

## **Chapter - 12**

### **Developing a Response to Wildfires**

#### **A. Introduction**

This chapter describes the program components required to develop and implement a response to wildfires.

#### **B. Objectives**

All responses to wildfires and wildland fire use fires will be based on firefighter and public safety, cost effectiveness, and values to be protected consistent with resource objectives, regardless of ignition source, by using the Appropriate Management Response (AMR), as described in an approved, National Environmental Protection Agency (NEPA) compliant Fire Management Plan (FMP). Prescribed fires will be implemented through an approved prescribed fire plan and in accordance with the FMP.

A revised flow chart was developed through National Wildfire Coordinating Group (NWCG) to depict the framework in which the *2001 Federal Wildland Fire Management Policy* will be implemented. The chart will identify what action may be taken given an ignition, regardless of source. Management actions depend on the provisions in the approved FMP.

#### **C. Annual Operating Plan**

Agencies and Tribes, in conjunction with their cooperators, will develop a wildland fire Annual Operating Plan (AOP). This plan is documented in the FMP (see Chapter 3). At a minimum the AOP plan must include the following elements.

##### **1. AOP Elements**

- a. Organization
  - Chain-of-command/table of organization for local agencies and cooperators.
  - Notification process/procedures.
  - Roles/responsibilities, etc.
- b. Dispatch Operations
  - Dispatcher roles and responsibilities

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- Procedures for dispatch of resources off unit.
- c. Daily Duties:
- Check-in/out of administrative/fire personnel
  - Intelligence.
  - Weather.
  - Briefings.
  - Verify initial attack (IA) Response Levels.
- d. IA Response Plan
- Preplanned response to an incident.
- Key Elements
    - 1) Identification of geographic Preparedness Level
    - 2) Fire weather
    - 3) Identification of wildfire danger
    - 4) Process for assessing the appropriate response.
    - 5) Identification of resources to respond to a given Fire Management Zone (FMZ) based on fire danger and weather
    - 6) Cooperator support and planned response
    - 7) Communications procedures
- e. Emergency Operations (Fire/Non-fire)
- Key Elements
    - 1) Agency and Regional notification
    - 2) Call-back procedures
    - 3) Evacuation of fire area
    - 4) Closing public/private roads
    - 5) Ordering additional personnel, equipment, aircraft
    - 6) Fire weather watch and red flag warning notification
    - 7) Temporary flight restrictions (TFR)
    - 8) Aircraft pre-accident plan
    - 9) Utility company notification (Power and Gas)
    - 10) Law enforcement dispatching procedures/requirements
    - 11) Hazmat/spill response notification procedures
    - 12) Search and rescue

f. Local Agreements

A list of local agreements should be maintained on file and reviewed annually with the respective cooperators.

g. Communications

- Procedures for assigning/managing local radio frequencies.
- A map of repeater sites/frequencies.
- Instructions for using local dispatch radio consoles, phones, computers, fax machines, paging systems, etc.

h. Weather

- Procedures for processing of weather observations via Weather Information Management System (WIMS).
- Daily posting and briefing procedures; broadcasts of fire weather forecasts to local fire suppression personnel.
- Procedures for processing spot weather forecast requests and disseminating spot forecasts to the field.
- Procedures for immediate notification to fire suppression personnel of Fire Weather Watches and Red Flag Warnings.

i. Fire Danger

- Remain aware of locally significant fire danger indices and record those values daily.
- Update and post monthly the seasonal trends of those values vs average.

j. Briefings

Identify time frames and frequencies/locations for daily briefings must be clearly specified in the local dispatch Standard Operating Procedures (SOP). A method should also be identified for documenting briefings (time given, content of briefing, and person(s) conducting and receiving briefing).

k. Preparedness Levels

Identify general information relating to the local preparedness plan; procedures for identifying level; notification to management;

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dispatching roles and responsibilities at each preparedness level, etc.

- Specific triggers should be incorporated into preparedness plans that cause the preparedness level to move up or down. These triggers could be related to number/size of wildfires, amount and type of resources available/committed, regional/national fire situation, condition of local fuels, observed wildfire behavior, and human-caused risk or predicted lightning activity level, etc. Specific actions should also be tied to each preparedness level, such as prepositioning of suppression resources (crews, engines, helitack, etc.), the activation of local MAC Groups, making contacts with other agencies, and hiring of Call-When-Needed (CWN) aircraft, emergency rental equipment or emergency firefighting (EFF) crews.

### I. Aviation

- Ordering/scheduling requirements and procedures.
- Special use airspace.
- Special use mission requirements.
- Incident/accident reporting and documentation procedures.
- Flight management/tracking procedures.

### m. Dispatch Center Staffing Plan

- Call-out procedures for additional personnel in emergency situations.
- Designation of duty officer for dispatch center.
- Shift limitations and day off/Rest and Relaxation (R&R) policy.
- EFF hiring, etc.

### n. Expanded Dispatch Plan

- Indicators for considering establishment of expanded dispatch.
- Recommended organization and points of contact.
- Overhead positions to order.

