

# **El Dorado County Air Pollution Control District Smoke Management Program**

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# Introduction and Background

El Dorado County is located 130 miles east of San Francisco, and Placerville, the government center of El Dorado County, is located 120 miles southwest of Reno. El Dorado County encompasses 1,876 square miles or 1,096,960 acres and is bounded by Placer County to the north, the State of Nevada to the east, Alpine County to the southeast, Amador County to the south and Sacramento County to the west.

El Dorado County's rapid growth is expected to continue into the next century. The 1997 estimated population of 144,900 is a 4.2 percent increase over the county's population in 1990. The county's population is expected to be over 180,000 by 2005, an increase of 24 percent over 1997. The fastest growing community will continue to be El Dorado Hills located along the western boundary of the county.

Although characterized by warm, dry summers and wet winters, the regions of El Dorado County exhibit considerable climatic diversity. The High Country region and Sierra Nevada mountains receive heavy snowfall during the winter, while weather in the Gold Country and Valley areas is usually milder, with the Gold Country exhibiting winter climatic conditions approximating the High Country and summer conditions closer to those in the Valley.

Predominately the surface winds in El Dorado County vary from the valley through the foothills into the high country. During the spring, summer and fall seasons, temperature inversions are a normal occurrence, which prohibits good dispersion of smoke and other air pollutants.

El Dorado County is one of seven air pollution control districts that make up the Mountain Counties Air Basin (MCAB). The MCAB consists of Amador, Calaveras, El Dorado (western slope), Mariposa, Northern Sierra (Nevada, Plumas, and Sierra Counties), Placer (a portion thereof), and Tuolumne air pollution control districts. The seven air districts work closely together employing a regional approach to air pollution control.

Additionally, El Dorado County is one of four air districts in the Lake Tahoe Air Basin (LTAB). The LTAB consists of Placer and El Dorado Counties in California and Douglas and Washoe Counties in Nevada).

This Smoke Management Program ("Program") is intended to describe El Dorado County Air Pollution Control District's ("District") methods of implementing §80100-80330 of the California Code of Regulations Title 17, Smoke Management Guidelines for Agricultural and Prescribed Burning, and of ensuring compliance with District Regulation III - Open Burning Rule 300. One of the District's goals is to achieve and to maintain all state and federal ambient air quality standards related to particulate matter through implementation of emission reducing measures, which includes this Program. The Program's objectives are to allow for the continuation of agricultural and prescribed burning as a resource management tool and provide increased opportunities for agricultural and prescribed burning while at the same time minimizing smoke impacts to the public. The Smoke Management Program described herein



will be effective for agricultural and prescribed burning conducted in the Mountain Counties Air Basin or the Lake Tahoe Air Basin portion of El Dorado County.

The District derives its authority to implement and enforce this Program from Regulation III, Rule 300 Open Burning. This rule requires applicants for agricultural and prescribed burning to supply such information as is required by the District prior to setting or allowing an outdoor fire. Additionally, sections 300.3 F., Smoke Management; section 300.3 C., Minimum Drying Times; Exceptions to Rule 300, section 300.1 B., Exemption, Agricultural Burning, section 300.1 C., Exemption, Burning Permit, section 300.1 D., Exemption, Minimum Drying Times; section 300.1 E., Nonagricultural Burning; section 300.1 F., Exemption, Wildland Vegetation Management, require the District to regulate burning under specific conditions related to agricultural and prescribed burning activities.

This Program was prepared in conjunction with the air districts participating in the Mountain Counties Air Basin Technical Advisory Committee. Public and private land management agencies have been given the opportunity to comment on this Program through their participation in the Mountain Counties Air Basin Smoke Management Alliance (“MCABSMA”). This also included those agencies within the El Dorado County portion of the Lake Tahoe Air Basin. Additionally, the District provided a 30-day public notice and comment period prior to District Board of Directors adoption in a public hearing.

The District plans to continue participating in the MCABSMA which provides a forum to develop agreements with public and private land management agencies for more detailed smoke management activities and associated tools. The MCABSMA Charter is attached as Appendix A.

The District’s current regulations provide the authority to implement and enforce this Program, however, in the future, there may be proposed changes to Regulation III that fully outline this Program. Any changes needed to fully develop and implement the Program will be drafted and after public review adopted by the District’s governing board.

This Program is divided into six sections: permitting, registration, authorization, planning, resources, and enforcement with supporting appendices. Each section outlines the methods used by District staff to administer the program. The appendices include pertinent documents that support the Program. Smoke management can be affected by many variables, and as such, this program may not address every situation. Therefore the Program has been designed to provide general direction, but should not override common sense in regulating burning in the District.

## **Section 1- Burn Permits**

District staff issues air permits for all agricultural and prescribed burning projects. Residential burn/fire permits are issued by the California Department of Forestry (CDF) and local fire districts. The air permit is issued at the District’s office but also may be issued via mail. The air permit includes conditions that limit burning to permissive burn days, limit types of material to



be burned, require material that is burned to be free of moisture and dirt, and require approved ignition devices be used. The permit allows the District to add conditions to limit the amount of material to be burned or burn hours if necessary. In addition to the air permit, land managers/burners must also submit a smoke management plan for prescribed burning projects.

