H. Prescribed Fire Documents

1. Compliance Procedures, State Air Quality Regulations for Prescribed Fires, Prescribed Natural Fires and Wildfires

a. Develop the Prescribed Burn Plan, including compliance documentation. Complete the Annual Prescribed Burn Application, including Unit No., location, duration, arces, and potential smoke impact. Submit to New Mexico State EID, Air Quality Bureau, Compliance Section (See New Mexico Smoke Management Plan).

b. Obtain weather forecast beginning approximately 10 days prior to proposed burn day; update forecast daily until 3 days prior to burn day. Perform fuels inventory to determine loading by tons/acre; read on-site weather and fuel moisture (10-hr TL) sticks daily 5 days prior to planned ignition date.

c. Perform SASEM calculations; determine Miller-Holzworth Mixing Height; determine ventilation index and airmass stability.

d. Receive Burn Permit from New Mexico State EID; perform any required mitigation specified, and contact EID as necessary.

e. Submit burn plan to Superintendent (through Chief, RM) for signatures.

f. Do final preparatory work on burn site; continue weather monitoring and run final fire behavior and ventilation calculations, burn day minus 3.

g. Receive approved Burn Plan from Superintendent.

h. Burn day minus one, begin notifications to agencies, media, etc. according to prepared list. Include State EID, compliance section and invitation to visit during burnday.

i. Burnday: obtain final spot forecast, verify prescription is met, conduct briefing for all assigned resources, assure public safety and smoke management guidelines are being implemented; ignite the burn and monitor required fire behavior elements for verification. If indicated, video-tape the burn for record purposes.

j. Conduct post-burn evaluation of prescription elements, ventilation and visibility affected. Adjust burn prescription accordingly.

2. FSA (Parts I & II) and PNF Decision Record

See following pages.

NATIONAL PARK SERVICE
FIRE SITUATION ANALYSIS
PART I. CURRENT FIRE SITUATION

1. FIRE # & NAME_____ NPS UNIT_____ CAUSE_____

1a) DATE: ___/___/_____ 1b) MONITORED air, lookout, at scene? (circle one)

2. FBWS: _____
Lead

FBWS: _____
Trainee

3. 3a) FIRE SIZE _____ 3b) DATE _____ TIME _____

3c) ELEVATIONAL RANGE _____ 3d) T _____ R _____ Section(s)_____

4. VEGETATION TYPE ____ ____% 4a) FUEL MODEL____ ____%
(of area burned) (of area burned)
_____% _____%
_____% _____%

5. MAP--ATTACH!!! (Indicate fire perimeter and fuel models in the area; also indicate points where weather/fire behavior readings were taken and use a large arrow to indicate where the daily fastest rate of spread (recorded in 6c--below) was observed).

6. FIRE ACTIVITY

6a) Relative Intensity:

_____

_____

6b) Daily Rate of Fire Growth:_____acres/day

6c) Daily Fastest ROS:_____ Direction--H, B, or F (circle one)
Fuel Model_____ Compass direction_____

7. PROJECTED FIRE ACTIVITY

7a) Fire Behavior (NFFL) Fuel Model(s) in Direction of Spread:

_____

_____

_____

7b) Factors that Affect Fire Spread: _____

_____

_____

7c) Forecasted Weather (1-5 days, specify number of days): attach forecast forms._____

_____

7d) Predicted Fire Behavior (specify number of days): _____

_____

8. THREATS/CONSTRAINTS

8a) Life or Property: _____

_____

_____

8b) Natural Resources: _____

_____

_____

8c) Cultural Resources: _____

_____

_____

8d) Management Boundaries: _____

_____

_____

8e) Threats to Exceed Prescription: _____

_____

_____

9. Smoke Movement: _____

_____

10. FIRE MONITORS' (FIRE BEHAVIOR/WEATHER SPECIALIST) RECOMMENDATIONS

10a) Closures/Evacuations: _____

_____

10b) Holding Actions: _____

_____

10c) Monitoring Frequency: _____

_____

11. SPECIAL CONCERNS OR COMMENTS: _____

_____

12. NARRATIVE (OPTIONAL) Use back of page

Attach prescribed natural fire data sheet (page 4), photographic log, and weather forecast.