- Location/facilities.
  - Equipment/supplies.
  - Support needs.
  - Procurement or buying unit team considerations.
  - Service and supply plan, etc.
- o. Administrative
- Funding.
  - Travel.
  - Time sheets.
  - Fire reports, etc.
- p. Accident/Incident
- Criteria/definitions.
  - Agency/Tribal notification and documentation requirements.
  - Procedures for mobilization of critical incident stress debriefing teams, etc.
- q. Medical Plan
- Activation/evacuation information.
  - Medical facility locations and phone numbers.
  - Air and ground transport (Medivac) capability.
  - Burn center information, etc.
- r. Media Plan
- General procedures.
  - Notification requirements to Agency/Tribal external affairs personnel; routing for media calls.

## D. The Appropriate Management Response To Wildfires

### 1. Definition

Appropriated Management Response (AMR) - Any specific action suitable to meet Fire Management Unit (FMU) objectives. Typically, the AMR ranges across a spectrum of tactical options (from monitoring to intensive management actions). The AMR is developed by using FMU strategies and objectives identified in the FMP.

### 2. Response Options

- a. Monitoring with minimal on-the-ground actions to intense suppression actions on all or portions of the wildfire perimeter. The basis of this information is the *Review and Update of the 1995 Federal Wildland Fire Management Policy* that resulted in the *2001 Federal Wildland Fire Management Policy*.
- b. Wildfires in areas without approved FMPs, or with FMPs that are not consistent with the *2001 Federal Fire Policy*, must be suppressed.

### 3. Evaluation Criteria To Develop The Appropriate Response

- a. Land and Resources Management Objectives
- b. Risks to firefighters and public health and safety
- c. Weather
- d. Fuel conditions
- e. Threats and values to be protected
- f. Cost efficiencies

### 4. Appropriate Management Response - Examples

- a. Monitoring from a distance  

Wildfire situations where inactive wildfire behavior and low threats require only periodic monitoring from a nearby location or aircraft.

b. Monitoring on-site

Wildfire situations that require the physical placement of monitors on the wildfire site to track spread, growth, intensity and/or characteristics.

c. Confinement

Actions taken when wildfires are not viable candidates for resource benefits and an analysis of strategic alternatives indicates threats from the wildfire do not require costly deployment of large numbers of suppression resources for mitigation or suppression. Typically these wildfires will have little to no on-the-ground activity and wildfire movement remains confined within a pre-determined area bounded by natural barriers or fuel changes.

d. Monitoring plus contingency actions

Monitoring is carried out on wildland fire use fires (approved in a FMP and directed in a WFIP) managed for resource benefits but circumstances necessitated preparation of contingency actions to satisfy external influences and insure adequate preparation for possible undesirable developments.

e. Monitoring plus mitigation actions

Actions on wildland fire use fires (approved in a FMP and directed in a WFIP) managed for resources benefits that either pose real, but not necessarily immediate, threats or do not have a totally naturally defensible boundary. These wildland fires are monitored but operational actions are developed and implemented to delay, direct, or check fire spread, or to contain the wildland fire to a defined area, and/or to ensure public safety (through signing, information, and trail/area closures).

f. Initial Attack

Action where an initial response is taken to suppress wildfires, consistent with firefighter and public safety and values to be protected.

g. Large wildfire suppression with multiple strategies

This action categorizes wildfires where a combination of tactics such as direct attack, indirect attack, and confinement by natural barriers are utilized to accomplish protection objectives as directed in a Wildland Fire Situation Analysis (WFSA).

h. Control and extinguishment

Actions taken on a wildfire when the selected WFSA alternative indicates a control strategy using direct attack. Sufficient resources are assigned to achieve control of the wildfire with a minimum of acres burned.

## **E. Responding to Wildfires**

The information in this section is documented in several guides such as the NWCG *Incident Response Pocket Guide* (NFES#1077) and NWCG *Fireline Handbook* (NFES#0065).

### **1. Definition**

Initial Attack – A planned response to wildfire given the wildfire's potential behavior. The objective of IA is to stop the spread of the wildfire and put it out at least cost.

### **2. Initial Attack Operations**

- a. Resources taking action as IA on a wildfire must have a qualified IA Incident Commander (IC) as identified in NWCG *Wildland Fire Qualifications Guide (PMS 310-1)*. The response may consist of one or more resources.
- b. Upon arriving at the incident the IC is responsible for the following actions.
  - Fire Size-Up Information (*IRPG, Fireline Handbook*)
    - 1) Fire Name
    - 2) Location
    - 3) Terrain (slope, aspect, elevation)
    - 4) Position of fire on the slope
    - 5) Size of fire
    - 6) Fuel type
    - 7) Anticipated control problems
    - 8) Hazards/concerns
    - 9) Fire behavior/spread potential
    - 10) Values threatened
    - 11) Weather conditions
    - 12) Wind speed and direction
    - 13) Resources on the fire
    - 14) Resources needed, if any
    - 15) Cause (known, suspected, under investigation)



- Incident Supervision and Management
  - 1) Safety of firefighters and the public are the highest priority.
  - 2) Ensuring that all firefighting actions are in full compliance with the Ten Standard Fire Orders and mitigation of the applicable Watch Out Situations has been accomplished.
  - 3) Ensuring that arriving ground forces on Type: 3-5 wildfire incidents have positive and documented contact with appropriate incident management personnel and receive a briefing.
  - 4) Manage fatigue of personnel and ensure compliance with work/rest and length of assignment guidelines.
  - 5) Assign personnel to fireline positions for which they are qualified, as certified by their employing agency.
  - 6) Monitor effectiveness of planned strategy and tactics. Immediately delay, modify, or abandon firefighting action of any part of a wildfire where strategies and tactics cannot be safely implemented.
  