- a) All agricultural and prescribed burning requires a valid air permit from the District. The most current version of the air permit application is attached as Appendix B. An approved Smoke Management Plan serves as a conditional permit to burn when combined with the air permit. The most current version of the Smoke Management Plan application is attached as Appendix C.
- b) A valid burn permit may also be required from the fire agency that has jurisdiction in the area of the proposed burn project.
- c) Burning conducted pursuant to such permits issued by the District and a fire agency must comply with all the conditions specified on such permits including the approval of a Smoke Management Plan. See Section 4 for further discussion on the Smoke Management Plan requirements. Failure to abide by permit conditions is a violation of Section 41852 of the California Health and Safety Code and of District Rule 501 General Permit Requirements, Section 501.4 E., Conditional Approval.
- d) All permits issued for agricultural and prescribed burning by the District and the fire agency must contain the following words or words of similar import: "This permit is valid only on those days during which agricultural burning, including prescribed burning, is not prohibited by the State Air Resources Board or by an air district pursuant to Section 41855 of the Health and Safety Code, and when burning on the lands identified herein has been approved by the air district".
- e) The District may issue special permits for agricultural or prescribed burning on no-burn days if denial of such permits would threaten imminent and substantial economic loss. The District limits the amount of burning that can occur pursuant to the issuance of such a permit to the extent that it ensures no exceedances of air quality standards or smoke impacts to smoke sensitive areas. Each applicant for a no-burn day permit shall submit a completed Authorization to Burn on a No Burn Day application to the District to make this determination.

## **Section 2 - Burn Registration and Reporting**

- a) All persons who want to conduct prescribed burning in the District in any particular calendar year must register their planned burn projects with the District. The MCABSMA members register their burns semi-annually prior to the spring and fall burn seasons. Updates and late additions to this registration process are accepted from members and non-members. The burn registration must include the name of the permittee, including a contact person with phone number; a listing of all projects planned, with legal descriptions of their locations



(township, range, section #); and an estimate of the total acreage and/or tons of material to be burned.

- b) Each day during the burn season, land managers/burners submit a daily report to the District. This report shall at a minimum list the project name, date, location and acres or amounts of material burned. The Daily Authorization Request & Information Reporting (Appendix D) or other suitable form can be used for this purpose.
- c) A report of the agricultural and prescribed burning conducted each calendar year in the District is submitted to ARB within 45 days of the end of each calendar year. The report includes the estimated tonnage and/or acreage for each type of waste burned from both agricultural and prescribed burning by county.
- d) The District also reports all special permits (no-burn day permits) issued each calendar year within 45 days of the end of each calendar year. This report includes the number of such permits issued, the date of issuance of each permit, the person or persons to whom the permit was issued, an estimate of tonnage and/or acreage for each type of waste burned pursuant to the permit, and a summary of the reasons why denial of each permit would have threatened imminent and substantial economic loss.
- e) Upon full implementation of the Prescribed Fire Incident Reporting System (PFIRS) or other suitable electronic reporting system, and upon proven effectiveness of this system, the District will fully participate to the greatest extent possible and encourage, if not require, MCABSMA members full cooperation and participation.

### **Section 3 - Burn Authorization System**

- a) The purpose of the burn authorization system is to minimize smoke impacts in smoke sensitive areas, avoid cumulative smoke impacts, and prevent public nuisance.
- b) The District operates a daily burn authorization system that regulates agricultural and prescribed burning. The burn authorization system specifies the amount, timing, and location for each burn project within the District boundaries. As such all burn authorization requests are evaluated first by these considerations.
- c) In evaluating burn authorization requests the Air District considers the following factors:
  - air quality;
  - meteorological conditions expected during burn;
  - types and amounts of materials to be burned;
  - location and timing of materials to be burned;
  - locations of smoke sensitive receptors;
  - smoke from all burning activities, including burning in neighboring air districts or regions which may affect the air quality in the District; and
  - historical data from previous burning.



Burn authorizations may be issued to land managers/burners for burn projects 24 hours in advance of ignition of each project. To obtain District authorization to burn any project, the land manager or burner must contact the District via telephone, fax, E-mail, or in person announcing the intent to burn. The burner must submit the Daily Authorization Request & Information Reporting or other suitable form to the District (Appendix D). Using the above criteria, the District staff would either grant or deny authorization to burn. When two or more burns are proposed for the same day and in the same general location, the burn agencies will coordinate amongst themselves and decide which burn will proceed. Once a burn authorization is granted it is only rescinded if meteorological conditions change such that adverse air quality impacts are likely.

- d) A burn authorization from the District only authorizes the ignition of a burn if the smoke management conditions specified in the project's Smoke Management Plan are met at the time of ignition and for the duration of the burn. A burn authorization does not relieve the burner from meeting the conditions of the smoke management plan. It is the burner's responsibility to ensure all conditions listed in the Smoke Management Plan are met prior to ignition. To validate the specific smoke transport conditions that exist on each site the land manager/burner will launch a helium-filled balloon, set a test fire, rely on local weather forecasts, spot weather forecasts, RAWS or other validation method, as specified in their Smoke Management Plan.
- e) To receive a burn authorization for burning on a No Burn Day, the land manager/burner must submit a completed Authorization to Burn on a No Burn Day Burn application to the District as soon as possible prior to ignition. As a prerequisite to burning on a No Burn Day, the District requires that the burn project be entered with ARB and shall have received the 48/72/96 notices for at least 3 days prior to ignition. In addition, the District may require the land manager/burner to supply on-site or RAWS meteorological weather observations, site specific weather forecasts, or other information necessary to assist in authorizing the burn project.
- f) In order to assist the land managers/burners in their planning process, the District may require the land managers/burners to enter their burn project with ARB to receive a 48-hour forecast, 72-hour outlook, and a 96-hour trend. To accomplish this, the land manager/burner shall submit a completed CB-3 form to the ARB and the District. The land manager/burner may contact the Air Resources Board after 4 p.m. Monday through Friday to obtain the forecast information. If requested, the District will contact the burner with this information. On weekends and holidays, the land managers/burners may need to call the ARB before 4 p.m. These forecasts are not a substitute for a burn authorization, and contain no guarantee that a favorable forecast will necessarily lead to a burn authorization approval, but are intended solely to help in burn project planning.
- g) The District maintains a daily log, recording burn authorizations, location of the burns, amounts of material burned, wildfires occurring that day, and any other relevant information related to smoke impacts. This data is used in the burn authorization process for subsequent



days and in evaluating the success and efficiency of the smoke management program. The District also maintains maps indicating burn locations in the District for easy reference of daily burning, location of smoke sensitive receptors, and potential cumulative smoke impacts from other burning in the region.

