



# WILDLAND FIRE SITUATION ANALYSIS

Wildland Fire Situation Analysis (WFSA) is a decision-making process in which the Agency Administrator or representative describes the situation, establishes objectives and constraints for the management of the fire, compares multiple strategic wildland fire management alternatives, evaluates the expected effects of the alternatives, selects the preferred alternative, and documents the decision. The format and level of detail required is dependent on the specific incident and it's complexity. The key is to document the decision.

## WFSA INITIATION

**FIRE NAME**

**JURISDICTION(S)**

**DATE AND TIME INITIATED**

|   |
|---|
| Cerro Grande                              |
| NPS, near SFNF-Espanola District Boundary |
| 5/5/00 1700                               |

## WFSA COMPLETION/FINAL REVIEW

**THE SELECTED ALTERNATIVE ACHIEVED DESIRED OBJECTIVES ON (DATE/TIME):**

**THE SELECTED ALTERNATIVE DID NOT ACHIEVE THE DESIRED OBJECTIVES AND A NEW WFSA WAS PREPARED ON (DATE/TIME):**

**AGENCY ADMINISTRATOR OR REPRESENTATIVE SIGNATURE:**

|   |
|---|
|   |
| Fire has escaped established perimeters and has exceeded capabilities of current fire mgt. organization. A Type 1 team has been ordered. A new WFSA is in process of being prepared |
| <i>[Signature]</i>  |

5/7/2000 1625

# WFSA INSTRUCTIONS

## Section I. WFSA Information Page

*The Agency Administrator completes this page.*

- I.A. Jurisdiction(s):** Assign the agency that have or could have fire protection responsibility, e.g., USFWS, Forest Service, BLM, etc.
- I.B. Geographic Area:** Assign the recognized "Geographic Coordination Area" in which the fire is located, e.g., Northwest, Northern Rockies, etc.
- I.C. Unit:** Designate the local administrative unit, e.g., Hart Mountain Refuge Area, Flathead Indian Reservation, etc.
- I.D. WFSA #:** Identify the number assigned to the most recent WFSA for this fire.
- I.E. Fire Name:** Self-explanatory.
- I.F. Incident Number:** Identify the agency number assigned to the fire, e.g., BOD 296, BNF 001.
- I.G. Accounting Code:** Insert the local unit's accounting code.
- I.H. Date/Time Prepared:** Self-explanatory.
- I.I. Attachments:** Check here to designate attachments used in the completion of the WFSA. "Other" could include data or models used in the development of the WFSA. Briefly describe the "other" items used.

# I. WILDLAND FIRE SITUATION ANALYSIS

**A. JURISDICTION(S):**

National Park Service

**B. GEOGRAPHIC AREA:**

Southwest Coordination Center  
Santa Fe Zone

**B. UNIT(S):**

Bandelier Nat'l Monument

**D. WFS#:**

1

**E. FIRE NAME:**

Cerro Grande

**F. INCIDENT #:**

NM-BAP-~~0000~~0009

**F. ACCOUNTING CODE:**

7128 - 0015 - 249

**G. DATE/TIME PREPARED:**

5/5/00

16:30 - 21:15

**H. ATTACHMENTS:**

- COMPLEXITY MATRIX/ANALYSIS<sup>1</sup>
- RISK ASSESSMENT<sup>1</sup>
- PROBABILITY OF SUCCESS<sup>1</sup>
- CONSEQUENCES OF FAILURE<sup>1</sup>
- MAPS<sup>1</sup>
- DECISION TREE<sup>2</sup>
- FIRE BEHAVIOR PROJECTIONS<sup>1</sup>
- CALCULATIONS OF RESOURCE REQUIREMENTS<sup>1</sup>
- OTHER (SPECIFY)

<sup>1</sup> Required

<sup>2</sup> Required by the USFS

## **Section II. Objectives and Constraints**

*The Agency Administrator completes this page.*

**II.A. Objectives: Specify criteria that should be considered in the development of alternatives.**

**Safety objectives for firefighters, aviation, and public must receive the highest priority, Suppression objectives must relate to resource management objectives in the unit resource management plan.**

**Economic objectives could include closure of all portions of an area, thus impacting the public, or impacts to transportation, communication and resource values.**

**Environmental objectives could include management objectives for airshed, water quality, wildlife, etc.**

**Social objectives could include any local attitudes toward fire or smoke that might affect decisions on the fire, safety, etc.**

**Other objectives might include legal or administrative constraints which would have to be considered in the analysis of the fire situation, such as the need to keep the fire off other agency lands, etc.**

**II.B. Constraints: List constraints on wildland fire action. These could include constraints to designated wilderness, wilderness study areas,**

**environmentally or culturally sensitive areas, irreparable damage to resources or smoke management/air quality concerns. Economic constraints such as public and Agency cost could be considered here.**

## II. OBJECTIVES AND CONSTRAINTS

### A. OBJECTIVES (must be specific and measurable):

1. **SAFETY:**  
**Public** Provide for safety and well being of firefighters and the public. Insure the public receives no injuries.  
**Firefighter** Insure no lost time injuries to fire personnel.
2. **ECONOMIC:** Implement fire management actions in a cost effective manner.
3. **ENVIRONMENTAL:** No adverse impacts to T&E species and cultural resources. Minimize impacts to species of concern.
4. **SOCIAL:** Keep public informed to foster understanding and support for fire management actions taken.
5. **OTHER:**
  - a. Limit fire spread to park boundary to the N, NW, NE, + E
  - b. Keep fire out of Water Canyon
  - c. Limit fire spread to the south to SR4

- B. CONSTRAINTS:** Retardant drops and foam permitted only if the fire poses a serious threat to cross the park's eastern boundary onto SFNF <sup>or Baco</sup> lands.
- Archeologist present during all ground disturbing activities.
- Minimize falling of snags and live trees greater than 20" dbh.

