

Chapter 10 Developing a Response to Wildland Fires

A. Policy

1. All fire management activities will be based on firefighter and public safety, cost effectiveness, and values to be protected consistent with resource objectives, by using the full range of strategic and tactical options otherwise known as Appropriate Management Response (AMR) as described in an approved Fire Management Plan (FMP).
2. The *Wildland and Prescribed Fire Management Policy-Implementation Procedures Reference Guide* outlines the steps for determination of Appropriate Management Response. Additional individual agency direction may apply.
3. A Wildland Fire Implementation Plan (WFIP) will be initiated for all wildland fires. For an estimated 90+% of all wildland fires, information needed for WFIP Stage I decision analysis is contained in the FMP and is covered in the fire sizeup.

B. Annual Operating Plan

1. **Developing an Annual Operating Plan**
 - a. Units with dispatching responsibility, in conjunction with their cooperators, will ensure that Annual Operating Plans (AOPs) are developed, updated, and approved annually. The procedures outlined in the plans must be implemented and adhered to during dispatching operations.
 - b. There are variations in the required elements for AOPs due to many factors (activity level/complexities, interagency coordination, all-risk incidents, and HazMat). However, the following topics shall be identified (at a minimum) in a dispatch center's AOP.
 - c. Additional guidance can be obtained by reviewing local unit fire management reference guides.
2. **Annual Operating Plan Elements**
 - a. **Organization**
Chain-of-command/table of organization for local agencies and cooperators; Notification process/procedures; Roles/responsibilities, etc.
 - b. **Dispatch Operations**
 - 1) General information
 - 2) Dispatcher roles and responsibilities

- 3) Dispatcher training and qualifications
- 4) Procedures for dispatch of resources off unit
 - a) **Daily Duties**
 - (1) Check-in/out of administrative/fire personnel
 - (2) Intelligence
 - (3) Weather/briefings
 - (4) Verify initial attack response levels
 - (5) Status suppression resources
 - (6) Preparedness level establishment and verification
 - c. **Initial Attack Response Plan Elements**

Preplanned dispatch plans, Run-cards, Dispatch procedures

 - 1) Notification of a reported fire
 - 2) Procedures for identifying preparedness levels
 - 3) Fire weather
 - 4) Identification of fire danger
 - 5) Process for assessing the appropriate response
 - 6) Identification and notification of resources to respond
(Local units will establish standard response times for all initial attack resources)
 - 7) Appropriate management notification
 - 8) Cooperator support and planned response
 - 9) Communications procedures
 - 10) Procedures to follow when activity exceeds the initial attack plan
 - 11) Aviation procedures
 - d. **Emergency Operations (Fire/Non-fire)**
 - 1) Notification of a reported incident
 - 2) Jurisdiction verification
 - 3) Response plan activation
 - 4) Agency and area notification
 - 5) Move-up and cover procedures
 - 6) Call-back procedures
 - 7) Evacuation of incident area
 - 8) Closing public/private roads
 - 9) Ordering additional personnel, equipment, and aircraft
 - 10) Fire Weather Watch and Red Flag Warning notification
 - 11) Temporary Flight Restrictions (TFRs)
 - 12) Agency duty officers (roles and responsibilities)
 - 13) Aircraft pre-accident plan
 - 14) Utility company notification (power and gas)
 - 15) Law enforcement dispatching procedures/requirements
 - 16) HazMat/spill response notification procedures
 - 17) Local government requesting all-risk assistance
 - 18) Search and Rescue

- 19) Identify the incident commander
- e. **Local Agreements**
Copies of all interagency or inter-unit agreements and associated annual operating plans that govern the use of fire management resources. Maps delineating areas of responsibility for fire suppression coverage.
 - f. **Communications**
Procedures for assigning/managing local radio frequencies; Procedures for obtaining additional frequencies; maps of repeater sites; instructions for using local dispatch radio consoles, phones, computers, fax machines, paging systems, etc.
 - g. **Weather**
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.
 - h. **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 versus seasonal averages.
 - i. **Information to be Provided by Dispatch for Suppression/Support**
Resource availability/shortages; radio frequencies to be used; burning conditions/fuel types; weather forecast updates; local fire activity; agency policies, etc. For management: fire activity, incident updates, weather updates, resource status.
 - j. **Briefings**
Timeframes and frequencies/locations for daily briefings must be clearly specified in the local dispatch 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**
General information relating to the local preparedness plan; procedures for identifying level; notification to management; dispatching roles and responsibilities at each preparedness level, etc.
 - l. **Trigger Points**
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 fires, amount and type of resources available/committed, regional/national fire situation, condition of local fuels, observed fire behavior,

human-caused risk or predicted lightning activity level, etc. Specific actions should also be tied to each preparedness level, such as repositioning of suppression resources (crews, engines, airtankers, smokejumpers, etc.), the activation of local Multi-Agency Coordination (MAC) groups, making contact with other agencies, and hiring of call when needed (CWN) aircraft, emergency equipment rental agreements (EERA), or administratively determined (AD) pay plan crews.

- m. **Aviation**
Ordering/scheduling requirements and procedures; special use airspace; Special use mission requirements; Incident/accident reporting and documentation procedures; flight management/tracking procedures.
- n. **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/EFF hiring, etc.
- o. **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.
- p. **Administrative Items**
Funding; travel; time sheets; fire reports, etc.
- q. **Accident/Incident**
Criteria/definitions; agency notification and documentation requirements; procedures for mobilization of critical incident stress debriefing teams, etc.
- r. **Medical Plan**
Activation/evacuation information; medical facility locations and phone numbers; air and ground transport (Medivac) capability; burn center information, etc.
- s. **Media Plan**
General procedures; notification requirements to agency external affairs personnel; routing for media calls.

C. Appropriate Management Response to Wildland Fires

- 1. **Definition**
Specific actions taken in response to a wildland fire to implement protection and fire use objectives.

2. Developing Appropriate Management Response Evaluation Criteria

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

D. Appropriate Management Response Options**1. Monitoring from a distance**

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

2. Monitoring on-site

Fire situations that require the physical placement of monitors on the fire site to track the fire's spread, intensity, and/or characteristics.

3. Confinement

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

4. Monitoring plus contingency actions

Monitoring is carried out on fires managed for resource benefits but circumstances necessitate preparation of contingency actions to satisfy external influences and ensure adequate preparation for possible undesirable developments.

5. Monitoring plus mitigation actions

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

6. Initial Attack

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

7. Large fire suppression with multiple strategies

This action categorizes fires 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).

8. Control and extinguishment

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

E. Responding to Wildland Fires**1. Report of Wildland Fire**

When a wildland fire is reported it is evaluated according to the procedures outlined in the Annual Operating Plan.