13. PREPARED BY: _____ Date: _____ Time: _____
Lead FBWS

_____ Date: _____ Time: _____
Trainee FBWS

NO CHANGE: _____ Date: _____ Time: _____
Lead FBWS

14. MANAGEMENT ACTIONS: (if applicable) _____

_____

REVIEWED BY: _____ Date: _____ Time: _____
PFM/PBB/FMO

SUPPRESSION RESOURCES ASSESSMENT _____

_____

15. Nearest Available ICT4/ICT3: Name _____

Home Phone _____ Work Phone _____ On Paid Standby? Yes / No (circle)

16. PRESCRIBED NATURAL FIRE DATA SHEET

FIRE # & NAME _____

	0600	0800	1000	1200	1400	1600	1800	2000	PARK PNF Rx by FUEL MODEL FM / FM / FM
Date									
Time									
Location									
Aspect									
Slope									
WEATHER									
Temp.									
R.H.									
Mid W.S.									
Wind Dir.									
Shading									
FUEL MOISTURE									
1 hr.									
10 hr.									
100 hr.									
Live									
FIRE BEHAVIOR									
Model									
Direction									
Obs. ROS									
Pre. ROS									
Obs. FL									
Pre. FL									
H/A									
FI									

Drought Indicies (BI, ERC, KBDI, 1000 hr, etc.)_____

PART II

Park _____ Fire #/Name _____ Date _____

17. Fire Situation (including multiple fire problems): _____

_____

_____

_____

18. ALTERNATIVE ACTIONS:

HOLDING ACTIONS

A. (No Action) _____

_____

_____

_____

_____

B. _____

_____

_____

_____

_____

C. _____

_____

_____

_____

_____

FURTHER ALTERNATIVES MAY BE ADDED, if necessary: _____

SUPPRESSION ALTERNATIVE ACTIONS:

Alternative ___. .

_____

_____

_____

_____

Alternative ___ .

_____

_____

_____

_____

Alternative ___ .

_____

_____

_____

_____

Alternative ___ .

_____

_____

_____

_____

FURTHER ALTERNATIVES MAY BE ADDED, if necessary:_____

_____

19. DECISION MATRIX

Impacts On:	Alternative ___ (No Action)	Alternative ___	Alternative ___
Soil			
Air			
Water			
T & E Species			
Vegetation			
Developments			
Recreation			
Wilderness			
Firefighter Safety			
Public Safety			
Cultural			
Adjacent Landowners			
Wildlife			
Other			

20. Management Constraints From Fire Management Plan:

21. Projected Containment/Suppression Needs/Costs:

Alternative____		Alternative ____		Alternative_____	
Item	Cost	Item	Cost	Item	Cost
TOTAL COST	_____		_____		_____

Alternative: -	____	____	____
Est. Completion Time (days)	_____	_____	_____
Est. Fire Size at Project Completion (acres)	_____	_____	_____
Remaining Uncontained Perimeter (%)	_____	_____	_____

22. Preferred Alternative and Rationale: _____

_____

_____

Attach map of fire for each alternative.

23. Prepared by: _____ Date: _____

Signature: _____ Date: _____

Title: _____

Reviewed by: _____ Date: _____

Title: _____

Reviewed by: _____ Date: _____

Title: _____

Approved by: _____ Date _____
Superintendent

FIRE SITUATION ANALYSIS

The fire situation analysis (FSA) is standardized for National Park Service use and has been broken into Parts I and II. Part I, which is prepared by a FBWS I/II, is designed for use in routine monitoring of prescribed natural fires. It documents the daily fire situation, makes forecasts for upcoming fire activity, and documents that the daily fire situation does not exceed that which has been specifically approved by the Superintendent in the fire management plan. Part II, which will be prepared jointly by the FBWS and/or the PFM/PBB/FMO and other tactical experts as needed, will be prepared along with Part I at the beginning of a PNF and thereafter when a new threat or constraint, referenced in 8a-8e Part I is identified, or when increased holding actions in 10b are indicated; or when the fire management plan and progress of the fire or other situations develop which indicate that a different management strategy is appropriate.