## **Section III. Alternatives**

The FIRE MANAGER/and or INCIDENT COMMANDER complete(s) this page.

- III.A. Wildland Fire Management Strategy:** Briefly describe the general wildland fire strategies for each alternative. Alternatives must meet resource management plan objectives.
- III.B. Narrative:** Briefly describe each alternative with geographic names, locations, etc., that would be used when implementing a wildland fire strategy. For example, "contain within the Starvation Meadows' watershed by the first burning period".
- III.C. Resources Needed:** Resources listed must be reasonable to accomplish the tasks described in Section III.B. It is critical to also look at the reality of the availability of these needed resources.
- III.D. Estimated Final Fire Size:** Estimated final size for each alternative at time of containment.
- III.E. Estimated Contain/Control Date:** Estimates for each alternative shall be made based on predicted weather, fire behavior, resource availability and the effects of wildland fire management efforts.
- III.F. Cost:** Estimate all fire costs for each alternative. Consider mopup, rehabilitation, and other costs as necessary.
- III.G. Risk Assessment: Probability of success/Consequences of failure:** Describe probability as a % and associated consequences for success and failure. Develop this information from models, practical experience or other acceptable means. Consequences described will include fire size, days to contain, days to control, costs and other information such as park closures and effect on critical habitat. Include fire behavior and long-term fire weather forecasts to derive this information.
- III.H. Complexity:** Assign the complexity rating calculated in the Guide for Assessing Fire Complexity.
- III.I. Maps:** A map for each alternative must be prepared. The map shall be based on the "Probability of success/Consequences of Failure" and include other relative information.

### III. ALTERNATIVES

|  | A  | B   | C   |
|--|--|---|---|
| <b>A. WILDLAND FIRE STRATEGY:</b>          | Full suppression through direct attack   | Full suppression through indirect attack at main east fire road and burn unit fire line to the north.   | Full suppression through indirect attack at original BUI boundary |
| <b>B. NARRATIVE:</b>                       | Build direct fireline on the perimeter that is currently not contained. This would be 1 mile of line constructed through heavy dead & down mixed conifer                         | The existing firelines would be utilized as control lines to burn out from. The stop over on the east perimeter will be controlled w/ direct line                                   |   |
| <b>C. RESOURCES NEEDED:</b>                |  |   |   |
| <b>HANDCREWS</b>                           | 2 20-person  | 2 20-person   |   |
| <b>ENGINES</b>                             | 1 Type 6   | 3 Type 6  |   |
| <b>DOZERS</b>                              | 0  | 0   |   |
| <b>AIRTANKERS</b>                          | 0  | 0   |   |
| <b>HELICOPTERS</b>                         | 1  | 1   |   |
| <b>D. ESTIMATED FINAL FIRE SIZE:</b>       | <del>700</del> 500   | 910   |   |
| <b>E. ESTIMATED CONTAIN/CONTROL DATE</b>   | contain 1800 5/7<br>control 1800 5/10  | contain 1800 5/7<br>control 1800 5/10   |   |
| <b>F. COSTS:</b>                           | \$ 52,000  | \$ 68,000   |   |
| <b>G. RISK ASSESSMENT:</b>                 |  |   |   |
| <b>PROBABILITY OF SUCCESS/</b>             | Probability of success is high. with the two crews and a day of preparation the operation should go safely and smoothly. Failure will result in additional acreage (~300 acres). | Probability of success is threatened by exposing crews to understory line in heavy dead & down. Resource damage will also result as firelines will be cut and dug into mineral soil |   |
| <b>CONSEQUENCES OF FAILURE</b>             |  |   |   |
| <b>H. COMPLEXITY:</b>                      | Moderate   | Moderate  |   |
| <b>I. ATTACH MAPS FOR EACH ALTERNATIVE</b> |  |   |   |

## **Section IV. Evaluation of Alternatives**

The Agency Administrator(s), FMO and/or Incident Commander(s) completes this page.

**IV.A. Evaluation Process:** Conduct an analysis for each element of each objective and each alternative. Objective shall match those identified in section II.A. Use the best estimates available and quantify whenever possible. Provide ratings for each alternative and corresponding objective element. Fire effects may be negative, cause no change or may be positive. Examples are: 1) a system which employs a "-" for negative effect, a "0" for no change, and a "+" for positive effect; 2) a system which uses a numeric factor for importance of the consideration (soils, watershed, political, etc.) and assigns values (such as -1 to +1, -100 to +100, etc.) to each consideration, then arrives at a weighted average. If you have the ability to estimate dollar amounts for natural resource and cultural values this data is preferred. Use those methods which are most useful to managers and most appropriate for the situation and agency. To be able to evaluate positive fire effects, the area must be included in the resource management plan and be consistent with prescriptions and objectives of the Fire Management Plan.