- a. If no approved Fire Management Plan (FMP) exists or the fire is in an area designated for suppression action, initial response forces are dispatched.
- b. If the fire is in an area where an approved FMP exists, the fires may be managed to benefit resource values in accordance with the preplanned conditions and objectives outlined in a Wildland Fire Implementation Plan (WFIP).
 - 1) A WFIP will be initiated for all wildland fires. For an estimated 90+% of all wildland fires, information needed for WFIP Stage I decision analysis is contained in the FMP. Only the most complex fires being managed for resource benefits (Fire Use Fires) will require completion of all parts of a WFIP. The full WFIP consists of three distinct stages (Stage I, Stage II and Stage III). When wildland fires occur, pre-planned descriptions in the FMP (in combination with the Fire Situation) assist Stage I decisions.
 - 2) Progressive development of these stages will occur for wildland fires managed for resource benefits or where initial attack is not the selected response. Objectives, fire location, cause, conditions of fuel continuity, current fire activity, fire location, predicted weather and fire behavior conditions, and risk assessment results will indicate when

various WFIP Stages must be completed. Resource benefits become more important as strategic decision factors, additional planning and documentation requirements (additional WFIP Stages) are involved.

2. Initial Attack Operations

The objective of initial attack fire suppression is to safely and efficiently suppress fires in conformance with existing policy and procedures consistent with an approved Fire Management Plan (FMP).

The information in this section is documented in the “*NWCG - Incident Response Pocket Guide*” (NFES#1077), and “*NWCG Fireline Handbook (NFES #0065)*”

a. Organization and qualifications

Resources taking initial attack action on a fire must be qualified and have a designated qualified Initial Attack Incident Commander.

b. Fire Size-up (Stage 1 WFIP)

At the earliest opportunity after arrival on an incident, the initial attack incident commander will, relay the information on page 10-23 (Sizeup) to the agency dispatch, and continue to keep the dispatcher informed of any significant changes and progress on the fire.

c. USFS – A complexity analysis must be completed and documented on all fires. This can be found in the IRPG.

3. Fire Cause Determination

The Incident Commander is responsible for assisting in the determination of the cause of the fire. It is recommended that all initial attack incident commanders complete basic training in wildland fire cause determination.

a. BLM – All initial attack incident commanders must have completed basic training in wildland fire cause determination.

A checklist for Fire Cause Determination can be found in the IRPG.

4. Operational Briefings

a. All personnel arriving at an incident must receive a briefing from the Incident Commander (IC), or delegate, prior to initiating any actions on the incident. Incoming ICs must place a priority on providing briefings to resources already on the scene. The principles of LCES must be implemented prior to the initiation of any actions.

- b. *USFS* – All employees will adhere to the Chief's Memo of Direction for the Thirtymile Action and Implementation Plan as stated in the 5100 memos dated January 11, 2002 and April 16, 2002.
- c. If firefighters cannot be briefed prior to departure from base, the receiving dispatch office will provide a briefing to the supervisor by radio. In all cases, firefighters will be briefed prior to starting work. The IC or their delegate will document all Operational Briefings.
- d. The Operational Briefing Checklist found on page 10-23 and in the *IRPG*, contains the minimum items required to brief all incoming crews, personnel, or resources. Units are encouraged to expand the minimum briefing, as appropriate, to ensure that safety and efficiency are addressed.

5. Spot Weather Forecast

Spot weather forecasts must be requested for fires that exhibit extreme fire behavior, exceed initial attack, or are located in areas where Fire Weather Watch and Red Flag Warnings have been issued.

Spot weather forecasts may be requested at any time. See the Spot Weather Forecast Request form on page 10-24.

6. Strategy & Tactics

- a. **Determining Strategy and Tactics**

Determining appropriate initial attack strategies and tactics must be based on appropriate management response while providing for firefighter and public safety. Other factors to consider are: suppression objectives, values at risk, current and predicated fire behavior, weather conditions, available resources and their condition.
- b. **Application of Risk Management**

Identification and mitigation of risk must be considered in all strategic and tactical planning. Use of the Risk Management Process is mandatory. Tactical assignments for all resources will not be initiated or continued without strict adherence to the Risk Management Process, incorporating the 10 Standard Fire Orders, 18 Watch Out Situations, and principles of LCES. These items can be found in the *IRPG*.
- c. Reevaluation of the Risk Management/LCES process is essential.

Fire Suppression Interpretations from Flame Length	
Flame Length	Interpretations
Less than 4'	Fires can generally be attacked at the head or flanks by firefighters using hand tools. Handline should hold fire.
4' to 8'	Fires are too intense for direct attack on the head with hand tools. Handline cannot be relied on to hold the fire. Bulldozers, engines, and retardant drops can be effective.
8' to 11'	Fires may present serious control problems: torching, crowning, and spotting. Control efforts at the head will probably be ineffective.
Over 11'	Crowning, spotting, and major fire runs are probable. Control efforts at the head of the fire are ineffective.

7. Direct Attack

This strategy is conducted directly on the flaming edge of the fire. Direct attack must start with an anchor point.

Direct Attack	
Advantages	Disadvantages
Minimal area is burned. No additional area is intentionally burned.	Firefighters can be hampered by heat, smoke, and flames.
It's the safest place to work; firefighters can usually escape into the burn area.	Control lines can be very long and irregular, because the line follows edge of fire.
Reduces the possibility of the fire moving into the crowns of trees or brush.	Burning material can easily spread across mid-slope lines.
The uncertainties of burning out or backfiring can be reduced or eliminated.	May not be able to use natural or existing barriers.
Full advantage is taken of burnout areas.	Usually more mop-up and patrol.

8. Indirect Attack

This strategy is used when a direct attack is not possible or practical. The use of natural barriers, roads, fuel type changes, etc. helps to establish control lines as part of burnout or backfiring operations. Effective strategy when fire behavior is intense and/or firefighting resources are scarce. Indirect attack must start with an anchor point.

Indirect Attack	
Advantages	Disadvantages
The line can be located along favorable topography.	More land will be burned.
Natural or existing barriers can be used.	Must be able to trade time and space to allow line to be constructed.
Firefighters may not have to work in smoke and heat.	Firefighters may be placed in more danger because they are more distant from the fire and can't observe it.
Allows line to be constructed in lighter fuels.	There may be some dangers related to burning out or backfiring.
May be less danger of slopovers.	Fire may cross line before it is fired.
Can cut fireline across pockets and fingers.	Burning out may leave unburned islands of fuel.
Usually shorter and straighter line.	May not be able to use line already built.

9. Hotspotting

Hotspotting as a tactic is used to hold the active areas on a fire's edge long enough to allow line construction operations to encompass the area. Emphasis must be placed on the use of viable anchor points, escape routes and safety zones to maintain LCES.

10. Coldtrailing

Coldtrailing as a tactic means the firefighters are working along a partially cold line. They are inspecting the black line for heat, constructing line where needed, and mopping up hotspots. Coldtrailing is used to reduce unnecessary disturbance to the environment.