Parts I and II are initially approved by the Superintendent in order to declare that a new fire is to be managed as a PNF. Thereafter, Part I is prepared by an experienced PFM/PBB or FMO specified by NPS policy. This individual then completes and signs block 14 of the FSA, part I, specifying all management actions taken during the last burning period and actions to be taken during the next burning period in order to comply with the park's fire management plan. The recommendation of whether or not to carry the PNF into the next burning period as a PNF or to activate Part II of the FSA is documentged and approved on the NPS-PNF Decision Record. This record remains on the Superintendent's desk throughout the PNF season and is updated daily by the FMO. Part II is always approved by the Superintendent on the document itself, since Part II legally documents a change in management strategy.

Should additional space be required for any FSA inputs, the back side of each page should be used for continuation.

INSTRUCTIONS FOR PART I (CURRENT FIRE SITUATION)

Part I is a very important management tool. Its usefulness depends on the quality of work by the fire monitor (fire behavior/weather specialist). The information collected and compiled provides the key link between the fire and management actions. It is easy to misinterpret the intent of a simple category title; take the time to read these instructions carefully so that management (at all levels) will receive the complete picture. Turn the page over and write on the back if the space provided for any particular element is inadequate. Do not lump two or three days of information onto one form. If any entry on this FSA does not apply to the fire being analyzed, place an NA in the appropriate blank space; this will ensure that all elements of this document are considered.

1. FIRE # & NAME, NPS Unit, and monitoring method are self-explanatory. Fill in the date of the reconnaissance/report. Cause of ignition: lightning, natural, unknown, human.

2. Write in the name of the Fire Behavior Weather Specialist (FBWS) and the assigned trainee. The lead monitor must be at least a fully qualified FBWS II. The trainee monitor must have successfully completed the training course prerequisites and may use this assignment to fulfill the job experience prerequisites.

3. 3a--FIRE SIZE - Calculate in acres using a dot grid, perimeter tables, etc.
3b--Enter the date and time when the fire size was determined.
3c--Enter the highest and lowest elevations at which the fire has burned.
3d--Give legals: T (township); R (range); and Sections.

4. VEGETATION/FUEL TYPES - Identify for area burned. Use a conventional identification system (i.e., NFFL or NFDRS, etc.).

5. MAP - A map must be included with every submission of the FSA. Outline vegetation or fuel model areas both within and around the burn. Completely label and date every map. Use a large arrow to indicate where the fastest rate of spread was observed. Label location of fire weather/behavior data readings that are recorded on the Fire Data Sheet (page 4) with labels A, B, C, D, etc. on both the map and the data sheet.

6. FIRE ACTIVITY - The intent of this section is to summarize today's "observed" fire activity.

6a--Relative Intensity - Use an adjective rating system; i.e., smoldering, creeping, running, torching, crowning, spotting. Describe for all fuel models present.

6b--Daily Fire Growth - Calculate from fire position/time maps and/or by fire behavior system analysis, using observed weather data. This rate of growth should be expressed as acres/day.

6c--Daily Fastest R.O.S. - Record the fastest rate of spread (linear) observed during the entire day's fire activity (chains/hour). Circle the direction of the fire spread (heading, backing,flanking). Also list the compass direction of spread; i.e., NS, S, NNE. Indicate the fuel model through which the fastest R.O.S. was observed.

7. PROJECTED FIRE ACTIVITY - The intent of this section is to have the fire monitor(s) observe and employ the key variables that influence fire behavior and to predict fire activity.

7a--Fire Behavior System (NFFL) Fuel Models in Direction of Spread - Discuss the predicted fire activity in the various fuel models that are going to be involved as the fire spreads; this will require mapped locations of the fuel models present in all directions of fire spread.

7b--Factors that Affect Fire Spread - Describe barriers and deterrents to fire spread, as well as factors that are likely to increase the spread; i.e., barren sites, fuel changes, local weather patterns, etc.

7c--Forecasted Weather - Obtain long range (1-5 day) forecast, if possible. Specify the type of forecast received. Request spot weather forecasts for time periods of known or expected significant fire danger and for times of any locally observed changes in winds, etc. at the fire site which could increase fire activity. Attach the weather forecast form if received.

