

1 **Chapter 10**
2 **Developing a Response to Wildland Fires**

3
4 **Policy**

5 Fire, as a critical natural process, will be integrated into land and resource
6 management plans and activities on a landscape scale, and across agency
7 boundaries. Response to wildland fires is based on ecological, social and legal
8 consequences of the fire. The circumstances under which a fire occurs, the
9 likely consequences on firefighter and public safety and welfare, natural and
10 cultural resources, and values to be protected, dictate the appropriate response to
11 fire.

12
13 **Annual Operating Plan**

14
15 **Developing an Annual Operating Plan**

16 Units with dispatching responsibility, in conjunction with their cooperators, will
17 ensure that Annual Operating Plans (AOPs) are developed, updated, and
18 approved annually. The procedures outlined in the plans must be implemented
19 and adhered to during dispatching operations.

20
21 There are variations in the required elements for AOPs due to many factors
22 (activity level/complexities, interagency coordination, all-risk incidents, and
23 HazMat). Additional guidance can be obtained by reviewing local unit fire
24 management reference guides. The elements found in Appendix DD Annual
25 Operating Plan Elements shall be identified in each dispatch center's AOPs.

26
27 **Appropriate Management Response to Wildland Fires**

28
29 **Definition**

30 The Appropriate Management Response (AMR) is any specific action suitable
31 to meet Fire Management Unit (FMU) objectives. Typically, the AMR ranges
32 across a spectrum of tactical options (from monitoring to intensive management
33 actions). The AMR is developed by using FMU strategies and objectives
34 identified in the Fire Management Plan.

35
36 **Developing Appropriate Management Response Evaluation Criteria**

- 37 • Risks to firefighters and public health and safety
38 • Land and Resource Management Objectives
39 • Weather
40 • Fuel conditions
41 • Threats and values to be protected
42 • Cost efficiencies

43
44

1 **Appropriate Management Response Options**

2

3 **Monitoring from a distance**

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

6

7 **Monitoring on-site**

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

10

11 **Confinement**

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

18

19 **Monitoring plus contingency actions**

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

24

25 **Monitoring plus mitigation actions**

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

32

33 **Initial Attack**

34 A planned response to a wildfire given the wildfire's potential fire behavior.
35 The objective of initial attack is to stop the spread of the fire and put it out at
36 least cost. This is an action where an initial response is taken to suppress
37 wildfires consistent with firefighter and public safety and values to be protected.

38

39 **Wildfire suppression with multiple strategies**

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

44

45

1 **Control and extinguishment**

2 These actions are taken on a wildfire when the selected WFSAs alternative
3 indicates a control strategy. Sufficient resources are assigned to achieve control
4 of the fire with a minimum of acres burned.

5

6 **Responding to Wildland Fires**

7

8 **Report of Wildland Fire**

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

11

12 If no approved Fire Management Plan (FMP) exists or the fire is in an area
13 designated for suppression action, initial response forces are dispatched.

14

15 If the fire is in an area where an approved FMP exists, the fires may be managed
16 to benefit resource values in accordance with the preplanned conditions and
17 objectives outlined in a Wildland Fire Implementation Plan (WFIP).

18

19 A Wildland Fire Implementation Plan (WFIP) will be initiated for all wildland
20 fire use events. For an estimated 90+% of all wildland fires, information needed
21 for WFIP Stage I decision analysis is contained in the FMP. Only the most
22 complex fires being managed for resource benefits (Fire Use Fires) will require
23 completion of all parts of a WFIP. The full WFIP consists of three distinct
24 stages (Stage I, Stage II and Stage III). When wildland fires occur, pre-planned
25 descriptions in the FMP (in combination with the Fire Situation) assist Stage I
26 decisions.

27

28 Progressive development of these stages will occur for wildland fires managed
29 for resource benefits or where initial attack is not the selected response.

30 Objectives, fire location, cause, conditions of fuel continuity, current fire
31 activity, fire location, predicted weather and fire behavior conditions, and risk
32 assessment results will indicate when various WFIP Stages must be completed.
33 Resource benefits become more important as strategic decision factors,
34 additional planning and documentation requirements (additional WFIP Stages)
35 are involved.