- h) Multi-day burns or burns greater than 250 acres to be burned in one day require authorization on a daily basis from the District in conjunction through the ARB's consultation process.
- i) If smoke from a project may impact other air districts or states, District staff shall notify the appropriate air quality agency by faxing, or by other electronic means, the Controlled Burn/Prescribed Fire Notification (Appendix E) as soon as practical and prior to ignition. Any concerns these agencies have over the planned burn will be incorporated into the authorization.
- j) If increased burning activities causes competition for burning between burn agencies, the District will, in coordination with MCABSMA members, establish guidelines for prioritizing all agricultural burns, including prescribed burns. In considering priorities, the District shall consider the public benefits of burn projects, including safety, public health, forest health and wildfire prevention, ecological needs, economic concerns, and disease and pest prevention. Efforts to reduce smoke emissions, such as removal of excess material, shall also be considered.
- k) CDF maintains the District's burn day information messaging for the Lake Tahoe Air Basin (South Lake Tahoe at 1-888-332-2876 (toll free) and the western slope at (530) 621-5897 or 1-866-621-5897 (toll free) to announce the daily burn day decision in the District. The District consults with the ARB. and fire agencies as necessary to make the final determination.

## **Section 4 - Smoke Management Planning**

- a) Each prescribed burn project will be registered for smoke management planning purposes as described in Section 2a.
- b) Burn projects less than 10 acres in size or that will emit less than one ton of particulate matter may only need to obtain an air permit. Burn projects greater than 10 acres or that will emit in excess of one ton of particulate matter must complete a District Smoke Management Plan. Before issuing an authorization to burn, the District, at its discretion, may require additional smoke management procedures to be used if a burn:
  - 1) is greater than 100 acres in size,
  - 2) may impact smoke sensitive areas, or
  - 3) presents other potential problems.
- c) Each land manager/burner will follow the minimum smoke management guidelines listed below for each burn project.



- 1) **Meteorological Prescription:** Provide a detailed meteorological prescription that must be met to proceed with the burn. At a minimum, the prescription must include the acceptable wind direction. Other considerations may include wind speed, temperature profile, winds aloft, humidity, temperature, actual and predicted inversions, burn day status, and forecast precipitation. The District may require weather forecasts to be obtained to make smoke management decisions for the burn project.
  - 2) **Contingency Actions:** What actions will a land manager/burner take if smoke from the burn project produces unacceptable smoke impacts. Actions may include: stopping further ignitions, active fire suppression, rapid mop up, and other appropriate techniques that are discussed with the District.
  - 3) **Smoke Mitigation:** What actions will be taken to minimize smoke from the burn. These may include: minimum drying times/fuel moistures, piling and/or windrowing materials, active mop up of smoldering, pretreatment of fuels, and other appropriate techniques.
  - 4) **Burning Alternatives:** Describe the alternatives to burning which have been considered for this burn project and the basis of why the alternatives were not feasible or justified. Alternatives are listed in the SMP. Additionally for projects requiring NEPA/CEQA environmental documentation, alternatives to burning may be addressed in the air quality section of such documents. The location of the documents is to be noted in the SMP.
  - 5) **Smoke Sensitive Receptors:** A description of the smoke sensitive receptors, such as towns, schools, or roads, is required. A map showing these receptors and the predicted smoke travel should be submitted.
  - 6) **Public Notification:** Describe how the potentially affected public will be notified of the burn project. This may include one or all of the following: media announcements, phone contact lists, road signs, Internet posting and other appropriate techniques.
  - 7) **Complaint Handling Procedures:** A procedure shall be developed that insures that all complaints regarding smoke impacts received by a company or individual conducting the burn are promptly reported to the District.
  - 8) **Smoke Monitoring:** Describe the procedures that will be used to monitor and track the smoke transport from the burn project, which may include: a smoke spotter to check on downwind sites, ambient air monitoring, aerial monitoring, or other appropriate methods.
- d) **Naturally Ignited Wildland Fires:** A District Smoke Management Plan shall be completed and submitted within 72 hours from the start of a burn if the size of the fire is expected to exceed ten acres in size and will be managed for resource benefit. When a natural ignition occurs on a no-burn day, the initial “go/no-go” decision to manage the fire for resource benefit will be a “no-go” unless:



- 1) After consultation with the District, staff decide, for smoke management purposes, that the burn can be managed for resource benefit; or
- 2) For periods of less than 24 hours, a reasonable effort has been made to contact the District, or if the District is not available, the Air Resources Board (ARB); or
- 3) After 24 hours, the District has been contacted, or if the District is not available, the ARB has been contacted and concurs that the burn can be managed for resource benefit.

A “no-go” decision does not necessarily mean that the fire must be extinguished, but that the fire cannot be considered as a prescribed fire.

- e) District staff will maintain the highest possible level of training with regards to smoke management. Staff that are assigned to the District’s agriculture and prescribed program will attend smoke management workshops, seminars, and training sessions. Participation and cooperation in smoke management alliances, Interagency Air and Smoke Council (IASC) meetings, and Mountain Counties Air Basin Technical Advisory Committees will strongly be encouraged, if not mandatory. When the Prescribed Fire Incident Reporting System (PFIRS) or some other electronic substitute, becomes available, the District will participate to the fullest extent possible.
- f) For those burns that are either in excess of 250 acres, created smoke impacts or were burned on No Burn Days, the responsible burn agency must complete a District Project Post Burn Form. These are to be completed and returned to the District within 30 days from the completion of the burn project. This information will then be reviewed and can assist in issuing burn authorizations for similar projects.
- g) All agricultural burning projects (for the purpose of this subsection excludes prescribed burn projects) will be registered with the District for smoke management planning purposes through the permitting process as described in Section 1. Agricultural burning projects are required to abide by air permit conditions that include general smoke management under Regulation III.