7d--Predicted Fire Behavior - Predict fire activity for the next 1 to 5 days (specify the number of days), given current fire position and forecasted weather. Predict the acreage growth expected in the next 24 hours and display the expected growth and fire shape on the map.

8. THREATS/CONSTRAINTS - *Address threats and constraints identified in the park's Fire* Management Plan. Specify both potential and actual threats.

8a--Life or Property - Briefly describe threats to visitors as well as to fire monitors, *firefighters, etc. Threats to consider are reduced visibility, location of roads, trails, ranger* station buildings, local land ownership other than NPS, etc.

8b--Natural Resources - Briefly summarize threats to rare, threatened, or endangered *species, scenic vistas, water quality, etc.*

8c--Cultural Resources - Identify threats to cultural and/or archaeological resources. Indicate whether the persons responsible for protection/management have been notified.

8d--Management Boundaries - Describe the proximity of the fire to any management boundaries. Do not simply state that there is a boundary and then describe it; indicate how far the fire is from the boundary(ies) and anticipated arrival time, if any.

8e--Threats to Exceed Prescription - Parks must have specific prescriptions for prescribed natural fires. These are specified in the FMP and must contain fire condition indicies and fire behavior parameters (ie; FL, ROS). Indicate if these are likely to be exceeded.

9. SMOKE MOVEMENT - Describe altitudes containing smoke, direction of smoke movement, relative density, color, presence of inversion and time of lifting (if it occurs). If a highly scenic or popular recreational area is being impacted, described the time and extent of visibility reduction. Also estimate the smoke concentration and probable impacts on nearby towns, cities, or other important targets that are likely to be or are being affected by smoke.

10. FIRE MONITORS' (FIRE BEHAVIOR/WEATHER SPECIALIST) RECOMMENDATIONS

10a--Closures/Evacuations - Advise on closures and/or evacuations; include trails, buildings, roads, recreation or wilderness areas, etc. Also recommend the need for safety signs.

10b--Holding Actions - If fire warrants a holding action to maintain the prescription, provide the justification based on the current situation and predicted fire behavior. Indicate the extent of the proposed action, i.e., natural barriers to be used, length of line to be cut, etc.

10c--Monitoring Frequency - Indicate how often the fire should be monitored on site, given the current and projected conditions. Distinguish between air and ground reconnaissance frequency.

11. SPECIAL CONCERNS OR COMMENTS - Stress the points of concern in the Fire Situation Analysis that only ground monitoring can provide (ie; length of active fire perimeter, number of acres burned, erratic fire behavior, threats to safety, reduced visibility, future monitoring requirements, etc.). Suggested points to address are threats to safety, reduced visibility, future monitoring requirements, or specific local concerns such as land status, etc.

12. NARRATIVE (OPTIONAL) - Use the back of the page (or attach notes) to the FSA to record information that may be of interest and for which space has not been provided.

13. SIGNATURES - Both fire monitors (lead/trainee) contributing to the Part I analysis should sign, date, and time the submission. Refer to the NPS Prescribed Fire Qualifications System Flow Chart and job complexity analysis for appropriate staffing levels. A "no change" signature is optional and can be entered by the lead monitor when and if there are no significant changes in items 6-11 of Part I from the previous day's activities; the use of ths signature block eliminates the need for duplication associated with the completion of this document.

14. The PFM/PBB/FMO has the responsibility for ensuring that the FSA is properly completed each day and must sign that it has been reviewed and is recommended for approval. The line officer is the Superintendent who has the ultimate responsibility for authorizing the appropriate action(s) based upon Part I submissions, including a daily assessment of available suppression resources. The Superintendent signifies acceptance and approval by signing the Daily Decision Record (NPS Form #___).

15. The FMO is responsible for designating a ICSR or ICMR, whichever is most appropriate, to each PNF for contingency actions. A copy of the FSA Part I (and Part II if changed) should be sent to the incident commander (IC) designate daily and, if necessary, this individual can be placed on paid standby. Ideally the designate IC can and should be the PFM OR PBB if s/he is qualified for the IC job function.