- Fire cause determination
  - 1) Note who reported the wildfire.
  - 2) Note people and vehicles in the vicinity of the wildfire.
  - 3) Weather conditions.
  - 4) Locate the wildfire origin and protect it from disturbance.
  - 5) Search wildfire origin for wildfire cause.
  - 6) Protect evidence.
  - 7) Photograph origin.
  - 8) Provide notes, information and physical evidence to the responsible law enforcement representative, or make the notes part of the official fire record.
  
- Operational Briefings
  - 1) Wildland fire personnel are not always familiar with local fuel and weather conditions, terrain, potential hazards, etc. Fire personnel not provided with information regarding the incident may be less effective, and safety may be compromised. Therefore, it is policy to brief all fire personnel who arrive at an incident, at the earliest possible time.
  
  - 2) An Operational Briefing Checklist is shown in **Appendix 12-1**. This checklist contains the elements of a fireline briefing, as identified in the IRPG, to brief all incoming crews and personnel.

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- Spot Weather Forecasts
  - 1) Spot Weather Forecast should be requested for wildfires that have potential for extreme wildfire behavior or exceeding IA, or are located in areas where Red Flag Warnings have been issued. The “Spot Weather Form” in **Appendix 12-2** represents a standard format for developing this information. For specific geographical information review the National Weather Service AOPs for that geographic area. Spot weather forecasts can also be requested electronically via the Internet at such web sites as the National Fire Weather Page, <http://fire.boi.noaa.gov/>.
  - 2) The basic elements of a spot weather forecast are:
    - (a) Name fire or other project
    - (b) Control agency
    - (c) Request time and date
    - (d) Location by Latitude and Longitude
    - (e) Drainage name
    - (f) Aspect
    - (g) Fire Size
    - (h) Elevation
    - (i) Fuel type
    - (j) Fire character (ground, crown)
    - (k) Current weather conditions
      - location
      - elevation
      - observation time
      - wind direction
      - wind velocity (eye level or 20 feet)
      - dry bulb
      - wet bulb
      - remarks
- Strategy and Tactics

Determining the IA strategies and tactics must be based on the main incident and management objective – providing for firefighter and public safety. There are other factors, including wildfire behavior (rate of spread, fuel type(s), flame length, etc.), which along with values at risk and wildland fire suppression resources available, often dictate which strategies and tactics should be used.

## F. Extended Attack Operations

### 1. Definition

Extended Attack – Suppression activity for a wildfire that has not been contained or controlled by IA or contingency resources and for which more firefighting resources are arriving, en route, or being ordered by the IA IC.

### 2. Organization

- a. When complexity levels exceed initial attack capabilities, the appropriate ICS positions should be added to the command staff, commensurate with the complexity of the incident. Extended Attack actions can overwhelm an IA IC, if specific Incident Command System (ICS) organizational issues are not addressed at an early stage. The Wildfire Complexity Analysis (WCA) and the WFSA assist the manager in determining the appropriate management structure to provide for safe and efficient fire suppression operations.
- b. A unified command structure should be a consideration in all multi-jurisdiction incidents.

### 3. Wildfire Complexity Analysis

- a. A WCA should be used as a guide for Agency Administrators and/or fire managers to identify and mitigate certain complexity or safety issues by selecting a different strategy, tactic, or higher qualification of incident management personnel to safely and effectively manage the incident.
- b. Developing the WCA
  - Assumptions
    - 1) As an incident becomes more complex, the need for an incident management team (IMT) or organization increases.
    - 2) To facilitate assembling an efficient and effective organization, key managers should be involved during the early stages of complexity analysis.
    - 3) The analysis is not a cure-all for the decision process; local fire history, current fire conditions, and management requirements must be considered.

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- The WCA Form and respective guidelines is shown in **Appendix 12-3**.
- The following guidelines will be used developing the WCA. One “Yes” check in each of the five major elements would indicate a complexity level suggesting consideration of a type 2 IMT. If some elements are not involved, use the following ranges:
  - 1) 1-3 “Yes” checks: Current management should be able to handle the incident. The local organization fills positions as needed. Continue to monitor objectives and accomplishments; consider a type 3 organization.
  - 2) 4-6 “Yes” checks: Indicates complexity level suggesting a type 3 team.
  - 3) 7-10 “Yes” checks: Scrutinize overall complexity and safety concerns, consider past fire history and current and expected situation, and review WFSA. This complexity suggests the need for a Type 1 or Type 2 team.
- The WCA should be reviewed periodically to determine the level of management required.

### 4. Wildland Fire Situation Analysis

The WFSA was revised in 2006 and the BIA will use the latest version.