11. Mopup

Mopup as a tactic is to extinguish burning material that may cause a fire to spread beyond the control lines.

Mopping Up a Fire	
Priorities	Guidelines
Start work on each portion of line as soon as possible.	Start with the most dangerous line first. Work from the fireline toward the center of the fire. Small fires are totally extinguished. On larger fires, mopup a minimum of 100 feet, or to such a distance that nothing will blow, roll, or spot across the line.
Secure and extinguish burning materials.	Arrange burning fuels so they cannot roll across the line. Spread smoldering fuels and apply water so they will cool. Scatter fuels away from the line.
Mitigate special hazards inside the line.	Fall snags; extinguish logs and stumps. If you can't fall the snag, clear around the base, so burning material will not fall into flammable fuels.
Mitigate special hazards outside the line.	Move slash back, away from the fireline. Fall snags and cover with dirt. If stumps are close to the line, cover them with dirt.
Reinforce the fireline.	Widen and clean the fireline. Reinforce any undercut line. Burnout or coldtrail islands. Dig out roots that cross under the fireline. Feel for hot material along the fireline.
Check for spot fires.	Constantly check for spot fires, especially downwind from the fireline. Check heavier fuels (logs, snags, slash, etc.) for smoldering material.

For additional information on strategic and tactical guidelines and principles, see the *NWCG Fireline Handbook (PMS 410-1, NFES 0065)*, *Chapter 1, Initial Attack and Chapter 5, Safety, and the Incident Response Pocket Guide (PMS-461, NFES 1077)*.

F. Extended Attack Operations

1. Definition

ICS provides for a management/organizational structure on incidents that evolve in complexity or increase in size, whether within a few hours or over several days. While the criteria for incident complexity vary by local conditions, a fire that has escaped initial attack and is considered in extended attack when:

- a. Has not been contained by the initial attack resources dispatched to the fire.
- b. Will not have been contained within the management objectives established for that zone or area.
- c. Has not been contained within the first operational period and there is no estimate of containment or control.

2. Organization

When complexity levels exceed initial attack capabilities, the appropriate Incident Command System (ICS) positions should be added commensurate with the complexity of the incident. The Incident Complexity Analysis and the Wildland Fire Situation Analysis (WFSA) assist the manager in determining the appropriate management structure to provide for safe and efficient fire suppression operations.

A unified command structure will be a consideration in all multi-jurisdiction incidents.

3. Incident Complexity Analysis

- a. An Incident Complexity Analysis will be used as a guide for ICs, fire managers, and agency administrators to evaluate emerging fires in order to determine the level of management organization required to meet agency objectives. This will assist in identifying resource, safety, and strategic issues that will require mitigation.
- b. There are two types of Incident Complexity Analysis available:
 - 1) For Type 1 and 2 incidents use the form located on page 12-26.
 - 2) For Type 3, 4 and 5 Incidents use the form located on page 12-29.
- c. Assumptions for Developing a Complexity Analysis
 - 1) As an incident becomes more complex, the need for an incident management team 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.

4. Wildland Fire Situation Analysis (WFSA)

a. Definition

- 1) The 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. A WFSA will be completed whenever a fire escapes initial attack.
- 2) The Agency Administrator, his/her representative, and the Fire Management Officer (FMO) or Incident Commander prepare the WFSA. The format and level of detail required depends on the specific incident and its complexity. For signatory authority and cost limits see the chart on page 10-16.
- 3) An electronic copy of the WFSA can be found at www.fws.gov/fm/policy/HANDBOOK or at www.fs.fed.us/land/fire/wfsa.htm.

b. WFSA Element Descriptions

1) Current Situation

This portion of the analysis provides basic information describing the fire situation at the time the 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:

(a) **Fire name and number**

(b) **Date of analysis**

This is the date on which the current analysis was made. Enter the month, day, and year.

(c) **Time**

Enter the time of day the analysis was completed. Enter the 24-hour clock time.

(d) **Location**

Use local terminology for point of origin. Include a legal description and latitude and longitude.

- (e) **Fire weather and behavior**
 - (1) **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.
 - (2) **Predicted** - Describe the predicted weather patterns, and fire behavior predictions based on weather, fuels, topography, and the potential size.
 - (f) **Resource availability**

Briefly discuss the availability of suppression resources to control the fire and fire activity at the local and geographic level.
 - (g) **Management objectives and constraints**

The management objectives and constraints should be summarized to assist in the decision process.
 - (h) **Social or external considerations**

Discuss any issues that would contribute to making good suppression decisions.
 - (i) **Evaluation Criteria**

Document the criteria used to evaluate suppression alternatives: Safety (firefighter/public); land and resource management objectives; environmental considerations; social, political, economic considerations; resources availability; local, geographic, and national fire activities; and reinforcement capabilities.
- c. **Alternatives**
- 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 preidentified evaluation criteria.
- 1) **Strategy** - Briefly state the alternative strategies for management of the incident. Use geographic names, locations, etc. Roughly designate each strategy on a map.
 - 2) **Management Forces Required** - Make general estimates with enough detail to help in estimation of costs, determine if resources are available, etc.
 - 3) **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.

- 4) **Estimated Size at Containment** - Estimates for acreage burned under each alternative should be recorded and displayed on a map.
 - 5) **Estimated Cost** – Estimate total cost of suppression alternative. Include suppression costs and rehabilitation needs. The WFSA will include the least suppression cost option. This option will serve as a way to describe the values to protect and the context surrounding a suppression decision. If the least-cost alternative is not chosen the WFSA will include a written rationale for not choosing it. Agency administrators are responsible for financial oversight. This responsibility cannot be delegated.
 - 6) **Estimated Probability of Success** - Based on estimates from 0-100 for each alternative.
- d. **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 fire consequences are consistent with resource objectives, values, fire effects, and policy.
- e. **Record of Decision**
Agency administrators select an alternative that best implements the objectives and constraints for the management of the area. Agency administrators select the level of management required to successfully implement the selected alternative (Type 1, Type 2, or Type 3 Incident Management Team). Briefly provide rationale for decisions. The WFSA shall become a permanent part of the final fire record.
- f. **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.
- g. **USFS—Signature authority for costs:**
below \$2,000,000.00 resides at the district level
below \$10,000,000.00 resides at the Forest Supervisor level
below \$50,000,000 resides at the Regional Forester level

DOI-Signature authorities for WFSA are as follows:

	BIA	NPS	FWS	BLM
Local Level	\$1,000,000 Agency Supervisor	\$1,000,000 Park Superintendent	\$1,000,000 Refuge Manager	\$1,000,000 Field/District Manager
Mid Level	\$1,000,000 - \$5,000,000 Regional Director	\$1,000,000 - \$5,000,000 Regional Director	\$1,000,000 - \$5,000,000 Regional Director	\$1,000,000 - \$5,000,000 State Director
National Level	>\$5,000,000 BIA Director	>\$5,000,000 NPS Director	>\$5,000,000 FWS Director	>\$5,000,000 BLM Director

G. Wildland/Urban Firefighting

1. Introduction

A wildland-urban interface 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 wildland fires. Wildland fires in these areas are often multi-jurisdictional and multi-agency. This complexity combined with wildland fire, 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 wildland/urban interface for extremely dangerous and complex fire burning conditions.