16. A Prescribed Natural Fire Data Sheet (page 4) should be included with all "at scene" reconnaissance reports. The hours listed across the top of the form are only suggested data collection times. The actual frequency is dependent upon the fire and information requirements of the NPS unit. Actual monitoring time for each data collection point is recorded after the date. The * at 1400 hours indicates the recommended time (depending on a unit's time zone and specific needs) at which FSA data should be called into Fire Dispatch or to the park "Fire Contact". It is a critical fire data collection time.

Location identifiers (use letters to identify points) on the data sheet; make sure these data labels correspond with points identified on the map.

The data sheet has space for listing prescription elements. Include park-specific PNF prescription(s) for as many fuel models as applicable; three prescriptions can be listed in the space provided below the fuel model numbers (Fire Behavior System-NFFL).

A photographic log may be required in some situations.

INSTRUCTIONS FOR PART II-- (HOLDING/SUPPRESSION CONSIDERATIONS)

17. FIRE SITUATION - Briefly describe the single or multiple fire problems, smoke problems, fire load or other situations . Discuss the availability of suppression forces, if they are indicated as needed, and their location if known.

18. ALTERNATIVE ACTIONS - Describe the holding and/or fire suppression alternatives which may be used to manage the fire situation. This discussion can include no actions needed, specified holding actions, or a combination of control, confine, contain strategies if suppression is called for. Any of these may involve only a portion of the fire perimeter.

19. DECISION MATRIX - A narrative analysis of the effects of each alternative management action on park values. In essence, you are analyzing the effect of the action and not the effect of the fire. Address only those values which are critical to the selection of a desired alternative. Be brief and to the point!!

20. MANAGEMENT CONSTRAINTS - Refer to the park Fire Management Plan for the general management constraints (e.g., public safety protection of features and resources, restoration of natural processes, etc.). These may be listed on a separate sheet or simply referenced to the park Fire Management Plan.

21. PROJECTED HOLDING/SUPPRESSION NEEDS/COSTS - Estimate needs and costs of the holding or suppression action (e.g., contain, confine, control) for each alternative. List by broad category, general considerations such as aircraft costs, personal services, major equipment acquisition, etc.

22. PREFERRED ALTERNATIVE AND RATIONALE - The selection of the preferred alternative will be based upon a relative weighting of management constraints from the fire plan and the impacts of the various alternatives. The objective of this process is to manage the fire problem with the least impact on park natural and cultural resources. This determination requires those responsible for making such decisions to undertake and document a project review similar to that required under NEPA.

23. Signature(s) - of PFM or PBB and others who prepared the FSA.

Reviewed - signature of any designate discussed in fire management plan.

Approval-the Superintendent must sign the FSA Part II each time it is changed to reflect new management strategy.

NPS - PNF DECISION RECORD

FIRE #	FIRE NAME	INITIALS OF RECOMMENDING OFFICIAL (PFM/PBB/FMO)			APPROVED	DISAPPROVED	SUPERINTENDENTS'S SIGNATURE	DATE
		PNF	WF	O				

NPS-PNF DECISION RECORD--INSTRUCTIONS

Directions: This form must be updated daily and signed by the Superintendent or acting Superintendent when there are any ongoing prescribed natural fires in the park. It is intended to provide management with a status report of all active PNFs being managed daily via Part I *of the Fire Situation Analysis. Significant changes in management strategy of a PNF are reflected* in Part II of the FSA which must be signed by the Superintendent on the FSA document itself. Management of wildfires is done via an approved EFSA.

Status must be indicated as: prescribed natural fire (PNF), wildfire (WF), out (O). If a fire has been declared a wildfire, it may be removed from the list if desired after being noted for one day. PNFs that have gone out may be removed from the list if desired after being noted for one day.

Based upon existing and forecasted fire weather, all the fires listed except those noted as wildfires are anticipated to remain within prescription in the forecast period of 24 hours. Local or regional personnel and resources are available to monitor the fires or suppress those fires which may exceed prescription, in accordance with the guidelines for fire suppression found in the area Fire Management Plan.

3. Instructions for Completing the Prescribed Fire Unit Plan

See the following pages.