- b. The WFSA must be used to determine the most appropriate management strategies for incidents that exceed IA.
- c. The WFSA is a decision making process in which the Agency Administrator or representative describes the situation, evaluates the expected effects, establishes objectives and constraints for the management of the incident, selects an appropriate alternative, and documents that decision.
  - The primary criteria for choosing suppression strategies are to minimize costs without compromising safety. Planned and actual suppression costs must also be commensurate with the values to be protected. They must be included and displayed in the WFSA.
- d. The Agency Administrator, his/her representative, and the Fire Management Officer (FMO) or IC prepares the WFSA. The format and level of detail required depends on the specific incident and its complexity. The key is to **document the decision**. Agency Administrator/Line officers are responsible for financial oversight.

e. The following represents the WFSAs thresholds for line officer approval and certification. The Agency Superintendent approves all WFSAs, but any WFSAs over the \$2,000,000 threshold, will be certified by the appropriate Agency Administrator listed below.

- Up to \$2,000,000 Agency Superintendent
- \$2,000,000 - \$5,000,000 Regional Director
- Greater than \$5,000,000 BIA Director

**The WFSAs approval is the line officer's responsibility and cannot be delegated.**

f. Multi-jurisdictional Incidents will require a collaboratively developed WFSAs that is approved and signed by each of the respective agencies. Each agency will use the appropriate Agency Administrator approving levels for certifying each agency's costs for the WFSAs.

g. A WFSAs form and respective instructions are shown in **Appendix 12-4**. The WFSAs is available in an electronic format at the following web site: <http://www.fs.fed.us/fire/wfsa/>.

h. The required elements to be addressed in the WFSAs are:

- Current Situation
- Evaluation Criteria
- Alternatives
- Analysis of Effects
- Record of Decision
- Review/Evaluation/Update
- Probability of Success
- Consequences of Failure

i. WFSAs Element Descriptions

- Current Situation - This portion of the analysis provides basic information describing the wildfire situation at the time the

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analysis was conducted. It is important to clearly describe the situation that occurred at the time the decision was made.

Elements to be addressed are:

- 1) Fire name and number.
  - 2) Date of analysis: This is the date on which the current analysis was made. Enter the month, day, and year.
  - 3) Time: Enter the time of day the analysis was completed. Enter the 24-hour clock time.
  - 4) Location: Use local terminology for point of origin. Include a legal description and latitude and longitude.
  - 5) Fire weather and behavior:
    - (a) Current - Briefly discuss the fire weather in terms of temperature, wind and daily patterns. Describe the fire in non-technical terms, such as creeping, spotting crowning, etc. Discuss the flame lengths, rates of spread, size, etc.
    - (b) Predicted - Describe the predicted weather patterns, and fire behavior predictions based on weather, fuels, topography, and the potential size.
  - 6) Resource availability: Briefly discuss the availability of suppression resources to control the wildfire and wildfire activity at the local and geographic level.
  - 7) Management objectives and constraints: The management objectives and constraints should be summarized to assist in the decision process.
  - 8) Social or external considerations: Discuss any issues that would contribute to making good suppression decisions.
- Evaluation Criteria

Document the criteria used to evaluate suppression alternatives:

    - 1) Safety (firefighter/public).
    - 2) Land and resource management objectives.
    - 3) Environmental considerations.
    - 4) Social, political, economic considerations.
    - 5) Resources availability. Local, geographic, and national wildfire activities and reinforcement capabilities.
  - Alternatives
    - 1) Develop a sufficient number of alternatives to represent a reasonable range for the situation. Each alternative must be practical and contain the level of detail required to

compare the alternatives and make a decision based on pre-identified evaluation criteria.

- (a) Strategy - Briefly state the alternative strategies for management of the incident. Use geographic names, locations, etc. Roughly designate each strategy on a map.
- (b) Management Forces Required - Make general estimates with enough detail to help in estimation of costs, determine if resources are available, etc.
- (c) Estimate Date of Control - Estimates for each alternative should be made based on predicted weather and behavior factors, barriers, fuels etc., and the effects of suppression efforts.
- (d) Estimated Size at Containment - Estimates for acreage burned under each alternative should be recorded and displayed on a map.
- (e) Estimated Cost - Estimate total cost of suppression alternative. Include suppression costs, and rehabilitation. Estimated cost should also consider the probability of success, i.e., the consequences of failure. The WFSA "Decision Tree Application" describes the cost of failure based on the probability of success (see attached description). **Note:** The "average acre cost" from the planning process often works better than trying to estimate the cost for a specific situation.
- (f) Estimated Probability of Success - Based on estimates from 0-100 for each alternative.

- Analysis of Effects

Apply the above evaluation criteria to the alternatives. The results of the analysis will be the basis for selecting the appropriate alternative. The analysis of effects is based on the best estimates on the unit, resource and fire management. The situation will determine the level of detail required. You may display the effects in dollars, or as positive or negatives, as demonstrated on the example forms. The important thing is to document your decision. Ensure that estimates of potential wildfire consequences are consistent with resource objectives, values, fire effects, and policy.

- Record of Decision

Agency Administrator selects an alternative that best implements the objectives and constraints for the management of the area. Agency Administrator selects the level of

management required to successfully implement the selected alternative (Type 1, Type 2, or Type 3 IMT). Briefly provide rationale for decisions. The WFSA shall become a permanent part of the final fire record.