2. Policy

The operational roles of the agencies in the wildland/urban interface are wildland firefighting, hazardous fuels reduction, cooperative prevention and education, and technical assistance. Structural fire suppression is the responsibility of tribal, state, or local governments. Federal agencies may assist with exterior structural protection activities under formal Fire Protection Agreements that specify the mutual responsibilities of the partners, including funding.

a. Protection Agreements and Planning

Managers must incorporate wildland/urban interface considerations into all agreements, operating plans, and land and fire management plans, to ensure that all interface areas are covered and state and local responsibilities are apportioned appropriately.

- b. *BLM – Bureau of Land Management (BLM) resources will not be planned, nor dispatched, as a normal response for structure or vehicle fires, except in those cases where these fires pose a significant threat to BLM-administered lands. In these*

situations, resources should only be used in wildland protection. Actions will be limited to the exterior of the structure or vehicle unless there is an immediate threat to human life.

- c. *No BLM employee will respond to a structure or vehicle fire prior to receiving required training in hazard awareness and unique safety considerations associated with structure and vehicle protection. A local fire department with responsibility for structure and vehicle fire protection may provide this training. The minimum hose diameter for vehicle fires is 1.5 inches when using foam in wildland/urban interface and vehicle fire situations.*
- d. *BLM employees, in interagency dispatch centers, should not provide dispatch services for cooperating agencies with structure fire, vehicle fire, or emergency medical responsibility, unless:*
 - 1) *A current interagency agreement is in effect and,*
 - 2) *BLM personnel have been trained in local emergency dispatch procedures and,*
 - 3) *The BLM employee has a delegation of authority for those activities outside the normal scope of the BLM. In these instances, BLM employees will be acting as agents of that agency and will only communicate information contained in that agency's dispatch plan or as directed by an official from that agency.*
- e. *FWS – Structural firefighting is not our functional responsibility. We should only perform assistance in structure protection on an emergency basis to save lives. Our fire personnel may assist in protecting wildlands around structures or protecting the structure's exterior from approaching fire when we can accomplish such action safely. We will make our fire personnel aware of safety hazards associated with suppression activities around structures and transportation systems.*

Do not knowingly place employees in a position where exposure to noxious gases or chemicals or other situations require the use of self-contained breathing apparatus.

Cooperative agreements will not commit our personnel to structural fire suppression.
- f. *NPS – The NPS has structural fire suppression authority and responsibilities on lands it administers. Only personnel with proper training and equipment will be assigned interior structure suppression duties, per DO-58. NPS wildland firefighters without the required structural training, PPE, and equipment are limited to exterior or exposure protection of buildings in wildland fire situations.*

- g. *NPS-Vehicle Fire Response Requirements for Wildland Firefighters. Vehicle fires including single-passenger vehicles are common types of fires encountered by firefighters. These fires contain a high level of toxic emissions and must be treated with the same care that structural fires are treated. Firefighters must be in full structural fire personal protective clothing including self-contained breathing apparatus.*
- h. *NPS-Situations exist during the incipient phase of a vehicle fire where the fire can be quickly suppressed with the discharge of a handheld fire extinguisher. Discharging a handheld fire extinguisher during this phase of the fire will normally be considered an appropriate action. If the fire has gone beyond the incipient stage, employees are to protect the scene and request the appropriate suppression resources.*
- i. *NPS-If firefighters are directed, dispatched, (including self-dispatching) to structural fires, including vehicle fires, they must be provided with the required personal protective equipment, fire fighting equipment and training.*
- j. *NPS-In order to protect the health and safety of National Park Service personnel, no employee shall be directed, dispatched, (including self-dispatching) to the suppression of vehicle fires unless they meet or exceed the following standards and regulations. The use of personal protective equipment and self-contained breathing apparatus are governed by adherence with the following Director's Orders, standards and regulations:*
 - 1) *Directors Order #58, Structural Fire*
 - 2) *NFPA 472 (1997) – Standard on Professional Competence of Responders to Hazardous Materials Incidents*
 - 3) *NFPA 1001 (1997) – Standard for Firefighter Professional Qualifications*
 - 4) *NFPA 1971 (2000) – Standard on Fire Protective Ensemble for Structural Fire Fighting*
 - 5) *NFPA 1404 (1996) – Fire Department Self-Contained Breathing Apparatus Program*
 - 6) *NFPA 1500 (1997) – Fire Department Occupational Safety and Health Program*
 - 7) *29 CFR 1910 & 1926 (Respiratory Protection Final Rule) and OSAH 29 CFR 1910.134 (Respiratory Protection).*
- k. *NPS- Training.*
 - 1) *Firefighters being dispatched to suppression of vehicle fires require:*
 - a) *Compliance with OSHA 29 CFR 1910.134 (This information is taught in Unit 5 of the structural fire training course and will require approximately 3 hours).*

- b) *Compliance with NFPA 1971 Standard on Protective Ensemble for Structural Fire Fighting (This information is taught in Unit 4 of the structural fire training course and will require approximately 1 hour).*
 - c) *Documented instruction by a certified fire instructor on the strategy, tactics and safety requirements in suppression activities related to vehicle fire suppression. This training does not include rescue and extrication. (This information is taught in Unit 19 of the structural fire training course and will require approximately 3 hours).*
 - d) *Funding of the training required to suppress vehicle fires should be provided by the benefiting accounts.*
- l. **NPS- Medical examinations**
Medical Requirements for Firefighters (NFPA 1582). Medical requirements include respiratory testing and some other components not included in the wildland fire medical examination.
 - m. **NPS- Physical fitness.**
Same as National Park Service wildland fire requirements for arduous duty.
 - n. **USFS – FSM-5137 – Structure Fires.** *Structure fire protection activities include suppression of wildfires that are threatening improvements. Exterior structure protection measures include actions such as foam or water application to exterior surfaces of buildings and surrounding fuels, fuel removal, and burning out around buildings.*
 - o. **USFS – FSM-5137.1 – Structure Fire Protection from Advancing Wildfires.** *The Forest Service’s primary responsibility is to suppress wildfire before it reaches structures. The Forest Service may assist state and local fire departments in exterior structure fire protection when requested under terms of an approved cooperative agreement.*
 - p. **USFS – FSM-5137.2 – Structure Fire Suppression.** *Structure fire suppression, which includes exterior and interior actions on burning structures, is the responsibility of state, tribal, or local fire departments.*
 - q. **USFS – Forest Service officials shall avoid giving the appearance that the agency is prepared to serve as a structure fire suppression organization.**
 - r. **USFS – Forest Service employees shall limit fire suppression actions to exterior structure protection measures as described in Section 5137.**