## **Section 5 - District Resources**

### **a) General District Resources**

The District consists of 6 staff and a five (5) member Board of Directors. The Burn Program has a program manager who is overseen by the Air Pollution Control Officer who is responsible for carrying out this Program, especially the permitting, enforcement and decision-making functions. The District will rely on the ARB for forecasting and the MCABSMA for planning.

### **b) Meteorological Resources**



The District relies primarily on the ARB to provide the daily burn day decision and the 48/72/96 forecasts to guide the burn authorization. To augment its forecasting tools, the ARB funds a local meteorological data gathering flight out of Columbia (Tuolumne County) to obtain more accurate data on atmospheric conditions in the Mountain Counties Air Basin. The District utilizes the Internet as a tool to access general weather trends, RAWS data, and fire weather forecast data for specific burns.

The District may also utilize special weather forecasts obtained by burn agencies through the Interagency Fire Forecast and Warning Unit, especially for burn projects that are large or located near sensitive receptors.

The District currently possesses portable visual equipment (cameras, binoculars) to observe and document smoke impacts, plume dispersion, and other items.

c) Air Monitoring Resources

Currently there are two (2) particulate matter ("PM") monitoring stations located within the District. Both are operated by ARB and are located in Placerville and Echo Summit. Additionally, District staff makes visual observations regarding visibility and how much smoke is impairing an area.

## Section 6 - Inspection and Enforcement

- a) Subject to the constraints of time and availability District staff conduct on-site inspections of a representative number of agricultural and prescribed burns each year. Such inspections are prioritized based on the following criteria:
- 1) active burns that are generating complaints;
  - 2) active burns that are large (100+ acres) or located near sensitive receptors;
  - 3) active burns that are conducted in an area or by a source that historically generates many complaints; and
  - 4) planned burns representing a variety of sources and fuels.
- b) Inspections of active burns document that meteorological conditions are within acceptable parameters; that the amount of acreage and/or fuel given in the burn registration and authorization is what is actually being burned; and that the burn is not impacting any sensitive receptors.
- c) Inspections of a planned burn documents that the projected acreage and/or fuel loading is consistent with that reported in the burn registration; that the meteorological prescription is reasonable for the location; and that actions taken to reduce fuel loading and/or smoke emissions have been carried out.



- d) If unacceptable smoke impacts occur to a smoke sensitive area from an authorized burn, and such impacts are verified by District staff, then the burner is promptly notified and required to institute the contingency actions as outlined in the SMP where possible.
- e) Notices of Violation issued for violations of the District's Smoke Management Program are handled according to the District's Mutual Settlement Program.



# **APPENDIX A**

## **Mountain Counties Air Basin Smoke Management Alliance Charter**



# Mountain Counties Air Basin Smoke Management Alliance

## CHARTER

1/14/00

### STATEMENT OF PURPOSE

The Mountain Counties Air Basin Smoke Management Alliance is established and maintained to provide coordination and uniformity in smoke management efforts in the Mountain Counties Air Basin (MCAB), recognizing the need for and role of fire in ecosystems management and fuel reduction while protecting the public health.

### GOALS

- Minimize smoke impacts on smoke sensitive areas.
  
- Consistency and predictability:
  - Smoke Management Plan (SMP) forms.
  - Rules related to Title 17 Smoke Management Guidance.
  - Post-burn smoke management evaluation forms.
  - Permit conditions and application process.
  - Requesting 48-72 forecasts.
  - Ignition decisions.
  - Fees to recover district program costs.
  - Burn coordination procedures for determining timing and placement of burns.
  - Monitoring/surveillance of smoke.
  
- Communication, coordination, and cooperation:
  - Annual pre-season notification of upcoming projects.
  - Annual mid-season update of projects.
  - Post-season/post-burn smoke management evaluations, as needed.
  - Cooperation of burn project public notifications and cross-jurisdictional notifications.
  - Burn authorization and burn project coordination procedures.
  - Complaint coordination.
  
- Development of tiered requirements based on potential for smoke impacts:
  - Information required in SMPs.
  - SMP review and inspections.
  - Cost recovery/fees.



## MEMBERSHIP

- MCAB Air Districts.
- State, federal, and private land managers (hereinafter, "land managers") that conduct prescribed burns on lands within the MCAB.
- Interested parties: Neighboring jurisdictions with potential smoke impacts from burn projects conducted within the MCAB, and state and federal oversight agencies are welcome to attend meetings to communicate concerns and share information, but will not be "voting" members.

## MEETING FREQUENCY

Bi-annual (twice per year):

- January meeting: This meeting will have the primary purpose of providing each land manager's annual pre-season notification of planned upcoming burn projects. Maps and big-picture information are requested.
- June (toward the end of the month): This meeting will have the primary purpose of providing each land manager's update on completed and planned burn projects.

Note: Additional agenda items, as determined by the membership, will be included, with subject matter generally within the intent of the goals listed above.

## MEETING HOST

The meeting host will alternate between the MCAB Technical Advisory Committee (TAC) Chairman and a designated land manager member. The meeting host is responsible for developing the agenda (with membership input), distributing the agenda, making arrangements for meeting place, distributing the meeting minutes from the prior meeting with the agenda, chairing the meeting they host, and coordinating the completion of minutes for the meeting.

- January meeting: MCAB Technical Advisory Committee Chairman.
- June meeting: Land manager (rotation).

## COMMUNICATION

The current MCAB TAC Chair will be the point of contact for the air districts. The land manager membership will designate a point of contact (initially Christie Neill). E-mail will be used to the greatest extent feasible to reduce communication costs. The points of contact will maintain and coordinate membership/interested party lists with mailing addresses, phone numbers, fax numbers, and e-mail addresses. Lists will be updated at least annually. Points of contact will be responsible for communicating with their respective membership.