**Sum Of Economic Values:** Calculate for each element the net effect of the rating system used for each alternative. This could include the balance of: pluses (+) and minuses (-), numerical rating (-3 and +3), or natural and cultural resource values in dollar amounts. (Again resource benefits may be used as part of the analysis process when the wildland fire is within a prescription consistent with approved Fire Management Plans and in support of the unit's Resource Management Plan.)

## IV. EVALUATION OF ALTERNATIVES

| A. EVALUATION PROCESS              | A  | B  | C |
|------------------------------------|----|----|---|
| <b><i>SAFETY</i></b>               |    |    |   |
| Firefighter                        | -3 | 0  |   |
| Aviation                           | -2 | -2 |   |
| Public                             | -2 | -3 |   |
| <b>Sum of Safety Values</b>        |    |    |   |
| <b><i>ECONOMIC</i></b>             |    |    |   |
| Forage N/A                         |    |    |   |
| Improvements                       | 0  | 0  |   |
| Recreation N/A                     |    |    |   |
| Timber N/A                         |    |    |   |
| Water                              | -1 | 0  |   |
| Wilderness N/A                     |    |    |   |
| Wildlife                           | +1 | +3 |   |
| Other (specify)                    |    |    |   |
| <b>Sum of Economic Values</b>      |    |    |   |
| <b><i>ENVIRONMENTAL</i></b>        |    |    |   |
| Air                                | -3 | -2 |   |
| Visual                             | 0  | 0  |   |
| Fuels                              | +2 | +4 |   |
| T & E Species                      | +0 | 0  |   |
| Other (specify)                    |    |    |   |
| <b>Sum of Environmental Values</b> |    |    |   |
| <b><i>SOCIAL</i></b>               |    |    |   |
| Employment                         |    |    |   |
| Public Concern                     | -3 | -2 |   |
| Cultural                           | 0  | 0  |   |
| Other (Specify)                    |    |    |   |
| <b>Sum of Social Values</b>        |    |    |   |
| <b><i>OTHER</i></b>                |    |    |   |
|                                    |    |    |   |

-14

-2

## **Section V. Analysis Summary**

The Agency Administrator(s), FMO and/or Incident Commander(s) complete this page.

- V.A. Compliance with Objectives:** Prepare narratives that summarize each alternative's effectiveness in meeting each objective. Alternatives that do not comply with objectives are not acceptable. Narratives could be based on effectiveness and efficiency. For example: "most effective and least efficient", "least effective and most efficient", "or "effective and efficient". Or answers could be based on a two-tiered rating system such as "complies with objective" and "fully complies with or exceeds objective". Use a system that best fits the manager's needs.
- V.B. Pertinent Data:** Data for this section has already been presented and is duplicated here to help the Agency Administrator(s) confirm their selection of an alternative. Final Fire Size is displayed on page three, section III.D. Complexity is calculated in the attachments and displayed on page three, section III.H. Costs are displayed on page three, section III.F. Economic Values have been calculated and displayed on page four. Probability of Success/Consequence of Failure is calculated in the attachments and displayed on page three, section III.G.
- V.C. External and Internal Influences:** Assign information and data occurring at the time the WFSAs are signed. Identify the Preparedness Index (1 through 5) for the National and Geographic levels. If available, indicate the Incident Priority assigned by the MAC group. Designate the Resource Availability status. This information is available at the Geographic Coordination Center and needed to select a viable alternative. Designate "yes" indicating an up-to-date weather forecast has been provided to, and used by, the Agency Administrator(s) to evaluate each alternative. Assign information to the "other" category as needed by the Agency Administrator(s).

## **Section VI. Decision**

Identify the alternative selected. Must have clear and concise rationale for the decision, and a signature with date and time. Agency Administrator(s) signature is mandatory.

## V. ANALYSIS SUMMARY

| ALTERNATIVES                               | A  | B  | C |
|--|--|--|---|
| <b>A. COMPLIANCE WITH OBJECTIVES:</b>      | Acceptable and realistic   | Acceptable and realistic   |   |
| SAFETY                                     | Firefighter safety is less, because of the need to cut hold underlung line             | Firefighter safety, Public safety reduced with fire near the road. |   |
| ECONOMIC                                   | \$19,000 less expensive  | Greatly reduced fuel loads   |   |
| ENVIRONMENTAL                              | environment effects and adverse w/ reduction of benefits + increased soil disturbance. | improved wildlife habitat  |   |
| SOCIAL                                     | Public approval of tactics.  | Air Quality reduced additional two days.                           |   |
| OTHER                                      |  | Interagency approval of option.                                    |   |
| <b>B. PERTINENT DATA:</b>                  |  |  |   |
| FINAL FIRE SIZE                            | 500 ac.  | 910 ac.  |   |
| COMPLEXITY                                 | Moderate   | Moderate   |   |
| COST                                       | \$52,000   | \$68,000   |   |
| RESOURCE VALUES                            | -14  | -2   |   |
| PROBABILITY of SUCCESS                     | <del>High</del> 80%  | <del>High</del> 85%  |   |
| CONSEQUENCES OF FAILURE                    | Threatening <del>to</del> LAMP and Townsite  | Threatening LAMP + Townsite.                                       |   |
| <b>C. EXTERNAL/INTERNAL INFLUENCES:</b>    |  |  |   |
| NATIONAL AND GEOGRAPHIC PREPAREDNESS LEVEL | 3  |  |   |
| INCIDENT PRIORITY                          | N/A  |  |   |
| RESOURCE AVAILABILITY                      | Moderate   |  |   |
| WEATHER FORECAST (LONG-RANGE)              | red continued warm and dry   |  |   |
| FIRE BEHAVIOR PROJECTIONS                  | <del>some</del> continued backing fire down the slopes with some flanking + torching   |  |   |

