn on the day that the burn is to take place, or after 4 p.m. of the previous evening. [1] • The Certified Burn Manager must submit their certificate number at the time of the request. [1] (Non-certified burners are not required to do this. [2])
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • Authorization must be received on the day of the burn, prior to igniting the fire. [1] • Sufficient personnel must be on site to manage the fire while the burn is being conducted. [2] • Prescriptions for prescribed broadcast burning must be on site throughout the entire burn and available for inspection by a DOF representative. [1]
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • Yes, operating agreements have been established between the DOF and large private, commercial, and public land managers.

FLORIDA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Florida
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • The regulations do not discuss alternatives to fire as a land management tool. [1] • Strong emphasis placed on mechanisms in areas in urban areas. [2]
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • The DOF will suspend any open burning authorization and require burns in progress to be extinguished when appropriate, whenever atmospheric or meteorological conditions indicate improper dispersion of pollutants. Any burn in progress will be allotted two hours to reduce emission to a level that no longer threatens public health or safety. [1] <p>The certified burner program requires the following:</p> <ul style="list-style-type: none"> • No Certified Burn Manager will approve a prescription unless and until the Certified Burn Manager has evaluated and approved the impact of the burn on related smoke sensitive areas. [1] • In smoke sensitive areas, piles or windrows must be extinguished one hour before sunset. [1] • The amount of dirt in the piles or rows must be minimized to enhance combustion and reduce emissions. [1] • Open burning in particulate and ozone nonattainment areas may be temporarily suspended when the DEP determines that ambient air concentrations of total suspended particulate or ozone may near or exceed the primary or secondary standards for these pollutants. [1] • No open burning may be conducted during a National Weather Service Air Stagnation Advisory, a DEP Air Stagnation Advisory, an Air Pollution Episode, or if the DOF determines that weather conditions are unfavorable for safe burning. [1]
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> • The regulations do not specify whether actions taken to minimize emissions before and during fires must be documented. • For certified burners, yes; no, for others. [2]

FLORIDA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Florida
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> • burn plans are recommended, but are required only under the Certified Burn Manager program. [2] • The burn prescription must include the following: (1) Stand or site description, (2) Map of the area to be burned, (3) Personnel and equipment to be used on the burn, (4) Desired weather factors, including surface wind speed and direction, transport wind speed and direction, minimum mixing height, minimum relative humidity, maximum temperature, and fine fuel moisture, (5) Desired fire behavior factors, such as type of burn technique, flame length, and rate of spread, and (6) The signature of the Certified Burn Manager. [1]
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • Certified Burn Manager will not approve a prescription unless and until the Manager has evaluated and approved the impact of the burn on related smoke sensitive areas. [1] • The impact of the burn is evaluated by following procedures in "Prescribed Fire in Southern Forests." [2]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • DOF policy is to notify the public of planned prescribed burns, but notification is not required by statute. [2]
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • The regulations do not specify whether contingency plans to reduce exposure to smoke are required. [1] • The DOF will suspend any open burning authorization and require burns in progress to be extinguished whenever atmospheric or meteorological conditions indicate improper dispersion of pollutants. Any burn in progress will be allotted two hours to reduce emission to a level that no longer threatens public health or safety. [2]
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • The land owner/burn manager is responsible, and must monitor the fire, for smoke impacts on sensitive receptors such as roads, airports, homes, etc. The DOF has an agreement with the DEP to monitor and report air quality problems caused by prescribed fires. [2]
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> • The Office of Environmental Education of the Department of Education must incorporate where feasible and appropriate, the issue of prescribed burning into their education materials. [1] • The role of fire in Florida ecosystems is taught in schools and the DOF has educational materials on a web site. [2]

FLORIDA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Florida
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> • A DOF representative may inspect the prescription for broadcast burning at the burn site. [1] • The DOF has enforcement personnel to respond to complaints and issue notices of violations when appropriate. [2]
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> • Any person violating any of the provision of the State regulations is liable for all damages caused by the violation. [1] • Anyone who willfully or intentionally violates the State regulations are subject to felony punishment. Anyone who carelessly violates the State regulations are subject to misdemeanor punishment. [1] • Anyone who causes unauthorized fire or lets a fire escape is liable for the payment of all reasonable costs and expenses incurred while suppressing the fire. [1] • An administrative fine, not to exceed \$1,000 may be imposed. [1]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> • The regulations do not discuss post-burn reports. [1]
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> • The regulations do not include provision to periodically review program effectiveness. [1] • Florida laws are routinely reviewed as issues are raised by the public and regulated community. [2]
21. What are the review criteria?	<ul style="list-style-type: none"> • The regulations do not discuss review criteria. [1] • The regulations are reviewed based on issues raised by the public and regulated community. [2]

FLORIDA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Florida
<i>Optional Air Quality Protection</i>	
22. Does the program establish any “special protection zones”? How are these zones described? What additional smoke management requirements apply in special protection zones?	<p>The only “special protection zones” are the following smoke sensitive receptors:</p> <ul style="list-style-type: none"> • The regulations prohibit open burning that reduces visibility at a public airport or on public roadways. [1] • The open burning must be set back 300 feet from any occupied building except the landowner’s buildings. [1] • Open burning in particulate and ozone nonattainment areas or in the area of influence may be temporarily suspended if the DOF determines that total suspended particulate or ozone may near or exceed the primary or secondary standards for these pollutants. [1] • The DOF won’t issue authorization if sensitive areas are likely to be impacted. [2]
23. Does the program establish any “performance standards”? What are the performance standards?	<ul style="list-style-type: none"> • Certification as a Burn Manager is accomplished by completion of the DOF’s Certified Burner course and direct experience in 3 prescribed burns prior to taking the course or satisfactory completion of the Florida Inter-Agency Basic Prescribed Fire course and direct experience in 3 prescribed burns. [1] • Certified burners must complete eight hours of continual training annually in prescribed fire issues. [2] • For burners that have problems, the DOF can review plans more closely. [2]
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> • In the event that the actions of any Certified Prescribed Burn Manager demonstrate that his/her practices and procedures during one or more prescribed burns violated the State regulations or agency rules or threaten public health or safety, the Commissioner of Agriculture will revoke the certification of the Certified Prescribed Burn Manager. [1]
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	<ul style="list-style-type: none"> • Nuisance regulations apply to non-certified burning. If a complaint is made, a DOF representative is required (internal policy) to do an on-site inspection so that we can determine if there is a need to shutdown the burn and issue restrictions for future burning on the site. Certified Burners can not be shutdown for nuisance complaints, they can however, be shutdown for a threat to health or safety. [3]
26. Is the smoke management program, or the regulations authorizing the program, part of the State’s implementation plan (SIP)?	<ul style="list-style-type: none"> • Yes, the rules and regulations in both Florida Statute 590 and Florida Administrative Code 5I-2 are part of the SIP as far as I know, unless there have been some recent changes that I am not aware of at this time. [3]

FLORIDA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Florida
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	<ul style="list-style-type: none"> The program is funded by the state's general revenue program, Florida does not charge a fee for the authorization program. [3]
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	<ul style="list-style-type: none"> The Florida DOF has information concerning fuel types and acres burned for each authorization that could be used to approximate an emissions inventory. This is not currently procedure in Florida, but with the information available to us, it easily could become policy if the information served some useful purpose. In light of the fact that Florida currently does not have any non-attainment areas, we have not felt this to be a critical need. [3]
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	<ul style="list-style-type: none"> No, we do not have a process, but based on the information available to us, we could produce an estimate of what the emissions would have been. However, the alternative methods (chemical/mechanical) are not currently inventoried. [3]

GEORGIA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Source of summary information:

- [1] Rules for Air Quality Control Chapter 301-3-1, revised June 1998.
- [2] Personal communication with Alan Dozier, Georgia Forestry Commission, 912-751-3492. October 27, 1998.

Special Note:

Georgia has not developed formal smoke management guidance but instead uses the National Wildlife Coordinating Group's publication *A Guide for Prescribed Fire in Southern Forests* as a basis for their "plan." (Personal communication with Alan Dozier, Georgia Forestry Commission, 912-751-3492. October 27, 1998.) This table does not summarize the information contained in the National Wildlife publication.

Smoke Management Program Component	State
	Georgia
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> The Georgia Forestry Commission (GFC) Office and the fire department having local jurisdiction over the open burning location makes the burn/no burn decision. [1]
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> The regulations do not discuss if the GFC coordinates with adjacent jurisdictions.

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SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Georgia
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • Georgia has not developed a formal smoke management program. [2] • The open burning regulations do not discuss a smoke management program but do require several smoke management conditions be met before burning is initiated (see question #9 for list of conditions). [1]
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • The regulations cover all type of open burning including burning related to agricultural procedures, the burning over of any forest land by the owners of the land, and burning for the purpose of land clearing, construction, or right of way maintenance. [1]
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • In general, the regulations do not require authorization to burn. • Open burning of vegetative material for the purpose of land clearing using an air curtain destructor may require authorization from the fire department and the Georgia Forestry Office (GFO). [1] • No application procedure is discussed in the regulations. [1]
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • An air pollution episode must not have been declared. [1]
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • The regulations do not specify if operating agreements have been established between the GFC and large land managers.
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • The regulations do not discuss alternatives to fire as a land management tool.

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SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Georgia
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • For open burning in other than predominantly residential areas for the purpose of land clearing or construction or right-of-way maintenance the following actions to minimize emissions from fire must be met: (1) The amount of dirt on or in the material being burned must be minimized, (2) Heavy oils, asphaltic materials, items containing natural or synthetic rubber, or any materials other than plant growth are not to be burned, and no more than one pile of 60' by 60', or equivalent, is to be burned within a nine acre area at one time. [1] • Except for a reasonable period to get a fire started, no smoke the opacity of which is equal to or greater than 40 percent can be emitted from any source of open burning listed in the regulations. [1]
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> • The regulations do not specify if actions taken to minimize emissions before and during fires are to be documented.
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> • The regulations do not specify if written burn plans are required.
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • Prevailing winds at the time of burning must be away from the major portion of the area's population.
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • The regulations do not specify if the affected public must be notified when fires are authorized.
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • The regulations do not specify if contingency plans are required to reduce exposure to smoke if intrusions occur.

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SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Georgia
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> The regulations do not specify if the air quality impacts of fires must be monitored.
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> The regulations do not specify if a public education and awareness program has been established.

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SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Georgia
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> • The regulations do not specify what actions can be taken by the GFC to monitor compliance.
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> • A written notification to a person of a violation at one site is considered adequate notice of the rules and regulations and subsequently observed violations by the same person at the same or different site will result in immediately appropriate legal action. [1]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> • The regulations do not specify if post-burn reports are required.
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> • The regulations state that the Georgia Department of Natural Resources Environmental Protection Division will investigate and prepare recommendations on the air quality and solid waste impacts of the general prohibition of some of the activities listed in the regulations. Based on the recommendations and the U.S. EPA's approval, section 5 of the regulations may be modified to reflect economics of disposal and overall environmental benefit. [1]
21. What are the review criteria?	<ul style="list-style-type: none"> • The regulations do not specify the review criteria.

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SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Georgia
<i>Optional Air Quality Protection</i>	
22. Does the program establish any "special protection zones"? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • For open burning in other than predominately residential areas for the purpose of land clearing or construction or right-of-way maintenance, the following areas are given special consideration: (1) Prevailing winds at the time of burning must be away from the major portion of the area's population, and (2) The locations of the burning must be at least 1,000 feet from any dwelling located in a predominately residential area. [1] • In those counties whose total population exceeds 65,000, there are fewer exceptions to the general prohibition against open burning. In addition, burning is to be conducted between 10 a.m. and one hour before sunset and must not cause air pollution in quantities or characteristics or of a duration which is injurious or which unreasonably interferes with the enjoyment of life or use of property. [1]
23. Does the program establish any "performance standards"? What are the performance standards?	<ul style="list-style-type: none"> • The regulations do not establish any performance standards.
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> • The regulations do not specify what additional smoke management requirements apply if the performance standards have been exceeded.
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	

GEORGIA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Georgia
26. Is the smoke management program, or the regulations authorizing the program, part of the State's implementation plan (SIP)?	
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	

GEORGIA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Georgia
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	

IDAHO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Source of summary information:

- [1] Montana/North Idaho Smoke Management Program Operating Guide. Prepared by Ed Mathews, Program Coordinator. February 1997.
- [2] Idaho Administrative Code, 16.01.01, Air Pollution Control, Sections 600 through 616, Rules for Control of Open Burning. 1998.
- [3] Comments received from Idaho Division of Environmental Quality dated August 27, 1999.

Special note:

The Montana/North Idaho Smoke Management Program Operating Guide (February 1997) is currently being revised to include south Idaho in the program. Additional program changes in late 1999 will necessitate another revision in the spring of 2000.

Smoke Management Program Component	State
	Idaho
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> • The Idaho Division of Environmental Quality (DEQ) has the final authority on any burn restrictions as authorized in the open burning and emergency episode rules. [2] [3] • The Monitoring Unit (consisting of a meteorologist representing the Montana Department of Environmental Quality (DEQ) and a representative of the Montana Department of Natural Resources and Conservation (DNR C)) is the decision-making body during the fall prescribed burning season (September through November) and makes a decision each day as to whether or not any restrictions on burning are necessary for the following day. [1]

**IDAHO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Idaho
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> • A Memorandum of Agreement (MOA) exists between the North Idaho Airshed Group and the Montana State Airshed Group. This MOA is known as the North Idaho and Montana Airshed Group MOA. This MOA is also known as the Inter-State Working Agreement. [1] • Another MOA exists between the following agencies and companies: Idaho DEQ, USFS Regional Forester, BLM State Director, National Weather Service, Western Region, DAW Forest Products, Inland Empire Paper, Louisiana Pacific Corp., BIA Area Director, Idaho Dept. Of Lands, Plum Creek Timber Co., Inc., State of Idaho Dept. of Fish and Game, Potlatch Corp. Western Division, University of Idaho College of Forestry, Wildlife & Range Sciences, and the U.S. Army Corps of Engineers. By virtue of signing the North Idaho Airshed Group MOA each signatory receives full membership in the Group. This MOA is known as the North Idaho Airshed Group (NIAG) MOA. [1] • A new MOA exists between the south Idaho members. The signatory members are: Idaho DEQ, Idaho Dept. of Lands, U.S. Forest Service, Bureau of Land Management, U.S. Fish and wildlife Service, Boise-Cascade, and National Weather Service. The MOA will be included in the revised “Montana/North Idaho Smoke Management Program Operating Guide (1999).” [3]
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • Signatories to the NIAG MOA agree to abide by the Smoke Management Plan (SMP) for North Idaho and are responsible for proper smoke management in their areas of operation. [1] • The program is voluntary. Non-members are encouraged to participate. [3]
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • The program applies to Federal, State, and private prescribed burning (including prescribed natural fire/wildland fire managed for resource benefits). Agricultural burning is addressed in a separate program [3]
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • Prior to September 1 of each year, all signatories to the NIAG MOA are required to provide to the Monitoring Unit, a list of all prescribed burns planned for the entire calendar year. [1] • Each signatory to the NIAG MOA is required to submit a daily report of planned burning for the next day to the Local Airshed Coordinator. [1] • The reporting schedule will probably change in the next revision of the operating guide (1999). A list of all planned fires will probably be reported before the spring burn season. This list can be updated during the year as needed. Daily reports include today’s and tomorrow’s planned burns. [3]

**IDAHO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Idaho
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • A burning restriction must not be in place. The need for a burning restriction is determined by evaluating existing air quality conditions, meteorological conditions, and the expected amount of residual smoke from previous days' burning. Upon analysis of all available information the Monitoring Unit decides whether any restrictions to burning are necessary for the following day. [1] • Restrictions can be statewide; by individual airshed(s); by elevation within an airshed(s); by individual burn number(s); by impact zone(s); by time periods; and any combination thereof. [3] • Each NIAG MOA signatory is responsible for making burning crews aware of any burning restrictions. [1]
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • A MOA exists between the following agencies and companies: Idaho DEQ, USFS Regional Forester, BLM State Director, National Weather Service, Western Region, DAW Forest Products, Inland Empire Paper, Louisiana Pacific Corp., BIA Area Director, Idaho Dept. Of Lands, Plum Creek Timber Co., Inc., State of Idaho Dept. of Fish and Game, Potlatch Corp. Western Division, University of Idaho College of Forestry, Wildlife & Range Sciences, and the U.S. Army Corps of Engineers. By virtue of signing the NIAG MOA each signatory receives full membership in the Group. This MOA is known as the North Idaho Airshed Group (NIAG) MOA. [1] • A new MOA exists between the south Idaho members. The signatory members are: Idaho DEQ, Idaho Dept. of Lands, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service, Boise-Cascade, and National Weather Service. The MOA will be included in the revised "Montana/North Idaho Smoke Management Program Operating Guide (1999)." [3]
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • Both MOAs state that alternative methods are to be encouraged when such methods are practical. No further detail regarding alternative methods is provided. [1] • The open burning rules states "Two (2) years from the date of any economical and reasonable alternative to a specific usage of open burning has been approved by the Director, that usage of open burning will no longer be allowable under Section 606 through 616." [2] [3]
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • The program guide does not describe actions that must be taken to minimize emission from fires.