- s. *USFS – FSM-5137.3 – Structure Fire Protection and Suppression for Forest Service Facilities. At those Forest Service administrative sites, outside the jurisdiction of state and local fire departments, limit fire protection measures to prevention, use of fire extinguishers on incipient stage fires (FSH 6709.11, Sec. 6-4c), safe evacuation of personnel, containment by exterior attack, and protection of exposed improvements.*
- t. *USFS – At Forest Service administrative sites located within the jurisdiction of state and local structural fire departments, structure fire suppression responsibility must be coordinated with state and local fire departments.*
- u. *USFS – FSM-5137.4 – Vehicle and Dump Fires. Do not undertake direct attack on vehicle or dump fires on National Forest System lands unless such action is absolutely necessary to protect life or prevent the spread of fire to the wildlands.*
- v. *USFS – For additional fire service and homeowner information regarding wildland/urban fire refer to FIREWISE.ORG on the Internet.*

3. Wildland/Urban Interface Watch Outs

Checklists are provided in Appendices and the Incident Response Pocket Guide for safe and efficient responses and operations. The primary considerations are firefighter safety and public safety. Checklists that address interface situations can be found on the following pages.

Wildland Urban Interface: Page 10-30.

Structure Triage: Page 10-31.

Structure Go/No-Go Reference: Page 10-32.

HazMat IC Checklist: Page 10-33.

4. Roadside Response

Positioning of vehicles and employee awareness is paramount when responding to incidents in close proximity to roadways. Refer to the appendix on page 10-34 which highlights tactical considerations for roadway responses.

H. Hazardous Materials

1. Hazardous Materials Response Requirements For Wildland Firefighter

- a. All emergency service personnel are required to be trained in hazardous materials response. There are several levels of hazardous materials training including “first responder

awareness,” “first responder operations,” and “technical.” This section addresses the “first responder awareness” and “first responder operations” level only.

- b. First responder awareness and first responder operations levels shall receive training to meet applicable United States Department of Transportation (DOT), United States Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), *NFPA 472 Standard on Professional Competence of Responders to Hazardous Materials Incidents*, and other appropriate state, local, or provincial occupational health and safety regulatory requirements. This training is offered in many locations and requires approximately 8 hours.
- c. First responders at the awareness level are those persons who, in the course of their normal duties, could be the first on the scene of an emergency involving hazardous material. First responders at the awareness level are expected to recognize the presence of hazardous materials, protect themselves, call for trained personnel, and secure the area.
- d. First responders at the operational level are those persons who respond to releases or potential releases of hazardous materials as part of the initial response to the incident for the purpose of protecting nearby persons, the environment, or property from the effects of the release. First responders at the operational level are expected to respond in a defensive fashion to control the release from a safe distance and keep it from spreading. Training for the operational level requires approximately 24 hours.
- e. *USFS –FSM-5135.2 – Hazardous Materials. Limit actions of Forest Service personnel on incidents involving hazardous material to those emergency measures necessary for the immediate protection of themselves and the public. If the material is a health and safety hazard requiring special measures for control and abatement, promptly notify the appropriate public safety agencies. Provide training in hazardous materials recognition and avoidance to employees whose exposure to such materials is likely (FSM 2160).*

See page 10-33 for HazMat Checklist.

Size Up Report

- Incident Name** – All incidents
- Incident Commander** – All incidents
- Incident Type** – Wildland fire, vehicle accident, hazardous materials (HazMat), search and rescue, etc.
- Incident Status** – Fire-creeping, running, spotting, crowning: Vehicle-blocking road, over side, etc.
- Location** – Use landmarks, legal, or lat/long.
- Jurisdiction** – Agency with jurisdiction
- Radio Frequencies** – All incidents
- Incident Size** – Fire and HazMat
- Fuel Type** – Fire incidents only
- Wind Speed and Direction** – All incidents
- Slope and Aspect** – Fire and HazMat
- Best Access** – All incidents
- Special Hazards or Concerns** – For air and ground units
- Additional Resource Needs** – Personnel and equipment

Briefing Checklist**Situation**

- Fire name, location, map orientation, other incidents in area
- Terrain influences
- Fuel type and condition
- Fire weather (previous, current, and expected)
Winds, RH, temperature, etc.
- Fire behavior (previous, current, and expected)
Time of day, alignment of slope and wind, etc.

Mission/Execution

- Command
Incident commander/immediate supervisor
- Commander's intent
Overall strategy/objectives
- Specific tactical assignments
- Contingency plans

Communications

- Communication plan
Tactical, command, air-to-ground frequencies,
cell phone numbers
- Medivac plan

Service/Support

- Other resources
Working adjacent and those available to order
Aviation operations
- Logistics
Transportation
Supplies and equipment

Risk Management

- Identify known hazards and risks
- Identify control measures to eliminate hazards/reduce risk
Anchor point and LCES
- Identify trigger points for disengagement/re-evaluation of
operational plan

Questions or Concerns?

Spot Weather Observation and Forecast Request Instruction & Notes

Spot Weather Forecasts should be requested for fires that will exceed initial attack, have potential for extreme fire behavior, or are located in areas where Red Flag Warnings or Fire Weather Watches have been issued. This form is primarily for field use documentation of weather observations and/or forecasts. Whenever possible, a copy of the actual fire Weather Forecast should be used for operational briefings and/or included in the fire documentation.

Instructions

1. **Name of Fire/Incident:** Use incident or project name.
2. **Control Agency:** Agency with primary responsibility for managing the incident.
3. **Request Made:** Put date and time (use 24-hour clock).
4. **Location:** Use an on-site legal description specific to the nearest ¼ section.
5. **Drainage Name:** Use the closest drainage name or landmark from a topographical map.
6. **Exposure:** Use one of the 8 major cardinal points (N, SE, NW, etc.) to designate general aspect.
7. **Size of Project:** In acres.
8. **Elevation:** Designate elevation in feet; Top and Bottom refer to elevation of fire. (For a group of lightning fires specify "Concentration" then give number of fires and size of largest; request forecast for each drainage.)
9. **Fuel Type:** Use a fuel model number or a name description.
10. **Project On:** Projects may be on the ground or crowning.
11. **Weather Conditions at Project or from Nearby RAWS:** In the Place column, put On-site (which refers to the legal description used in Number 4); if the observations are taken off-site, specify the Township, Range, and Section to the nearest ¼ or the location of the RAWS used. In the Elevation column, put the actual elevation for the observations (may or may not be the same as in Number 8).
12. **Send Forecast To:** Specify how the forecast will be broadcast or sent, especially if it differs from normal radio relay or faxing procedures (i.e., having copies faxed to mobile units, office, or stations), and also the name of the contact who will be receiving the request (may differ from the person making the forecast request).
13. **Forecast and Outlook:** Document name of forecaster and office forecast originated from.
14. **Forecast Received:** Document name of person receiving forecast, date, time and location and received (to verify or update information in Number 12).