## VI. DECISION

The selected alternative is: **B**

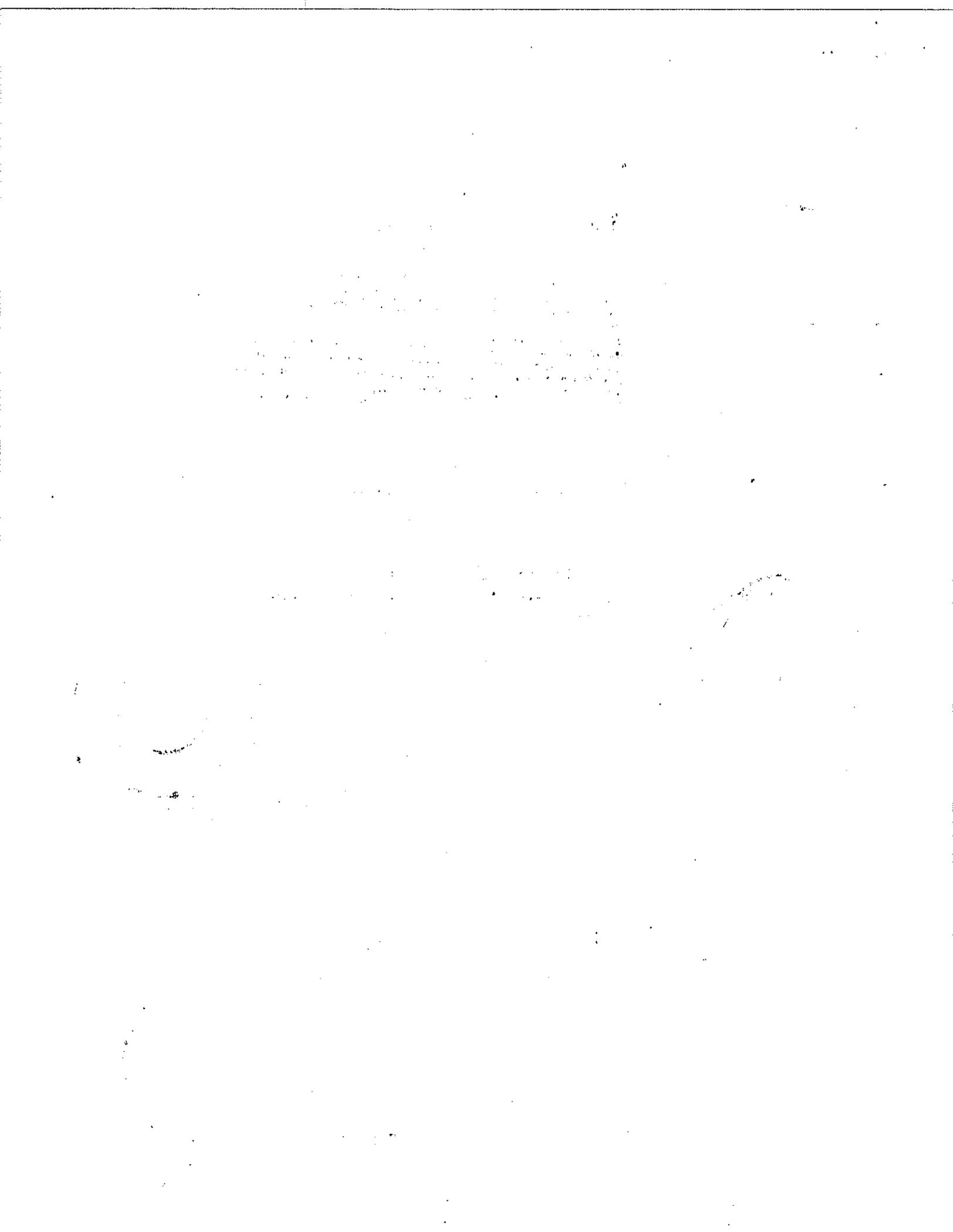
**RATIONALE:** Firefighter safety is higher. Resource impacts are primarily positive.