**IDAHO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Idaho
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> The program guide does not discuss if actions taken to minimize emissions before and during fire are to be documented.
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> Signatories to the NIAG MOA must provide, on their annual list of planned burns, the following information for each planned burn: 1) identification number (the Program Coordinator assigns each signatory a block of numbers), 2) legal description, 3) elevation, 4) number of acres, 5) type of burn, 6) airshed number, and 7) impact zone code. [1] [3]
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> Each morning a weather balloon is used to obtain an upper air sounding at selected cities in Montana and Idaho. The resulting temperature and wind information is plotted by the Monitoring Unit and then relayed to the NWS office at Missoula. The NWS will compile all meteorological data and issue an updated management forecast each day at approximately 9 AM, and a forecast for the following day at approximately 3:30 PM. Burners may also work directly with the NWS Fire Weather Forecasters to obtain spot weather forecasts for specific burns. [1] Burners are expected to curtail burning if, in their opinion, they are not getting adequate smoke dispersion, or if local weather factors are such that smoke problems could result. [1]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> The program guide does not discuss if the affected public must be notified when fires are authorized. The public can find out about any burn restrictions in their area by calling the hotlines or looking at the following web sites for the fall program and the prototype spring/summer program: http://www.smokemu.org http://www.fs.fed.us/r1/fire/nrcc/smoke.html A brochure on the program is available to the public. [3]
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> The program guide does not discuss if contingency plans are required to reduce exposure to smoke if intrusions occur. Restrictions would be in effect as long as stagnant meteorological conditions and/or elevated air quality concentrations persisted. [3]

**IDAHO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Idaho
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • DEQ has real-time PM10 and PM2.5 air quality monitors located throughout the state (TEOMS and nephelometers). DEQ provides the data daily to the Monitoring Unit [3] • During the months of September through November, the Monitoring Unit is responsible for the daily monitoring of meteorological data, air quality information, and planned forestry burning. It is responsible for notifying Local Airshed Coordinators when acceptable limits of smoke accumulation are threatened to be exceeded. [1]
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> • One of the roles of the North Idaho Airshed Group is to prepare and disseminate information on open burning. No further details are provided regarding a public education and awareness program. [1] • The public can find out about any burn restrictions in their area by calling the hotlines or looking at the following web sites for the fall program and the prototype spring/summer program: http://www.smokemu.org http://www.fs.fed.us/r1/fire/nrcc/smoke.html [3] • A brochure on the program is available to the public. [3]
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> • Complaints and real-time air quality monitoring are used to monitor compliance. [3]
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> • Should any signatory of the NIAG MOA fail to follow any procedures, requirements or restrictions issued under the SMP, it is considered grounds for revocation of their membership in the SMP. The North Idaho State Air Quality Bureau, Dept. Of Health and Welfare or local air pollution control agency may take appropriate action as authorized under existing State or local statutes, or rules and regulations for violation of open burning. [1]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> • Yes, prior to the last day of January (after the fall burning season), signatories to the NIAG MOA must compile and submit to the Program Coordinator a final listing by burn number of all prescribed burns accomplished during the calendar year. The accomplishment report must contain the dates on which the burns were accomplished, the total acres burned, and the tons/acre of fuel consumed on each burn unit. [1]

**IDAHO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Idaho
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> • Signatories to the North Idaho and Montana Airshed Group MOA agree to evaluate each of their smoke management programs, and review their agreements and improvements to each program at the end of the burning year (on December 1). [1] • Signatories to the NIAG MOA agree to evaluate the program, review the agreement and improve the SMP where feasible. [1] • Program evaluation is conducted in the spring during an annual meeting of all members. The Executive Committee meets annually as well to evaluate the program and discuss any needed improvements. [3]
21. What are the review criteria?	<ul style="list-style-type: none"> • The annual report, which is completed for the annual membership meeting, includes a comparison of burn restrictions to air quality concentrations. [3]
<i>Optional Air Quality Protection</i>	
22. Does the program establish any “special protection zones”? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • Special protection zones are defined as impact zones. Impact zones are any area of the State which the NIAG determines to be a smoke sensitive area. No further detail describing special protection zones is provided in the program guide. [1] • All nonattainment areas are included in impact zones. Other areas of concern are also identified as impact zones. [3] • Restrictions on burning may be made by impact zone. [1]
23. Does the program establish any “performance standards”? What are the performance standards?	<ul style="list-style-type: none"> • Each signatory to the NIAG MOA is responsible for proper smoke management in its area of operations. Each signatory adheres to the airshed group’s restriction procedures which enable the Monitoring Unit to reduce burning, stop burning in specific areas, or cease burning entirely when meteorological or existing air quality conditions warrant. [1]
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> • The program guide does not discuss what additional smoke management requirements apply if the performance standards have been exceeded.

**IDAHO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Idaho
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	<ul style="list-style-type: none"> • The State of Idaho Air Quality Rules do not include a specific nuisance rule. There are, however, odor and visible emission rules (also on the web site referred to earlier). [3]
26. Is the smoke management program, or the regulations authorizing the program, part of the State's implementation plan (SIP)?	<ul style="list-style-type: none"> • Although the state open burning rule is part of the Idaho SIP and indicates that the Idaho DEQ will develop and put into effect a smoke management plan for prescribed burning, the program has never been formally submitted as part of the SIP or approved by the EPA. [3]
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	<ul style="list-style-type: none"> • Each member pays an annual membership fee (including Idaho DEQ) and there is an additional per acre fee for accomplished burns. The fee varies depending on whether it is a forest or range burn. There were additional "start-up" costs when the north and south programs were initiated. [3]
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	<ul style="list-style-type: none"> • No, but starting in 2000, the program will be collecting year-round data (as described in #11 and 19) that could be used to develop annual emissions inventories for forest/range burning. Non-member burn activity data would not be included, but the data would represent the bulk of the federal, state, and private burn activities. [3]

**IDAHO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Idaho
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	<ul style="list-style-type: none"> • No. [3]

LOUISIANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Source of summary information:

- [1] Louisiana Smoke Management Voluntary Guidelines. Louisiana Department of Agriculture and Forestry, Office of Forestry. 1988.
- [2] Comments received from Louisiana Department of Agriculture & Forestry dated September 22, 1999.

Smoke Management Program Component	State
	Louisiana
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> • All burning from a smoke management standpoint is regulated by the Division of Air Quality, Dept. of Environmental Quality (DEQ); however, the burn/no burn decision is made by the person in charge of the burning project. [1] [2]
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> • The State Forester coordinates all forestry burning with the DEQ. [1] • The voluntary guidelines describe the responsibilities of the Louisiana Office of Forestry, Baton Rouge Office, the Louisiana Office of Forestry District Offices, and the Louisiana Forestry Association. [1]
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • Participation in the smoke management program is voluntary. Cooperators are those forest land owners or managers who have agreed to carry out prescribed burning in such a manner to adhere as to the Voluntary Smoke Management Guidelines. [1]
4. What types of burning (agricultural, silviculture, other) are covered by the program?	<ul style="list-style-type: none"> • The voluntary guidelines cover prescribed burning for the purposes of silviculture, wildlife habitat management, grazing, and fire hazard reduction. [1]

LOUISIANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Louisiana
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> On the day of the burn cooperators must inform the appropriate Office of the Forestry District Office, which will coordinate with the Department of Environmental Quality.* Cooperators must provide all the required information (not specified), and request information on the type of category day, which is a scale from 1 to 5 based on ventilation rates. The ventilation rate is calculated by multiplying the afternoon mixing height by the transport wind speed. [1] *Coordination between the Office of Forestry and DEQ is not done on a burn-by-burn basis or even a day-by-day basis. [2]
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> The cooperator may proceed with the burn if the nearest Office of Forestry District Office has determined that the ventilation rate is 2000 or greater, and if the cooperator determines that smoke sensitive areas will not be impacted by the burn. Ventilation rates of 2000-4000, 4000-8000, 8000-16000, and >16000 are considered category days 2 to 5, respectively. Each category day has specific guidelines. No burning is allowed for a ventilation rate less than 2000, which is a category day 1.
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> The voluntary guidelines do not discuss any operating agreements that have established between the DEQ and large land managers. [1] There is a certified prescribed burner program in Louisiana. [2]
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> The voluntary guidelines do not discuss alternatives to fire as a land management tool. [1]
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> Cooperators will not ignite new fires and will attempt to control any fires burning at the time an air stagnation advisory (category day 1) is declared. [1]
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> The voluntary guidelines do not discuss if the actions to minimize emissions before and during fires must be documented. [1]

**LOUISIANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Louisiana
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> • Written plans are not required; however, most certified burners maintain a file of burn plans for the areas they plan to burn. The plan covers smoke sensitive areas, fuel conditions, and weather considerations. [2]
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • Cooperators are requested to use the National Weather Service information to receive the fire weather forecast, the category day, and the surface inversion lifting temperature. [1] • Cooperators are expected to take measures to keep the smoke's impact on the environment within acceptable limits. The recommended procedure to accomplish this objective follows a five-step screening system: (1) Obtain the category day information, (2) Determine the screening distance (the area to examine for possible sensitive targets), (3) Determine the trajectory of the smoke plume, (4) Identify smoke sensitive and other impacted areas, and (5) Evaluate the results. [1] • If in evaluating the screening results, the cooperator identifies any smoke sensitive areas that could be adversely impacted by smoke production, the cooperator should take necessary precautions or consider burning under more favorable conditions. [1]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • Most certified burners notify the affected public. [2]
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • The voluntary guidelines do not discuss if contingency plans are required to reduce exposure to smoke if intrusions occur. [1]
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • The voluntary guidelines do not discuss if the air quality impacts of fires must be monitored. [1]

LOUISIANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Louisiana
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> • The voluntary guidelines do not discuss if a public education and awareness program has been established. [1] • Certified bumers receive training in smoke management guidelines as a portion of the class. [2]
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> • The voluntary guidelines do not discuss any actions that can be taken by the DEQ to monitor compliance with the voluntary guidelines. [1]
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> • The voluntary guidelines do not discuss penalties for non-compliance. [1]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> • The voluntary guidelines do not discuss post-burn reports. [1]
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> • The voluntary guidelines do not contain provision to review its effectiveness. [1]
21. What are the review criteria?	<ul style="list-style-type: none"> • The voluntary guidelines do not specify any review criteria. [1]

**LOUISIANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Louisiana
<i>Optional Air Quality Protection</i>	
22. Does the program establish any “special protection zones”? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • The voluntary guidelines identify sensitive targets as those areas that can be adversely affected by smoke and provides the following examples: airports, major highways, communities, recreation areas, schools, hospitals, nursing homes, and factories. [1] • Cooperators are asked to recognize potential smoke sensitive areas that already have an air pollution or visibility problem. Cooperators are asked to identify any potential areas where emission of SO₂ merge with the smoke plume. Likely sources are identified as smelters, electric power plants and factories where coal is burned. [1] • If in evaluating the screening procedure results, the cooperator identifies any sensitive areas that could be adversely impacted by smoke production, the cooperator is asked to either take necessary precautions or consider burning under more favorable conditions. [1]
23. Does the program establish any “performance standards”? What are the performance standards?	<ul style="list-style-type: none"> • The voluntary guidelines do not discuss any performance standards. [1]
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> • The voluntary guidelines do not discuss any additional criteria to use when performance standards have been exceeded. [1]
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	

LOUISIANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Louisiana
26. Is the smoke management program, or the regulations authorizing the program, part of the State's implementation plan (SIP)?	
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	

**LOUISIANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Louisiana
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	

**MISSISSIPPI
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Source of summary information:

- [1] Voluntary Smoke Management Guidelines for Mississippi. Mississippi Forestry Commission. Revised October 1998.
- [2] Mississippi Prescribed Burning Act and Other Fire-Related Laws. State statutes §§ 49-19-301 through 49-19-307. Effective March 1, 1993.
- [3] Mississippi Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants. APC-S-1, Section 3.7 Open Burning. Amended January 22, 1998.

Smoke Management Program Component	State
	Mississippi
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> The Mississippi Forestry Commission (MFC) administers the burning permit system; however, the final burn/no burn decision is made by the person in charge of the burn project. [1]
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> The MFC coordinates with the Department of Environmental Quality during air pollution episodes. [1] Local ordinance or burning bans take precedence over the MFC permit. [1]
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> Participation in the smoke management program is voluntary; however, no property owner or his agent is liable for damage or injury if the prescribed burning is accomplished under certain conditions. One of those conditions is preparing a written prescription (prescribed burning plan) and having it notarized prior to the burn. [1]

**MISSISSIPPI
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Mississippi
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • The voluntary guidelines cover agricultural and forestry burns. [1] • The Mississippi Prescribed Burning Act promotes the use of prescribed burning for ecological, silvicultural and wildlife management purposes. [2] • The Air Emission Regulations contain information to cover burning of agricultural wastes in the field and/or silvicultural wastes for forest management purposes. [3]
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • The voluntary guidelines require that to receive liability coverage: (1) A written prescription be prepared and notarized before the burn, and (2) A burning permit is obtained from the MFC, which consists of a verbal authorization to burn. A permit is obtained by calling the MFC's District Offices' central radio dispatch. Permits issued by the MFC are not a "permission to burn", rather a permit means that at least the minimum atmospheric conditions are present for adequate dispersal of smoke. • A written record of the following information is made at the time of the permit request and maintained as a state document: (1) The type burn (agricultural or forestry) and the number of acres involved, (2) The purpose of the burn, if it is a forestry burn, (3) The name of the landowner, and the name, address and phone number of the person responsible for the burn, (4) The legal location of the burn site, (5) The time period covered by the permit, and (6) The permit number. • On the day of the burn, the burning permit number and the time of day the permit is in effect must be recorded on the prescription. [1] • The Mississippi Prescribed Burning Act requires that: (1) A written prescription be prepared and notarized prior to prescribed burning, and (2) A burning permit be obtained from the MFC. [2] • The Air Emission Regulations require that a permit be obtained from the MFC when there is a Forestry Commission tower serving the area in which the burning occurs. [3]

**MISSISSIPPI
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Mississippi
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • To conduct an agricultural or forestry burn the voluntary guidelines require that: (1) A burning permit be obtained from the MFC, (2) Burning must occur within the time limits specified by the stagnation indices, which are provided by the MFC when issuing a permit, (3) No starter or auxiliary fuels that produce excessive visible emissions be used, (4) local ordinance permits the burning, and (5) Neither an air pollution episode nor an extreme wildfire condition should exist at the time of the burn. [1] • When any smoke-sensitive area may be affected by a burn, all of the following atmospheric conditions must be met to minimize any possible adverse effects: (1) Height of mixing layer is 1,650 feet (500 meters) or greater; (2) Transport wind speed is 8 mph (3.5 meters per second) or greater; (3) Background visibility is at least 5 miles within the plotted area; (4) For night burns, backing fires with surface wind speed greater than 4 mph and relative humidity under 80 percent should be present; (5) There should be no fog predicted for the time the burn will take place or during the period that residual smoke may be produced. No permits will be issued if either the mixing height or transport wind speed do not reach the minimum values in (1) and (2) above. [1]
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • Neither the voluntary guidelines nor the regulations mention any operating agreements established between the Division of Air Quality and large land managers.
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • The voluntary guidelines suggest that burn managers use alternatives to burning if smoke-sensitive areas are threatened with adverse smoke impact; however, those alternatives are not specifically discussed. [1]

**MISSISSIPPI
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Mississippi
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • Because burning of windrowed logging debris can produce a great deal of smoke and burning can last for weeks, burn managers are cautioned when burning in smoke-sensitive areas. [1] • The voluntary guidelines state that the following criteria must be met to minimize any possible adverse effects: (1) If rough is older than 2 years, use a backing fire; (2) Promptly mop up and monitor to minimize emissions; (3) If it appears that stumps, snags, or logs may cause a residual smoke problem, take steps to keep them from burning. If they ignite, extinguish them. [1] • Use of or burning of combustible material that causes excessive visible emission (rubber tires, plastic materials, etc.) is prohibited. [3] • Open burning of land-clearing debris must not use starter or auxiliary fuels which cause excessive smoke. [3]
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> • The voluntary guidelines do not specify whether actions taken to minimize emissions before and during fire be documented.
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> • The voluntary guidelines require that to receive liability coverage, a prescribed burn plan must be prepared before carrying out a prescribed burn. The date of the plan must be documented by having the plan notarized before doing the burn. On the day the burn is done, the burning permit number and time of day the permit is in effect must be recorded on the burning plan. The voluntary guidelines state that the plan does not need to be overly complex, but should cover the essentials of weather, terrain and fuels. See the Prescribed Burning Plan forms attached for the information that must be included in the plan. [1]
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • Smoke dispersion conditions are evaluated through the five-step smoke management screening system which is used to indicate when the resource manager can burn without causing a smoke problem. The five steps are: (1) Plot the direction of the smoke plume, (2) Identify smoke-sensitive areas, (3) Identify critical smoke-sensitive areas, (4) Determine fuel type, and (5) Minimize risk (by meeting the listed criteria). The voluntary guidelines describe how to apply each of the five steps. [1] • The Smoke Manager's Checklist advises managers to use test fires to confirm smoke behavior and to use weather and smoke management forecasts. [1]

**MISSISSIPPI
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Mississippi
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • The Smoke Manager's Checklist advises managers to notify the local fire control office, nearby residents, and adjacent landowners prior to burning. [1] • Use of "Smoke Ahead" warning signs, to caution motorists, is advised. [1]
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • The Smoke Manager's Checklist advises managers to have an emergency plan but does not provide any details. [1]
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • Make use of "Smoke Ahead" warning signs to caution motorists and make night checks to detect possible smoke problems. [1]
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> • Neither the voluntary guidelines nor the regulations discuss if a public education and awareness program has been established.
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> • Neither the voluntary guidelines nor the regulations discuss actions to be taken to monitor compliance.
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> • Neither the voluntary guidelines nor the regulations discuss penalties for non-compliance.
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> • If an evaluation of a completed burn is made, it is at the individual burner's discretion. [1] • The Prescribed Burning Plan forms include a section requesting burn summary information. The burner is request to provide the following information: (1) Acres burned, firing technique, burning permit #; (2) Date burned, time set, time permit in effect; and (3) Actual weather conditions. [1]

**MISSISSIPPI
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Mississippi
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> • Neither the voluntary guidelines nor the regulations discuss provisions to review program effectiveness.
21. What are the review criteria?	<ul style="list-style-type: none"> • Neither the voluntary guidelines nor the regulations specify any review criteria.