- Monitoring/Evaluation/Update

The WFSA must be reviewed prior to each operational period to determine if the alternative is still valid. The responsible Agency Administrator must sign the WFSA to document the review. If costs exceed 10% the approved dollar amount in the WFSA, the WFSA will need recertification from by the appropriate certifying line authority. In addition, the WFSA may need to be redone if the objectives have changed.

## **G. Wildland Urban Interface Firefighting**

### **1. Introduction**

A Wildland Urban Interface (WUI) exists where community defined values, structures, watersheds, roads and highways, power and gas lines, or other community resources intermingle with wildland fuels, and may be threatened by wildfires. Wildfires in these areas are often multi-jurisdictional and multi-agency. This complexity combined with the wildfire, public safety, increased media attention, political pressures, and other factors, may combine to overwhelm a normal size-up and decision-making process. The potential exists in areas of WUI for extremely dangerous and complex fire burning conditions

### **2. Policy**

The operational role of the BIA in the WUI is wildland firefighting, hazardous fuels reduction, cooperative prevention and education, and technical assistance. Structural fire suppression is the responsibility of Tribal, state, or local governments. BIA managers and supervisors will not knowingly place BIA wildland firefighters in positions where exposure to noxious gases or chemicals would require the use of self-contained breathing apparatus. Cooperative agreements will not commit Agency personnel to suppression or other all-risk response activities outside of the guidance provided below. The authorized funding under the suppression (92310) operations sub-activity is for wildfire suppression activities only.

- a. Structure Fires, Vehicle Fires, and Dump (Landfill) Fires

Structure, vehicle, and dump fire suppression is not a functional responsibility of BIA wildland fire resources. These fires have the



potential to emit high levels of toxic gases, for which BIA wildland firefighters are neither trained nor equipped. BIA firefighters will not take direct suppression action on structure, vehicle, or dump fires. BIA firefighters will not be dispatched to structure, vehicle, or dump fires unless there is an immediate and significant threat to lands and resources that are under BIA protection. This policy will be reflected in suppression response plans.

Should BIA firefighters encounter structure, vehicle, or dump fires, firefighting efforts will be limited to areas where the fire has spread onto BIA protected lands, and only when such actions can be accomplished safely and with no exposure to smoke emitted from the fire. Structure protection will be limited to exterior efforts, and only when such actions can be accomplished safely and in accordance with established wildland fire operations standards.

BIA fire managers should avoid giving the appearance that their wildland fire firefighters resources are trained and equipped to perform structure and vehicle fire suppression.

**b. Emergency Medical Response**

Medical emergency response is not a functional responsibility of BIA wildfire suppression resources. BIA wildland fire firefighters are not trained and equipped to perform emergency medical response duties, and should not be part of a preplanned response that requires these duties. Local fire and emergency medical services have the functional responsibility for these types of responses. When BIA firefighters encounter emergency medical response situations, their efforts should be limited to immediate care (first aid, first responder actions) that they have been trained to provide as part of their normal fire suppression duties. BIA fire managers should avoid giving the appearance that their wildland fire firefighters are trained and equipped to perform emergency medical response.

**c. Hazardous Materials**

BIA wildland fire firefighters have the potential to be exposed to hazardous materials releases while performing their jobs. Hazardous materials or waste may be found on public lands in a variety of forms, e.g., clandestine drug lab waste, mining waste, illegal dumping, and transportation accidents.

BIA employees that discover any unauthorized waste dump or spill site that contains indicators of potential hazardous substances should take the following precautions:

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- Treat each site as if it contains harmful materials;
- Do not handle, move, or open any container, breathe vapors, or make contact with the material;
- Move a safe distance upwind from the site; and
- Contact appropriate personnel. Generally, this is the Hazardous Materials Coordinator for the BIA area.

### H. Fuels Management and Hazardous Fuels Program Planning and Implementation

Chapter 16 Hazardous Fuels Management and Chapter 17 Hazardous Fuels Program Planning and Implementation have been excluded from this operations guide indefinitely. The national and interagency policy guides for the hazardous fuels programs are contained in the following guides and handbooks:

- *Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide 2006*
- *BIA Fuels Management Handbook, January 2006*
- *BIA Fuels Program Business Management Handbook, February 2006*

Exclusive use of these handbooks and guides enhances intra and interagency program continuity, avoids duplication, reduces the chances to misinterpret policy and provides one stop shopping for the fuels programs policy in a fire management and political environment where changes occur frequently. Please call the Assistant Director, Fire Use and Fuels, Deputy Fire Use and Fuels, or National Fire Ecologist for more information.

#### 1. Prescribed Fire or Wildland Fire Use Approvals at Planning Levels 4 and 5

Each Agency/Tribe must complete the Department of the Interior, BIA Preparedness Level 5 Prescribed Fire and Wildland Fire Use Concurrence Form (see *BIA Fuels Management Handbook* and/or *BIA Fuels Program Business Management Handbook*) to request permission to implement a prescribed fire or wildland fire use during National Preparedness Level 4 and 5.