AGENCY ADMINISTRATOR SIGNATURE

*Chausse Lydial*

DATE/TIME

21:20 May 5, 2000



# **A GUIDE FOR ASSESSING FIRE COMPLEXITY**

## **Use of the Guide:**

- 1. Analyze each element and check the response yes or no.**
- 2. If positive responses exceed, or are equal to, negative responses within any primary factor (A through G), the primary factor should be considered as a positive response.**
- 3. If any three of the primary factors (A through G) are positive response, this indicates the fire situation is or is predicted to be Type I.**
- 4. Factor H should be considered after all above steps. If more than two of these items are answered yes, and three or more of the other primary factors are positive responses, a Type I team should be considered. If the composites of H are negative, and there are fewer than three positive responses in the primary factors (A-G) a Type II team should be considered. If the answers to all questions in H are negative, it may be advisable to allow the existing overhead to continue action on the Fire.**

## **GLOSSARY OF TERMS**

**Potential for blow-up conditions** - Any combination of fuels, weather and topography excessively endangering personnel.

**Threatened and endangered species** - Threat to habitat of such species, or in the case of flora, threat to the species itself.

**Smoke Management** - Any situation which creates a significant public response, such as smoke in a metropolitan area or visual pollution in high-use scenic areas.

**Extended exposure to unusually hazardous line conditions** - Extended burnout or backfire situations, rock slides, cliffs extremely steep terrain, abnormal fuel situations such as frost killed foliage, etc.

**Disputed Fire Management responsibility** - Any wildland fire where responsibility for management if not agreed upon due to lack of agreements or different interpretations, etc.

**Disputed fire policy** - Differing fire policies between suppression agencies when the fire involves multiple ownership is an example.

**Pre-existing controversies** - These may or may not be fire management related. Any controversy drawing public attention to an area may present unusual problems to the fire overhead and local management.

**Have overhead overextended themselves mentally or physically** -

This is a critical item that requires judgment by the responsible agency. It is difficult to write guidelines for this judgment because of the wide differences between individuals. If, however, the Agency Administrator feels the existing overhead cannot continue to function efficiently and take safe and aggressive action due to mental or physical reasons, assistance is mandatory.

# FIRE COMPLEXITY ANALYSIS

|  |              | Yes/No         |
|--|--------------|----------------|
| <b>A. FIRE BEHAVIOR: Observed or Predicted</b>   |              |                |
| 1. Burning Index (from on-site measurement of weather conditions).<br>Predicted to be above the 90% level using the major fuel model in which the fire is burning. | <u>X</u>     | <u>  </u>      |
| 2. Potential exists for "blowup" conditions (fuel moisture, winds, etc).   | <del>X</del> | <del>X</del> X |
| 3. Crowning, profuse or long-range spotting.   | <u>X</u>     | <u>  </u>      |
| 4. Weather forecast indicating no significant relief or worsening conditions.  | <u>  </u>    | <u>X</u>       |
| Total .....  | <del>2</del> | <del>2</del> 4 |
| <br><b>B. RESOURCES COMMITTED:</b>   |              |                |
| 1. 200 or more personnel assigned.   | <u>  </u>    | <u>X</u>       |
| 2. Three or more divisions.  | <u>  </u>    | <u>X</u>       |
| 3. Wide variety of special support personnel.  | <u>  </u>    | <u>X</u>       |
| 4. Substantial air operation which is not properly staffed.  | <u>  </u>    | <u>X</u>       |
| 5. Majority of initial attack resources committed.   | <u>X</u>     | <u>  </u>      |
| Total .....  | <u>1</u>     | <u>4</u>       |
| <br><b>C. RESOURCES THREATENED:</b>  |              |                |
| 1. Urban interface.  | <u>  </u>    | <u>X</u>       |
| 2. Developments and facilities.  | <u>  </u>    | <u>X</u>       |
| 3. Restricted, threatened or endangered species habitat.   | <u>X</u>     | <u>  </u>      |
| 4. Cultural sites.   | <u>X</u>     | <u>  </u>      |
| 5. Unique natural resources, special designation zones or wilderness.  | <del>X</del> | <u>X</u>       |
| 6. Other special resources.  | <u>  </u>    | <u>X</u>       |
| Total .....  | <u>2</u>     | <u>4</u>       |
| <br><b>D. SAFETY:</b>  |              |                |
| 1. Unusually hazardous fire line conditions.   | <u>  </u>    | <u>X</u>       |
| 2. Serious accidents or fatalities.  | <u>  </u>    | <u>X</u>       |
| 3. Threat to safety of visitors from fire and related operations.  | <u>X</u>     | <u>  </u>      |
| 4. Restrictions and/or closures in effect or being considered.   | <u>  </u>    | <u>X</u>       |
| 5. No night operations in place for safety reasons.  | <u>  </u>    | <u>X</u>       |
| Total .....  | <u>1</u>     | <u>4</u>       |



**E. OWNERSHIP:**

- |  | Yes/No   |
|--|--|
| 1. Fire burning or threatening more than one jurisdiction. | <input checked="" type="checkbox"/> <input type="checkbox"/> |
| 2. Potential for claims (damages).                         | <input type="checkbox"/> <input checked="" type="checkbox"/> |
| 3. Different or conflicting management objectives.         | <input type="checkbox"/> <input checked="" type="checkbox"/> |
| 4. Dispute over fire management responsibility.            | <input type="checkbox"/> <input checked="" type="checkbox"/> |
| 5. Potential for unified command.                          | <input type="checkbox"/> <input checked="" type="checkbox"/> |
| Total .....  | <u>1</u> <u>4</u>  |