**MISSISSIPPI
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Mississippi
<i>Optional Air Quality Protection</i>	
22. Does the program establish any “special protection zones”? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • The voluntary guidelines recognize smoke-sensitive areas and critical smoke-sensitive areas. As part of the burn plan, smoke-sensitive areas and critical smoke sensitive areas must be plotted on a burn map.[1] • Smoke-sensitive areas are identified as airports, highways, communities, recreations areas, schools, hospitals, and factories which are potential target for smoke from the burn. If the area to be burned contains organic soils that are likely to ignite, and a smoke-sensitive is a potential target, burners are advised not to burn. [1] • Critical smoke-sensitive areas are identified as those areas that already have an air pollution or visibility problem, and those areas within the probable smoke impact areas as determined in step three of the Smoke Management Screening System. If any critical smoke-sensitive areas have the potential to be affected by smoke from a burn, burners are advised not to proceed with the burn. [1] • When any smoke-sensitive area may be affected by a burn, all of the following criteria must be met to minimize any possible adverse effects: (1) Height of mixing layer is 1,650 feet (500 meters) or greater, (2) Transport wind speed is 8 mph (3.5 meters per second) or greater, (3) Background visibility is at least 5 miles within the plotted area, (4) If rough is older than 2 years, use a backing fire, (5) Promptly mop up and monitor to minimize smoke hazards, (6) If smoke-sensitive area is impacted by smoke from two fires, it should be at least a mile from either fire. If one of the fires involves logging debris, the distance should be two miles from either fire, (7) For night burns, backing fires with surface wind speed greater than 4 mph and relative humidity under 80 percent should be present, (8) Make use of “Smoke Ahead” warning signs to caution motorists and make night checks to detect possible smoke problems, (9) There should be no fog predicted for the time the burn will take place or during the period that residual smoke may be produced, and (10) If it appears that stumps, snags, or logs may cause a residual smoke problem, take steps to keep them from burning; if they ignite, extinguish them. [1]
23. Does the program establish any “performance standards”? What are the performance standards?	<ul style="list-style-type: none"> • If a smoke-sensitive area is impacted by smoke from two fires, it should be at least one mile from either fire. If one of the fires involves logging debris, the distance should be two miles from either fire.
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> • Neither the voluntary guidelines nor the regulations specify any additional criteria to use when performance standards have been exceeded.

**MISSISSIPPI
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Mississippi
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	
26. Is the smoke management program, or the regulations authorizing the program, part of the State's implementation plan (SIP)?	
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	

**MISSISSIPPI
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Mississippi
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	

MONTANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Source of summary information:

- [1] Montana/North Idaho Smoke Management Program Operating Guide. Prepared by Ed Mathews, Program Coordinator. February 1997.
- [2] Comments received from the Department of Environmental Quality, Permitting and Compliance Division, Air & Waste Management Bureau dated August 19, 1999.

Special Note:

The Montana/North Idaho Smoke Management Operating Guide, February 1997 is currently being revised to reflect the inclusion of South Idaho into the Airshed Group. Furthermore, the operating guide will likely be revised again around February 2000 because of a change to the operation of the monitoring unit.

Smoke Management Program Component	State
	Montana
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> • The Monitoring Unit (consisting of a meteorologist representing the Department of Environmental Quality (DEQ) and a representative of the Montana Department of Natural Resources and Conservation (DNRC)) is the decision-making body during the fall prescribed burning season (September through November) and makes a decision each day as to whether or not any restrictions on burning are necessary for the following day. [1] • From March 1 through November 30 the burn/no burn decision is left up to the owner. [2] • Open burning is generally closed from December 1 through February 29. [2]

MONTANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Montana
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> • A Memorandum of Agreement (MOA) exists between the Montana State Airshed Group (Group) and the North Idaho Airshed Group. This MOA is known as the North Idaho and Montana Airshed Group MOA. [1] • Another MOA exists between the following agencies and companies: Montana DEQ, USFS Regional Forester, BLM State Director, Glacier National Park Superintendent, National Weather Service, Western Region, Yellowstone National Park Superintendent, Missoula City-County Air Pollution Control Board, Darby Lumber, Stone Container Corp., R-Y Timber Inc., BIA Area Director, DNRC, Plum Creek Timber Co., Inc., Big Sky Lumber Co., Department of Fish, Wildlife and Parks, U.S. Department of Fish & Wildlife Service, Pyramid Mountain Lumber, Louisiana Pacific, and Stolze Land & Lumber Co. This MOA is known as the Montana Smoke Management MOA (MSM-MOA) By virtue of signing the MSM-MOA each signatory receives full membership in the Montana State Airshed Group. [1]
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • Signatories to the MSM-MOA agree to abide by the Smoke Management Plan (SMP) for Montana and are responsible for proper smoke management in their areas of operation. [1] • If an entity meets the definition of a major open burner, then they need to apply for a permit even if they are not part of the Group. [2]
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • The SMP covers fires used to accomplish land management objectives, fuel hazard reductions, regeneration and wildlife habitat improvement. [1] • The plan was not established to regulate agricultural burning, but the fall restrictions do apply to agricultural burners. [2]

MONTANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Montana
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • All major open burners (defined as any person, institution, business or industry conducting open burning that emits more than 500 tons of CO or 50 tons of any other pollutant per year) must obtain an annual burning permit from the DEQ and pay a fee based on emissions produced. Signatories to the MSM-MOA obtain an annual burning permit as part of being a member and following all rules and regulations of the Group. September 1 is the start date of the annual permit. [1] (September 1 is currently the start date of the annual permit, but may not be in the future.) [2] • Prior to September 1 of each year, all signatories to the MSM-MOA are required to provide to the Monitoring Unit, a list of all prescribed burns planned for the entire calendar year. [1] • Each signatory to the MSM-MOA is required to submit a daily report of planned burning for the next day to the Local Airshed Coordinator. [1] • For pre-season operations (after September 1 but before the startup of the Monitoring Unit) signatories to the MSM-MOA needing to burn, must contact their Group Representative by 10 am each day with their planned acreage and location. During pre-season, signatories to the MSM-MOA may assume that they are authorized to burn as long as they have an Air Quality Permit and their daily planned burn lists were submitted to their Group representative. [1] • MSM-MOA signatory members planning to conduct “Essential Winter Burning” (burning performed December through February) are required to submit a planned winter burn list to the Monitoring Unit not later than November 1 of each year. [1] • The list for those planning to conduct “Essential Winter Burning” is reviewed by the monitoring unit coordinator and passed along to the department, who, in turn, notifies the burner of approval or denial of the proposed burn. [2] • Each MSM-MOA signatory is responsible for making burning crews aware of any burning restrictions. [1]
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • A burning restriction must not be in place. The need for a burning restriction is determined by evaluating existing air quality conditions, meteorological conditions, and the expected amount of residual smoke from previous days’ burning. Upon analysis of all available information the Monitoring Unit decides whether any restrictions to burning are necessary for the following day. [1] • Essential winter burning will be conducted only when good or excellent smoke dispersion conditions are indicated by the National Weather Service (NWS). [1]

MONTANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Montana
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • A Memorandum of Agreement (MOA) exists between the following agencies and companies: Montana DEQ, USFS Regional Forester, BLM State Director, Glacier National Park Superintendent, National Weather Service, Western Region, Yellowstone National Park Superintendent, Missoula City-County Air Pollution Control Board, Darby Lumber, Stone Container Corp., R-Y Timber Inc., BIA Area Director, DNRC, Plum Creek Timber Co., Inc., Big Sky Lumber Co., Department of Fish, Wildlife and Parks, U.S. Department of Fish & Wildlife Service, Pyramid Mountain Lumber, Louisiana Pacific, and Stolze Land & Lumber Co. By virtue of signing the MSM-MOA each signatory receives full membership in the Montana State Airshed Group. [1]
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • Both MOAs state that alternative methods are to be encouraged when such methods are practical. No further detail regarding alternative methods is provided. [1]
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • The rules (ARM 17.8, subchapter 6) require that best available control technology (BACT) be applied to minimize emissions from fires. BACT means, those techniques and methods of controlling emission of pollutants from an existing or proposed open burning source, which limit those emissions to the maximum degree, which the department determines, on a case-by-case basis, is achievable for that source, taking into account impacts on energy use, the environment, and the economy, and any other costs, including cost to the source. Such techniques and methods may include the following: scheduling of burning during periods and seasons of good ventilation, applying dispersion forecasts, utilizing predictive modeling results performed by and available from the department (DEQ) to minimize smoke impacts, limiting the amount of burning to be performed during any one time, using ignition and burning techniques which minimize smoke production, selecting fuel preparation methods that will minimize dirt and moisture content, promoting fuel configurations which create an adequate air to fuel ratio, prioritizing burns as to air quality impact and assigning control techniques accordingly, and promoting alternative treatments and uses of materials to be burned. [2]
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> • The program guide does not discuss if actions taken to minimize emissions before and during fire are to be documented.

MONTANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Montana
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> • Signatories to the MSM-MOA must provide, on their annual list of planned burns, the following information for each planned burn: 1) identification number (the Program Coordinator assigns each signatory a block of numbers), 2) legal description, 3) elevation, 4) number of acres, 5) estimate of fuel loading (tons/acre)(needed on the end-of-season accomplishment report), 6) type of burn, 7) airshed number, and 8) impact zone code. [1] • The DEQ requires that for essential winter burning enough information be recorded so that a post mortem can be conducted in the event that complaints are received from the public or enforcement actions is required. As a minimum, information to be documented includes: 1) Assigned State Airshed Group number for each burn, 2) legal location of burn, 3) size of burn, 4) type of burn (e.g., road clearing, piles, pit burning), 5) fuel load, 6) elevation of burn, and 7) a brief explanation detailing why the burn is an essential winter burn. [1]
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • Each morning a weather balloon is used to obtain an upper air sounding at selected cities in Montana and Idaho. The resulting temperature and wind information is plotted by the Monitoring Unit and then relayed to the NWS office at Missoula. The NWS will compile all meteorological data and issue an updated management forecast each day at approximately 9 AM, and a forecast for the following day at approximately 3:30 PM. Burners may also work directly with the NWS Fire Weather Forecasters to obtain spot weather forecasts for specific burns. [1] • Burners are expected to curtail burning if, in their opinion, they are not getting adequate smoke dispersion, or if local weather factors are such that smoke problems could result. [1] • Essential winter burning will be conducted only when good or excellent smoke dispersion conditions are indicated by the NWS. [1]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • The program guide does not discuss if the affected public must be notified when fires are authorized; however, it does discuss how to process a citizen complaint which should include an explanation of the smoke control program. [1] • The public can find out about restrictions in their area by calling the hotline or looking on the Internet. [2]

MONTANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Montana
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • The program guide does not discuss if contingency plans are required to reduce exposure to smoke if intrusions occur. • Restrictions during the fall would continue during the intrusion event - until conditions improve. [2]
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • During the months of September through November, the Monitoring Unit is responsible for the daily monitoring of meteorological data, air quality information, and planned forestry burning. It is responsible for notifying Local Airshed Coordinators when acceptable limits of smoke accumulation are threatened to be exceeded. [1] • The DEQ tracks thermo-electric oscillating monitor (TEOM) data on a daily basis. [2]
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> • The program guide does not describe if a public education and awareness program has been established. [1] • The Group prepared a brochure to educate people about the Group and smoke management. [2]
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> • The program guide does not describe what actions can be taken by the central authority to monitor compliance with the smoke management program. • The DEQ and the Group rely on complaints and TEOM readings to monitor compliance. [2]
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> • Should any signatory of the MSM-MOA fail to follow any procedures, requirements or restrictions issued under the SMP, it may be considered grounds for revocation of their annual air quality permit, and/or membership in the SMP. The DEQ or local air pollution control agency may take appropriate action as authorized under existing State or local statutes, rules and regulations for violation of open burning rules and regulations. [1]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> • Yes, prior to the last day of January (after the fall burning season), signatories to the MSM-MOA must compile and submit to the Program Coordinator a final listing by burn number of all prescribed burns accomplished during the calendar year. The accomplishment report must contain the dates on which the burns were accomplished, the total acres burned, and the tons/acre of fuel consumed on each burn unit. [1]

MONTANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Montana
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> • Signatories to the Northern Idaho and Montana Airshed Group MOA agree to evaluate each of their smoke management programs, and review their agreements and improvements to each program at the end of the burning year (on December 1). [1] • Signatories to the MSM-MOA agree to evaluate the program, review the Agreement and improve the SMP where feasible. [1]
21. What are the review criteria?	<ul style="list-style-type: none"> • The program guide does not specify review criteria for either MOA.
<i>Optional Air Quality Protection</i>	
22. Does the program establish any “special protection zones”? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • Special protection zones are defined as impact zones. Impact zones are any area that the Group determines to be a smoke sensitive area. No further detail describing special protection zones is provided in the program guide. [1] • Impact zones may be established by the Group or the DEQ; a general description of the impact zone is given in the SMP operating guide. [2] • Restrictions on burning may be made by impact zone. [1]
23. Does the program establish any “performance standards”? What are the performance standards?	<ul style="list-style-type: none"> • No, the program does not establish any performance standards. [1]
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> • The program guide does not discuss what additional smoke management requirements apply if the performance standards have been exceeded.
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	<ul style="list-style-type: none"> • The State of Montana Air Quality Rules do not include specific provisions regarding a potential nuisance created by open burning (except for firefighter training). There is a general section of the rules (ARM 17.8.315) that pertains to odors. Those rules state that no person shall cause, suffer or allow any emissions of gases, vapors or odors beyond his property line in such a manner as to create a public nuisance. In addition, there may be general public nuisance regulations that would allow someone to seek relief through court actions not associated with the air quality rules. [2]

MONTANA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Montana
26. Is the smoke management program, or the regulations authorizing the program, part of the State's implementation plan (SIP)?	<ul style="list-style-type: none"> • Yes, see 59 FR2988. [2]
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	<ul style="list-style-type: none"> • The state portion of the smoke management program is fee funded. Currently, the fees for "major open burners" are based on the actual or estimated actual amount of air pollutants emitted in the last calendar year. This is calculated based on tons of particulate matter, oxides of nitrogen, and volatile organic compounds. The fees are adjusted periodically to cover the department's costs of operating the fall smoke management program. In kind services may be used to reduce the fees of some major open burners. [2]
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	<ul style="list-style-type: none"> • The state maintains an annual emission inventory of open burns. A description of each planned open burn is included with a permit application. The department does not attempt to separate prescribed natural fires from other fires, such as slash burns. The emissions that we use to calculate fees are generally based on post-burn reports. [2]
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	<ul style="list-style-type: none"> • No. [2]

**NORTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Source of summary information:

- [1] Smoke Management Guidelines. North Carolina Division of Forest Resources. February 8, 1988.
- [2] North Carolina Air Quality Rule, 15A NCAC 2D .1900, Open Burning of Combustible Materials.
- [3] Regulation of Open Fires, North Carolina G.S. 113-60.21 – 113.60.31.
- [4] Comments received from the North Carolina Department of Environment and Natural Resources, Division of Forest Resources dated August 19, 1999.