The following provides clarification when requesting approval for fire use implementation at preparedness levels 4 and 5. This information is

reference in the 2007 National Interagency Mobilization Guide, pages 77 and 79.

Preparedness Level 4

Wildland Fire Use (WFU) and prescribed fire (Rx) applications can be initiated or continued if the proposed action is approved by an agency at the Regional or State Office level. The approval must be based on an assessment of risk, impacts of the proposed actions on Area resources and activities, and include feedback from the Geographic Multi-Area Coordinating Group (GMAC). The GMAC provides information or perspectives to agencies wishing to proceed with or implement a WFU or Rx application. The final decision to implement resides with the implementing agency.

Preparedness Level 5

Wildland Fire Use (WFU) and prescribed fire (Rx) applications can be initiated or continued if the proposed action is approved by an agency at the Regional or State Office level and local resources can carry out the implementation (including contingency resources). The approval must be based on an assessment of risk, impacts of the proposed actions on Area resources and activities, and include feedback from the GMAC. The GMAC provides information or perspectives to agencies wishing to proceed with or implement a WFU or Rx application.

For WFU or Rx applications to be initiated or continued that require additional support of resources from outside the local unit or require resource ordering of an Incident Management Team (IMT) or Fire Use Management Team (FUMT), a National MAC representative must assess risk and impacts of the proposed action and present to NMAC for review prior to proceeding. The final decision to implement resides with the implementing agency.

Approval by NMAC requires that requests are submitted no later than 0700 hours MST, on the day of the proposed ignition (preferably sooner). Ideally, a project request would be placed at 0700 Monday for projects that can be ignited and placed in patrol status by the following Monday, at which time new requests are submitted. The Regional Fuels Specialist should precede the written request with a courtesy call, providing as much lead time as possible.

Keep project requests brief. The concurrence form contains the essential information necessary for the NMAC to approve your request. They do not have time to review several pages of attached information.

**APPENDIX 12-1 - Operational Briefing Checklist**

1. Incident Status		Location	
Size		Jurisdiction	
Hazards			
2. Incident Site		Forest/Grassland/etc.	
General Health			
Terrain			
3. Fuel Conditions		Live Fuels	
1-hour	10-hour	1000-hour	
Important Indices			
4. Weather Conditions:		Current: air temp wind speed direction RH	Forecasted: air temp wind speed direction RH
5. Command/Control		Incident Commander	
Resources on Incident			
Resources Ordered			
Communications			
Reporting Procedures			
Key Radio Frequencies COMMAND:		TACTICAL:	AIR TO GROUND:
6. Fire Behavior		Current	Forecasted
7. Aviation		Aircraft	
Hazards			
Restrictions			
8. Other			

**Operational Briefing Checklist Guidelines**

1. **Incident Status** - Provide the location (Township, Range, Section, lat./long.), estimated size, jurisdiction, and known hazards such as power lines, hazmat sites, poor driving conditions, etc.
2. **Incident Site** - Provide basic information about the site, including biome (forest, woodland, shrub steppe, etc.) Include general state of health, such as overmature, 70 percent insect infested, large areas of blowdown, flashy fuels, etc. Also, provide general sense of terrain, such as large relief with 60 percent slopes.
3. **Fuel Conditions** - Provide best estimates of live, 1-, 10- and 1,000-hour time-lag fuel moisture contents, and important NFDRS indices as they relate to fire behavior and appropriate suppression actions.
4. **Weather conditions** - Provide current observations (including wind speed and direction, air temperature, and relative humidity) and predicted or Spot Weather Forecasts. **Emphasize Fire Weather Watches and Red Flag Warnings.** (The IC should work in conjunction with dispatch to obtain and relay site weather conditions.)
5. **Command and Control** - Provide the name and radio frequency of the incident commander (or appropriate general staff) for contact on arrival. Also describe the appropriate method of reporting (checking in), the general communications procedure, and key radio frequencies.
6. **Fire behavior** - Provide best estimates of rate of forward spread, direction of spread, and approximate flame lengths. Include important facts on recent fire behavior.
7. **Aviation** - Provide important information relating to number and types of aircraft operating in the area, including agreements, restrictions, or airspace closures.
8. **Other** - Add additional information that would improve efficiency without compromising safety.

**Note:** some items on the briefing checklist may not be applicable. For example, a discussion on 1,000-hour time-lag fuels may not be necessary if such fuels do not exist on or adjacent to the incident site.