# **APPENDIX B**

## **Air District Burn Permit Application**



EL DORADO COUNTY AIR POLLUTION PERMIT  
2850 Fairlane Court, Placerville, California 95667  
Office Telephone: (530)621-6662, FAX: (530) 642-1531

\_\_\_\_\_ Agricultural Burning \_\_\_\_\_ Range Improvement Burning  
\_\_\_\_\_ Forestry Management Burning \_\_\_\_\_ Land Development  
\_\_\_\_\_ Wildland Vegetation Management \_\_\_\_\_ Fire Suppression and Training  
\_\_\_\_\_ Ditch and Road Maintenance

BURN DAY INFORMATION  
TELEPHONE NUMBER: (530) 621-5897

Date \_\_\_\_\_ This Permit Expires on \_\_\_\_\_

Name \_\_\_\_\_ Telephone # \_\_\_\_\_

Address \_\_\_\_\_

Location of Burning Site \_\_\_\_\_

\_\_\_\_\_ Sec. \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_

Distance to Nearest Residential Area (In Miles) \_\_\_\_\_

Type of Material to be Burned \_\_\_\_\_

Estimated amount (tons per acre) \_\_\_\_\_

Total Acres Involved or Total Acres Where Material Came From \_\_\_\_\_

Reason for Burning \_\_\_\_\_

**CONDITIONS:**

1. This permit is valid only on those days which are NOT PROHIBITED by the State Air Resources Board or the Air Pollution Control Officer.
2. The use of tires for ignition of fires is prohibited.
3. The material shall be arranged to facilitate efficient burning and shall be free of soil, rock, or other waste such as tires, rubbish, tar paper, or construction debris.
4. The material shall be dried as required; shall be free of visible moisture and only ignited with an approved device.
5. All open outdoor fires shall comply with applicable Local, County, and State regulations. Local Fire Agency shall be notified prior to each burn.
6. This permit is valid only on land owned or legally controlled by Permittee and shall be available for inspection at the burn site.
7. This permit may be revoked or suspended for violation of any conditions of said permit or when it is necessary for public safety.

The Permittee shall take the following additional precautions:

**Burn on burn days only; ENFORCE SMOKE MANAGEMENT**

Any person who violates the provisions of the El Dorado County Air Pollution Control District Rules and Regulations is guilty of a misdemeanor and is punishable by imprisonment in the County Jail not exceeding six (6) months, or by fine not exceeding One Thousand (\$1,000) dollars, or both, and the cost of putting out the fire.

I have read and fully understand the controls of this permit. I understand that this permit does not excuse the Permittee from liability in the event the fire creates a nuisance or hazard.

Signature: \_\_\_\_\_ Title \_\_\_\_\_

Issued by: \_\_\_\_\_ Title \_\_\_\_\_



# **APPENDIX C**

## **Smoke Management Plan Application Form**



**Smoke Management Plan  
Check Off Sheet (for permittee use only)**

Air District: \_\_\_\_\_ Date: \_\_\_\_\_

Permittee Name: \_\_\_\_\_

Project Name: \_\_\_\_\_

Check ( ✓ ) one of the following as a result of the information listed above or other pertinent information:

	Less than 1 ton of Particulate Matter (PM10) emissions and/or less than 10 acres in size, applicant must complete and comply with an Air District Burn Permit.
	Between 1 ton and 10 tons of PM10 emissions and/or between 10 and 100 acres complete sections 1, 2, 3, and 5 of the Smoke Management Plan.
	Over 10 tons of PM10 emissions and/or 100 acres complete sections 1-5 of the Smoke Management Plan and over 250 acres, complete sections 1-6.
	Regardless of size or PM10 emissions, if smoke has the potential to impact a smoke sensitive area, complete those sections of the Smoke Management Plan identified by the Air District.

Those Sections checked off ( ✓ ) are to be completed and submitted as the Smoke Management Plan to your local air district for review.

	Section 1 – GENERAL INFORMATION AND APPROVALS
	Section 2 – PROJECT SPECIFIC INFORMATION
	Section 3 – PUBLIC NOTIFICATION AND ALTERNATIVES
	Section 4 – SMOKE DISPERSAL SURVEILLANCE AND MONITORING
	Section 5 – DAILY AUTHORIZATION REQUEST AND INFORMATION REPORTING FORM
	Section 6 – AIR DISTRICT PROJECT POST BURN FORM

Section 5 to be completed and submitted every day of active ignition.  
Section 6 to be completed and submitted within 30 days after completion of project.



## **SMOKE MANAGEMENT PLAN 2001 BURN SEASON**

(MAY 31, 2001 TAC Approved)

In accordance with the air district's Smoke Management Program, this Smoke Management Plan (SMP) serves as part of the applicant's permit application. Once approved by the air district, this SMP serves as part of the conditional permit to burn, when combined with the standard single page permit to burn.

Final authorization to burn this project may be granted by the responsible air district staff 24 hours in advance of ignition and must be obtained for each day of actual ignition. Final authorization may be denied if the conditions set forth in this Smoke Management Plan have not been met by the day of the ignition. (CCR 80160(i))

This SMP is required for all prescribed burns (Forest Management Burning, Range Improvement Burning, Wildland Vegetation Management Burning). Unless specified on the Check Off Sheet, in the Northern Sierra Air Quality Management District this plan is not required for burn projects less than five acres in size.

The information required herein is the minimum information needed to evaluate the effectiveness of smoke management efforts for this project. Further information may be needed if the proposed burn:

- 1) is large;
- 2) has the potential to impact a smoke sensitive area;
- 3) may have multi-jurisdictional smoke impacts;
- 4) have other complexities, which make more information necessary.