36

37 **Initial Actions**

38 The actions taken by the first resources to arrive at a wildland fires. The
39 objective is to safely and efficiently manage fires in conformance with existing
40 policy and procedures consistent with an approved Fire Management Plan
41 (FMP).

42

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

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1 **Organization and Qualifications**

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

4
5 **Fire Size-up (Stage 1 WFIP)**

6 At the earliest opportunity after arrival on an incident, the initial attack incident
7 commander will relay the information from Appendix D to the agency dispatch,
8 and continue to keep the dispatcher informed of any significant changes and
9 progress on the fire.

- 10 • *FS - A complexity analysis must be completed and documented on all fires.*
11 *This can be found in the IRPG.*

12
13 **Fire Cause Determination**

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

- 17 • *BLM - All initial attack incident commanders must have completed basic*
18 *training in wildland fire cause determination.*

19
20 A checklist for Fire Cause Determination can be found in the *IRPG*.

21
22 **Operational Briefings**

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

28
29 If firefighters cannot be briefed prior to departure from base, the receiving
30 dispatch office will provide a briefing to the supervisor by radio. In all cases,
31 firefighters will be briefed prior to starting work. The IC or their delegate will
32 document all Operational Briefings.

33 The Briefing Checklist found in Appendix F and in the *IRPG*, contains the
34 minimum items required to brief all incoming crews, personnel, or resources.
35 Units are encouraged to expand the minimum briefing, as appropriate, to ensure
36 that safety and efficiency are addressed.

37
38 **Spot Weather Forecast**

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

42
43 Spot weather forecasts may be requested at any time by using Appendix K.

44

1 **Strategy & Tactics**

2

3 **Determining Strategy and Tactics**

4 Determining appropriate initial attack strategies and tactics must be based on
5 appropriate management response while providing for firefighter and public
6 safety. Other factors to consider are: suppression objectives, values at risk,
7 current and predicated fire behavior, weather conditions, available resources and
8 their condition.

9

10 **Application of Risk Management**

11 Identification and mitigation of risk must be considered in all strategic and
12 tactical planning. Use of the Risk Management Process is mandatory. Tactical
13 assignments for all resources will not be initiated or continued without strict
14 adherence to the Risk Management Process, incorporating the 10 Standard Fire
15 Orders, 18 Watch Out Situations, and principles of LCES. Reevaluation of the
16 Risk Management/LCES process is essential.

17

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.

18

19 For additional information on strategic and tactical guidelines and principles, see
20 the *NWCG Fireline Handbook 3 (PMS 410-1, NFES 0065), Chapter 1,*
21 *Firefighter Safety and Chapter 2, Initial Attack, and the Incident Response*
22 *Pocket Guide (PMS-461, NFES 1077).*

23

24 **Extended Attack Operations**

25

26 **Definition**

27 Suppression activity for a wildfire that has not been contained or controlled by
28 initial action or contingency forces and for which more firefighting resources are
29 arriving, en route, or being ordered by the initial attack incident commander.

30

- 1 ICS provides for a management/organizational structure on incidents that evolve
2 in complexity or increase in size, whether within a few hours or over several
3 days. While the criteria for incident complexity vary by local conditions, a fire
4 that has escaped initial attack and is considered extended attack when:
- 5 • The fire has not been contained by the initial attack resources dispatched to
6 the fire.
 - 7 • The fire will not have been contained within the management objectives
8 established for that zone or area.
 - 9 • The fire has not been contained within the first operational period and there
10 is no estimate of containment or control.

11

12 **Organization**

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

19

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

22

23 **Incident Complexity Analysis**

24 An Incident Complexity Analysis will be used as a guide for ICs, fire managers,
25 and Agency Administrators to evaluate emerging fires in order to determine the
26 level of management organization required to meet agency objectives. This will
27 assist in identifying resource, safety, and strategic issues that will require
28 mitigation. There are two types of Incident Complexity Analysis available:

- 29 • For Type 1 and 2 incidents use Appendix L.
- 30 • For Type 3, 4 and 5 Incidents use Appendix M.

31

32 **Assumptions for Developing a Complexity Analysis**

- 33 • As an incident becomes more complex, the need for an incident
34 management team or organization increases.
- 35 • To facilitate assembling an efficient and effective organization, key
36 managers should be involved during the early stages of complexity
37 analysis.
- 38 • The analysis is not a cure-all for the decision process; local fire history,
39 current fire conditions, and management requirements must be considered.

