

# Fire Management in Wilderness

## Excerpts from Forest Service Manual (FSM) 2320

### 2323 - MANAGEMENT OF OTHER RESOURCES IN WILDERNESS

#### 2323.04 – Responsibilities

##### 2323.04c - Regional Forester

Unless specifically reserved to the President (FSM 2323.04a) or the Chief (FSM 2323.04b) or assigned to the Forest Supervisor (FSM 2323.04d) or the District Ranger (FSM 2323.04e), the Regional Forester is responsible for approving all measures that implement FSM direction on the management of other resources in wilderness. Specific responsibilities include but are not limited to:

11. Approving emergency burned area rehabilitation projects.

#### 2323.4 - Management of Soil and Water Resources

##### 2323.42 - Policy

The policy for soil and water management is generally the same as for all National Forest watersheds (FSM 2502). However, in wilderness natural processes shall dominate.

##### 2323.43 - Watershed Improvements

###### 2323.43a - Watershed Condition Improvement

(See FSM 2522). Use watershed improvements to restore watersheds where deteriorated soil and hydrologic conditions caused by humans or their influences create a serious threat or loss of wilderness values. Watershed condition improvements are also appropriate where natural conditions present a definite hazard to life or property; or where such conditions could cause serious depreciation of important environmental qualities outside of the wilderness. Promote natural healing where such dangers are not imminent or where natural vegetation would return in a reasonable time.

Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing.

Use nonmotorized equipment to accomplish improvement objectives. Only imminent threat to important values downstream justifies the use of motorized equipment.

### 2323.43b - Emergency Burned Area Rehabilitation

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of the wilderness resource or to protect life, property, and other resource values outside of wilderness. Normally use hand tools and equipment to install selected land and channel treatments.

### 2323.6 - Management of Air Resource

#### 2323.62 - Policy

4. Manage smoke from management ignited prescribed fires occurring in or adjacent to class I wilderness areas in a manner that causes the least impact on air quality related values (FSM 2324).

### 2324 - MANAGEMENT OF SUPPORT ACTIVITIES IN WILDERNESS

#### 2324.04 – Responsibilities

##### 2324.04a - Chief

The Chief is responsible for approving:

3. Extending or widening of existing airfields and construction of new airfields.
4. Construction and maintenance of heliports away from existing administrative sites.

##### 2324.04b - Regional Forester

The Regional Forester is responsible for:

2. Approving the use of prescribed fire on a wilderness by wilderness basis through approval of the appropriate management plan. The management plan sets forth the standards and guidelines for the use and application of prescribed fire and the methods of monitoring results.

3. Approving construction of new fire lookouts.
6. Approving construction of nonemergency helispots.

##### 2324.04c - Forest Supervisor

The Forest Supervisor is responsible for approving:

1. Reconstruction of existing fire lookouts.
2. Construction of helispots for wildfire suppression and emergencies.

## 2324.2 - Management of Fire

### 2324.21 - Objectives

The objectives of fire management in wilderness are to:

1. Permit lightning caused fires to play, as nearly as possible, their natural ecological role within wilderness.
2. Reduce, to an acceptable level, the risks and consequences of wildfire within wilderness or escaping from wilderness.

### 2324.22 - Policy

1. Two types of prescribed fires may be approved for use within wilderness: those ignited by lightning and allowed to burn under prescribed conditions and those ignited by qualified Forest Service officers.
2. No fire may be ignited or allowed to burn without documented, preplanned, specified conditions.
3. Document specific objectives, standards, and guidelines for the control of wildfire and the use of prescribed fire within each wilderness (FSM 5100, 5150, and 5190) in a forest plan or, where the forest planning process has not been completed, in either an interim wilderness management or fire management area plan. Document specific direction for fire program implementation in the forest fire management action plan (FSH 5109.19).
4. Suppress all wildfires within wilderness in accordance with the direction FSM 5130.
5. Fire ignited by lightning may be permitted to burn if prescribed in an approved plan (FSM 2324 and 5150).
6. Forest Service managers may ignite a prescribed fire in wilderness to reduce unnatural buildups of fuels only if necessary to meet at least one of the wilderness fire management objectives set forth in FSM 2324.21 and if all of the following conditions are met:
  - a. The use of prescribed fire or other fuel treatment measures outside of wilderness is not sufficient to achieve fire management objectives within wilderness.
  - b. An interdisciplinary team of resource specialists has evaluated and recommended the proposed use of prescribed fire.
  - c. The interested public has been involved appropriately in the decision.