Smoke Management Program Component	State
	North Carolina
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> • The North Carolina Division of Forest Resources (DFR) has to authority to issue or deny permits for open burning in or adjacent to woodlands. The DFR makes the burn/no burn decision. [2] • Note that the NCDFR has presented agency legislation to promote the use of prescribed burning. House Bill 316, which contains the new prescribed burning regulations, has recently been ratified, and the law becomes effective January 1, 2000. These new regulations are not reflected in this table.
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> • Inquiries, requests and plans are handled by the appropriate Department of Environmental, Health, and Natural Resources regional office. [2] • The Western North Carolina Regional Air Pollution Control Agency, the Forsyth County Environmental Affairs Department, and the Mecklenburg County Department of Environmental Affairs enforce open burning rules as part of their local air pollution programs. [2] • Fires set to agricultural lands for disease and pest control and fires set for other agricultural or apicultural practices must be acceptable to the Department of Agriculture. [1] • Fires set for wildlife management practices must be acceptable to the Wildlife Management Commission. [2]

**NORTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	North Carolina
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • The Smoke Management Guideline of NC DFR are voluntary for the forestry community. The system is not applied to any burning other than forestry burning. [4]
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • The guidelines focus on prescribed fire for forest management. [1] • The regulations apply to all operations involving open burning and the authority of the DFR to issue or deny permits for open burning in or adjacent to woodlands. [2], [3]. • The DFR's burning laws are designed primarily to prevent forest fires. [4]
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • On the day of the burn, the manager must obtain a burning permit, notify the North Carolina Forestry Service office, and provide details on: (1) Total acres to be burned, (2) Fuel tonnages from the tables located in the guidelines, (3) Name of the burning boss, (4) BSP, location, (5) Time of ignition, and (6) Purpose of the burn. [1] • Permits must be issued in the name of the person undertaking the burning and must specify the area in which the burning is to occur, the type and amount of material to be burned, the duration of the permit, and other such factors as are necessary to identify the burning which is allowed under the permit. [3] • The DFR law allows the DFR to stop issuance of permits but the DAQ must declare that an air pollution episode exists. [4]
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • A permit must be obtained in non-high hazard counties to burn any material in any woodland under the protection of the DEHNR or within 500 feet of any such woodland during the hours starting at midnight and ending at 4:00pm. A permit must also be obtained for high hazard counties. [3] • Several types of open burning are permissible without a permit under certain conditions. [2] • No fires may be started or vegetation added to existing fires when the DFR has banned burning for an area. [2] • The burn must not violate any local government ordinances. [2]

**NORTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	North Carolina
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • Although the DFR coordinates with other state and local agencies, neither the guidelines nor the regulations discuss any formal operating agreements that have been established between the DFR and large land managers. • Burners that have the potential to burn 15,000 tons of material or more per year may be subject to Section 15ANCAC 2Q .0500, Title V Procedures. [2] • Burners that burn 38,000 tons per year or more may be subject to 15A NCAC 2D .0530, Prevention of Significant Deterioration. [2]
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • For fires set for the disposal of material generated as a result of a natural disaster, the burner must document to the Division of Environmental Management regional office supervisor that there is not any other practical method of disposal of the waste. [2]
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • The amount of dirt or organic soil on or in the material to be burned must be minimized and the material arranged in a way suitable to facilitate rapid burning. [3] • Heavy oils, asphaltic material, or items containing natural or synthetic rubber may not be used to ignite the material to be burned or to promote the burning of such material. [3]
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> • Neither the guidelines nor the regulations specify if actions taken to minimize emissions before and during fires must be documented.
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> • While the guidelines state that burners should “review burning plan for necessary parameters”, no further details are provided in either the guidelines or the regulations to determine if written burn plans are required. [1]

**NORTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	North Carolina
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • Smoke dispersion is evaluated through the dispersion information provided for each category day. The category day must be appropriate for the particular burn. Burners must obtain the category day, a scale of 1 to 5, from the Forest Service. Based on the category day, burners may proceed with the burn, may proceed with limitations, or may not be allowed to burn. [1] • The guidelines ask burners to anticipate their timing of future burning by tracking weather observations from NCFS weather, NOAA weather radio, and local sources. [1]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • Neither the guidelines nor the regulations specify if the affected public must be notified when fires are authorized. The rules for high hazard counties do state that permission to burn must be granted by the occupants of a dwelling in a residential area within 1,000 feet of the open burning location. [3]
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • Neither the guidelines nor the regulations specify if contingency plans are required to reduce exposure to smoke if intrusions occur.
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • The regulations state that operators of air curtain burners must be certified to read visible emissions and the facility must be tested for visible emissions. No other information regarding monitoring of the air quality impacts of fires is discussed in either the guidelines or the regulations. [2]
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> • Neither the guidelines nor the regulations specify if a public education and awareness program has been established. • Air quality rules are listed on the back of the permit as a public service. [4]
<i>Surveillance and Enforcement</i>	

**NORTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	North Carolina
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> • When organic material is ignited during prescribed burning activities, and the material continues to burn, a daily evaluation must be made to (1) estimate the acres continuing to burn within a given 16,000 acre block, and (2) approximate daily tonnage that will be consumed. (It is not clear how these activities are inspected). [1] • Any forest ranger may direct the person responsible for setting a fire to extinguish the fire or take other action if the fire has: (a) been set without a permit and in an area in which permits are prohibited; (b) been set without a permit and determined by the forest ranger that a permit would not have been issued for the fire; (c) deviated from the conditions of the permit. [3]
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> • Any person in violation of the regulations or of any permit issued under authority of the regulations shall be guilty of a Class 3 misdemeanor. [3]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> • Neither the guidelines nor the regulations discuss whether post-burn reports are required.

**NORTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	North Carolina
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> Neither the guidelines nor the regulations discuss if the program includes provisions to periodically review its effectiveness.
21. What are the review criteria?	<ul style="list-style-type: none"> Neither the guidelines nor the regulations discuss any review criteria.
<i>Optional Air Quality Protection</i>	
22. Does the program establish any "special protection zones"? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> There are eighteen North Carolina counties that are classified as high hazard counties. It is unlawful to burn in any woodland under protection of the DENR or within 500 feet of any such woodland without a permit in high hazard counties. It is also unlawful in high hazard counties to burn any debris, stumps, brush or other flammable materials resulting from ground clearing activities without a permit. Ground clearing greater than five acres require a special permit. The following are also required: (1) Prevailing winds at the time of ignition must be away from populated areas; (2) The location of the burning must be at least 1,000 feet from any dwelling in a residential area unless permission is granted; (3) The amount of dirt or organic soil in the material to be burned must be minimized; (4) Burning may not be initiated when a forest ranger determines that stagnant air conditions or inversions exist; (5) Heavy oils, asphaltic materials, or items containing natural or synthetic rubber may not be used for burning; (6) Initial burning may only be between 9:00 am and 3:00 pm and no combustible material may be added to the fire between 3:00 pm and 9:00 am except when authorized by any forest ranger.
23. Does the program establish any "performance standards"? What are the performance standards?	<ul style="list-style-type: none"> Neither the guidelines nor the regulations establish any performance standards.
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> Neither the guidelines nor the regulations specify what additional smoke management requirements apply if the performance standards have been exceeded.

**NORTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	North Carolina
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	
26. Is the smoke management program, or the regulations authorizing the program, part of the State's implementation plan (SIP)?	
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	

**NORTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	North Carolina
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	

**NEW MEXICO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Source of summary information:

- [1] New Mexico Smoke Management Memorandum of Understanding 1997 - 2002.
The New Mexico Smoke Management Memorandum of Understanding includes: the New Mexico Smoke Management Plan, Fire Activity Report Forms A, B. and C, a Burn Accomplishment Evaluation Form, Emissions Calculation Forms for PM-2.5, PM-10, TOP, and VOC., a Permit Application and Reporting of Open Burning Form, a map of existing fire management zones in New Mexico, and a map of airsheds in New Mexico.
- [2] New Mexico State Regulations Title 20 (Environmental Protection), Chapter 2 (Air Quality), Part 60 (Open Burning). November 30, 1995.

Smoke Management Program Component	State
	New Mexico
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> The New Mexico Environment Department (NMED) is responsible for making burn/no burn decisions by approving or disapproving permit applications. [1] and [2]
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> The NMED, the USDA Regional Forester, the USDI Intermountain Region, the BLM, New Mexico, the USDI Regional Fish and Wildlife Service, the New Mexico State Land Office, and the New Mexico Dept. Of Energy, Minerals and Natural Resources have signed a Memorandum of Understanding (MOU) that is the basis for the Smoke Management Plan (SMP). [1] Signatories to the MOU must notify the appropriate local agencies as required in their burn plan of intent to burn and the location of each burn. [1]

**NEW MEXICO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	New Mexico
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • The signatories of the MOU agree to abide with the New Mexico SMP, which includes ensuring proper smoke management of prescribed fires conducted by the signatories. [1] • Most other open burning requires a permit and approval to burn from the NMED. [2]
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • Acceptable burning projects within the MOU are: (1) Hazardous fuel reduction, (2) Slash disposal from timber sales and roads constructed within contract areas, (3) Wildlife habitat improvement, (4) Forest stand improvement, (5) Insect and disease control, (6) Site preparation for revegetation, (7) Water yield improvement, (8) Maintenance of natural ecosystems, (9) Maintenance of threatened and endangered species, (10) Other vegetative management improvement projects, and (11) Cultural scene maintenance. [1] • State regulations allow burning of fully dried tumbleweeds and burning for agricultural management, excluding timber, directly related to the growing or harvesting of crops. [2] • Other open burning is permitted for the following purposes when a permit is obtained from the NMED: (1) Weed Abatement, (2) Prevention of fire hazards, (3) Disposal of dangerous materials, (4) Instruction and training of fire fighting and fire rescue personnel, (5) Civil defense, (6) Conservation, (7) Game management, (8) Disease and pest control, (9) Land clearance for highway construction, (10) Forestry management, (11) Control of vegetation in irrigation ditches and canals, (12) Clearance and maintenance of watercourses and flood control channels to eliminate flood hazards, (13) Disposal of hydrocarbons spilled or lost from pipeline breaks or other transport failure, and (14) Other special circumstances. [2] • The NMED is prohibited by state regulation from requiring permits for agricultural burning. [1]

**NEW MEXICO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	New Mexico
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • Within the MOU, for planned ignition prescribed fire, an annual application for an annual permit for all burns planned from January 1 through December 31, must be submitted to the NMED office in Santa Fe. The NMED, after review, will inform the applicant that the permit is approved, approved with conditions, or denied within 35 days after receipt of a complete application. [1] • Within the MOU, for prescribed natural fire, application for burns are made on an annual basis. An operating plan including the prescription and map showing the area for the prescribed natural fire is included with each initial application. The application is reviewed and approved, approved with conditions, or denied. Subsequent annual applications for approved areas need not include plan and maps but only minor necessary changes for that area and the permit application form. [1] • Burn projects not covered by the MOU or not considered part of forest and public land management projects must submit an application for a burn permit for a specific project to the local NMED district office. The NMED will process the application within 20 days. [1]
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • For planned ignition prescribed fire within the MOU, land managers must have a valid annual permit, there must not exist any practical alternative to burning, managers must select appropriate smoke management techniques, each manager must use the best meteorological information to assure burning during conditions of at least “good” smoke dispersal, the permittee must notify the appropriate local agencies as required, and managers must consider potential visibility impacts of smoke. [1] • For prescribed natural fire within the MOU, land managers must have a valid annual permit and the manager must telephone the Air Quality Bureau Enforcement Section to report fires that exceed ten acres. [1] • For projects not covered by the MOU or not considered part of forest and public land management projects, the burner must have a permit to open burn, there must not exist any practical alternative to burning, the health or welfare of any person must not be detrimentally affected, and the ambient air quality of other property must not be detrimentally affected. [2]
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • A MOU exists between the NMED and large land managers in which the signatories agree to the SMP. [1]
<i>Minimizing Air Pollutant Emissions</i>	

**NEW MEXICO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	New Mexico
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • Although specific alternatives are not discussed, the signatories of the MOU must consider practical alternatives to burning and may conduct prescribed burning only if there are no practical alternatives. [1] • The NMED reserves the right to deny a permit for any type of burning for which there appears to be a reasonable alternative to burning. [1] and [2]
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • Each signatory to the MOU is responsible for proper smoke management for prescribed fires it conducts and, on a case-by-case basis, identifies and implements the best smoke management techniques appropriate to minimize the amount and /or impact of smoke produced. For prescribed natural fire, the responsible parties must promptly initiate appropriate suppression action if the conditions of the permit are not being met. Potential visibility impacts of smoke must be considered and factored into the prescription for the burn. Piled material must be cured and as free of dirt as possible. To the degree practical, all burning must be done during periods conducive to smoke dispersal, to be determined by using the best meteorological information reasonably available. Other conditions required for smoke management may be added to the permit if deemed necessary. [1] • Other open burning must be maintained under the following conditions: no natural or synthetic rubber or petroleum products may be burned, care must be taken to minimize the amount of dirt on the material being burned, all burning, except agricultural burning, must take place between the hours of 10 a.m. and 4 p.m., and the material to be burned must be as dry as possible. [2]
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> • Neither the MOU nor the regulations discuss if actions to minimize emissions before and during a fire must be documented.
<i>Smoke Management Components of Burn Plans</i>	

**NEW MEXICO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	New Mexico
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> • The MOU does not specifically discuss written burn plans; however, signatories are required to apply for an annual permit and received approval. The permit application request the following information: (1) Organization, contact name and telephone number, (2) Location, acreage, fuel loading determination method, type of fuel and number of tons/acres to be burned, (3) If smoke sensitive areas will be affected, and if so, a map of the smoke sensitive areas including distance and direction. [1] • For other open burning, the regulations do not discuss written burn plans; however, the person seeking to open burn must request a permit from the NMED in writing. The request must include the following information: (1) The requestor's name, address, and telephone number, (2) The location where the burning is to be conducted, (3) The type and quantity of material to be burned, (4) The date when the burning is to be conducted, (5) The methods that will be followed to ignite, maintain and control the burning, (6) The reasons why the requestor believes the burning is necessary, and (7) The alternatives to burning and the reasons why the requestor believes them not be feasible. [2]
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • Each signatory to the MOU must use the meteorological information produced by the National Weather Service Fire Weather Forecaster before burning. For planned ignitions, a single test fire may first be ignited to indicate local mixing depths. [1] • For other burning, the regulations do not discuss how smoke dispersion conditions must be evaluated; however, the wind direction at the site of agricultural burning must be such that the smoke will generally be carried away from areas of human habitation. [2]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • Signatories to the MOU must ensure that public notification plans are developed and implemented for each prescribed fire activity. In addition, signatories must notify the appropriate local agencies as required in their burn plan of intent to burn and the location of each burn. [1] • For other burning, the regulations do not discuss if the public must be notified when fires are authorized. [2]
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • Signatories to the MOU must have an prescribed fire contingency plan in place that will identify how the organization will reduce fire emissions, eliminate ignitions in certain areas, or take appropriate suppression action. The contingency plans will be implemented when meteorological conditions warrant, or the NMED determines that National or State Air Quality Standards are or will be exceeded, and/or the responsible land management organization anticipates that the prescription for a particular fire will be exceeded. [1] • For other open burning, the regulations do not discuss if contingency plans are required. [2]

NEW MEXICO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	New Mexico
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • For prescribed natural fire, the responsible land management agency and/or the NMED will monitor the fire to determine if the responsible party must initiate appropriate suppression action. • If pollutant levels are anticipated to exceed National or State Ambient Air Quality Standards, air quality control regulations, or significantly impact visibility, the NMED may require the responsible land management agency to monitor and/or model pollutants generated from a particular prescribed fire or wildfire. The NMED may assist in identification of instrumentation, site selection, installation of instrumentation, operation, calibration, quality assurance, quality control, laboratory analysis, data interpretation, and supplies. [1] • For other open burning, the regulations do not discuss if monitoring is required. [2]

NEW MEXICO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	New Mexico
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> The MOU states that Fire Managers, Public Information Officers, and other Agency individuals contacting the public will know details about the prescribed burning program, project(s), and objectives of the burn. Prescribed Fire handouts and other developed educational material can enhance the process. [1]
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> Within the MOU, all prescribed burning operations are subject to inspection by the NMED. The determination of compliance with air quality standards is the responsibility of the NMED and is determined through modeling, emissions inventories, and air quality monitoring. [1]
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> If at any time the NMED determines that any condition of the permit is not being complied with, the permit may be revoked for the specific project where the non-compliance is occurring. In addition to revocation of the permit, the NMED may take any other enforcement action authorized under State or Federal statutes, rules and regulations. [1]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> Within the MOU, as a condition of the permit, the actual activity that occurred with each permitted burn must be reported to the NMED. Each permitted user of prescribed fire provides the NMED with an annual reporting of fire activity (by using Fire Activity Report Forms A, B, and C attached to the MOU) by March 1 for the previous calendar year's activities. [1] The Fire Activity Report needs to demonstrate where, when, and how much fuel was burned; what types of fuel were burned; and how the emissions from the burn were determined. The Fire Activity Report must also include location, time, fuel types, (vegetative type, piles or in-situ, etc.), fuel loading (e.g., tons per acre, pile weights), number of acres or piles burned, emission calculated (pounds per ton, acre, or burn), emission rates (e.g., pounds per minute, ton per hour), and the emission factors used in the calculations. [1] Upon request, the responsible land management agency must furnish to the NMED within 90 days a fire activity report for a particular prescribed fire or wildfire. [1]

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SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	New Mexico
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> The MOU signatories agree to meet annually during the second week of January to update maps and contact persons, to evaluate the prescribed fire program and the permitting and data collection system in New Mexico, and review and modify the New Mexico Smoke Management Plan where necessary. [1]
21. What are the review criteria?	<ul style="list-style-type: none"> The MOU does not specify review criteria.
<i>Optional Air Quality Protection</i>	
22. Does the program establish any "special protection zones"? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> Within the MOU, smoke sensitive areas are described as including but not limited to Class I areas as well as other scenic and important view especially during times of significant visitor use, urban and rural population centers, schools, hospitals, nursing homes, transportation facilities such as roads and airports, recreational areas, and other locations that may be sensitive to smoke impacts for health, safety, scientific, or aesthetic reasons. [1] Each signatory to the MOU must explicitly consider potential visibility impacts of smoke in Class I areas and other smoke sensitive areas. Each signatory must minimize smoke impacts through application of appropriate smoke management techniques including scheduling burns outside times of significant visitor use and employment of alternatives to prescribed burning to the extent they are environmentally acceptable, technologically feasible and economically reasonable. [1] Smoke sensitive areas that are scenic and/or important views are identified in zone management plans. Zone smoke management plans are coordinated by each Zone Board. [1] For other open burning, the emission of smoke must not be allowed to pass onto or across a public road or landing strip such that a hazard is created by impairment of visibility, and the wind direction at the site of agricultural burning must be such that the smoke will generally be carried away from areas of human habitation. [2]

**NEW MEXICO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	New Mexico
23. Does the program establish any “performance standards”? What are the performance standards?	<ul style="list-style-type: none"> The MOU identifies six objectives: (1) To minimize the generation and/or impacts of smoke in New Mexico when prescribed burning is necessary, particularly in smoke sensitive areas and in important views in Class I areas, (2) To encourage, consider, and use alternative treatments when they are ecologically beneficial, technologically feasible, and economically reasonable, (3) To assure that the New Mexico Ambient Air Quality Standards and air quality control regulations are not violated., (4) To develop and implement an interagency system among land management agencies to monitor and inventory emissions from prescribed fires and wild fires, (5) To cooperate in developing, exchanging and presenting training for employees to promote their understanding of smoke management, fire ecology, and regulatory requirements, and (6) To establish and maintain communication and information exchange among all agencies with responsibilities for smoke management on prescribed fires. [1]
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> Neither MOU nor the regulations discuss any additional smoke management requirements which apply if the performance standards are exceeded.
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	
26. Is the smoke management program, or the regulations authorizing the program, part of the State’s implementation plan (SIP)?	