40

41 **Wildland Fire Situation Analysis (WFSA)**

42 **Definition**

43 The Wildland Fire Situation Analysis process is used to determine and
44 document the suppression strategy from the full range of responses available for

1 suppression operations. Suppression strategies are designed to meet the policy
 2 objectives of suppression.

3
 4 The WFSA is a decision making process in which the Agency Administrator or
 5 representative describes the situation, compares multiple strategic wildland fire
 6 management alternatives, evaluates the expected effects of the alternatives,
 7 establishes objectives and constraints for the management of the fire, selects the
 8 preferred alternative, and documents the decision. The format and level of detail
 9 required depends on the specific incident and its complexity. The key is to
 10 document the decision made. A WFSA will be completed whenever a wildfire
 11 escapes initial attack.

12
 13 The Agency Administrator, their representative, with the Fire Management
 14 Officer (FMO) or Incident Commander will prepare the WFSA. The format and
 15 level of detail required depends on the specific incident and its complexity. For
 16 signatory authority and cost limits see the chart below. An electronic copy of
 17 the WFSA can be found at <http://www.fs.fed.us/fire/wfsa/>. A description of the
 18 WSFA Elements with guidance for the completion can be found in Appendix
 19 EE.

20
 21 **Signature authorities for WFSA are as follows:**

	BIA	BLM	FWS	NPS	FS
Local Approval Level	\$2,000,000 Agency Supervisor	\$2,000,000 Field/District Manager	\$2,000,000 Refuge Manager	\$2,000,000 Park Superintendent	\$2,000,000 District Ranger \$2,000,000-10,000,000 Forest Supervisor
Regional/State Certification Level	\$2,000,000 - \$5,000,000 Regional Director	\$2,000,000 - \$5,000,000 State Director	\$2,000,000 - \$5,000,000 Regional Director	\$2,000,000- \$5,000,000 Regional Director	\$10,000,000- \$50,000,000 Regional Forester
National Certification Level	>\$5,000,000 Director	>\$5,000,000 Director	>\$5,000,000 Director	>\$5,000,000 Director	>\$50,000,000 Chief

22
 23 **Wildland/Urban Firefighting**

24
 25 **Introduction**

26 A wildland-urban interface exists where community-defined values, structures,
 27 watersheds, roads and highways, power and gas lines, or other community
 28 resources intermingle with wildland fuels, and may be threatened by wildland
 29 fires. Wildland fires in these areas are often multi-jurisdictional and multi-
 30 agency. This complexity combined with wildland fire, public safety, increased
 31 media attention, political pressures, and other factors, may combine to
 32 overwhelm a normal size-up and decision-making process. The potential exists

1 in areas of wildland/urban interface for extremely dangerous and complex fire
2 situations.

3

4 **Policy**

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

12

13 **Protection Agreements and Planning**

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

18

19 **Emergency Non-Wildland Fire Response**

20 Authorized funding under the wildland fire preparedness and suppression
21 activities includes funding for wildland fire related activities. Funding is not
22 provided to prepare for or respond to emergency non-wildland fire response
23 activities such as structure fires, vehicle fires, dump fires, hazardous materials
24 releases, and emergency medical responses.

25

26 **Management Controls to Mitigate Exposure**

27 Agency policy states that PPE devices will be used only when equipment
28 guards, engineering controls, or management control does not adequately protect
29 employees. To meet this requirement:

- 30 • Managers and supervisors will not knowingly place wildland firefighters in
31 positions where exposure to toxic gases or chemicals would require the use
32 of self-contained breathing apparatus.
- 33 • Managers will not sign cooperative fire protection agreements that would
34 commit wildland firefighters to situations where exposure to toxic gases or
35 chemicals would require the use of self-contained breathing apparatus.
- 36 • Managers will avoid giving the appearance that their wildland fire
37 suppression resources are trained and equipped to perform structure,
38 vehicle, and dump fire suppression, to respond to hazardous materials
39 releases, or to perform emergency medical response.