Notes

Under the Remarks column in Number 11, put the estimated ignition time for Rx projects. For Rx projects, fire weather forecasters can work with you ahead of time and either do some "practice" forecasts or provide you with weather information for planning.

For better service, do not send a request in just prior to Rx ignition (turn-around time is typically 1 to 2 hours). Most fire weather forecasters work early shifts, and usually leave around 1600 to 1700.

If the fire weather forecaster does not hear from you, they assume the forecast was accurate. If the forecast does not match what is actually occurring, let the fire weather forecaster know. Feedback is crucial for improving forecast accuracy. Forecasts can be updated. If at anytime you do not understand what the forecast is telling you, or you have questions about its content for whatever reason, do not hesitate to call the fire weather forecaster and discuss the matter.

Spot Weather Observation and Forecast Request (See reverse for instructions)									
Requesting Agency will Furnish Information for Blocks 1-12									
1. Name of Incident or Project				2. Control Agency			3. Request Made		
							Time:		Date:
4. Location (Designate Township, Range, and Section (include ¼ section):					5. Drainage Name		6. Exposure/Aspect:		
7. Size of Incident or Project (acres):			8. Elevation		9. Fuel Type:		10. Project On:		
			Top	Bottom			9 Ground 9 Crowning		
11. Weather Conditions at Incident or Project or from RAWS:									
Place	Elevation	Observation Time	Wind Direction/Velocity		Temperature		No entry necessary. To be completed by the Fire Weather Forecaster.		Remarks <small>(Indicate precipitation, cloud type and % cover, wind and frontal conditions, etc.)</small>
			20-Foot:	Eye Level:	Dry Bulb:	Wet Bulb:	Rh	Dp	
12. Send Forecast To (Person):			Send Forecast To (Location):				Send Forecast Via:		Send Copy To:
The Fire Weather Forecaster will Furnish the Information for Block 13:									
13. Discussion and Outlook:								Date and Time:	
Burn Period	Sky Cover	Temperature	Humidity	Wind		Indices			
				Eye Level	20-Foot				
9 Today (sunrise to dusk)	9 Mostly Sunny/Clear	°F _____	_____ %	9 Upslope	9 Upslope	Haines:			
9 This Afternoon (noon until dusk)	9 Fair			9 Downslope	9 Downslope	LAL:			
9 This Evening (1600 until dusk)	9 Partly Cloudy	9 High	9 Maximum	Direction_____	Direction_____	BI:			
9 Tonight (sunset until sunset)	9 Mostly Cloudy	9 Low	9 Minimum	Velocity____mph	Velocity____mph	CI:			
	9 Cloudy	9 Range	9 Range	Gusts____mph	Gusts____mph				
	9 Variable								
9 Today (sunrise to dusk)	9 Mostly Sunny/Clear	°F _____	_____ %	9 Upslope	9 Upslope	Haines:			
9 This Afternoon (noon until dusk)	9 Fair			9 Downslope	9 Downslope	LAL:			
9 This Evening (1600 until dusk)	9 Partly Cloudy	9 High	9 Maximum	Direction_____	Direction_____	BI:			
9 Tonight (sunset until sunset)	9 Mostly Cloudy	9 Low	9 Minimum	Velocity____mph	Velocity____mph	CI:			
	9 Cloudy	9 Range	9 Range	Gusts____mph	Gusts____mph				
	9 Variable								
Outlook for (Date): _____	9 Mostly Sunny/Clear	°F _____	_____ %	9 Upslope	9 Upslope	Haines:			
	9 Fair			9 Downslope	9 Downslope	LAL:			
	9 Partly Cloudy	9 High	9 Maximum	Direction_____	Direction_____	BI:			
	9 Mostly Cloudy	9 Low	9 Minimum	Velocity____mph	Velocity____mph	CI:			
	9 Cloudy	9 Range	9 Range	Gusts____mph	Gusts____mph				
	9 Variable								
Name of Fire Weather Forecaster:				Fire Weather Office Issuing Forecast:					
14. Forecast Received by (Name):				Date:		Time:		Forecast Received at (Location) Via:	

**Guide to completing the Incident Complexity Analysis.
(Type 1, 2)**

- 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 responses, this indicates the fire situation is or is predicted to be of Type 1 complexity.
- 4) Factor H should be considered after numbers 1–3 are completed. If more than two of the items in factor H are answered yes, and three or more of the other primary factors are positive responses, a Type 1 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 2 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.

Incident Complexity Analysis		YES	NO
A. Fire Behavior (Observed or Predicted)			
1. Burning index (from on-site measurement of weather conditions) predicted to be above the 90% level using the major fuel model in which the fire is burning.			
2. Potential exists for extreme fire behavior (fuel moisture, winds, etc.).			
3. Crowning, profuse or long-range spotting.			
4. Weather forecast indicating no significant relief or worsening conditions.			
Total			
B. Resources Committed			
1. 200 or more personnel assigned.			
2. Three or more divisions.			
3. Wide variety of special support personnel.			
4. Substantial air operation which is not properly staffed.			
5. Majority of initial attack resources committed.			
Total			
C. Resources Threatened			
1. Urban interface.			
2. Developments and facilities.			
3. Restricted, threatened, or endangered species habitat.			
4. Cultural sites.			

5. Unique natural resources, special-designation areas, wilderness.		
6. Other special resources.		
Total		
D. Safety		
1. Unusually hazardous fireline construction.		
2. Serious accidents or fatalities.		
3. Threat to safety of visitors from fire and related operations.		
4. Restrictions and/or closures in effect or being considered.		
5. No night operations in place for safety reasons.		
Total		
E. Ownership		
1. Fire burning or threatening more than one jurisdiction.		
2. Potential for claims (damages).		
3. Different or conflicting management objectives.		
4. Disputes over suppression responsibility.		
5. Potential for unified command.		
Total		
F. External Influences		
1. Controversial fire policy.		
2. Pre-existing controversies/relationships.		
3. Sensitive media relationships.		
4. Smoke management problems.		
5. Sensitive political interests.		
6. Other external influences.		
Total		
G. Change in Strategy		
1. Change in strategy to control from confine or contain		
2. Large amounts of unburned fuel within planned perimeter.		
3. WFSA invalid or requires updating.		
Total		
H. Existing Overhead		
1. Worked two operational periods without achieving initial objectives.		