Information may need to be extracted from the project burn plan to supplement this SMP. Air district staff review of the burn plan is for informational purposes only. When the burn plan is reviewed, the air district staff assumes no approval authority or liability for approving the burn plan. The burn agency is responsible for providing firefighter and public safety, which is not the intent of the information included on this form.

Terms used in this form have the same meaning as those defined in the air district's open burning regulation definitions and/or the California Code of Regulations, Title 17, §80101. Where differences occur, the air district's definitions apply.



## SECTION 1 – GENERAL INFORMATION

### A. PROJECT INFORMATION: (CCR 80160(b))

Project Name/Number				Air District Permit Number			
Legal Location	T	R	S	Project Acres			
Street/Crossroads							

Check off ( ✓ ) the category(ies) of prescribed burning that applies to this project:

<input type="checkbox"/>	<b>Forest Management Burning:</b> use of open fires, as part of a forest management practice, to remove forest debris or for forest management practices which include timber operations, silvicultural practices, or forest protection practices.
<input type="checkbox"/>	<b>Range Improvement Burning:</b> use of outdoor fires to remove vegetation for a wildlife, game, or livestock habitat or for the initial establishment of an agricultural practice on previously uncultivated land.
<input type="checkbox"/>	<b>Wildland Vegetation Management Burning:</b> the use of prescribed burning conducted by a public agency, or through a cooperative agreement with a private manager or contract involving a public agency, to burn land predominantly covered with chaparral (as defined in Title 14, California Code of Regulations, section 1561.1), trees, grass, or standing brush.
<input type="checkbox"/>	<b>Naturally Ignited Wildland Fire Managed for Resource Benefits.</b> (Refer to the Procedures page for requirements) (CCR 80160(h)(i))
<input type="checkbox"/>	<b>Improvement of Land for Wildlife or Game Habitat:</b> include with this SMP a statement from the California Department of Fish and Game, which certifies that this burn is desirable and proper. This CDFG statement may specify the amount of brush treatment that is appropriate for this project (for non-federal lands). (CCR 80160(p))
	<i>Comments:</i>

Check off ( ✓ ) the Types of Burn Project(s):

<input type="checkbox"/>	Machine Pile Burn	<input type="checkbox"/>	Hand Pile Burn	<input type="checkbox"/>	Landing Pile Burn
<input type="checkbox"/>	Broadcast Burn	<input type="checkbox"/>	Understory Burn	<input type="checkbox"/>	Other

Check off ( ✓ ) the Type of Vegetation(s):

<input type="checkbox"/>	Brush	<input type="checkbox"/>	Grass	<input type="checkbox"/>	Timber Litter
<input type="checkbox"/>	Residual Timber Slash	<input type="checkbox"/>	Other		

Fill In the following Information:

Burn Window/Season:			
Desired Season for Burn:		Acceptable Season for Burn:	
Project/Unit Elevation (ft):			
Top of Unit(s):		Bottom of Unit(s):	
Duration of Burn: (CCR 80160(b))			
Ignition _____ days	Burndown _____ days	Total _____ days	
Will an ARB Controlled Burn Notice 48/72/96 be requested? (Refer to the Procedures for the use of the CB-3 form.)			<input type="checkbox"/> Yes <input type="checkbox"/> No



**B. EMISSIONS ESTIMATES (Fill In):**

EPA-approved method used to calculate emissions	
Total estimated emissions: Particulate Matter (PM10)	tons

See Attached Calculations

**C. IDENTIFICATION OF SMOKE SENSITIVE AREAS: (CCR 80160(b))**

Smoke Sensitive Areas (SSA) include population centers (e.g. towns, villages, developments), hospitals, schools, daycare centers, nursing homes, shopping centers, public events, and may include campgrounds and trails inhabited by significant numbers of people.

Please Fill In and/or Check Off (✓)			Yes	No
Could any Smoke Sensitive Areas be affected by project?				
SSA	Distance/Direction From Burn	Unacceptable Conditions		
Does the planned project have the potential to impact a Class I area? If yes, why:				
Does the planned project have the potential to impact another air district or state? If yes, why?				
Is the planned project located in more than one air district? If yes, list.				
Historically, has burning in this area impacted any SSA? If yes, list conditions that led to the impact:				

If burning this project on a day concurrent with other burn projects or this is a multi-day burn which might cause a smoke impact on any SSA, it is the burn agency's responsibility to communicate daily and coordinate this burn project with the air district staff and/or the ARB, and other burners to minimize or avoid these impacts. (CCR 80160(e))

Check Off the Attached Maps

✓	Smoke Management Plan Maps
	Desired range of daytime plume path during ignition map (CCR80160(c))
	Possible night time smoke path map (CCR 80160(c))
	Smoke sensitive areas map (CCR 80160(b))
	Interior cut off lines map (Estimate/Potential)
	Project map

**D. APPROVAL**



I, the undersigned permittee, understand that this SMP, once approved by the Air District (District) and/or California Air Resources Board, is a condition of the Air District burn permit. This information is true to the best of my knowledge.

SMP Preparer Agency:		Telephone Number:	
SMP Preparer's Name (print):		Title:	
Signature:		Submittal Date:	

✓	AIR DISTRICT USE ONLY BELOW THIS LINE
	ARB Consultation (Required for multi-day or projects greater than 250 acres) (CCR 80160(g))
	Approved as submitted: _____ Date _____ <i style="text-align: center;">Air District Staff Signature</i>
	Approved with changes or conditions: _____ Date _____ <i style="text-align: center;">Air District Staff Signature</i> Changes/conditions: _____
	DISAPPROVED as submitted: _____ Date _____ <i style="text-align: center;">Air District Staff Signature</i> For the Following Reasons: _____



## SECTION 2 – PROJECT SPECIFIC INFORMATION

### A. WIND PRESCRIPTION: (CCR 80160(c))

<b>Fill in the Surface Wind Direction.</b>	
<b>Ideal:</b>	<b>Allowable:</b>
<b>Fill in the Wind Direction Aloft (Transport Direction).</b>	
<b>Ideal:</b>	<b>Allowable:</b>
<b>Identify potential meteorological conditions that would prohibit acceptable smoke dispersal:</b>	

Note: The air district may require additional on-site weather observations and/or spot weather forecasts.