40

41 **Structure Fires, Vehicle Fires, and Dump (Landfill) Fires**

42 Structure, vehicle, and dump fire suppression is not a functional responsibility of
43 wildland fire suppression resources. These fires have the potential to emit high
44 levels of toxic gases. Firefighters will not be dispatched to structure, vehicle, or

1 dump fires unless there is a significant threat to lands and resources that are
2 under agency protection, including by protection agreement. Firefighters will
3 not take direct suppression action on structure, vehicle, or dump fires. This
4 policy will be reflected in suppression response plans.

5
6 Should firefighters encounter structure, vehicle, or dump fires during the
7 performance of their normal wildland fire suppression duties, firefighting efforts
8 will be limited to areas where the fire has spread onto agency protected lands.
9 Structure protection will be limited to exterior efforts, and only when such
10 actions can be accomplished safely and in accordance with established wildland
11 fire operations standards.

- 12 • **FS - FSM-5137 - Structure Fires**
13 *Structure fire protection activities include suppression of wildfires that are*
14 *threatening improvements. Exterior structure protection measures include*
15 *actions such as foam or water application to exterior surfaces of buildings*
16 *and surrounding fuels, fuel removal, and burning out around buildings.*
- 17 • **FS - FSM-5137.1 - Structure Fire Protection from Advancing Wildfires.**
18 *The Forest Service's primary responsibility is to suppress wildfire before it*
19 *reaches structures. The Forest Service may assist state and local fire*
20 *departments in exterior structure fire protection when requested under*
21 *terms of an approved cooperative agreement.*
- 22 • **FS - FSM-5137.2 - Structure Fire Suppression.** *Structure fire*
23 *suppression, which includes exterior and interior actions on burning*
24 *structures, is the responsibility of state, tribal, or local fire departments.*
- 25 • **FS - Forest Service officials shall avoid giving the appearance that the**
26 *agency is prepared to serve as a structure fire suppression organization.*
- 27 • **FS - Forest Service employees shall limit fire suppression actions to**
28 *exterior structure protection measures as described in Section 5137.*
- 29 • **FS - FSM-5137.3 - Structure Fire Protection and Suppression for Forest**
30 **Service Facilities.** *At those Forest Service administrative sites, outside the*
31 *jurisdiction of state and local fire departments, limit fire protection*
32 *measures to prevention, use of fire extinguishers on incipient stage fires*
33 *(FSH 6709.11, Sec. 6-4c), safe evacuation of personnel, containment by*
34 *exterior attack, and protection of exposed improvements.*
- 35 • **FS - At Forest Service administrative sites located within the jurisdiction**
36 *of state and local structural fire departments, structure fire suppression*
37 *responsibility must be coordinated with state and local fire departments.*
- 38 • **FS - FSM-5137.4 - Vehicle and Dump Fires**
 - 39 ➤ **FS - Do not undertake direct attack on vehicle or dump fires on**
40 *National Forest System lands unless such action is absolutely*
41 *necessary to protect life or prevent the spread of fire to the wildlands.*
 - 42 ➤ **FS - For additional fire service and homeowner information**
43 *regarding wildland/urban fire refer to <http://firewise.org> on the*
44 *Internet.*

- 1 • **NPS – Structural Fire (including Vehicle Fires) Response Requirements.**
2 *Structural fire suppression is a functional responsibility in many NPS*
3 *units. Any structural fire response shall only be by personnel who have*
4 *received the required training and are properly equipped. Vehicle fires*
5 *contain a high level of toxic emissions and must be treated with the same*
6 *care that structural fires are treated. Firefighters must be in full structural*
7 *fire personal protective clothing including self-contained breathing*
8 *apparatus. Situations exist during the incipient phase of a vehicle fire*
9 *where the fire can be quickly suppressed with the discharge of a handheld*
10 *fire extinguisher. Discharging a handheld fire extinguisher during this*
11 *phase of the fire will normally be considered an appropriate action. If the*
12 *fire has gone beyond the incipient stage, employees are to protect the*
13 *scene and request the appropriate suppression resources. In order to*
14 *protect the health and safety of National Park Service personnel, no*
15 *employee shall be directed, dispatched, (including self-dispatching) to the*
16 *suppression of structural fires, including vehicle fires, unless they are*
17 *provided with the required personal protective equipment, firefighting*
18 *equipment and training. All employees must meet or exceed the standards*
19 *and regulations identified in Director’s Order and Reference Manual #58,*
20 *Structural Fire.*
- 21 • **NPS - Training Requirements for Firefighters Responding to Structural**
22 **Fires (including Vehicle Fires).** *All wildland firefighters who respond to*
23 *structural fires will meet the training requirements identified in Director’s*
24 *Order and Reference Manual #58, Structural Fire and will be qualified at*
25 *least at the Structural Firefighter level.*
- 26 • **NPS –Medical Examination Requirements for Firefighters Responding**
27 **to Structure Fires (including Vehicle Fires).** *All wildland firefighters*
28 *who respond to structural fires will meet the medical requirements*
29 *identified in Director’s Order and Reference Manual #58, Structural Fire.*
30 *Medical requirements include respiratory testing and some other*
31 *components not included in the wildland fire medical examination.*
- 32 • **NPS - Physical Fitness for Wildland Firefighters Responding to**
33 **Structure Fires (including Vehicle Fires).** *The physical fitness*
34 *requirements as the same as for wildland fire arduous duty.*