**F. EXTERNAL INFLUENCES:**

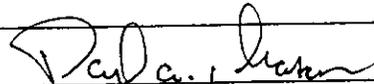
- |   |  |
|---|--|
| 1. Controversial wildland fire management policy. | <input type="checkbox"/> <input checked="" type="checkbox"/> |
| 2. Pre-existing controversies/relationships.      | <input type="checkbox"/> <input checked="" type="checkbox"/> |
| 3. Sensitive media relationships.                 | <input type="checkbox"/> <input checked="" type="checkbox"/> |
| 4. Smoke management problems.                     | <input checked="" type="checkbox"/> <input type="checkbox"/> |
| 5. Sensitive political interests.                 | <input checked="" type="checkbox"/> <input type="checkbox"/> |
| 6. Other external influences.                     | <input type="checkbox"/> <input checked="" type="checkbox"/> |
| Total .....                                       | <u>2</u> <u>4</u>  |

**G. CHANGE IN STRATEGY**

- |  |  |
|--|--|
| 1. Change in strategy (from lower to higher intensity management). | <input type="checkbox"/> <input checked="" type="checkbox"/> |
| 2. Large amounts of unburned fuel within planned perimeter.        | <input checked="" type="checkbox"/> <input type="checkbox"/> |
| 3. WFSA invalid or requires updating.                              | <input type="checkbox"/> <input checked="" type="checkbox"/> |
| Total .....  | <u>1</u> <u>2</u>  |

**H. EXISTING OVERHEAD:**

- |   |  |
|---|--|
| 1. Worked two operational periods without achieving initial objectives. | <input type="checkbox"/> <input checked="" type="checkbox"/> |
| 2. Existing management organization ineffective.                        | <input type="checkbox"/> <input checked="" type="checkbox"/> |
| 3. IMT overextended themselves mentally and/or physically.              | <input type="checkbox"/> <input checked="" type="checkbox"/> |
| 4. Incident actions plans, briefings, etc., missing or poorly prepared. | <input type="checkbox"/> <input checked="" type="checkbox"/> |
| Total .....   | <input type="checkbox"/> <u>4</u>                            |

|           |   |              |
|-----------|---|--------------|
| Signature |  |              |
| Date      | 5/5/00  | Time 8:15 p. |



## **Section VII. Daily Review**

The Agency Administrator(s), or designate complete(s) this page.

The date, time and signature of reviewing officials are reported in each column for each day of the Incident. The status of Preparedness Level, Incident Priority, Resource Availability, Weather Forecast, and WFSA Validity is completed for each day reviewed. Ratings for the Preparedness Level, Incident Priority, Resource Availability, Fire Behavior, and Weather Forecast are addressed on page five, section V.C. Assign a "yes" under "WFSA Valid" to continue use of this WFSA. A "no" indicates this WFSA is no longer valid and another WFSA must be prepared or the original revised.









# SOUTHWEST FIRE USE TRAINING ACADEMY



"Training for the Future"

## Calculation of Resource Requirements:

Friday 5/5

- 2 Handcrews to build  $\frac{1}{2}$  mile of handline in heavy dead & down
- 2 archeologist and 2 fire effect monitors to mitigate negative impacts and record effects
- helicopter module bucket drops & crew logistics

Saturday 5/6

- 2 Handcrews to prep and burnout firelines (east & west) to road 4
- 2 archeologist and 2 fire effects monitors
- helicopter module: bucket drops & crew logistics
- 2 Type VII engines to support firing operations

Sunday 5/7

- 2 Handcrews to complete firing operations and holding
- helicopter module:
- 2 Type VII engines to support holding operations
- water tender