Interagency
Prescribed Natural Fire
Burn Plan

1. **General Information (location map, fuel types, etc.,)**

   The intent of this section is to provide simple applicable information about the location within the management unit and information related to the ignition point and area where the fire is expected to burn.

2. **Fire Projections (expected and severe weather events)**

   Some form of analysis is needed to project fire size over time, whether it is FARSITE, RERAP, BEHAVE or other newer technology as it becomes available.

3. **Identification of Maximum Manageable Area (MMA)**

   The identification of the maximum manageable area should include input from staff specialists as applicable. With larger fires that are expected to cover large areas it is recommended that an interdisciplinary approach be taken, so that appropriate interests are represented and concerns are known. As each interest identifies its concerns a compromise is reached where all disciplines can eventually agree to the area where the fire will spread. For areas where rapid fire growth is the norm, and duration may be short, these areas may need to be established before the ignitions.

4. **Narrative risk assessment which may consider the following items:**

   Within this section there should be a list of items that the management unit must consider when authorizing a natural fire that may burn for many days or months. The list can be extensive or less so, depending on the management unit, the fire, but should include some of the following:

   - firefighter safety
   - fire behavior
   - fire history
   - threat to life and property
   - smoke management concerns and dispersion corridors
   - resources available for current and expected needs
   - effects on visitors, users, cooperators, local communities, etc..,
   - consideration of effect on other fire management activities
   - weather/season/drought prognosis
   - significant natural/cultural resource considerations

5. **Monitoring Actions**

The intent of this topic is to determine the intensity of monitoring needed and the time frame with which the fire is observed. This may also document when and why a fire will go from aerial reconnaissance to on the ground monitoring teams.

6. **Holding Actions**

This section may act as a place to identify known holding actions that may be expected. If a weak section on the MMA will require line construction and burning out, and the mop-up and patrol, it should be mentioned here with a plan as to how and when this may be done. When executing these actions, it is recommended that clear direction and an action plan be developed to guide the tactical deployment of personnel needed to accomplish the objectives of the holding action.

7. **Estimates of qualified resource needs to manage the fire**

Described the number, type, and qualifications of fire management resources (overhead, crews, engines, helicopters, etc) which will be needed to implement the monitoring and holding.

8. **Cost estimate to manage the fire/Are adequate funds available?**

Calculate a total cost estimate for the managing of the PNF, separating costs for planning, monitoring, holding and evaluation.

9. **Contingency actions**

Described the conditions which would result in conversion of the PNF to a wildfire, which may include exceedance of prescription parameters or escape of the fire beyond the MMA. Specify that the EFSA will be prepared which will evaluate a series of suppression options under an appropriate suppression response. Describe who would assume command of the wildfire. Describe how the resources assigned to the PNF would be organized to support the suppression effort.

10. **Information plan**

Describe the provisions to keep the public, cooperators, users, and internal personnel informed of the PNF and its subsequent growth.

11. **Decision criteria for routine revalidation**

Describe the process and criteria by which the PNF is evaluated to determine if the fire is still burning within prescription parameters and is predicted to remain so for the next 24 hours.

12. Evaluation Process

Describe how the fire will be evaluated from both a managerial and resource effect perspective. This may include financial, operational, ecological or similar type assessments.

13. Summary statement

Describe the relationship of the risk assessment and fire projections to the implementation actions and MMA. This summary statement combines the elements of the PNF Burn Plan and provides a rationale for establishing the MMA based on mitigation of identified risks.

14. Required Signatures

INTERAGENCY
PRESCRIBED NATURAL FIRE
BURN PLAN

1. General Inormation

ADMINISTRATIVE UNIT:_____
FIRE NAME:_____ADMINISTRATIVE#:_____
START DATE/TIME:_____DISCOVERY DATE/TIME:_____
PRESENT SIZE:_____
Location
Legal/lat/long//UTM: _____
Geographical Location:_____
Fuel Model:_____
Vegetation Type:_____
Slope:_____Aspect:_____Elevation:_____

2. Fire Projections and Map:
Projected fire area under expected weather conditions:_____acres on:_____
Projected fire area under severe weather conditions:_____acres on:_____