### B. MITIGATIONS: (CCR 80160(m)(n) and (o))

Please check off the mitigations below, which will be implemented to reduce smoke impacts, especially if the smoke will impact a smoke sensitive area.

✓	Mitigations
	Vegetation will be in the following condition during combustion, considering fire safety and other factors:
	Vegetation will be piled and prepared where possible so that it can be burned with a minimum amount of smoke, unless good silvicultural or ecological practices dictate otherwise.
	Limit burning to _____ Piles or _____ acres per day.
	No more than _____ piles shall be burning at one time
	Allow _____ hours between ignition of _____ (piles/units).
	Mop up will begin within: <input type="checkbox"/> 18 hrs <input type="checkbox"/> 24 hrs <input type="checkbox"/> 48 hrs <input type="checkbox"/> 72 hrs <input type="checkbox"/> after ignition.
	Special weather condition forecast:
	Burn window: Begin ignitions (time): _____ Terminate ignitions (time): _____
	Other, explain:

### C. CONTINGENCIES: (CCR 80160(c))

Please check off the contingency actions that can be practically and safely implemented if smoke impacts a smoke sensitive area. Adequate resources must be provided for contingency actions.

✓	Contingencies
	Stop ignitions, except as needed to maintain control of fire (allow fire to burn to contingency control lines).
	Fire suppression.
	Begin mop up immediately.
	Begin mop up within _____ hours of problem identification.
	Begin complete mop up within _____ hours of smoke problem identification.
	Discontinue mop-up if favorable conditions return.
	Other, explain:



**D. SMOKE IMPACT COMPLAINT PROCEDURES: (CCR 80160(I))**

1. All smoke related complaints shall be forwarded within two (2) hours or as soon as practical to the air district and either the Prescribed Fire Manager, Burn Boss and/or Incident Commander via fax or telephone.
2. The permittee will attempt to obtain at least the following minimum information from complainants and forward it to the air district:
  - a. date of complaint
  - b. time of complaint
  - c. complainant's name
  - d. complainant's address
  - e. complainant's telephone #
  - f. nature of the complaint (smoke impacts, visibility, fear of fire)
3. The Prescribed Fire Manager, Burn Boss and/or Incident Commander, in coordination with the Air District staff, shall seek resolution for all complaints, as necessary.
4. A log of all complaint calls related to a burn project shall be kept in the project file folder for a period of one year from the conclusion of the burn project.

**E. CONTACTING RESPONSIBLE OFFICIALS: (CCR 80160(I))**

**Note: Do not display or release personal phone information in burn or smoke plans.  
Make available to the Air District:**

1. Who is the Prescribed Fire Manager/Burn Boss/Incident Commander? \_\_\_\_\_  
\_\_\_\_\_
2. How can this person be reached at the burn project? \_\_\_\_\_  
\_\_\_\_\_



**SECTION 3 – PUBLIC NOTIFICATION AND ALTERNATIVES**

**A. PUBLIC NOTIFICATION:** (CCR 80160(c.6)(II))

Check off below all of the actions, to minimize the impact of smoke that will be taken to advise the SSA that burning is planned. When the burning is imminent, known sensitive receptors will be contacted.

✓	Type Of Notification	Describe The Activity And Timing
	Radio Station	
	Newspaper	
	Posters/Flyers/Letters	
	Television	
	Door to Door	
	Signage	
	Personal Phone Calls	
	Other, explain:	

**B. EVALUATION OF ALTERNATIVES TO BURNING:** (CCR 80160(c))

<p><b>Have alternative treatments other than burning been considered for this project?</b></p> <p><input type="checkbox"/> No. Please explain why burning was chosen over any alternatives.</p>		
<p><input type="checkbox"/> Yes. Please list alternatives below.</p>		
Alternative	Extent Used	Particulate Reduction (tons)
<p><input type="checkbox"/> Yes, part of NEPA/CEQA documentation.</p> <p><input type="checkbox"/> Attached</p> <p><input type="checkbox"/> On File with:</p>		



**SECTION 4 – SMOKE DISPERSAL SURVEILLANCE AND MONITORING** (CCR 80160(d))

Check off ( ✓ ) all of the activities procedures used for smoke surveillance and monitoring. (e.g. before, during and post-burn). (Note: indicate timing of each item.) All weather and surveillance records shall be filed in the project folder and be available for air district review upon request.

✓	Smoke Dispersal Surveillance And Monitoring
	Test Fire
	Balloon(s)
	Weather Collection (i.e. RAWS)
	Aircraft
	Weather Forecast
	Visual Monitoring
	Other:
Method/Location of Visual Monitors:	
Interval of smoke dispersal monitoring:	

If this project is larger than 250 acres or if there is the potential for impacts to SSAs, a Post-Burn Evaluation will be required from the burner within 30 days after completion of the burn.  
(CCR 80160(k))







## SECTION 6 - AIR DISTRICT PROJECT POST BURN FORM

Complete the following for burns greater than 250 acres burns that created smoke impacts, burning on a no burn day or as required by the Air District. Forward to the Air District within 30 calendar days of the completion of the burn.