2. Existing management organization ineffective.		
3. Overhead overextended mentally and/or physically.		
4. Incident action plans, briefings, etc. missing or poorly prepared.		
Total		

Incident Complexity Analysis (Type 3, 4, 5)		
Fire Behavior	Yes	No
Fuels extremely dry and susceptible to long-range spotting or you are currently experiencing extreme fire behavior.		
Weather forecast indicating no significant relief or worsening conditions.		
Current or predicted fire behavior dictates indirect control strategy with large amounts of fuel within planned perimeter.		
Firefighter Safety		
Performance of firefighting resources affected by cumulative fatigue.		
Overhead overextended mentally and/or physically.		
Communication ineffective with tactical resources or dispatch.		
Organization		
Operations are at the limit of span of control.		
Incident action plans, briefings, etc. missing or poorly prepared.		
Variety of specialized operations, support personnel or equipment.		
Unable to properly staff air operations.		
Limited local resources available for initial attack.		
Heavy commitment of local resources to logistical support.		
Existing forces worked 24 hours without success.		
Resources unfamiliar with local conditions and tactics.		
Values to be protected		
Urban interface; structures, developments, recreational facilities, or potential for evacuation.		
Fire burning or threatening more than one jurisdiction and potential for unified command with different or conflicting management objectives.		
Unique natural resources, special-designation areas, critical municipal watershed, T&E species habitat, cultural value sites.		
Sensitive political concerns, media involvement, or controversial fire policy.		

If you have checked “Yes” on 3 to 5 of the analysis boxes, consider requesting the next level of incident management support.

Wildland/Urban Interface Watch Outs

Wooden construction and wood shake roofs.

Poor access and narrow one-way canyons.

Observe bridge weight and size limits when using heavy equipment.

Inadequate water supply.

Natural fuels 30 feet or closer to structure.

Evacuations of public, livestock, pets, animals are planned or occurring.

Power lines and poles—watch for both overhead and fallen lines.

Propane and above ground fuel tanks with nearby vegetation or wooden improvements are present.

Local citizens are attempting suppression actions.

Coordination with multiple agencies.

Structure Triage

Address/Property Name

- Numerical street address, ranch name, etc.
- Residents on site?

Road Access

- Paved, gravel, dirt?
- Number of lanes, vegetation clearance, defensible space, safety zones?
- Undercarriage problems, 4x4 only?
- Turnouts, turnarounds?
- Bridges—adequate support structure?
- Water Crossings—approach angle, crossing surface?
- Terrain—road slope, position on slope, near chimneys, saddles, canyon bottom?
- Grade—greater or less than 15 percent?

Structure/Building

- Single residence, multiple occupancy, barn, fuel storage, unknown storage?
- What materials is the structure made of? Roof (wood shake, asphalt, etc.) Exterior walls (stucco, wood shake, or other combustibles).
- Eaves—covered and little overhang; exposed with large overhang exposure?
- Other—exposed wooden structural elements, overhangs slope, attached wood deck, firewood piles, wooden patio furniture, wooden fences attached to house.
- Underground utilities, septic, power, etc.

Clearances/Exposures/Defensible Space

- 100' vegetation clearance, max. 18" high, 15 percent or less slope, good ground clearance, vegetation is low combustible type, or is clearance less than described?
- Is the predominant fuel bed in area surrounding structure is light, medium, heavy, continuous, non-continuous?
- What types of hazards and fuels are adjacent to the structure?
- Are there high voltage lines or transformers near apparatus placement areas?
- Is the structure located on narrow ridge, knoll, narrow canyon, chimney, mid-slope; defensible space less than 200 feet?
- Are there propane and above ground fuel tanks with nearby vegetation?

Hazardous Materials

- Pesticides, herbicides, DOT/NFPA/UN symbols, propane, oil, fuels, paints?

Available Water

- Is there a water source such as hydrants or standpipes, water storage tanks with valve, swimming pools or natural bodies of water with access?

Evacuation Needs

- Coordination with local law enforcement and emergency services personnel? Evacuation plans, staging areas, resources needed, and communication.

Estimated Resources for Protection

- Number and types of engines, water tenders, crews, dozers, heavy equipment, and aviation resources.

Structure Go-No Go/Protection Reference

Factors that may make a structure too dangerous to protect:

If you answer, “yes” to any of the below, don’t attempt to protect that structure, move on to the next.

- Fire is making a sustained run and there is little or no clearance.
- Water supply will not last as long as the threat.
- Fire’s intensity dictates leaving the area immediately.
- The roof is more than one-quarter involved.
- There is fire inside the structure or windows are broken.

If the conditions listed above allow for a structure protection effort to be made then:

- Check roads before the fire arrives. Know turnouts, and bridge limits.
- Check each home for an adequate defensible space.
- Stay mobile; keep vehicle engine running and red lights on.
- Back in equipment for a quick escape.
- Brief resources on strategies, tactics, hazards, and LCES.
- Coil a short 1½ “ charged line with a fog nozzle on your engine for safety and quick response.
- Use short hose-lays.
- Keep at least 10% gallons of water in your tank.
- Determine if residents are home.
- Advise residents of escape routes, safety zones, evacuation plans and centers.
- Ask residents to evacuate threatened livestock or pets.
- Leave home lights on inside and out, day and night.
- Place owners ladder at a corner of the structure least threatened by the fire.
- Coil and charge garden hoses.
- Turn on sprinklers.
- Identify hazards. (HazMat, gas lines, power lines, etc.)
- If a home becomes involved, leave it and move to one you can save.

Firefighter safety and survival are the number one priority.

HazMat IC Checklist

Think Safety

- Assess situation.
- Safe approach, upwind/upgrade/upstream.
- Identify, isolate and deny entry.
- Notify agency dispatcher.
- Exact location, use GPS.
- Request needed assistance and identify a safe route.

Scene Management

- Goal is to protect life, environment and property.
- Attempt to identify substance using DOT North American Emergency Response Guide. Use binoculars, placards/labels, container shapes/colors, Material Safety Data Sheets (MSDS), shipping papers.
- Quantity of material involved.
- Exposures and hazards surrounding the site.

Organizational Responsibilities

- Establish chain of command.
- Develop action plan for area security and evacuation.
- Advise all on scene and responding resources of changes in situation.
- Keep dispatcher advised of changes.
- Document all actions taken:
 - Contacts
 - Employee exposures

Rules of thumb for isolation distances

- Minor event (1 drum, 1 bag, etc.) = 150 feet
- Major event (1 drum or more, etc.) = 500 feet
- Residential and light commercial = 300 feet
- Open areas = 1000 feet
- BLEVE (Boiling Liquid Expanding Vapor Explosion) potential = 2500 feet (one-half mile)
- Stage arriving units 2500 feet upwind.
- Position vehicles headed out.

1-800-424-9300 - CHEMTREC (Chemical Transportation Emergency Center)

For immediate information about a chemical or to seek assistance from a manufacturer.

1-800-424-8802 - National Response Center- To report spills of oil and Hazardous Material.

ROADSIDE INCIDENT RESPONSE

Considerations

- Firefighter and public safety will always be the number one priority.
- Utilize L.C.E.S. in all incident activities.
- Personal Protective Equipment will be utilized on all incidents.