3. Maximum Manageable Area (MMA). See attached map _____acres.

4. Risk Assessment Considerations
a. Threat to MMA boundary

b. Threat to public use and firefighter safety

c. Significant natural/cultural resource considerations

d. Smoke dispersion and effects

e. Weather/season/drought prognosis

f. Other

MANAGEMENT IGNITED PRESCRIBED FIRE NOTIFICATION LIST

E-mail via Ccmail as many of these people or agencies as possible. It can be done as a group mailing, and is **far more** efficient.

a. USFS dispatch, Santa Fe NF 438-7800
FAX map daily. 438-7875

b. Ben Jacobs, PFSM Coordinator, Boise. . . . . .(208) 387-5219

c. System Support Office (Ben Espinoza) 988-6113

d. Regional FMO (Dan O'Brien). . . . . (303) 969-2449
FAX . . . . . (303) 969-2037

e. Los Alamos Police Department 662-8222

f. Los Alamos County Fire Department (Station 7) 667-7080

g. Los Alamos Emergency Coordination Center. 667-7080
Ed Nettles, FAX:. 667-7770
REQUEST THAT THEY NOTIFY OTHER LANL DIVISION AND TEAMS!

h. Entrance Station 672-1004

i. Visitor Center . . . . . 672-3861 x 517

j. BIA, 8 Northern Pueblos (Jerome Jenkins) 1-505-753-1455

k. Bernalillo, State Forestry (Kim Kostelnick) 1-505-867-2334

l. State Police 827-9126

m. Santa Fe New Mexican 986-3030

n. LANL Security 667-4437

o. Los Alamos Monitor 662-4185

p. New Mexico Air Quality (Filiberto Dominquez). . . . . .827-1494 x 1507

q. Radio KRSN 662-4342

r. Baca Land & Cattle. . . . . 662-9520 or 662-9513

4. Burn Evaluation Summary, Management-Ignited Prescribed Fire

Burn Unit_____ Size_____ Date(s) of Burn_____

GOALS: _____

_____

	PREDICTED (PREBURN)	ACTUAL (POST)	MET?
BURN OBJECTIVES:			
PRESCRIPTION:			
temperature			
rel. humidity			
wind direction			
wind speed			
fuel moist 1hr			
10hr			
100hr			
1000hr			
woody			
herb			
rate of spread			
flame length			
scorch height			
burn severity			
COSTS:			
planning			
preparation			
burning			
holding			
mopup/patrol			
monitoring			
evaluation			
cost/acre			
MONITORING AND EVALUATION METHODS:			
fuel inventory			
tree change			
shrub change			
grass change			
herb change			
burn severity			
scorch height			
weather			
fire behavior			

GENERAL OBSERVATIONS (POSTBURN NARRATIVE)

RECOMMENDATIONS

I. Prescriptions

1. Management Ignited Prescribed Fire.

HEAD FIRES				
FUEL MODELS[1]	2	8	9	10
Vegetation	Montane Grasslands	Mixed (MC) Conifer	Ponderosa Pine Piñon-juniper Woodland	MC
Air Temperature (°F)	35-75	40-75	40-80	35-75
Relative Humidity (%)	10-30	12-35	12-35	12-35
Wind Speed (mph,	0-15	0-10	0-10	0-8
eye-level)	2-10	2-10	2-10	2-10
1 hr. TL Fuel Moisture	6-10	5-10	5-12	6-12
10 hr. TL Fuel Moisture	5-60	-	-	5-60
Live Fuel Moisture				
Rate of Spread (ch/hr)	2-120	1-10	2-30	2-10
Heat/Unit Area (BTU/ft²)	80-100	200-700	200-700	220-700
Flame Length (ft)	1-6	1-6	1-8	1-6

BACKING FIRES				
FUEL MODELS[1]	2	8	9	10
Air Temperature (°F)	40-80	45-75	40-85	40-75
Relative Humidity (%)	12-30	12-30	12-30	12-30
Wind Speed (mph,	0-8	0-8	0-8	0-8
eye-level)	2-10	2-10	2-10	2-10
1 hr. TL Fuel Moisture	4-10	4-10	4-10	4-10
10 hr. TL Fuel Moisture	-	6-20	6-20	06-20
1000 hr. TL Fuel Moisture	8-18	8-18	8-18	8-18
Rate of Spread (ch/hr)	0.5-3	0.5-2	0.5-2	0.5-2
Heat/Unit Area (BTU/ft²)	400-600	300-800	300-750	350-800
Flame Length (ft)	0.5-2	1-3	1-3	1-3.5

[1]National Forest Fire Laboratory, Missoula, Montana.