### A. GENERAL INFORMATION:

Burner/Agency/Permittee Name							
Project Name/Number			Air District Permit Number				
Legal Location	T	R	S	Project Acres			
Street/Crossroads							

### B. BURN INFORMATION:

Date Of Burn	Burn Day Status	Ignition Time	Planned Acres	Actual Acres	Tonnage Consumed	Completion Date Of Burn

### C. EMISSIONS INFORMATION:

POLLUTANT	TOTAL EMISSIONS (tons/burn)
PM10	
PM 2.5	
Other Pollutants	

### D. NARRATIVE INFORMATION:

- Was this burn conducted as per the Smoke Management Plan's air quality conditions? \_\_\_\_\_  
\_\_\_\_\_
- Were there any smoke impacts, including impacts to Smoke Sensitive Areas, neighboring air districts and or states? If yes, list areas and duration of impacts. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- List reason(s) for impacts. \_\_\_\_\_  
\_\_\_\_\_
- Number of complaints received? (Forward complaints to Air District) \_\_\_\_\_
- List contingency actions initiated to reduce impacts. \_\_\_\_\_
- List recommendations to utilize for future burns in this area to minimize impacts. \_\_\_\_\_  
\_\_\_\_\_
- Was the burn successful with regards to air quality? \_\_\_\_\_  
\_\_\_\_\_

SUBMITTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

#### Air District Use Only

Staff Reviewer:	Date Reviewed:	Date Logged:
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**PROCEDURES****Use of the 48/72/96 forecast: (CCR 80145(f))**

Fill in the requested information for the project on the supplied ARB Control Burn Notice - CB-3 form, being specific as to when the proposed burn will take place. In the first position of the "Person to be notified" column write in the name and phone number of the Air District where the burn will take place. In the second position, fill in your name or agency name and phone number. Fax this form to the ARB (916-445-0786) and either send or fax a copy to the Air District three (3) days prior to the start of the burn. The ARB will then notify the Air District of the forecast for the burn and the Air District will relay this information to you on a daily basis. Please notify the Air District and ARB within 24 hours when this burn is canceled, postponed, deactivated, or completed.

**Naturally Ignited Wildland Fires Managed For Resource Benefit**

A Smoke Management Plan (SMP) shall be completed and submitted to the appropriate Air District within 72 hours from the start of the fire if the size of the burn is expected to exceed ten acres in size. (CCR 80160(i))

When a natural ignition occurs on a no-burn day, the initial "go/no-go" decision to manage the fire for resource benefit will be a "no-go" unless:

1. After consultation with your Air District, the Air District staff decide, for smoke management purposes, that the burn can be managed for resource benefit; or
2. For periods of less than 24 hours, a reasonable effort has been made to contact the District, or if the District is not available, the Air Resources Board (ARB); or
3. After 24 hours, the District has been contacted, or if the District is not available, the ARB has been contacted and concurs that the burn can be managed for resource benefit.

A "no-go" decision does not necessarily mean that the fire must be extinguished, but that the fire cannot be considered as a prescribed fire. (CCR 80160(h))



## PM10 EMISSIONS CALCULATIONS FOR DIFFERENT PILE SIZES

1. Choose the pile size most represented on your burn site.
2. Multiply the number of piles in your project with the corresponding "Tons of PM10" values to get the total PM10 tonnage.

<b>PM10 EMISSIONS FOR SPECIFIED PILE SIZES</b>	
<b>Revised 10/3/00</b>	
Tonnage was calculated using 38 lbs/cu.ft.	
U.S. Forest Service's Conformity Handbook, Table 6 Emissions Factor of 19 pounds/ton of fuel burned - average pile and burn slash	
GENERIC PILE BURNING in feet, tonnage	TONS OF PM10
4 width x 3 height, 0.18 tons	0.002
5 width x 4 height, 0.36 tons	0.003
6 width x 5 height, 0.63 tons	0.006
8 width x 6 height, 1.24 tons	0.012
10 width x 6 height, 1.80 tons	0.017
12 width x 8 height, 3.41 tons	0.032
15 width x 8 height, 5.10 tons	0.048
20 width x 10 height, 11.04 tons	0.105
25 width x 10 height, 16.90 tons	0.161

See Exhibit A and B for additional information on calculation emissions.



# **APPENDIX D**

## **Daily Authorization Request and Information Reporting Form**







# **APPENDIX E**

## **Controlled Burn/Prescribed Fire Notification Form**



# Mountain Counties Air Basin

## Controlled Burn/Prescribed Fire Notification

MCAB members are hereby advised a controlled burn or prescribed fire is scheduled to take place within the jurisdiction of the air district sending this notice. Details are outlined below. Call the reporting district if there are questions.

<b>To: <u>MCAB Member/s (check members being notified)</u></b>	<b><u>Fax Number</u></b>
<input type="checkbox"/> Amador County APCD	(209) 223-6260
<input type="checkbox"/> Calaveras County APCD	(209) 754-6521
<input type="checkbox"/> Great Basin Unified APCD	(760) 872-6109
<input type="checkbox"/> Mariposa County APCD	(209) 966-8248
<input type="checkbox"/> Northern Sierra AQMD	(530) 274-7546
<input type="checkbox"/> Placer County APCD	(530) 889-7107
<input type="checkbox"/> Tuolumne County APCD	(209) 533-5520
<input type="checkbox"/> ARB Meteorology	(916) 445-0786
<input type="checkbox"/> Nevada, Bureau of Air Quality	(775) 587-6396

<b>From: <u>MCAB Member (check member sending notice)</u></b>	<b><u>Office Phone</u></b>
El Dorado County APCD                      Dennis Otani	(530) 621-5804

Fire location: \_\_\_\_\_

Date ignition starts: \_\_\_\_\_ Date ignition ends: \_\_\_\_\_

Estimated acreage to be burned: \_\_\_\_\_

Description of material to be burned: \_\_\_\_\_

Agency responsible for the fire: \_\_\_\_\_

Contact person: \_\_\_\_\_

Report complaints to: \_\_\_\_\_ Phone: \_\_\_\_\_

Comments: \_\_\_\_\_

Notification provided by: \_\_\_\_\_ Date: \_\_\_\_\_