NEW MEXICO
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	New Mexico
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	

OREGON
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Source of summary information:

- [1] Smoke Management Reference Manual. Oregon Department of Forestry, Fuels and Meteorological Services Section. June 1993.
- [2] Memorandum of Understanding between the Oregon DEQ, Oregon DOF, U.S. Department of Interior Bureau of Land Management, and U.S. Department of Agriculture Forest Service. Undated.
- [3] Comments received from the Oregon Department of Forestry. August 1999.

Smoke Management Program Component	State
	Oregon
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> • The Oregon Department of Forestry (DOF) State Forester is responsible for making the burn/no burn decisions. [1] Burning instructions must be complied with on all applicable land. [3] • The authority for approving prescribed burning is delegated to the District Forester for burning conducted within DOF protection district boundaries. [1] • Authority is delegated to the Forest Supervisor for the USDA, Forest Service, and the park Superintendent for the National Park Service for burning in their administrative areas that are coordinated with the State forester. [1] • The Bureau of Land Management is delegated authority in areas outside of the restricted area. [1]
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> • The DOF coordinates with the Oregon DEQ. Cooperating agencies that provide information and/or resources include the Washington Department of Natural Resources, the USDA Forest Service, the Bureau of Land Management, Bureau of Indian Affairs, U.S. National Park Service, U.S. Fish & Wildlife Service, National Weather Service, Regional air pollution authorities, and Oregon Forest Industries Council. [1]

OREGON
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Oregon
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • The program is applicable to prescribed burning on forest land in Oregon within Oregon DOF forest protection district or national forest boundaries where the intent is to maintain the land in use for forest management purposes or as a commercial forest operation. [1] • Private and non-federal government forest landowners must do forest land prescribed burning according to the Oregon Smoke Management Plan and are responsible to burn according to directions from DOF field administrators. [1] • The program does not apply to prescribed natural fires. [1] • Burning on private land, at any time, outside of a protection district is not part of the program. All such burning must be conducted in accordance with requirements of state or local agency air quality regulations. [1]
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • The program covers prescribed burning on forest land in Oregon within Oregon DOF forest protection district or national forest boundaries where the intent is to maintain the land in use for forest management purposes or as a commercial forest operation. [1]
5. How do land managers apply for authorization to burn?	<p>In the restricted area, three basic steps are involved:</p> <ul style="list-style-type: none"> • A DOF Forest Practices Forest Activities Computer Tracking System (FACTS) number must be obtained through the local DOF office prior to burning a unit. [1] • A “Unit Description” is reported on a Reporting System Coding Sheet (Part 1, Form 1-4-1-501) and then entered into the computer by the field administrator. [1] • Unit numbers of planned burns in the restricted area are submitted by field offices on the day before burning is to be done. This results in a list of planned burns (Part 2, Form 1-4-1-501). [1]
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • A forest landowner or operator must in cooperation with the State Forester, develop a written burn plan when the DOF district determines that the plan is needed. [1] • Burning will not be initiated until smoke management instructions are issued from Salem. [1]

OREGON
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Oregon
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • A memorandum of understanding (MOU) exists between the Oregon DEQ, Oregon DOF, U.S. Department of Interior Bureau of Land Management, and U.S. Department of Agriculture Forest Service to achieve the common goal of protecting air quality, life and property, and restoring and maintaining the health of forest ecosystems in northeast Oregon. [2] • Although the Washington Department of Ecology is not a signatory of the MOU, the DEQ, DOF, BLM, and the Forest Service coordinates extensively with them on all air quality and forest health concerns. [1]
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • The program does not specifically discuss alternatives to fire as a land management tool but does encourage, through the Forest Practices Foresters, alternate treatment practices that are consistent with the purposes of the Forest Practices Act.. [1] • The DOF will encourage private forest landowners to burn only those units that must be burned to achieve the landowners' objectives. Forest Practices Foresters will encourage utilization of residue, fuel reduction measures, low emission-producing burning methods, and alternate treatment practices that are consistent with the purposes of the forest Practices Act. [1]
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • Mass ignition methods are encouraged to help reduce emissions where such techniques are economical and practical. [1] • Mop-up is initiated consistent with atmospheric and wind conditions. [1] • Tonnage limits are reviewed by the DEQ and DOF for possible update and revision, as necessary, as uniform fuel loading estimation and consumption procedures are developed and tested. [1]
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> • The reporting system forms do not require documentation of the actions taken to minimize emissions before and during fires. [1]
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> • A forest landowner or operator must, in cooperation with the State Forester, develop a written burn plan when the DOF district determines that the plan is needed for fire control or air quality reasons. [1]

OREGON
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Oregon
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • The State Forester and the field administrators will monitor weather factors and air quality conditions in designated areas and other areas sensitive to smoke. [1] • The Salem Forestry Weather Center provides smoke management forecasts daily. The forecast is for the following day with an update as necessary on the morning of the forecast period. The forecasts include reference to transport winds and mixing for the restricted area and other areas sensitive to smoke. Burning will be conducted in accordance with the current forecast information. [1] • Smoke management instructions are issued by the state meteorologist at the Salem Forestry Weather Center and during periods when weather is favorable for significant amounts of burning. The instructions are based on an analysis of the atmospheric conditions affecting smoke transport, dispersion, and air quality in designated areas and other areas sensitive to smoke. [1]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • Federal and non-federal landowners are encouraged to notify adjoining residents of planned burning at least one week in advance and also the day of the burning, if possible.
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<p>While formal contingency plans are not discussed in the reference manual, the following is required:</p> <ul style="list-style-type: none"> • The field units are required to provide a smoke intrusion report to the smoke management meteorologist if smoke from prescribed forest burning enters a designated area or other area sensitive to smoke at ground level. This allows the smoke management personnel to obtain monitoring data prior to and during the incident. It also facilitates public relations work resulting from an incident. [1] • Any wildfire that has the potential for smoke input into a designated area or other area sensitive to smoke is reported immediately to the State Forester's Fire Operations Center.

OREGON
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Oregon
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • The DEQ maintains a realtime monitoring network used by ODF. [1] [3] • The air quality impacts of fire must be monitored. [1] • The State Forester monitors prescribed burning operations when necessary by aircraft and other means to insure compliance and determine the effectiveness of smoke management procedures. [1] • Random audits and requiring smoke intrusion reports are ways of monitoring. [1] • Field units are responsible for monitoring burn activity and reporting intrusions. [1] • Monitoring is intensified when needed by using lookouts, aerial observations, and on-site observations of smoke behavior. [1] • Landowners are responsible for intermittent monitoring for at least 3 days to ensure the smoke is not causing an impact in a nonattainment city. Landowners must provide a level of mop-up, as directed by the DOF, which will prevent or minimize smoke impacts upon the PM-10 nonattainment areas. [1]
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> • The program does not discuss if a public education and awareness program has been established.
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> • To evaluate compliance with the smoke management program, the State Forester will conduct a review of approximately 1% of the units burned each year in the restricted area. Approximately one-half of the audits will be conducted on the day of the burn and approximately one-half will be pre-burn audits. [1] • The DEQ may participate in audits. [1]
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> • On non-federal lands violations of the smoke management program, directive, or the daily instructions issued by the State forester are subject to enforcement action by the State Forester: 1) burning without a permit is a violation of ORS 477.515, and 2) burning not in compliance with the smoke management program and directive is a violation of OAR 629-615-0300(2)(a). [1] • On Federal forest land violations of the smoke management program, directive or the daily instructions issued by the State Forester are subject to federal enforcement action under Section 118 of the Clean Air Act, as amended in 1990. [1]

OREGON
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Oregon
19. Are post-burn reports required? What information is required?	Yes, a computerized accomplishment report is submitted by field offices in the restricted area the day after burning.. The report requires the following information: fire unit number, district or forest identifier, actual date of burn, actual ignition time, number of acres actually burned, fuel actually consumed in piles, fuel consumed in broadcast portion of units or underburns, ignition duration, ignition method, if rapid ignition was achieved, weather station, 10-hour fuel moisture, 1000-hour fuel moisture, 1000-hour fuel moisture method used, number of days since significant rain, unit weather at the time of ignition, and snow-off month.
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> • The smoke management plan and directive is reviewed at least every five years. The review is conducted by the State Forester and the Director of Environmental Quality and includes representatives of affected agencies and parties. [1]
21. What are the review criteria?	<ul style="list-style-type: none"> • Review criteria is not discussed.

OREGON
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Oregon
<i>Optional Air Quality Protection</i>	
22. Does the program establish any “special protection zones”? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • The program establishes special protection zone (SPZ) requirements. [1] • The SPZ is shown on maps which are included with the documentation for Special Protections Zone Requirements (Appendix 4) of the Smoke Management Reference Manual. [1] • Prescribed burning in the SPZ will be allowed only when the smoke management meteorologist believes there will be no measurable smoke impacts within the PM-10 nonattainment area. [1] • Between December 1 and February 15, no new ignitions will be allowed in the SPZ on a day that a “Red” day has been declared through the local woodstove curtailment program. No pile burning will be allowed if DOF believes that the piles will produce significant smoke after the third day. [1] • For SPZs, in the event that areas violate the PM-10 standards beyond statutory deadlines and prescribed burning is demonstrated to be a significant source, the following contingency plan provisions will be implemented: 1) the SPZ boundaries will be expanded to include the area from which burning could have a significant impact during the nonattainment period, 2) SPZ restrictions will apply over more of the calendar year (November 1 to March 1), 3) The SPZ around Kalmath Falls and La Grande, as well as all future PM-10 nonattainment areas will have mandatory smoke management programs during the time when the zones are in effect, and 4) Prescribed burning will be prohibited within the SPZ during December and January if an impact of 5 to 10 micrograms per cubic meter, 24 hour average, is demonstrated, after contingency provisions are in effect. Burning will be prohibited November 1 to March 1 if an impact of 10 micrograms per cubic meter, 24 hour average, as demonstrated by monitoring, after the contingency provisions go into effect. [1]
23. Does the program establish any “performance standards”? What are the performance standards?	<ul style="list-style-type: none"> • While the program does not establish any specific performance standards, the program does established a smoke management Directive. The objective of the Directive is to prevent smoke, resulting from burning on forest lands, from being carried to or accumulating in designated areas and other areas sensitive to smoke; to provide maximum opportunity of essential forest land burning; 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. [1] • Intrusions intensity is defined. [1] [3]

OREGON
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Oregon
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> • The program does not specify any additional criteria to use when performance standards have been exceeded.
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	<ul style="list-style-type: none"> • The smoke management plan protects “other areas sensitive to smoke” (OAR 629-043-043(2)(q)) [1] [3] • Intrusions of smoke are defined in the smoke management operational directive. [1] [3]
26. Is the smoke management program, or the regulations authorizing the program, part of the State’s implementation plan (SIP)?	<ul style="list-style-type: none"> • Yes. [3] • Visibility considerations are also part of the SIP. [3]
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	<ul style="list-style-type: none"> • General fund, harvest tax, per acre fees, and direct payment for services fund the program. OAR 629-043-041 describes the acreage assessment. An MOU exists with federal agencies in northeast Oregon for direct payment. [3] • The acreage assessment is \$0.50/acre to register a unit for burning and \$2.50/acre for piled burns accomplishments and \$5.00/acre for broadcast and underburn accomplishments. Fee exemptions are allowed for forest health burning and units less than 3 acres in size. [3]
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	<ul style="list-style-type: none"> • The Department of Forestry calculates particulate emissions for every burn. Emissions can be summarized for any time period. [3] • Emissions calculations are based on actual acres burned, weather and fuel conditions and fuel consumption algorithms. [3]

OREGON
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Oregon
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	<ul style="list-style-type: none"> • No. [3]

**SOUTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Source of summary information:

- [1] Smoke Management Guidelines for Vegetative Debris Burning Operations in the State of South Carolina. South Carolina Forestry Commission. Revised November 1998.
- [2] Memorandum of Understanding between the South Carolina Department of Health and Environmental Control Bureau of Air Quality and the South Carolina Forestry Commission. July, 1985.
- [3] Air Pollution Control Regulation 61 - 62.2 (Health & Environmental Control Department).
- [4] South Carolina Forest Law Handbook, Regulation of Fires on Certain Lands, Title 48, Chapter 35 at www.state.sc.us/forest/lawprec.htm#contents
- [5] South Carolina Forest Law Handbook, South Carolina Prescribed Fire Act, Title 48, Chapter 34 at www.state.sc.us/forest/lawpres.htm#20
- [6] Comments received from the South Carolina Forestry Commission. August 1999.

Smoke Management Program Component	State
	South Carolina
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> • The South Carolina Forestry Commission (SCFC) is responsible for administering the Smoke Management Guidelines and has the authority to make burn/no burn decisions. [1]

**SOUTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	South Carolina
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> • The SCFC consults with and coordinates activities with the South Carolina Department of Health and Environmental Control (DHEC). [1] • A MOU exists between the SCFC and the South Carolina Department of Health and Environmental Control Bureau of Air Quality for the purpose of accomplishing mutual objectives. [2] • Daily compliance with and coordination of the smoke management guidelines are handled by the appropriate SCFC Dispatch Center. [1]
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • Yes, the guidelines state that the prescribed fire manager is ultimately responsible for compliance with the guidelines and should follow a logical plan, identify any smoke sensitive areas, and evaluate downwind conditions prior to and during burning operations. [1] • No property owner or lessee or his agent or employee conducting a prescribed fire pursuant to Title 48, Chapter 34 is liable for damage, injury, or loss caused by fire, resulting smoke, or other consequences of the prescribed fire unless negligence is proven. [5]
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • The guidelines focus on forest, wildlife, and agricultural areas to be burned. Crop stubble/pasture grass, piled debris, and ditchbank/hedgerow burning limitations are also discussed. [1] • The Memorandum of Understanding (MOU) covers vegetative debris burning related to forestry, wildlife, and agriculture. [2] • The regulations cover all types of open burning. [3]
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • A written prescribed fire plan, prepared by a knowledgeable person, is needed for each forest, wildlife, and agricultural area to be burned (except for crop stubble and pasture grass). [1] • The fire manager must be in compliance with Title 48, Chapter 35 of the 1976 Code of Laws as amended (“Notification-Precautions Law”), and all other applicable regulations. [1] • The fire manager must calculate available fuel tonnage and/or acreage that may be burned under forecasted conditions prior to notification (informing the SCFC of intent to burn). [1] • On the day of the burn the fire manager should call the Forestry Commission Dispatch center to notify them of the burn and to report the following information: (1) Time of the burn (planned), (2) County and location (latitude and longitude if possible), (3) Type of burn, (4) Tonnage and/or acreage to be burned, (5) Identity of and distance to nearest smoke sensitive area, and (6) Person in charge of burn and how he/she can be contacted. [1] • Notifications are accepted only on the day of the burn. [1]

**SOUTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	South Carolina
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • The category day must be appropriate for the particular burn. Fire managers must obtain the category day, a scale of 1 to 5 based on ventilation rates, from the Forestry Commission office. Based on the category day, fire managers may proceed with the burn, may proceed with limitations, or may not be allowed to burn. [1] • The fire manager must notify the Forestry Commission Dispatch center on the day of the burn. [1] • Maximum fuel tonnage for a single burn must not exceed the permissible limit set for a given 16,000 acres (25 square miles). The permissible limit is dependant on the distance to the nearest downwind smoke sensitive area and the category day. The limit can be found from tables in the Smoke Management Guidelines. [1] • Special action regarding open burning during an Air Pollution Episode may apply. [2] • The prepared prescribed fire plan should be on site during the burn. [1] • Prescribed fires conducted in accordance with Title 48, Chapter 34, must have at least one certified prescribed fire manager present and supervising the burn from ignition until it is declared safe. [5]
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • Neither the guidelines nor the regulations discuss if operating agreements have been established between the SCFC and large land managers, but a MOU does exist between the SCFC and the South Carolina Department of Health and Environmental Control Bureau of Air Quality for the purpose of accomplishing mutual objectives. [2]
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • Neither the guidelines, the regulations, nor the MOU discuss alternatives to fire as a land management tool.
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • Open burning is permitted only if the following minimum conditions are followed: (1) The amount of dirt on the material being burned must be minimized, (2) No heavy oils, asphaltic materials, items containing natural or synthetic rubber, or any other materials other than plant growth may be burned, and (3) All salvageable timber and pulpwood must be removed prior to burning for land clearing. [3]
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> • The written prescribed fire plan must include smoke management information. [1]

**SOUTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	South Carolina
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> • Yes, a written prescribed fire plan is required for each forest, wildlife, and agricultural area to be burned (except for crop stubble and pasture grass) and must be prepared by a knowledgeable person. The guidelines include a sample plan. [1] • The written plan should include the following: (1) Location and sketch map or photo, (2) Purpose and objective, (3) Description of stand, fuels, and topography, (4) Optimum weather and fuel conditions, (5) Smoke management information, (6) Preparation required, (7) Public contacts needed, (8) Firing technique, (8) Patrol, mop up, and escaped fire procedures, (9) Special precautions, and (10) Evaluation information. [1]
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • Fire managers must obtain the fire weather forecast, which includes information on smoke management, by calling the appropriate Forestry Commission office. [1] • The guidelines describe general burning limitations based on the category day and ventilation rate. [1] • Burners are cautioned that smoke flows and settles in low areas during the night and early morning and may create hazardous road conditions, especially when combined with fog. [1] • The guidelines state that the prescribed fire manager must evaluate downwind conditions prior to and during burning operations. This includes smoke sensitive areas within a sixty degree arc downwind from the burn. The guidelines are not specific on how this evaluation should be done.[1]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • Neither the guidelines, the regulations, nor the MOU discuss if the public must be notified when fires are authorized; however, the prescribed fire plan requires contact information regarding the RFD and land owners adjacent to the burn area. [1]
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • Neither the guidelines, the regulations, nor the MOU discuss if contingency plans are required to reduce exposure to smoke if intrusions occur.

**SOUTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	South Carolina
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • The person starting the burning must supervise carefully the fire started and have it under control prior to leaving the area. [4]
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> • Yes- media publicity, classes, and landowner and public meetings. [6]
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> • The SCFC performs complaint investigations of vegetative debris burning. Noted air quality regulatory violations are referred to the DHEC. [1] • Daily compliance with the smoke management guidelines is handled by the SCFC Dispatch center. [1]
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> • A written report or warning to a person of a violation at one site is considered adequate notice of the Regulation, and subsequent observed violations at the same or different site will result in appropriate legal action. [3] • Any person violating the provision of Title 48, Chapter 35 is guilty of a misdemeanor and will be fined not less than \$10 nor more than \$100 or imprisoned for not less than ten days nor more than thirty days. For any subsequent offense, a fine of not less than \$25 nor more than \$300 or imprisonment for not more than six months may be imposed. [4]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> • The prescribed fire manager is asked to contact the appropriate SCFC Dispatch center when the smoke from that burn has dissipated. [1] • The prescribed fire plan requires post-burn evaluation information that includes: (1) Weather and temperature conditions, (2) Percentage of fuel burned, (3) Smoke dispersal, (4) Objectives met, and (5) Problems encountered. [1]
<i>Program Evaluation</i>	

**SOUTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	South Carolina
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> • Neither the guidelines, the regulations, nor the MOU discuss provisions to review the programs effectiveness.
21. What are the review criteria?	<ul style="list-style-type: none"> • Neither the guidelines, the regulations, nor the MOU discuss any review criteria.

**SOUTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	South Carolina
<i>Optional Air Quality Protection</i>	
22. Does the program establish any “special protection zones”? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • Smoke-sensitive areas are defined as any area downwind or down-drainage where smoke may be dangerous or offensive (i.e. roads, towns, chicken farms, etc). [1] • The guidelines state that it is important that the fire manager preparing the plan and conducting the burn consider the location of all potential smoke-sensitive areas in order to eliminate any adverse effects from the smoke. In addition to evaluating smoke-sensitive areas within a sixty degree arc downwind from the burn, the fire manager must consider possible wind direction shifts and down-drainage smoke drift in all directions. [1] • The guidelines present tables which describe the maximum amount of fuel that may be burn at any one time in relation to the distance to the nearest downwind smoke-sensitive area and the category day. [1]
23. Does the program establish any “performance standards”? What are the performance standards?	<ul style="list-style-type: none"> • Neither the guidelines, the regulations, nor the MOU specify any performance standards.
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> • Neither the guidelines, the regulations, nor the MOU specify any additional criteria to use when performance standards have been exceeded.
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	<ul style="list-style-type: none"> • Not that I know of. Not familiar with any “state nuisance regs”. [6]
26. Is the smoke management program, or the regulations authorizing the program, part of the State’s implementation plan (SIP)?	<ul style="list-style-type: none"> • Yes. [6]

**SOUTH CAROLINA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	South Carolina
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	<ul style="list-style-type: none"> • No fees. All funding is part of agency operating budget. [6]
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	<ul style="list-style-type: none"> • Forestry Commission does not. DHEC might. [6]
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	<ul style="list-style-type: none"> • No. [6]

TENNESSEE
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Source of summary information:

- [1] Rules of the Tennessee Department of Environment and Conservation, Bureau of Environment, Division of Air Pollution Control.
Chapter 1200--3--4, Open Burning.
- [2] Comments received from Tennessee Air Pollution Control. August 1999.

Special Note:

Tennessee has not published formal smoke management guidelines. (Personal communication with John Patton, Tennessee Air Pollution Control 615-532-0604, October 26, 1998.)

Smoke Management Program Component	State
	Tennessee
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> • The burn/no burn decision is made by the person in charge of the burn for fires used to clear land consisting solely of vegetation grown on that land for residential, agricultural, forest, or game management purposes. In general, the Tennessee Department of Environment and Conservation, Bureau of Environment, Division of Air Pollution Control (TDEC) oversees all types of open burning and issues burning permits when needed. [1] • The Division of Forestry, Department of Agriculture, also regulates open burning; however its purpose is not smoke management. [2]
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> • The regulations do not discuss coordination with adjacent jurisdictions.

TENNESSEE
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Tennessee
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • No, a permit is not required for fires used to clear land consisting solely of vegetation grown on that land for residential, agricultural, forest, or game management purposes. [1] • Other types of open burning (see Chapter 1200-3-4-.04 Tennessee Open Burning Regulations) must be conducted under certain conditions. For some types of open burning, a permit issued by TN APC is necessary. [2]
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • The regulations cover all types of open burning. [1]
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • Authorization is not needed if the fire is used to clear land consisting solely of vegetation grown on that land for residential, agricultural, forest or game management purposes. Other types of open burning may be conducted as provided for in state regulations. [1] [2]
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • No public nuisance should be created by the open burning. [1]
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • The regulations do not specify if agreements have been established between the TDEC and large land managers.
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • The regulations do not discuss alternatives to fire as a land management tool.
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • The regulations do not discuss actions required to minimize emission from vegetation fires.
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> • No [2]

TENNESSEE
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Tennessee
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	• No [2]
12. How must smoke dispersion conditions be evaluated?	• The regulations do not specify how smoke dispersion conditions are to be evaluated.
13. Must the affected public be notified of planned fires?	• No [2]
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	• No [2]
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	• No [2]
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	• No [2]
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	• The regulations do not discuss any actions that can be taken by the central authority to monitor compliance with a smoke management plan in the area of vegetation, forestry, and agricultural burning. [2]

TENNESSEE
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Tennessee
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> • An open burning permit will be subject to revocation if emissions from the permitted fires is deemed to jeopardize public health or welfare, or create a public nuisance or safety hazard. [1] • Failure to adhere to provisions of the issued permit will be subject to applicable provisions of the rules of the TDEC and such corrective/punitive measures as deemed appropriate. [1]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> • No [2]
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> • No [2]
21. What are the review criteria?	<ul style="list-style-type: none"> • The regulations do not specify any review criteria.
<i>Optional Air Quality Protection</i>	
22. Does the program establish any “special protection zones”? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • The regulations regarding fires used to clear land consisting solely of vegetation grown on that land for residential, agricultural, forest, or game management purposes state only that no public nuisance should be created by the open burning. [1] • Other types of open burning may be done only when in conformity with specific conditions which include consideration for smoke-sensitive areas such as airports, hospitals, nursing homes, schools, highways, reservations, parks, and residences. [1]
23. Does the program establish any “performance standards”? What are the performance standards?	<ul style="list-style-type: none"> • The regulations do not establish any performance standards in the area of agricultural, forestry, and vegetation burning. [2]
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> • The regulations do not specify if any additional smoke management requirements apply if the performance standards have been exceeded.

**TENNESSEE
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Tennessee
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	<ul style="list-style-type: none"> • State statutes and regulations make it doubtful the state APC could interfere with agricultural, forestry, and vegetation burning even if a public nuisance is created. [3]
26. Is the smoke management program, or the regulations authorizing the program, part of the State's implementation plan (SIP)?	<ul style="list-style-type: none"> • Yes, to an extent. The open burning regulations in the SIP differ from the presently effective state open burning regulations. [3]
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	<ul style="list-style-type: none"> • State appropriations. [3]
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	<ul style="list-style-type: none"> • No. [3]

TENNESSEE
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Tennessee
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	No response provided.

TEXAS
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Source of summary information:

- [1] Texas State Regulations. Chapter 111 – Control of Air Emissions from Visible Emissions and Particulate Matter, Subchapter B – Outdoor Burning. Texas Natural Resource Conservation Commission. 1996.
- [2] Comments received from the Texas Natural Resource Conservation Commission dated August 25, 1999.

Smoke Management Program Component	State
	Texas
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> The Texas Natural Resources Conservation Commission (TNRCC) is in charge of overseeing all outdoor burning. [1]
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> The regulations are not clear about the coordination between the Texas Natural Resources Conservation Commission and other jurisdictions. The regulations do state that outdoor burning for training fire-fighting personnel should be authorized by either the local air pollution control agency or the appropriate commission regional office. The regulations also state that for prescribed burning for forest management purposes, the Texas Forest Service must be notified and, when possible, the appropriate commission regional office should be notified.
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> The Outdoor Burning Rule is the States smoke management program and compliance with all the rule requirements is mandatory to have an authorized burn. [2]
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> The regulation covers all burns, which includes all prescribed burning. [2]

TEXAS
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Texas
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • The Texas Forest Service must be notified prior to prescribed burning for forest management purposes. When possible, the appropriate commission regional office should also be notified, although it is not required. [1] • Most open burning is allowed in accordance with the regulations or by orders or permits of the commission. If possible in some cases, the appropriate commission regional office should be notified of the burn, although it is not required. [1] • Outdoor burning for training fire-fighting personnel must be requested in writing to the local air pollution control agency or the appropriate commission regional office. [1] • Prior to any coastal salt-marsh management burning, verbal or written notification must be made to the appropriate commission regional office. [1]
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • Outdoor burning conducted within the parameters of the regulations is authorized. • Outdoor burning not authorized by the regulations may be authorized by written permission from the executive director if there is no practical alternative and burning will not cause or contribute to a nuisance, traffic hazard, or to a violation of any federal or state primary or secondary ambient air standard. [1]
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • The regulations do not specify whether operating agreements have been established between the TNRCC and large land managers. [1]
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • The regulations do not discuss alternatives to fire that can be used as a land management tool, but the regulations only allow open burning when no practical alternative to burning exists for the following: right-of-way maintenance, land clearing operations, maintenance along water canals, crop residue burning for agricultural management purposes, and for brush, trees, and other plant growth causing a detrimental public health and safety condition [1]
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • Anyone performing outdoor burning must not burn electrical insulation, treated lumber, plastics, non-wood/demolition materials, heavy oils, asphaltic materials, potentially explosive materials, chemical wastes, and items containing natural or synthetic rubber. [1]

TEXAS
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Texas
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> The regulations do not specify whether actions taken to minimize emissions before and during fires must be documented.
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> The regulations specify that for salt marsh burns the land manager must register all land on which burning will be conducted and provide a map which identifies significant points such as roads, canals, etc. and large acreage. The map must be subdivided into manageable blocks and each block must be identified. The TNRCC uses these maps to determine if the burn will potentially impact any sensitive receptors. The way the TNRCC rule is structured for salt marsh burns, the submission of the map and compliance with the meteorological constraints in the rule as well as the authorization requirements constitutes a burn plan. [1] [2]
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> The regulations specify that burning must be commenced and conducted only when wind direction and other meteorological conditions are such that smoke and other pollutants will not cause adverse effects to any public road or highway, landing strip, navigable water, or off-site structure containing sensitive receptor(s). [1] It is required that burning must be conducted in compliance with the following meteorological and timing considerations: (1) Burning must commence no earlier than one hour after sunrise and be completed on the same day not later than one hour before sunset; (2) Burning must not be commenced when surface wind speed is predicted to be less than six miles per hour or greater than 23 miles per hour during the burn period; and (3) Burning must not be conducted during periods of actual or predicted persistent low-level atmospheric temperature inversions. [1]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> The regulations require the notification and approval of adjacent land occupants if the burn will be within 300 ft. Of the property line unless the burn is conducted downwind from the sensitive receptor. [1] [2]
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> If at any time the burning causes or may tend to cause smoke to blow onto or across a road or highway, it is the responsibility of the person initiating the burn to post flag-persons on affected roads. [1] If smoke from open burning has the potential to create a nuisance or traffic hazard condition the fire must be extinguished. [1] [2]

TEXAS
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Texas
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> The regulations do not discuss whether air quality impacts of fires must be monitored.
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> The regulations do not discuss whether a public education and awareness program has been established.
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> The regulations do not discuss what actions may be taken by the TNRCC to monitor compliance with the regulations.
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> The regulations do not discuss what penalties are authorized for non-compliance, but do state that any person conducting outdoor burning under the regulations is not exempt from responsibility for consequences of outdoor burning. [1] The TNRCC has the statutory authority to levee administrative or civil penalties for any violation of the regulation. Administrative penalties can range as high as \$10,000 per occurrence per violation and civil penalties can go as high as \$25,000. [2]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> The regulations do not require post burn reports.
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> The regulations do not require a review of effectiveness.

TEXAS
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Texas
21. What are the review criteria?	<ul style="list-style-type: none"> • The regulations do not specify review criteria.
<i>Optional Air Quality Protection</i>	
22. Does the program establish any “special protection zones”? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • The regulations do not specify any special protection zones.
23. Does the program establish any “performance standards”? What are the performance standards?	<ul style="list-style-type: none"> • The regulations do not specify any performance standards.
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> • The regulations do not specify what additional criteria should be used when performance standards have been exceeded.
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	<ul style="list-style-type: none"> • The TNRCC has a welfare-based nuisance rule which precludes any person from discharging an air contaminant in such concentration and of such duration as to interfere with the normal use and enjoyment of ones property. Nuisance conditions are established by the investigator and the investigator must document that the observed conditions were of sufficient concentration and duration as to constitute a nuisance condition. [2]
26. Is the smoke management program, or the regulations authorizing the program, part of the State’s implementation plan (SIP)?	<ul style="list-style-type: none"> • Subchapter B has been submitted as part of the SIP. [2]

TEXAS
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Texas
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	<ul style="list-style-type: none"> • General Appropriations. [2]
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	<ul style="list-style-type: none"> • The TNRCC is in the process of developing a statewide inventory. [2]
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	<ul style="list-style-type: none"> • Not at this time. [2]

VIRGINIA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Source of summary information:

- [1] Voluntary Smoke Management Guidelines for Virginia. Virginia Department of Forestry. 1998.
- [2] Code of Virginia, Article 6.1 (Certified Prescribed Burning Manager Program), § 10.1-1150. Approved March 16, 1998.
- [3] Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. 9VAC 5 Chapter 40, Part II (Emission Standards, Article 40 (Emission Standards for Open Burning), (Rule 4-40).
- [4] Comments received from the Virginia Department of Forestry dated August 27, 1999.

Smoke Management Program Component	State
	Virginia
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> • The final decision to conduct a prescribed burn remains with the burn manager. The burn manager must be certified by and is responsible to the State Forester. [1][2] • Open burning in Virginia is regulated by the State Air Pollution Control Board and the Virginia Department of Forestry. [1]
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> • The VDF coordinates with the Department of Environmental Quality (DEQ) when an air pollution alert, warning, or emergency is declared. [1] • Homeowners adjacent to the fire must be notified of the intent to bum. [1]

VIRGINIA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Virginia
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • The VDF has developed voluntary smoke management guidelines. [1] • The Code of Virginia states that any landowner or his agent who conducts a prescribed burn in compliance with the requirements of the regulations is not liable for any damage or injury caused by or resulting from smoke. It is also required that the landowner or his agent must be a certified prescribed burn manager to conduct a prescribed burn. [2] <p>(Note: The Code of Virginia requires that a prescribed burn shall be conducted by certified prescribed burn manager, who shall ensure that the prescribed burning is in accordance with a prescription for the prescribed burn which shall include a smoke management plan based on the voluntary guidelines. Since the voluntary guidelines focus on prescribed fire and they are required by the Code of Virginia, it does not appear that the guidelines are truly “voluntary”.)</p>
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • The voluntary guidelines and the Code of Virginia focus on prescribed fire for forest resource management. [1] and [2] • The Air Pollution Regulations cover all types of open burning. [3]
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • The manager must follow the voluntary guideline recommendations to: (1) Use the five step smoke management screening procedure and (2) Prepare a written Prescribed Burning Smoke Management Plan (sample form is attached to the back of the voluntary guidelines) and (3) Notify the VDF and receive information about any weather conditions and/or any other burns that may impact your plans. [1] • Section 9 VAC 5-40-5630, #9 specifically states that open burning is permitted for approved forest management practices provided the following two conditions are met: (1) The burning must be at least 1,000 feet from any occupied building (unless the occupants have given prior permission), other than a building located on the property on which the burning is conducted, and (2) The burning is attended at all times. [1] and [3] • The Code of Virginia states that: (1) A prescription for the prescribed burn must be prepared by a certified prescribed burn manager prior to the burn, and (2) The nearest regional office of the VDF be notified prior to the burn. [2]

VIRGINIA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Virginia
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • The voluntary guidelines provide an extensive checklist of conditions. If any of these conditions exist, further analysis is required before burning. [1] • Burning must be tended at all times. [1] • The regional dispatcher, VFD, and adjacent homeowners must be notified of the intent to burn. [1] • Permission must be obtained from homeowners within 1,000 feet of the burn site. [1] • No burning is permitted during an air pollution health advisory, alert, warning, or emergency. [1] and [3] • Burning must be done in compliance with State and local air pollution control and smoke management regulations. [1] • A copy of the prescribed burn plan must be at the burn site throughout the period of burning. [2]
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • Neither the voluntary guidelines nor the regulations specify if operating agreements have been established between VDF and large land managers.
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • The voluntary guidelines suggest that if smoke-sensitive areas will be affected by smoke from the burn, an alternative to burning should be used; however, no further information on burning alternatives are provided. [1]