2. Prescribed Natural Fire

The following prescription applies to natural ignitions approved for PNF status in the Bandelier Prescribed Natural Fire Management Zone:

NFDRS Fuel Model: C (Weather Station: Tower 290801)
NFFL Fuel Models: 2/9

PRESCRIPTION (as of 06-30-97):

1) Three-day running mean ERC: <44; AND

2) Smoke dispersal is less than "good" for 3 or more days; OR

3) "Sustained" midflame wind speeds are in excess of 25 mph, exceipt for PNFs located in the piñon-juniper zone where sustained wind speeds can exceed 50 mph if long-range spotting is not a problem.

NOTE: These prescription parameters may be refined based on new data and analytic tools (such as PCSEASON and RERAP). Modifications will be recorded directly on this page, date and signed by the FMO, Chief of Resource Management and park Superintendent.

J. Research and Monitoring Plan

See Fire Monitoring Handbook (on file).

FMH DATA ANALYSIS SUMMARY

Park:_____ **Date:**___/___/___
Name:_____ Analyzer (RMS/FMO)

Briefly describe what management concerns prescribed fire will be used to treat:

_____

_____

_____

References Used:_____

Resource Management/Burn Objectives:

(1) _____

-2 _____

(3) _____

References Used to Support Stated Objectives:_____

Monitoring Type (one only per data analysis): **Burn / Control** (Circle One)

Monitoring Type Code	*Monitoring Type Name*	*Plot Numbers*

Monitoring Type Variables:	**Objective-dependent Variables:**
(1)	(1)
(2)	(2)
(3)	(3)
(4)	(4)

Note: monitoring type and objective-dependent variables may be identical

Variables used for Analysis (options are listed on page 3):

_____

_____

_____

Initial Interpretation of the Minimum Plot Calculation:

_____

_____

_____

Actions to be Taken Based on this Data Analysis:

_____

_____

_____

Additional Analyses Needed:

_____

_____

_____

Initial Interpretation of the Data:

_____

_____

_____

Were Objectives Met? (see page 1 for objectives--describe below in terms of the range of acceptability)

(1) Y/N/Unk _____
(2) Y/N/Unk _____
(3) Y/N/Unk _____

Actions to be Taken Based on this Data Analysis:

_____

_____

_____

Additional Analyses Needed:

_____

_____

_____

COMPUTERIZED FMH DATA ANALYSIS OPTIONS

Herbaceous	*Brush*
# transect hits (% frequency) by species	brush density by species
% relative cover by species or substrate	native brush density by species
% native species	non-native brush density by species
% non-native species	brush age by species
% perennial/annual native species	native brush age by species
% perennial/annual non-native species	non-native brush age by species
% dead perennials/annuals	brush density by age and species
live or dead herbaceous plant height	native brush density by age and species
live or dead herbaceous plant density	non-native brush density by age and species
live or dead native herbaceous plant density	
live or dead non-native herbaceous plant density	

Overstory Tree	*Pole-size Tree*
live or dead overstory tree density by species	live or dead pole tree density by species
live or dead overstory tree density by dbh	live or dead pole tree density by height
live or dead overstory tree density by dbh and species	live or dead pole tree density height and species

Seedling Tree	*Postburn*
seedling tree density by species	average scorch height
seedling tree density by height	average char height
seedling tree density by height and species	% of crown scorched
	average burn severity

Fuels	
total fuel load	fuel load in 1-hr size class
duff fuel load	fuel load in 10-hr size class
duff depth	fuel load in 100-hr size class
litter depth	fuel load in 1000-hr size classes
total woody fuel load	fuel load in 3+S class or +R class