d. Lightning-caused fires cannot be allowed to burn because they will pose serious threats to life and/or property within wilderness or to life, property, or natural resources outside of wilderness.

7. Do not use prescribed fire in wilderness to benefit wildlife, maintain vegetative types, improve forage production, or enhance other resource values. Although these additional effects may result from a decision to use prescribed fire, use fire in wilderness only to meet wilderness fire management objectives.

8. Do not use management ignited fire to achieve wilderness fire management objectives where lightning-caused fires can achieve them.

#### 2324.23 - Fire Management Activities

Conduct all fire management activities within wilderness in a manner compatible with overall wilderness management objectives. Give preference to using methods and equipment that cause the least:

1. Alteration of the wilderness landscape.
2. Disturbance of the land surface.
3. Disturbance to visitor solitude.
4. Reduction of visibility during periods of visitor use.
5. Adverse effect on other air quality related values.

Locate fire camps, helispots, and other temporary facilities or improvements outside of the wilderness boundary whenever feasible. Rehabilitate disturbed areas within wilderness to as natural an appearance as possible.

#### 2324.3 - Management of Structures and Improvements

##### 2324.33b - Fire Lookouts

(See FSM 5100). Construct or maintain lookouts for fire detection purposes when:

1. They are necessary to achieve wilderness management objectives and where it is not feasible to accomplish such objectives by means more compatible with wilderness values; or

2. They are necessary to protect values outside the wilderness.

The need and disposition of existing lookouts shall be documented in the forest plan. For approvals, see FSM 2324.04.

##### 2324.33d – Airfields

Unless otherwise approved by the Chief, do not locate new airfields, including emergency airstrips, in wilderness. Unless otherwise approved by the Chief, do not extend, widen, or resurface existing airfields. Document decisions about whether or not to permit the continued use of existing airfields for each wilderness in the forest plan. Legislation may mandate that certain airfields remain open. Maintain airfields by nonmotorized methods only. For further direction see FSM 7720 and FSM 7730.

#### 2324.33e - Heliports and Helispots

1. Heliports. Construct and maintain heliports at existing administrative and airfield sites where essential for wilderness purposes. Require justification for continued use of existing heliports or for constructing new ones. Unless otherwise approved by the Chief, do not locate other heliports within any wilderness. Evaluate and document the need for each heliport in the forest plan. Operate only those heliports considered vital to wilderness resource management.

2. Helispots. The Regional Forester may approve the construction of nonemergency individual helispots or systems of helispots. FSM 7720 contains guidelines for location, construction, and use of helispots. Except in emergency situations, evaluate and document the need for helispots in the forest plan.

#### 2326 - USE OF MOTORIZED EQUIPMENT OR MECHANICAL TRANSPORT IN WILDERNESS

##### 2326.03 - Policy

1. Ensure that Forest Service employees acquire and maintain necessary skills for primitive travel by foot, horse, canoe, or other nonmechanical means and the use of hand tools. For definitions see FSM 2320.5.

2. Do not approve the use of motorized equipment or mechanical transport unless justified as described in 2326.1. For procedures and examples see FSH 2309.19. For definitions see FSM 2320.5.

3. Discourage flights over wilderness within 2,000 feet of the ground surface, except in emergencies or for essential military missions. (The Federal Aviation Administration (FAA) has agreed to and the National Oceanic and Atmospheric Administration (NOAA) has posted, for the FAA, a 2,000 foot over terrain flight advisory on appropriate aeronautical charts.