VIRGINIA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Virginia
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • Burn managers should take the following actions to minimize emissions from fires: (1) Have clear objectives, (2) Obtain and use weather forecasts, (3) Do not burn when an air pollution health advisories are in effect during pollution episodes or when temperature inversions exist, (4) Burn when conditions are good for rapid dispersion, (5) Burn under favorable moisture conditions, (6) Burn in small blocks when appropriate, (7) Mop-up promptly, and (8) Curtail burning if the air shed is becoming overloaded with smoke. [1] • The burnout phase of the fire should be completed no later than one hour before sundown. [1] • Areas with organic soil or a thick root mat should not be burned when the soil or root mat is dry enough to continue to burn for long periods of time. [1] • Burn managers are advised to use backing fires when possible. Backing fires give more complete combustion of fuel and produce less smoke. [1] • Care should be taken to keep fires out of piled logging debris at log decks, sawdust piles, chip piles or bark piles. If fire gets in any material that will smolder for days or weeks, an attempt should be made to extinguish the fires. [1] • Mop-up activities should be directed toward residual smoke control as well as toward preventing the escape of the fire. [1]
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> • Smoke management must be considered in every prescribed fire plan. [1]

VIRGINIA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Virginia
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> • The voluntary guidelines recommends a prescribed burning plan for all forestry burns. The prescribed burning plan should include the following: (1) Burn area location and identification, (2) Weather forecasts, (3) Potential smoke targets and a map, (3) Burning plan strategy and (4) Provisions to minimize residual smoke. A sample Prescribed Burning Smoke Management Plan form is included in the voluntary guidelines. [1] • On all prescribed burns, managers must observe (1) Fire behavior, (2) Smoke dispersion, and (3) Effects on the vegetation and document this information by making it a part of the written plan. [1] • The Code of Virginia requires a prescription for all prescribed burns, prepared by a certified prescribed burn manager prior to the burn. The prescription must include: (1) The landowner's name, address, and telephone number and the telephone number of the certified prescribed burn manager who prepared the plan, (2) A description of the area to be burned, a map of the area to be burned, the objectives of the prescribed burn, and the desired weather conditions or parameters, (3) A summary of the methods to be used to start, control, and extinguish the prescribed burn, and (4) A smoke management plan. The plan should be retained at the site throughout the period of burning. [2]
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • The voluntary guidelines ask burn managers: (1) To obtain and use the best available weather forecasts, and consider atmospheric stability, mixing height, and transport wind speed, (2) Use the five step smoke management screening procedure provided in the voluntary guidelines, (3) Light a small test fire if doubt exists concerning smoke behavior, and (4) Take wind and humidity measurements at the tract prior to and during the burning operation. [1] • On all prescribed burns, managers should observe smoke dispersion and document this information by making it a part of the written plan. Although a copy of the plan should be retained on site throughout the period of burning, the guidelines are not clear as to when the burn manager should submit the burn plan. [1]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • Volunteer fire departments, local residents, and adjacent landowners should be notified. [1] • Permission must be obtained from the occupants of all dwellings located within 1,000 feet of the burn. [2]

VIRGINIA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Virginia
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • The voluntary guidelines recommend having an emergency plan. If a prescribed burn is not burning according to plan or if weather conditions change, burn managers should be prepared to control traffic and construct control lines. [1] • The voluntary guidelines recommend that if a potential problem is observed, stop burning and put the fire out if possible. Notify the State Forestry office immediately, request help in getting out flaggers and signs along roads, and notify people who may be affected if smoke is threatening communities, airports, farms, or homes. [1] • The voluntary guidelines recommend the following actions if an incident occurs: (1) Investigate the incident to determine if it was caused by smoke from the prescribed burn, (2) Secure names, addressees, and telephone numbers of witnesses, (3) If at night, check to determine if fog was present in the area, (4) Check for other sources of smoke, (5) Take pictures of both the incident site and the burn, (6) Secure weather records, and (7) Seek expert advice. [1]
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • On all prescribed burns, managers must observe smoke dispersion and fire behavior, and document this information by making it a part of the written plan. [1]
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> • Neither the voluntary guidelines nor the regulations specify if a public education and awareness program has been established.
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> • Prescribed burning is conducted under the direct supervision of a certified prescribed burn manager, who ensures that the prescribed burning is in accordance with the prescription. [2] • Neither the voluntary guidelines nor the Code of Virginia discuss how the certified prescribed burn managers' actions are monitored.
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> • If the actions of any certified prescribed burn manager or the prescriptions prepared by him violate any provision of the regulations, or threaten the public health and safety, his certification may be revoked by the State Forester. [2]

VIRGINIA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Virginia
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> Neither the voluntary guidelines nor the regulations specify if post-burn reports are required.
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> Neither the voluntary guidelines nor the regulations discuss provision to periodically review its effectiveness.
21. What are the review criteria?	<ul style="list-style-type: none"> Neither the voluntary guidelines nor the regulations discuss any review criteria.
<i>Optional Air Quality Protection</i>	
22. Does the program establish any "special protection zones"? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> The voluntary guidelines recognize smoke sensitive areas and give the following examples: (1) Airports, (2) Hospitals and nursing homes, (3) Interstate or other major high speed highways, (4) Heavily populated areas, and (5) Federal Class I air quality areas. [1] Smoke sensitive areas, within a 30 degree angle from the site of the burn, must be identified and marked on a map as recommended in step 1 of the five step smoke management screening procedure. Depending on the weather conditions, and proximity of the smoke sensitive area to the burn site, burn managers may be advised to proceed with the burn, postpone the burn, or find alternatives to burning. [1] Mop-up along road should begin as soon after burnout as possible to reduce the impact of residual smoke on visibility. [1]
23. Does the program establish any "performance standards"? What are the performance standards?	<ul style="list-style-type: none"> The voluntary guidelines set the following three basic objectives: (1) Identify and avoid smoke-sensitive areas, (2) Reduce emissions, and (3) Disperse and dilute smoke before it reaches smoke-sensitive areas. [1]
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> Neither the voluntary guidelines nor the regulations specify what additional smoke management requirements apply if the performance standards have been exceeded.

VIRGINIA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Virginia
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	<ul style="list-style-type: none"> • Our prescribed burner certification law states that smoke from a prescribed burn being done in compliance with the law can not be considered a nuisance. I am not aware of the criteria if any that is used to establish a nuisance. [4]
26. Is the smoke management program, or the regulations authorizing the program, part of the State's implementation plan (SIP)?	<ul style="list-style-type: none"> • No, not at this time. [4]
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	<ul style="list-style-type: none"> • The program is administered by the Virginia Department of Forestry, and therefore part of our operational budget. The cost of the training comes from registration fees for the course. There are no permit fees associated with this program. [4]
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	No response provided.

VIRGINIA
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Virginia
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	No response provided.

WASHINGTON
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Source of summary information:

- [1] Washington State Department of Natural Resources Smoke Management Plan. 1993, 1998.
- [2] Washington Smoke Management Plan Summary. 1997.
- [3] Comments received from the State of Washington, Department of Natural Resources dated August 23, 1999.
- [4] Comments received from the State of Washington, Department of Ecology dated August 20, 1999.

Smoke Management Program Component	State
	Washington
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> • The Washington Department of Natural Resources (DNR) Region Managers are responsible for making burn/no burn decisions on lands that are protected by the DNR. [1] • The Land Manager is responsible for making burn/ no burn decisions on lands not protected by the DNR. [1] • The DNR's Resource Protection Division, Smoke Management Section, must give smoke management approval before a Region or Land Manager can approve a burn. [1] • The DNR's authority is for silvicultural burning on forest land only. The Department of Ecology (DOE) should be consulted for information on regulatory authority on all other forms of burning. [3]

WASHINGTON
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Washington
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> • Indian nations may choose to participate in the Washington State DNR Smoke Management Plan (SMP) through a written agreement with the DNR, which gives the Indian nations the advantage of statewide coordination. [1] • There are currently no tribes participating in the SMP. DNR coordinates with the state of Oregon, and Federal land managers (including the Bureau of Indian Affairs) through the Oregon and Washington Wildland Fire Agreement. [3] • The DNR also has agreements with local authorities to coordinate regulations. [3] • The DNR does not formally coordinate with adjacent states or tribes as part of the SMP. Regional coordination occurs through the Pacific Northwest Wildfire Coordinating Group which includes tribal participation through the Bureau of Indian Affairs. Informal coordination is strongest with Oregon. [4]
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • Those who receive fire protection from the DNR must participate in the SMP. [1] • Federal agencies that do outdoor burning on forest lands must participate in and abide by the requirements of the DNR SMP. [1] • The SMP applies on all state and most private and Federal lands. The SMP is optional on tribal forest lands. It does not apply to naturally-ignited, prescribed fires in wilderness areas or national parks. [4]
4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • The SMP covers DNR-regulated forest land prescribed outdoor burning. [1] • The program does not apply to agricultural burning or outdoor burning on improved property. [4]

WASHINGTON
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Washington
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • A burn permit application form must first be completed and a permit must be issued by the DNR for all burns on lands protected by the DNR. For small fires, the permit application form itself is sufficient. For large fires, the application must also include: (1) A supplemental data sheet with pre-burn data; (2) Provisions for gathering and submitting post-burn data; and (3) A burn plan, if referenced on the face of the permit application. [1] • Large fires (100 tons of fuel) – <ul style="list-style-type: none"> – Lands protected by the DNR: Pre-burn data is entered into the smoke management tracking system*. On the afternoon before the burn, the Region Manager is responsible for screening, pre-authorizing, and prioritizing the burns submitted for the following day. On the day of the burn, the DNR Smoke Management Section posts a list of authorized burns for that day and the Region Manager makes the final decision about which burns receive final approval. [1] – Federal and participating tribal lands: Pre-burn data is entered into the smoke management tracking system*. On the afternoon before the burn, the Land Manager is responsible for pre-screening and prioritizing the burns submitted for the following day. On the day of the burn, the DNR Smoke Management Section contacts the Land Manager about burns that are approved and the Land Manager makes the final approval for burning. [1] – The DNR tells the land manager yes or no on the day of the burn, and the land manager has no choice unless the DNR says it is OK for that day. [4] • Small fires– All persons who propose to burn small fires must first call a burn hotline and follow the instructions that apply for the day and location of the proposed burning. [1]

**WASHINGTON
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM**

Smoke Management Program Component	State
	Washington
6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • Large fires– Burns will not be approved if: (1) There is a likelihood of a smoke intrusion into designated areas; (2) There is any likelihood of an over-flight of smoke above a designated area or special public events (but over-flights of smoke may be approved over designated areas on days when visibility would be reduced naturally); (3) Burning will not comply with the SIP of the CAA regarding visibility protection of Class I federal areas; (4) Any state or federal air quality regulations, laws, or rules would be violated; (5) Burning on state and private lands does not meet the requirements of Washington State’s Forest Practice Rules and Regulations relating to threatened or endangered species protection; (6) Burning will cause mandatory emission reduction levels to be exceeded; (7) Burning will knowingly violate another state’s published air quality standards; (8) Smoke will not significantly disperse within eight hours of ignition, and be fully dispersed by 12:00 pm the next afternoon unless it is a multiple day burn. Large fires are also not allowed during certain times of the year. [1] • Multiple day burns – Burns will be approved following the criteria for approving large burns. Additionally, three months before the burn the landowner must give the DNR sufficient burn plan information. [1] • Small fires– A burn hotline provides a message that either allows burning or suspends burning during instances of poor air quality and high fire danger. The burn or no burn hotline message for air quality is determined from input about air pollution episodes and impaired air conditions gathered from the Department of Ecology. [1], [4] • The following criteria are from WAC 332-24-205 (Washington Smoke Management Plan Appendix 15): silvicultural burning is not allowed within nonattainment areas of the state as established by Washington Department of Ecology for particulate matter ten microns or less or carbon monoxide, except for: (a) fires for improving and maintaining fire dependent ecosystems; (b) fires for training wildland fire fighters; (c) fires set for a defined research project; (d) military training exercises; (e) the exclusive purpose of managing storm or flood-related debris; or (f) where exempted by local or state air pollution control agencies. [4] • silvicultural burning is not allowed inside urban growth areas as designated under growth management plans, or in cities of greater than ten thousand population as follows: (a) in urban growth areas where reasonable alternatives exist; (b) in cities with a population of ten thousand or more as established by the office of financial management: (i) that exceed or threaten to exceed federal or state ambient air quality standards; and (ii) where reasonable alternatives to outdoor burning exist, in accordance with WAC 173-425-090. (c) after December 31, 2000, burning shall not be allowed in urban growth areas or cities with a population of ten thousand or more. [4] • No fire shall be ignited when the DOE has declared an air pollution episode for the geographic area pursuant to chapter 173-435 WAC; or the DOE or a local air pollution control authority has declared impaired air quality for

WASHINGTON
SUMMARY OF STATE SMOKE MANAGEMENT PROGRAM

Smoke Management Program Component	State
	Washington
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • Federal agencies that do outdoor burning on forest lands must participate in and abide by the requirements of the DNR SMP. [1] • Indian nations may choose to participate in the SMP through a written agreement with the DNR. [1] • The Oregon and Washington wildland Fire Agreement, entered into by the States of Oregon and Washington, and the Federal land managers, addresses all aspects of wildland fire. [3]
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • The SMP requires DNR Region Managers to consider the availability and feasibility of burning alternatives during the permit issuance and burn approval process. [1] • As part of its obligation to encourage alternatives to burning, the DNR will: (1) Gather and distribute information about burning alternatives; (2) Cooperate with alternative disposal industries by bringing together industrial landowners and disposal industries; (3) Consult with local government agencies to determine the availability and cost of legal dumping at approved sites. [1] • Appendix 14 of the SMP contains an extensive discussion of alternative debris disposal techniques described under the following headings: (1) Alternative mechanical treatments; (2) Increased utilization; (3) Chemical; (4) Manual; and (5) No treatment. [1] • The DNR encourages landowners to use alternatives to burning through its Backyard Forest Stewardship program. In Spokane County (the most fire prone area of the state) DNR works in partnership with local fire agencies and business through Fire Safe Spokane Inc. (A 501c3 non-profit corporation) to encourage homeowners to take actions to reduce the risk of wildfire using alternatives to burning. [3]
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • The SMP establishes emission reduction goals based on a calculated emissions baseline. The goal is to reduce burning emissions by 20 percent from baseline levels by December 31, 1994 and then reduce burning emissions by 50 percent from baseline levels by December 31, 2000. [1] • The modeling system used to generate the baseline numbers and to calculate and track future emissions is called SMS-INFO. [1] • Burn permit approval must consider techniques, and favors pile burning over broadcast burning. [4]

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10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> • The SMP does not require the actions taken to minimize emissions to be documented, but it does require that the DNR collects burning data from all participants in order to track progress toward the emission reduction targets. This tracking system* includes a summary of emissions created by each plan participant and calculation of pre-burn and post-burn emissions. [1] • Burning permits are a form of documentation of actions to minimize emissions before and during fires. Permits can require certain burning techniques in areas close to homes such as crane piling, fans, and mass ignition which minimize emissions. The FLMs do not submit permits to the DNR, but must submit the same pre-burn and post-burn data forms required for other land managers into a computer data base. "Pile type" and "ignition method" on these forms help document emissions or potential emission reductions. [4]
<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> • A written burn plan is required for State and private burns that will consume 100 tons and greater (large fires) in a 24 hour period, and for all burning that requires reporting by other Land Managers. The burn plan must be referenced on the face of a burning permit, which is required for burning on DNR-protected lands, and becomes part of the permit conditions. [1] • The burn plan must provide pre-burn data including the permit number, DNR region, burn type, type of landowner, specific location information, property owner's name, reason to burn, size of unit, and predominant species. [1] • Further pre-burn information must be provided for pile/landing or broadcast/underburn burns. For pile/landing burns, this includes pile/landing tons, pile calculation method, and pile type. For broadcast/underburn burns, this includes loading method, duff depth, slope, cut date, snow off date, and ignition method. [1] • Post-burn data must also be provided. The date burned, ignition time, and actual acres burned must be provided for all burns. Consumed pile tons and consumed landing tons must be provided for pile/landing burns. And for broadcast/underburn burns, ignition duration, weather data, number of days since significant rainfall, wind speed, fuel moisture, and 1000 hour method information must be provided. [1]