Upon Arrival at the Scene

- Size up of the incident- see Incident Response Pocket Guide
 - What has happened?
 - What is happening?
 - What will or could happen?
 - Is this a HazMat situation?
- Risk Management Process-
 - Decision Point, Go No Go. See the *Incident Response Pocket Guide*, page 1

Tactical Considerations

- Anytime traffic flow is affected by the incident, contact the jurisdictional law enforcement agency for assistance.
- Conduct all operations as far from traffic lanes as possible to provide for crew and public safety.
- Park units on the same side of the roadway when ever possible to avoid traffic congestion.
- Personnel do not exit the fire apparatus until instructed to do so by the module leader.
- Exit the fire apparatus away from the roadway or where hazard exposure is minimized.
- Exit the fire apparatus with full personal protective equipment.
- Post a lookout to watch for and control oncoming traffic.
- Utilize forward and rear spotters when visibility is impaired or road conditions warrant.
- Utilize and place road flares or other traffic warning signs when ever possible
- If equipment needs to be removed from the traffic side of the apparatus, one person will retrieve the equipment and a lookout will watch for oncoming traffic.
- Engine operators will operate pumps from the non-traffic side or from the cab of the apparatus when possible.
- Keep all hose, fire tools, and equipment out of traffic lanes when possible.
- During night operations utilize reflective clothing, vests and other safety equipment as necessary.
- All emergency responses on roadways will be concluded as quickly as possible to reduce personnel exposure.
- Cancel or demob unnecessary apparatus as soon as possible.

***Each agency emergency vehicle operator will follow their particular state laws and agency policies governing the operations of emergency vehicles.*

Manager's Supplement for After Action Review

Incident Commander _____

Fire Name and No. _____

Start Date and Duration of Incident _____

Date of Incident Debriefing _____

List of Debriefing Attendees:

Brief synopsis of fire behavior and narrative of the incident:

1. Fire Size-up:

- Gave an accurate sizeup of the fire to dispatch upon arrival? (See page 10-22)
- Managed fire suppression resources in accordance with the management objectives for the area and availability of resources?
- Did the unit support organization provide timely response and feedback to your needs? (See page 10-37)
- Were there any radio communication issues?

2. Provide for the Safety and Welfare of Assigned Personnel:

- Gave operation briefing prior to firefighters being assigned to incident operations. (See page 10-23)
- How were incoming resources debriefed; via radio, personal contact?
- Were agency work/rest guidelines followed? Was adequate food and water provided to firefighters?

3. Fire Suppression Operations:

- Did the strategies and tactics used meet management objectives, without compromising adherence to the Fire Orders, Watch Out Situations, and the principles of LCES?
- How were daily weather briefings, spot weather forecasts or other weather conditions monitored?
- Were there adjustments made to strategy and tactics?
- What were the potentially hazardous situations, and their mitigations?
- How were projected changes in the weather, tactics, hazards and fire behavior communicated to fire personnel?
- Were communications effective with dispatch and supervisor?
- Were all interested parties kept informed of progress, problems, and needs? Was aviation support used? If so, was it effective?
- Were there any injuries, close calls, or safety issues that should be discussed? Were these documented?

4. Administrative Responsibilities:

- Submitted complete documentation to supervisor for time, accidents, incident status, unit logs, evaluations, and other required or pertinent reports?
- Was timely and effective notification of the fire status and unusual events or occurrences reported to dispatch and management?
- If requested, was effective input provided into the Wildland Fire Situation Analysis (WFSA).
- If necessary, provided team transition briefing as assigned.
- Form ICS 201 was completed in accordance with local policy.

**Sample Questions
For Fire Site Visits
By Agency Administrators**

Management Direction

- ___ Who is the incident commander? If the fire is being managed under Unified Command, are all commanders present? Is the incident operating smoothly?
- ___ What is the incident organization?
- ___ What is the current situation? What has been damaged or is at risk?
- ___ Have you received adequate direction for the management of the incident? Is a Wildland Fire Situation Analysis required/still valid?
- ___ What are the incident management objectives? Constraints? Probability of success?
- ___ Are the Incident Action Plan objectives realistic and achievable with current resources?
- ___ Is a resource advisor needed?
- ___ What are your estimates of suppression costs?
- ___ What are the incident commander's concerns?
- ___ What are the local social, economic, and political issues?
- ___ Are there rehabilitation needs?
- ___ What can I, as the agency administrator, do to help?

Safety

- ___ What are your safety concerns?
- ___ Are these concerns resolved? If not, what needs to be done?
- ___ What is the general safety attitude and emphasis?
- ___ Have you assessed the potential hazardous situations and determined if the fire can be fought safely?
- ___ Have you applied the Fire Orders, Watchout Situations, and the LCES process selecting the strategies and tactics?
- ___ Have you effectively briefed firefighters on hazards, safety zones, escape routes, and current and expected weather and fire behavior?
- ___ Is the safety officer position filled? If not, how is this function being addressed?
- ___ Are you monitoring work schedules to ensure adequate rest? Are you meeting the standard work/rest guidelines?
- ___ Have you provided for adequate rest, food, water, and health services for all personnel?
- ___ Are all the fire personnel qualified for the positions they hold, and are they physically able to perform?
- ___ Have you had any injuries or accidents?

Fire Suppression Operations

- ___ What is the fire weather forecast (present and extended)?
- ___ What is the fire behavior potential?
- ___ Are fire personnel briefed on incident objectives, strategies, tactics, organization, communications, hazards, and safety principles?
- ___ Are the strategy and tactics based on current and forecast weather?

- ___ Are strategy and tactics safe, effective, and consistent with management's objectives and accepted fire policies and procedures?
- ___ Do you have effective communication on incident and with dispatch?
- ___ Are you monitoring weather and fire behavior to make needed adjustments to strategy and tactics?
- ___ Are you using tactical aircraft? Do you have an assigned air tactical group supervisor?
- ___ Is aircraft use safe, effective, and efficient?
- ___ If the fire escapes initial attack, what will your role be in developing the Wildland Fire Situation Analysis?

Administration

- ___ Do you have any administrative concerns?
- ___ What arrangements have you made to complete time reports, accident forms, fire report, etc.?
- ___ Did all orders and procurement go through dispatch?
- ___ Do you have any outstanding obligations?
- ___ Are all rental agreements and use records properly completed?
- ___ How did the fire start? If human-caused, has an investigation been initiated to determine the cause and develop a trespass case?
- ___ Do you know of any current or potential claims?

Dispatch Office

- ___ Is the incident receiving fire weather and fire behavior information?
- ___ Is the incident getting the resources ordered in a timely manner?
- ___ Is dispatch adequately staffed?
- ___ What are the local, area, and national Preparedness Levels? How do they affect this?
- ___ Are the elements identified at the various Preparedness Levels being considered?
- ___ What are the current local, area and national fire situations?
- ___ What is the priority of existing fires and how are the priorities being determined?