##### 2326.04 – Responsibility

###### 2326.04b - Regional Forester

The Regional Forester is responsible for approving:

1. Transport and supply by aircraft, air drop, motor boat, or mechanical transport for situations that meet the conditions under items 2, 4, or 5, in FSM 2326.1.

2. Hand-portable motorized equipment for needs that meet conditions listed under item 5 of FSM 2326.1.

3. Motorized ground equipment not designed for personnel transport and of a type or size that is controlled from a position afoot.

#### 2326.04c - Forest Supervisor

The Forest Supervisor approves the use of motorized equipment or mechanical transport under conditions described in section 2326.1, item 1 or 3. However, the Regional Forester shall approve the use of tractors for fire suppression.

#### 2326.1 - Conditions Under Which Use May Be Approved

Allow the use of motorized equipment or mechanical transport only for:

1. Emergencies where the situation involves an inescapable urgency and temporary need for speed beyond that available by primitive means. Categories include fire suppression, health and safety, law enforcement involving serious crime or fugitive pursuit, removal of deceased persons, and aircraft accident investigations.

5. To meet minimum needs for protection and administration of the area as wilderness, only as follows:

a. A delivery or application problem necessary to meet wilderness objectives cannot be resolved within reason through the use of nonmotorized methods.

b. An essential activity is impossible to accomplish by nonmotorized means because of such factors as time or season limitations, safety, or other material restrictions.

Specify, for each wilderness, the places and circumstances in which motorized equipment, mechanical transport, or aircraft are necessary for protection and administration of the wilderness and its resources in the forest plan.

The Line Officer approving the use of motorized equipment, aircraft, or mechanical transport shall specify what uses of that equipment are suitable and will have the least lasting impact to the wilderness resource. Schedule use of this equipment to minimize impact on wilderness visitors.

2326.11 - Use of Motorized Equipment by Other Government Agencies. Approve the use of motorized equipment, aircraft, or mechanical transport by other government agencies in National Forest wilderness in the same manner and under the same conditions stipulated for Forest Service use (sec. 2326.1).

## FSM 5100 – FIRE MANAGEMENT

### CHAPTER – ZERO CODE

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**Approved:** ROBIN L. THOMPSON  
Associate Deputy Chief, S&PF

**Date Approved:** 06/14/2012

**Posting Instructions:** Amendments are numbered consecutively by title and calendar year. Post by document; remove the entire document and replace it with this amendment. Retain this transmittal as the first page(s) of this document. The last amendment to this title was 5100-2011-1 to FSM 5130.

<b>New Document</b>	5100_zero_code	16 Pages
<b>Superseded Document(s) by Issuance Number and Effective Date</b>	5100_zero_code (Amendment 5100-2005-1, 06/17/2005)	28 Pages

**Digest:**

5100 Zero Code - This amendment substantially revises the entire chapter to better align with the U.S. Forest Service mission.

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## 5101 - AUTHORITY

### 5101.1 - Wildland Fire Management on National Forest System Lands

The following acts authorize and guide fire management activities for the protection of National Forest System lands and resources:

1. Organic Administration Act, June 4, 1897 (16 U.S.C. 551). This act authorizes the Secretary of Agriculture to make provisions for the protection of National forests against destruction by fire.
2. Bankhead-Jones Farm Tenant Act, July 22, 1937 (7 U.S.C. 1010, 1011). This act authorizes and directs the Secretary of Agriculture to develop a program of land conservation and land utilization to "assist in controlling soil erosion, reforestation, preserving natural resources, protecting fish and wildlife... mitigating floods... protecting the watersheds of navigable streams, and protecting the public lands..."
3. National Forest Management Act, October 22, 1976 (16 U.S.C. 1600 *et seq.*). This act directs the Secretary of Agriculture to specify guidelines for land management plans to ensure protection of forest resources. Regulations at Title 36, Part 19 of the Code of Federal Regulations (36 CFR 219.27) specify that, consistent with the relative resource values involved, management prescriptions in forest plans must minimize serious or long-lasting hazards from wildfire.
4. Granger-Thye Act, April 24, 1950 (16 U.S.C. 572). This act authorizes expenditure of United States Department of Agriculture (USDA) and Forest Service funds to erect buildings, lookout towers, and other Federal structures on land owned by States. It provides for the procurement and operation of aerial facilities and services for the protection and management of the national forests and other lands administered by the Forest Service.