Monday 5/8

- 1 Handcrew to patrol handline
- helicopter module:
- 2 Type VIII engines

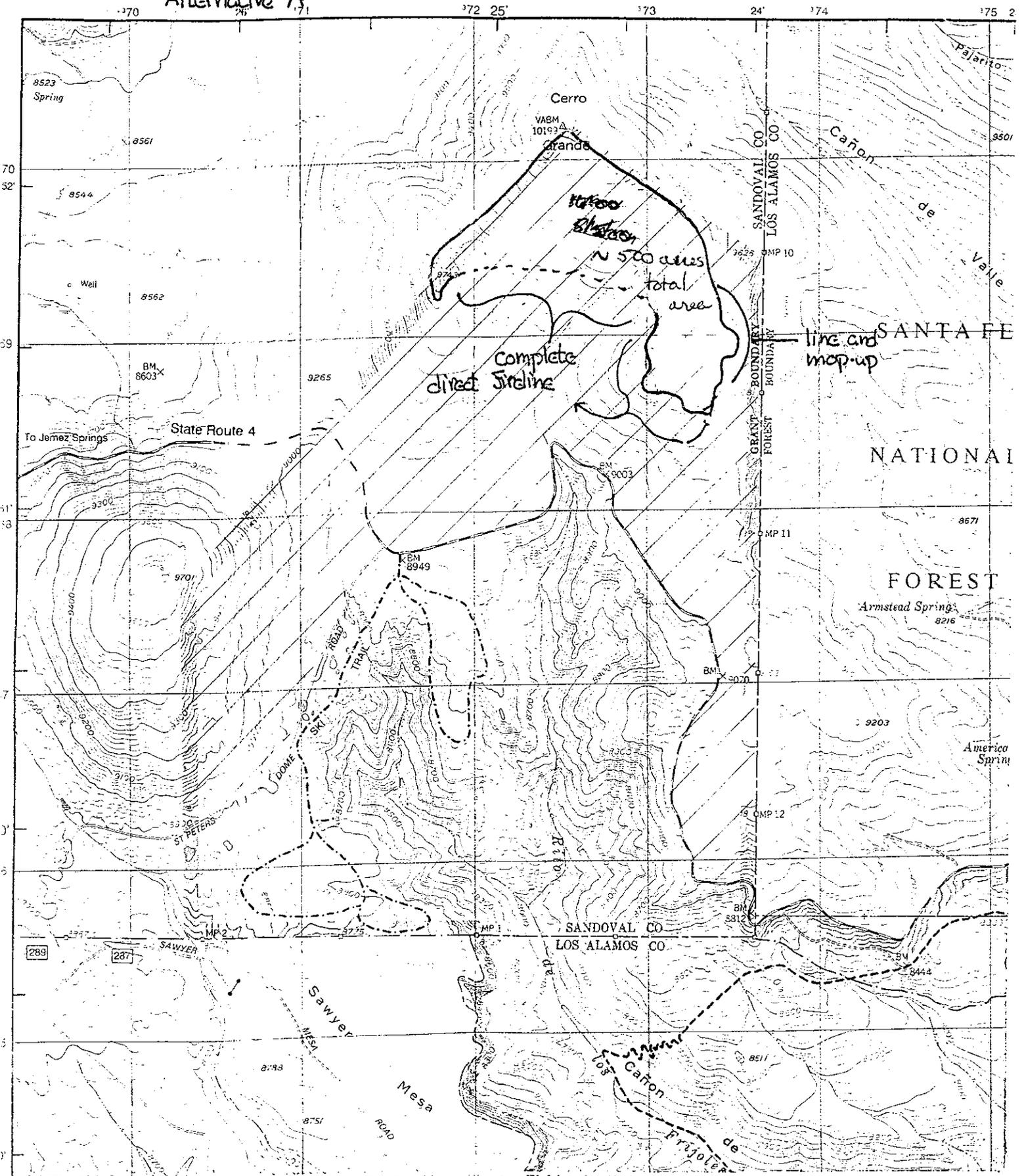


## Fire Behavior Projection

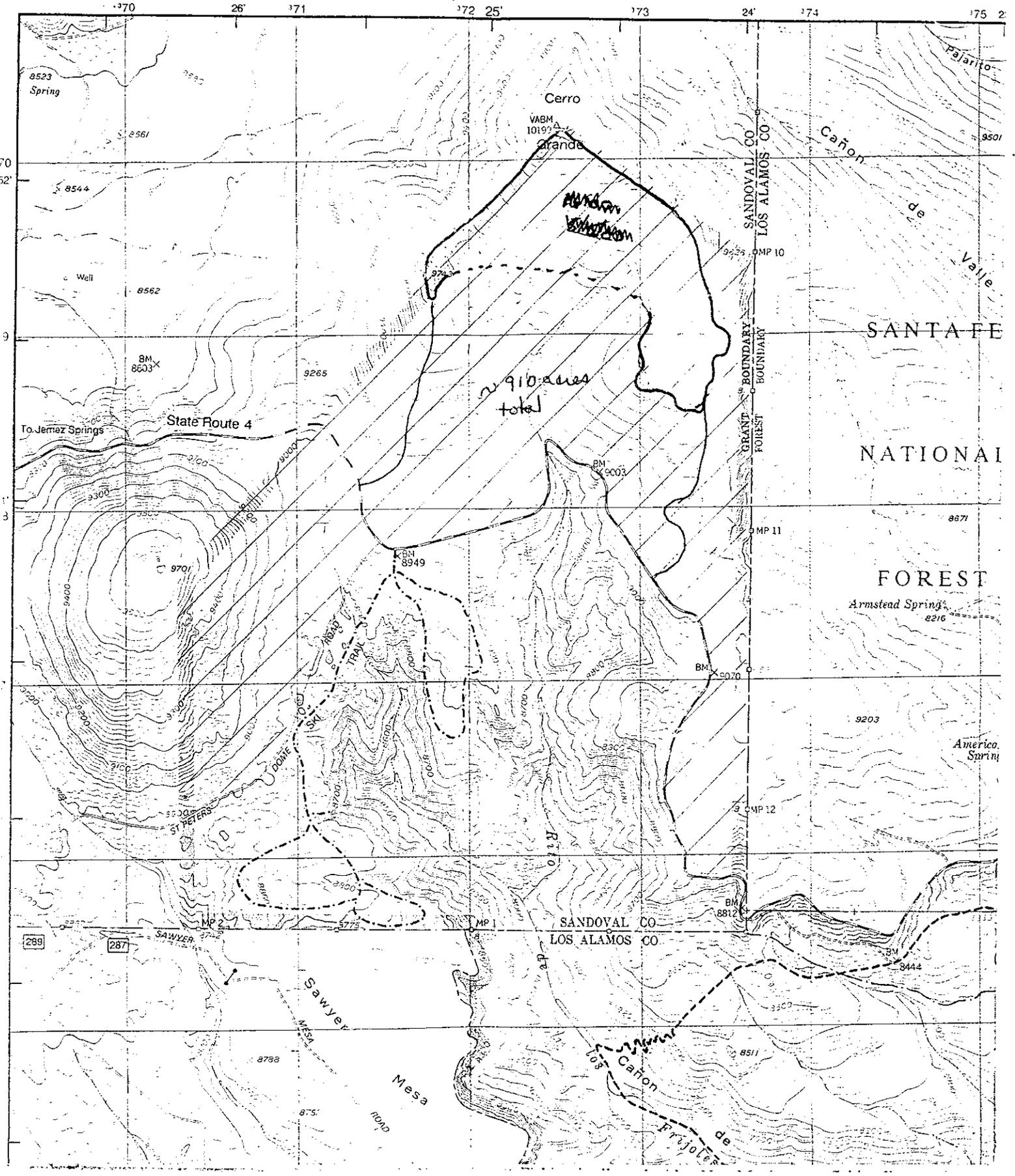
Over the entire fire area the fire will back down slope with minor flanking and head runs as stringers of fire back. Torchers will be likely and common in trees with sufficient ladder fuels or near concentrations of heavy down and dead material. Fire behavior will be similar to previous days with increased behavior with increasing winds. Low RH recovery during nighttime will encourage active fire behavior through the night.