35 **Hazardous Materials**

36 Wildland firefighters have the potential to be exposed to hazardous materials
37 releases while performing their jobs. Hazardous materials or waste may be
38 found on public lands in a variety of forms (e.g. clandestine drug lab waste,
39 mining waste, illegal dumping, and transportation accidents).
40

41
42 In order to meet 29 CFR 1910.120, and to ensure familiarity with hazardous
43 materials releases, all wildland firefighters will complete a one-time, two-hour
44 First Responder Awareness training course and an annual refresher course

1 thereafter (First Responders are individuals who are likely to witness or discover
2 a hazardous substance release, and who have been trained to initiate an
3 emergency response sequence by notifying proper authorities of the release).
4 Awareness Class module 1703-07/11 is available from the National Training
5 Center and may be taught in the field office by the Hazardous Materials
6 Coordinator.

7
8 Firefighters who discover any unauthorized waste dump or spill site that
9 contains indicators of potential hazardous substances should take the following
10 precautions:

- 11 • Follow the procedures in the *Incident Response Pocket Guide*.
- 12 • Treat each site as if it contains harmful materials.
- 13 • Do not handle, move, or open any container, breathe vapors, or make
14 contact with the material.
- 15 • Move a safe distance upwind from the site.
- 16 • Contact appropriate personnel. Generally, this is the Hazardous Materials
17 Coordinator for the local office.
- 18 • ***FS - FSM-5135.2 - Hazardous Materials***
19 *Limit actions of Forest Service personnel on incidents involving hazardous*
20 *material to those emergency measures necessary for the immediate*
21 *protection of themselves and the public. If the material is a health and*
22 *safety hazard requiring special measures for control and abatement,*
23 *promptly notify the appropriate public safety agencies. Provide training in*
24 *hazardous materials recognition and avoidance to employees whose*
25 *exposure to such materials is likely (FSM 2160).*

26 **Emergency Medical Response**

27 Medical emergency response is not a functional responsibility of wildland fire
28 suppression resources. Wildland firefighters are not trained and equipped to
29 perform emergency medical response duties, and should not be part of a
30 preplanned response that requires these duties. When wildland firefighters
31 encounter emergency medical response situations, their efforts should be limited
32 to immediate care (e.g. first aid, first responder) actions that they are trained and
33 qualified to perform.

- 34 • ***NPS – Emergency Medical Response Requirements.*** *NPS employees who*
35 *provide emergency medical services will adhere to the requirements*
36 *contained in Director’s Order and Reference Manual #51, Emergency*
37 *Medical Services, once these directives receive final approval.*

38 **Wildland/Urban Interface Watch Outs**

39
40 Checklists are provided in the Incident Response Pocket Guide for safe and
41 efficient responses and operations. The primary considerations are firefighter
42 safety and public safety. The Appendices that address interface situations can
43 be found in the back of this book.
44

- 1 • Structure Triage: Appendix O.
- 2 • Structure Go/No-Go Reference: Appendix P.

3

4 **Roadside Response**

- 5 Positioning of vehicles and employee awareness is paramount when responding
6 to incidents in close proximity to roadways. Refer to Appendix J which
7 highlights tactical considerations for roadway responses.