## APPENDIX 12-2 Spot Weather Forecast Request

Prior notification and burn plan information (prescription and map) provided to fire weather forecaster. <input type="checkbox"/> <b>Yes</b> (fill in 1-4 and skip to 12) <input type="checkbox"/> <b>No</b> (complete entire form and contact fire weather forecaster)											
1. Time of Request		2. Date		3. Name of Fire or Project				4. Control Agency			
5. Type of Project		6. Location (Sec - Twp - Range or LAT/LON)			8. Exposure (NE, W, SW, etc.)			9. Size (acres)			
7. Drainage Name						10. Elevation					
						Top			Bottom		
11. Fuel Type: <input type="checkbox"/> Grass <input type="checkbox"/> Brush <input type="checkbox"/> Timber <input type="checkbox"/> Slash <input type="checkbox"/> Other _____											
Cover Type: <input type="checkbox"/> Grass <input type="checkbox"/> Brush <input type="checkbox"/> Timber											
<input type="checkbox"/> Weather observations from project and/or remote automated weather station(s): (enter name/ID)											
Place	Elevation	Ob Time	20 ft Wind		Eye Level		TEMP		‡ Moisture		Remarks (Indicate rain, thunderstorm, etc.)
			Dir	Speed	Dir	Speed	Dry	Wet	RH	Dp	
13. Send Forecast to: _____, Attn _____, Via _____ Forecast needed by day/hour _____											
14. Planned Ignition Time (day/hour) _____											
16. Requested Forecast Period <input type="checkbox"/> 0-12 hours <input type="checkbox"/> 0-24 hours <input type="checkbox"/> 0-48 hours <input type="checkbox"/> 3-5 day outlook <input type="checkbox"/> 6-10 day outlook <input type="checkbox"/> other period _____ (define start and end period, date/time)						16. Forecast Elements (general outlook only provided after 48 hours): <input type="checkbox"/> Weather Discussion <input type="checkbox"/> Sky/Weather <input type="checkbox"/> Temperature <input type="checkbox"/> Relative Humidity <input type="checkbox"/> 20 foot Wind (include wind shifts) <input type="checkbox"/> Ridge Wind <input type="checkbox"/> Eye level Wind (include wind shifts) <input type="checkbox"/> General Transport Wind <input type="checkbox"/> General Mixing Depth (MSL or AGL) <input type="checkbox"/> Haines Index or other stability parameter <input type="checkbox"/> Inversion (depth and duration) <input type="checkbox"/> Transport Winds <input type="checkbox"/> Chance of Wetting Rain/Precipitation Duration <input type="checkbox"/> Dewpoint Other (specify) _____					
Anticipate additional forecasts for this burn <input type="checkbox"/> Yes <input type="checkbox"/> No Please provide feedback information about the quality of the forecast.											

**Spot Weather Forecast Request Form Instructions**

1. Time forecast requested
2. Date forecast requested
3. Name of fire or prescribed burn
4. Control (Responsible) Agency
5. Type of project Wildfire, Prescribed Burn, HAZMAT, Spraying, Search and Rescue, etc
6. Location, use section/township/range or latitude and longitude
7. Drainage, nearest stream, or river
8. Exposure, direction unit or project faces
9. Size, in acres
10. Elevation, provide elevations of top and bottom of unit in feet
11. Provide fuel and cover type
12. Site observations are necessary. If a RAWS is being used provide the name or number and where it is located in relation to the burn. If observations are being taken on site enter them in the boxes provided.
13. Who the forecast is to be sent to and how is it to be sent. Be sure to provide phone numbers. When is the forecast needed by.
14. Time of ignition
15. Check the boxes of the periods the forecast is to cover. Exp., if a forecast for the next 48 hours is needed check the 3rd box. If an outlook for 3-5 and 6-10 days is also needed the next 2 boxes should be checked. If only a 12 hour forecast is needed the 0-12 hours box would be checked. If special time periods are needed, such as specific hourly forecasts, check other period and explain.
16. These are the elements that can be included in the forecast. Check those that are needed.

WS FORM D-1

## APPENDIX 12-3 Wildfire Complexity Analysis

<b>Safety</b>	<b>Yes</b>	<b>No</b>
Exposure of personnel to unusually hazardous conditions	_____	_____
Accidents/injuries have occurred	_____	_____
Multiple fixed-wing aircraft and helicopters involved or anticipated	_____	_____
Potential for public evacuations	_____	_____
Terrain adversely affects performance of tactical resources, limits safety zones	_____	_____
Performance of firefighting resources affected by cumulative fatigue	_____	_____
<b>External/Political Factors</b>		
Potential for numerous damage claims	_____	_____
More than one jurisdiction involved	_____	_____
Controversial fire policy	_____	_____
Sensitive public/media relationships	_____	_____
Smoke management problems	_____	_____
Lack of cohesive organizational structure	_____	_____
<b>Resources Issues</b>		
Structures	_____	_____
Cultural values	_____	_____
Recreational developments	_____	_____
Urban interface	_____	_____
Critical municipal watershed	_____	_____
T & E species	_____	_____
<b>Fire Behavior</b>		
Current or predicted fire behavior dictates indirect control strategy	_____	_____
Fuels extremely dry and susceptible to rapid and explosive spread	_____	_____
Extreme fire behavior/blow-up potential exhibited	_____	_____
Current or predicted winds above 20 mph	_____	_____
Fuel moisture of eight percent or below (10-hour fuels)	_____	_____
Severe fire weather predicted for next two operational periods	_____	_____
<b>Personnel/Equipment</b>		
100 or more personnel assigned to incident	_____	_____
Variety of special support personnel or equipment	_____	_____
Resources unfamiliar with local conditions and accepted tactics	_____	_____
Heavy commitment of local resources to logistical support	_____	_____
Existing forces worked two operational periods without success	_____	_____
Communication ineffective with tactical resources or dispatch	_____	_____

**Total number of elements checked "Yes":**

Extended Attack Complexity Analysis Rating: 1-3: Current management sufficient. Type 3 organization should be considered.  
 4-6: Complexity level suggests a Type 3 Team.  
 7-10: Consider ordering a Type 2 Team.