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Smoke Management Program Component	State
	Washington
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • The SMP general burning requirements state: (1) Smoke from burning must not obscure visibility on public roads and highways; and (2) Smoke from burning must not cause a nuisance, which exists when emissions from any open fire causes physical discomfort or health problems to people residing in the vicinity of the burning or physical damage to property. [1] • The DNR encourages burners to use techniques such as fans, crane piling, mass ignition, and accelerated mop-up to reduce the amount of visible smoke produced during burning. [1] • Large burn approvals will include consideration of dispersal criteria and objectives. The Smoke Management Section predicts large scale dispersion potential and Regions include local knowledge of inversion and local dispersal patterns for individual burn sites. [1] • National Weather Service meteorologists provide synoptic weather patterns and air stagnation advisories and an Ecology meteorologist makes air quality assessments and predictions based on air quality monitoring and weather data and can prohibit all burning when air quality is impaired. When air quality is adequate, the DNR meteorologist evaluates smoke dispersion conditions based on atmospheric stability, mixing height, and transport winds in addition to local knowledge of wind and weather patterns and best professional judgement from past experiences. A mesoscale meteorological model (MM5) now available on the Internet, has been a very helpful new tool for both the meteorologists and the prescribed burning practitioners for smoke dispersion evaluation. [4]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • If the DNR determines that a multiple day burn has the potential to affect communities, the landowner must notify the public of the burn at least one week before they plan to burn. [1]
14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • The SMP does not discuss contingency plans for smoke intrusions. The SMP does state that DNR Region Managers are responsible for reporting and documenting where and when smoke intrusions occur, and must react to citizen complaints about smoke nuisances. A Smoke Intrusion Report must be submitted by the Region Manager to allow for a post-incident evaluation whenever smoke intrusion duration exceeds 30 minutes or if the Region Manager determines the smoke impact on the public warrants submission of the report. [1]
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • Monitoring air quality impacts of fires is the responsibility of the DOE. [3]

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	Washington
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> The SMP establishes an education and awareness program to inform small landowners and the general public about burning regulations and emission reduction techniques. DNR field representatives are the center of this effort through daily contact with the public and small landowners while writing burning permits. [1]
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> DNR Region Managers are responsible for ensuring that field enforcement is conducted and consistently applied. After contact with a permit applicant, it may be determined that a site inspection is necessary before issuing the permit. Also, prior to burning, Regions will audit 5 percent of the burn sites that did not receive a site inspection. [1]
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> Authorized penalties for non-compliance include refusal to issue future burning permits, fines, and incarceration. [1] Any person burning on forest land without complying with chapter DNR outdoor burning rules is in violation of the forest protection statute and chapter the state clean air act. Convictions or bail forfeitures in connection with illegal burning under DNR outdoor burning rules may result in refusal to issue further permits for a two-year period from the date of the illegal burning. In additions to any other fines and penalties that may be imposed, the department may charge and recover costs from the person responsible for any response to control or extinguish an illegal fire caused in part or in whole by negligent acts or omissions. [3]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> Post-burn data must be provided as part of a written burn plan. The date burned, ignition time, and actual acres burned must be provided for all burns. Consumed pile tons and consumed landing tons must be provided for pile/landing burns. And for broadcast/underburn burns, ignition duration, weather data, number of days since significant rainfall, wind speed, fuel moisture, and 1000 hour method information must be provided. [1]

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	Washington
<i>Program Evaluation</i>	
20. Does the program include provisions to periodically review its effectiveness?	<ul style="list-style-type: none"> • All or portions of the SMP may be further reviewed or updated as warranted. [1] • The 1993 was reviewed after five years. A review is scheduled for 2000. [3], [4]
21. What are the review criteria?	<ul style="list-style-type: none"> • General plan revisions will adopt the same procedure as used for initial adoption. [3]
<i>Optional Air Quality Protection</i>	
22. Does the program establish any "special protection zones"? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • The SMP establishes "designated areas" and "sensitive areas". [1] • Designated areas are established under the responsibility of the Department of Ecology and are defined as critical areas that are otherwise subject to air pollution from other sources. Sensitive areas are defined as areas of heavy recreational use and population centers outside designated areas. [1] • Large burns will not be approved if there is a likelihood of a smoke intrusion into designated or sensitive areas. [1] • See comments on question no. 6. [3]
23. Does the program establish any "performance standards"? What are the performance standards?	<ul style="list-style-type: none"> • The SMP establishes emission reduction goals based on a calculated emissions baseline. The goal is to reduce burning emissions by 20 percent from baseline levels by December 31, 1994 and then reduce burning emissions by 50 percent from baseline levels by December 31, 2000. [1] • The goal is to reduce forest burning emission other than forest health burning emissions (which are exempted from the emissions caps, but not from the nuisance, visibility, or public health requirements). [4]
24. What additional smoke management requirements apply if the performance standards have been exceeded?	<ul style="list-style-type: none"> • The 1994 target levels have been met (A 50% reduction target has been met every year since 1993). If the 2000 emission reductions are not met, the Department must immediately limit burning that is not for forest health purposes. If necessary, this will be done by implementing a mandatory emissions allocation system. [1] [2]

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25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	<ul style="list-style-type: none"> • If a fire creates a nuisance from smoke or flying ash, it must be extinguished. For purposes of this section, a nuisance exists when emissions from any open fire cause physical discomfort or health problems to people residing in the vicinity of the burning or physical damage to property. [3] • Smoke from burning must not cause a nuisance as defined in WAC 332-24-205 (8), as part of minimum requirements for all burning regulated by the DNR. If the fire creates a nuisance from smoke or flying ash, it must be extinguished. A nuisance exists when emissions from any open fire cause physical discomfort or health problems to people residing in the vicinity of the burning, or physical damage to property. [4]
26. Is the smoke management program, or the regulations authorizing the program, part of the State's implementation plan (SIP)?	<ul style="list-style-type: none"> • Yes, the SMP is part of the SIP. [3] [4]
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	<ul style="list-style-type: none"> • DNR's outdoor burning program is funded through the state general fund, fire protection assessments on forest land, and the state air pollution control account. Fees for silvicultural burning are assessed on estimated consumed tons. [3] • The state legislature appropriates funds to the DNR for administration and enforcement of the SMP. Funds are appropriated from the state General Fund, the Air Pollution Control Account, and from property taxes (forest protection assessment). Fees assessed for burning are deposited into the Air Pollution Control Account. Only about 30% of the money needed to administer the SMP and the inseparable outdoor burning regulation program is currently recovered by burning permits. [4]
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	<ul style="list-style-type: none"> • The DNR maintains an annual emissions inventory on silvicultural burning. [3] • The DNR maintains an annual air pollutant emissions inventory based on pre-burn and post-burn reports. Pre-burn data include fuel type, fuel loading, duff depth, and county. The post-burn report includes weather, fuel moisture, actual acres burned, and estimated tonnage consumed. This inventory is sent to the Department of Ecology. [4]

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	Washington
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	<ul style="list-style-type: none"> • No mechanism exists to estimate the emission reduction achieved through not burning. [3] • Air pollution emissions are calculated and recorded in terms of an annual total of PM-10 emissions produced. These forest burning emission records measure statewide compliance with mandated emission reduction goals in the SMP based on a calculated emissions baseline. A 50% emission reduction from this baseline is required by December 31, 2000. This becomes the ceiling level for all future annual emission totals. Annual totals do not currently include tribal forest land or wildfire emissions. Forest-health burning in eastern Washington is exempt from the emissions reduction ceiling. [4]

*Note: Washington's smoke management data tracking system has three allowable methods, which are: (1) The DNR Local Area Network (LAN); (2) The USFS Smoke Management System (SMS); and (3) Fax machine. The LAN is used by the DNR for tracking of data from State and private burning on DNR-regulated lands. The SMS is maintained by the U.S. Forest Service for data tracking, and SMS data is combined with DNR data within the LAN system. Other participants covered by the SMP will enter their data into one of the three systems to be determined by the DNR and the individual participant on a case by case basis. [1]

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Source of summary information:

- [1] Wyoming Air Quality Standards and Regulations, Section 13, Open burning restrictions.
- [2] Personal communication, B. Bauer, EC/R to Mark Arn, WDEQ-AQD, 307-777-7758, October, 27, 1998.
- [3] Comments received from the Wyoming Department of Environmental Quality dated August 20, 1999.

Smoke Management Program Component	State
	Wyoming
<i>Authorization to Burn</i>	
1. What agency/office has the central authority to make burn/no burn decisions? (Who has the regulatory authority?)	<ul style="list-style-type: none"> • The Wyoming Air Quality Division (AQD) approves applications and issues burn permits for proposed open burning of trade wastes only. The regulations do not contain a definition of trade wastes. [1] [3] • Burn permits request notification at least 24 hours prior to each burn. [3]
2. Regional Coordination – With what adjacent State, local, or tribal jurisdiction does the central authority coordinate?	<ul style="list-style-type: none"> • The application for open burning of trade wastes must provide evidence that the proposed open burning project has been approved by the fire department which has jurisdiction in the burn area. [1]
3. Is participation in the smoke management program by land managers mandatory?	<ul style="list-style-type: none"> • Wyoming has not yet developed a Smoke Management Program. [2] • The regulations do not discuss a formal smoke management program. The regulations outline the restrictions and requirements for open burning. [1]

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4. What types of burning (agricultural, silvicultural, other) are covered by the program?	<ul style="list-style-type: none"> • The regulations provide restrictions and requirements for open burning of trade wastes and open burning of plant and forestry wastes. [1] • The open burning of plant life grown on the premises in the course of any agricultural or forestry operation may be permitted when it can be shown that such open burning is necessary and that no fire hazard or public nuisance will occur. [1] In practice, this has been applied to forestry and rangeland operations but not agricultural operations. [3]
5. How do land managers apply for authorization to burn?	<ul style="list-style-type: none"> • For open burning of trade wastes, burners must file an application request with the AQD. Upon issuance of a burn permit by the AQD, the person may proceed with the operation under the modeled conditions with due consideration of the permit conditions. [1] [3] • AQD burn permits typically contain three conditions for the applicant to consider during the prescribed burn. Those three conditions are: 1) Burning must be conducted during meteorological conditions for which the air quality analyses indicate compliance with ambient standards. Such burning should occur during periods of maximum dispersion, normally from mid-morning to late afternoon. 2) Impacts to the air quality related values such as visibility must be considered in nearby Class I areas during prescribed burning activities, with additional consideration given to the time of year related to Class I visitor usage. 3) although there are no special considerations directly applicable to nearby communities and towns, ambient standards must be maintained and burning can only be permitted if no public nuisance will occur. [3] • Open burning of plant and forestry wastes is permitted when it can be shown that the open burning is necessary and that no fire hazard or public nuisance will occur. [1]

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6. What are the criteria for getting permission to burn?	<ul style="list-style-type: none"> • For open burning of trade wastes, an application must be approved by the AQD. The application must include the following information: 1) name, address, phone# of person submitting application, 2) Type of business or activity involved, 3) description of proposed equipment and operating practices; type, quantity and composition of waste to be burned; and expected composition and amount of air contaminants to be released into the atmosphere (Government agencies submit SASEM run, 4) schedule of burning operations, 5) exact location of burning operations, 6) reasons why no method other than open burning can be used for disposal, and 7) evidence that the proposed open burning has been approved by any fire department which may have jurisdiction. [3] • The criteria used by the AQD to approve or disapprove an application and issue a burn permit are not described in the regulations. [1] • For open burning of plant and forestry wastes, it must be shown that the burn is necessary and that no fire hazard or public nuisance will occur. The regulations provide no further detail regarding how an applicant would show that a nuisance will not occur. [1]
7. Have operating agreements been established between the central authority and land managers?	<ul style="list-style-type: none"> • No. None are required as compliance with the regulation is not an option [3]
<i>Minimizing Air Pollutant Emissions</i>	
8. What steps are taken to consider alternatives to fire as a land management tool?	<ul style="list-style-type: none"> • Reasons why no method other than open burning can be used for disposal, must be included in the application for open burning of trade wastes. [1]
9. What actions are required to minimize emissions from fires?	<ul style="list-style-type: none"> • None are required by the regulation. [3]
10. Must the actions taken to minimize emissions before and during fires be documented?	<ul style="list-style-type: none"> • No. [3]

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<i>Smoke Management Components of Burn Plans</i>	
11. Are written burn plans required by the SMP? What information must be included?	<ul style="list-style-type: none"> • Upon issuance of a burn permit by the AQD, the person may proceed with the operation under the modeled conditions with due consideration of the permit conditions. [3] • Burners must file an application request with the AQD which must include the following: (1) The name, address and telephone number of the person submitting the application, (2) The type of business or activity involved, (3) A description of the proposed equipment and operating practices, the type, quantity, and composition of wastes to be burned, and the expected composition and amount of air contaminants to be released into the atmosphere, (4) The schedule of burning operations, (5) The exact location where open burning will be used to dispose of the waste, (6) Reasons why no method other than open burning can be used for disposal, and (7) evidence that the proposed open burning has been approved by any fire department which may have jurisdiction. Upon approval of the application by the AQD, the person may proceed with the operation without being in violation of the regulations. [1] • Open burning of plant and forestry wastes is permitted when it can be shown that the open burning is necessary and that no fire hazard or public nuisance will occur. No written burn plan is required. [1]
12. How must smoke dispersion conditions be evaluated?	<ul style="list-style-type: none"> • The regulations do not discuss if or how smoke dispersion conditions must be evaluated. [1] • AQD burn permits typically contain the following conditions for the applicant to consider during the prescribed burn: 1) Burning must be conducted during meteorological conditions for which the air quality analyses indicate compliance with ambient standards. Such burning should occur during period of maximum dispersion, normally from mid-morning to late afternoon. [3] • Government agencies must submit a SASEM run with the burn application. The burn permit then states "The Division has reviewed the SASEM results included with your request and hereby grants permission to conduct the requested burn under the modeled conditions which predict no violation of the ambient standards with due consideration of the permit conditions listed above." [3]
13. Must the affected public be notified of planned fires?	<ul style="list-style-type: none"> • The regulations do not discuss if the affected public must be notified when fires are authorized. [1] • The fire department that has jurisdiction in the area must be notified. [3]

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14. Are contingency plans required to reduce exposure to smoke if intrusions occur? What are the criteria for implementing such plans?	<ul style="list-style-type: none"> • No [3] • AQD burn permits typically contain the following conditions for the applicant to consider during the prescribed burn: “Although there are no special considerations directly applicable to nearby communities and towns, ambient standards must be maintained and burning can only be permitted if no public nuisance will occur”. [3]
15. Must the air quality impacts of fires be monitored? Who is responsible for monitoring? What are the requirements?	<ul style="list-style-type: none"> • While the regulations do not specifically discuss monitoring, the application for open burning of trade wastes requires that the applicant provide the expected composition and amount of air contaminants to be released into the atmosphere. [1] • No monitoring required. [3]
<i>Public Education and Awareness</i>	
16. Has a public education and awareness program been established?	<ul style="list-style-type: none"> • No. [3]
<i>Surveillance and Enforcement</i>	
17. What actions can be taken by the central authority to monitor compliance with the smoke management program?	<ul style="list-style-type: none"> • The regulations do not discuss any actions that can be taken by the AQD to monitor compliance with the smoke management program. [1]
18. What penalties are authorized for non-compliance?	<ul style="list-style-type: none"> • The regulations do not discuss penalties for non-compliance. [1]
19. Are post-burn reports required? What information is required?	<ul style="list-style-type: none"> • The burn permits request that a burn completion report be submitted to the AQD. The AQD requests at a minimum: 1) agency name and burn name (as listed on permit), 2) location of burning operations, 3) date burned, and 4) percent burned. [3]
<i>Program Evaluation</i>	

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20. Does the program include provisions to periodically review its effectiveness?	• No. [3]
21. What are the review criteria?	• Not applicable (see question 20). [3]
<i>Optional Air Quality Protection</i>	
22. Does the program establish any “special protection zones”? How are these zones described? What additional smoke management requirements apply in special protection zones?	<ul style="list-style-type: none"> • The regulations do not specifically discuss any special protection zones; however, the open burning of plant and forestry wastes must show that no public nuisance will occur. [1] • AQD burn permits typically contain the following conditions for the applicant to consider burning the prescribed burn: 1) impacts to the air quality related values such as visibility must be considered in nearby Class I areas during prescribed burning activities, with additional consideration given to the time of year related to Class I visitor usage, and 2) although there are no special considerations directly applicable to nearby communities and towns, ambient standards must be maintained and burning can only be permitted if no public nuisance will occur. [3]
23. Does the program establish any “performance standards”? What are the performance standards?	• No. [3]
24. What additional smoke management requirements apply if the performance standards have been exceeded?	• Not applicable (see question 23). [3]
25. Do State nuisance regulations apply to smoke from prescribed fires? What criteria are used to establish a nuisance (e.g., number of complaints, particulate matter concentration, etc.)?	<ul style="list-style-type: none"> • The regulation states that the open burning of plant and forestry wastes must show that no public nuisance will occur. [3] • Burn permits typically contain a condition which states “...burning can only be permitted if no public nuisance will occur.” [3] • No criteria have been established to define a nuisance. [3]

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26. Is the smoke management program, or the regulations authorizing the program, part of the State's implementation plan (SIP)?	<ul style="list-style-type: none"> • The Open Burning Regulation is part of the SIP. [3]
27. How does the State fund operation of the smoke management program (e.g., program budget, permit fees, registration fees, etc.)? What is the basis for any fees assessed (e.g., acres planned, actual acres burned, type of burn, burn objective, etc.)?	<ul style="list-style-type: none"> • Processing of burn permit requests is funded via a program budget. No fees are assessed to burners. [3]
28. Does the State maintain daily, seasonal, or annual air pollutant emissions inventory from prescribed fires? If so, are the emissions calculations based on post-burn reports (i.e., actual acres burned, fuel types, estimated fuel consumed, etc.)?	<ul style="list-style-type: none"> • The division tracks 1) agency name and burn site name, 2) date permit request submitted, 3) date permit issued, 4) number of acres (or piles) to be burned, 5) location, 6) fuel type, 7) burn schedule, 8) particulate emissions, and 9) contact name and phone. All of this information is based on the application as submitted to the Division. [3]
29. When actions are taken to minimize emissions (e.g., fuel thinning, rapid mop-up, alternative to fire, etc.), is a mechanism in place to calculate and record the air pollutant emission reductions achieved?	<ul style="list-style-type: none"> • No. [3]