# Alternative A







SANTA FE  
NATIONAL  
FOREST

SANDOVAL CO.  
LOS ALAMOS CO.

170 26' 171 172 25' 173 24' 174 175 2'

70  
52

9

1

3

17200

17200

289

287

2798

875

Cerro Grande

Cañon de Tréjoles

State Route 4

Sawyer Mesa Road

Cañon de Tréjoles

Armstead Spring

America Spring

910 acres total

VABM 10197

BM 8603

BM 8949

BM 9003

BM 8070

BM 8812

BM 8444

9255

9255

9255

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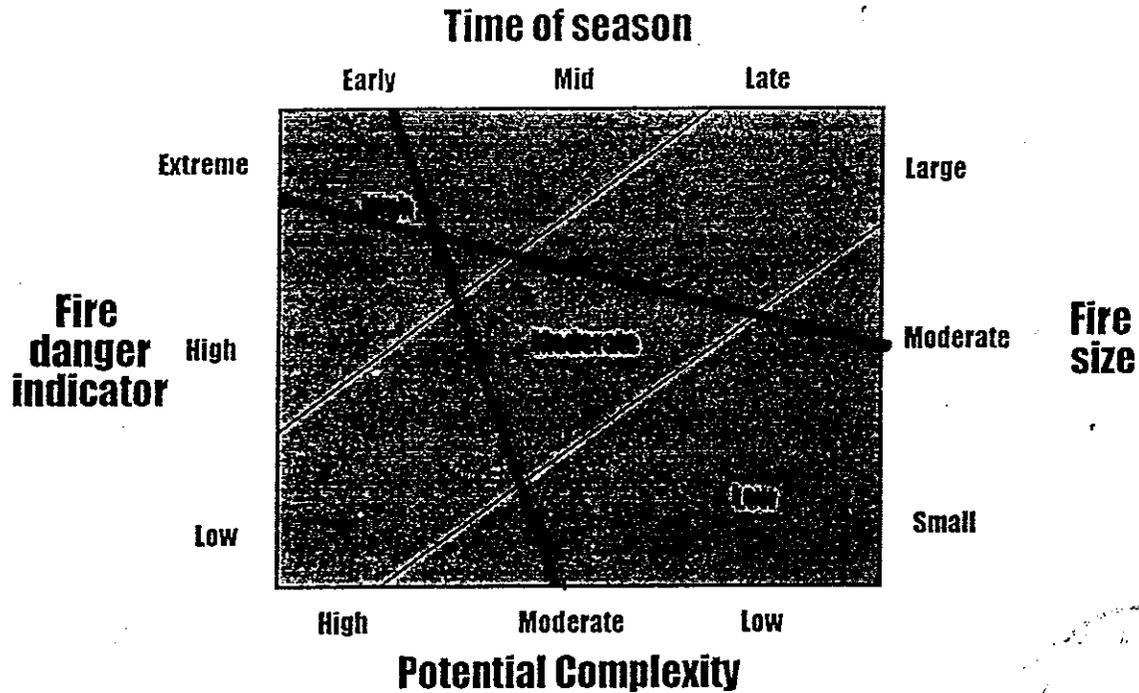
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## Wildland Fire Relative Risk Rating



**Determination of Relative Risk Rating for Wildland Fires. To obtain relative risk, connect lines between the top and bottom variables and the left and right hand variables. Where these lines cross represents the relative risk for this specific fire.**