**Remarks:**

Prepared By: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Reviewed By: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_



## APPENDIX 12-4

### Wildland Fire Situation Analysis (WFSA)

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

#### WFSA INITIATION

Fire Name	
Jurisdiction(s)	
Date and Time Initiated	

#### 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:	

## **WFSA Instructions**

### Section I. WFSA Information Page

*The Agency Administrator completes this page.*

- I.A. Jurisdiction(s): Assign the agency or agencies that have or could have fire protection responsibility, e.g., US FWS, USFS, 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
- 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
- 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.

<b>I. WILDLAND FIRE SITUATION ANALYSIS</b>	
A. Jurisdiction(s):	B. Geographic Area:
C. Unit:	D. WFSA #:
E. Fire Name:	F. Incident #:
G. Accounting Code:	
H. Date/time Prepared:	
I. Attachments: <ul style="list-style-type: none"> <li><input type="checkbox"/> Complexity Matrix/Analysis</li> <li><input type="checkbox"/> Risk Assessment</li> <li><input type="checkbox"/> Probability of Success</li> <li><input type="checkbox"/> Consequences of Failure</li> <li><input type="checkbox"/> Maps</li> <li><input type="checkbox"/> Decision Tree</li> <li><input type="checkbox"/> Fire Behavior Projections</li> <li><input type="checkbox"/> Calculations of Resource Requirements</li> <li><input type="checkbox"/> Other (Specify)</li> </ul>	

## Section II. Objectives and Constraints

*The Agency Administrator completes this page.*

- II.A. Objectives: Specify criteria that should be considered in the developing alternatives.

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

Economic objectives could include closure of all or 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 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 suppression 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
1.	Safety:
	Public:
	<i>Firefighter:</i>
2.	Economic:
3.	Environmental:
4.	Social:
5.	Other:
B.	Constraints

## Section III. Alternatives

*This page to be completed by fire manager/commander*

- 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 availability of these resources.
- III.D. Estimated Final 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 percent 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: Use the Wildland Fire Complexity Analysis
- III.I. Maps: A map for each alternative must be prepared.

III. ALTERNATIVES			
	A	B	C
A. Wildland Fire Strategy:			
B. Narrative:			
C. Resources Needed: Handcrews Engines Dozers Airtankers Helicopters			
D. Estimated Final Fire Size:			
E. Estimated Contain/ Control Date:			
F. Costs:			
G. Risk Assessment: Probability of Success Consequences of Failure			
H. Complexity:			
I. Attach Maps for Each Alternative:			

## Section IV. Evaluation of Alternatives

*This page is completed by the Agency Administrator(s), FMO, and/or incident commander.*

IV.A. Evaluation Process: Conduct an analysis for each element of each objective and 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 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 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			
Evaluation Process	A	B	C
Safety Firefighter Aviation Public			
Sum of Safety Values			
Economic Forage Improvements Recreation Timber Water Wilderness Wildlife Other (Specify)			
Sum of Economic Values			
Environmental Air Visual Fuels T & E Species Other (Specify)			
Sum of Environmental Values			
Social Employment Public Concern Cultural Other (Specify)			
Sum of Social Values			
Other			

## Section V. Analysis Summary

*This page is completed by the Agency Administrator(s), FMO, and/or incident commander.*

- 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-tier 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 administrators confirm their selection of an alternative. Final fire size is displayed on page 3, section III.D. Complexity is calculated in the attachments and displayed on page 3, section III.H. Costs are displayed on page 3, section III.F. Economic values have been calculated and displayed on page 4. Probability of success/consequences of failure is calculated in the attachments and displayed on page 3, section III.G.
- V.C. External and Internal Influences: Assign information and data occurring at the time the WFSA is signed. Identify the preparedness index (1 through 5) for 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 Area Coordination Center (GACC) and is 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).

V. ANALYSIS SUMMARY			
Alternatives	A	B	C
A. Compliance with Objectives Safety Economic Environmental Social Other			
B. Pertinent Data Final Fire Size Complexity Cost Resource Values Probability/Consequences of Success/Failure			
C. External/Internal Influences: National and Geographic Preparedness Level Incident Priority Resource Availability Weather Forecast (Long- range) Fire Behavior Projections			

## 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.

VI. Decision	
The selected alternative is:	
Rationale:	
Agency Administrator Signature	
Date/Time	

## Section VII. Daily Review

*This page is completed by Agency Administrator(s) or designate.*

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 5, section V.C. Assign a "yes" under "WFSA Valid" to continue use of the this WFSA. A "no" indicates this WFSA is no longer valid and another WFSA must be prepared or the original revised.

**CHAPTER 12 – FIRE RESPONSE**

VII. DAILY REVIEW								
Selected Alternative to Be Reviewed Daily to Determine If Still Valid until Containment/control								
			Preparedness Level	Incident Priority	Resource Availability	Weather Forecast	Fire Behavior Projections	WFSA Valid
If WFSA is no longer valid a new WFSA will be completed								