### 5101.2 - Wildland Fire Management on Other Federal, State, and Private Lands

The following additional authorities provide a basis for Forest Service cooperation with the Bureau of Land Management (BLM), Bureau of Indian Affairs (BIA), National Park Service (NPS), and U.S. Fish and Wildlife Service (FWS) agencies of the Department of the Interior (DOI) on all aspects of wildland fire management and as authorized in non-fire emergencies.

1. Alaska National Interest Lands Conservation Act, December 2, 1980 (Pub. L. 96-487, 94 Stat. 2371). This Act designates certain public lands in Alaska as units of the National Park System, National Wildlife Refuge System, National Wild and Scenic Rivers System, National Wilderness Preservation System and National Forest System. The Act provides for comprehensive land management for all Alaska Federal lands and requires DOI and USDA to provide access to non-Federally owned land surrounded by public lands.
2. Alaska Native Claims Settlement Act, December 18, 1971 (Pub. L. 92-203, 85 Stat. 688; 43 U.S.C. 1601). The Act requires the Secretary of the Interior to withdraw acres of

existing public land for specific consideration as new national wildlife refuges, national parks, national forests and wild and scenic rivers.

3. Clean Air Act, July 1955 (42 U.S.C. 7401 *et seq.*). This act provides for the protection and improvement of the nation's air resources and applies to the effects of prescribed fire and can help inform wildfire response.
4. Department of the Interior and Related Agencies Appropriations Act, 1995 (Pub. L. 103-332). The act provides program direction to allow respective agencies to take appropriate action in wildland fire management in Alaska.
5. Robert T. Stafford Disaster Relief and Emergency Assistance Act, May 22, 1974 (Pub. L. 93-288, 88 Stat. 143; 42 U.S.C. 5121). The act requires States to develop and maintain disaster preparedness plans and to provide for the annual testing of such plans. The act also increases the amount of Federal assistance in the development or approval of these plans and to provide assistance before, during, and after a disaster.
6. Economy Act June 30, 1932 (41 U.S.C. 686). This act provides for procurement of materials, supplies, equipment, work, or services from other Federal agencies.
7. Federal Fire Prevention and Control Act, October 29, 1974 (Pub. L. 93-498, 88 Stat. 1535, 15 U.S.C. 2201) as amended. This act establishes a U.S. Fire Administration and a National Fire Academy, in the Department of Housing and Urban Development, later incorporated into the Department of Homeland Security, to assist State and local governments in reducing the incidence of death, personal injury, and property damage from fire, and to increase the effectiveness and coordination of fire prevention and fire management agencies at all levels of government.
8. Federal Grant and Cooperative Agreement Act, 1977 (Pub. L. 95-224, as amended by Pub. L. 97-258, September 13, 1982; 96 Stat. 1003; 31 U.S.C. 6301 thru 6308). This act eliminates unnecessary administrative requirements upon recipients of Government awards by characterizing the relationship between executive agencies and contractors, States, local governments, and other recipients in acquiring property and services and in providing United States Government assistance.
9. Federal Land Policy and Management Act, 1976 (Pub. L. 94-579, 43 U.S.C. 1701). This act constitutes the Organic Act for the Bureau of Land Management (BLM). It governs most uses of the Federal public lands, including grazing. The act requires the land management agencies to execute their management powers under a land use planning process that is based on multiple use and sustained yield principles. The act also provides for public land sales, withdrawals, acquisitions, and exchanges.
10. Federal Property and Administrative Services Act, 1949 (40 U.S.C. 471; *et seq.*). This act permits the transfer or sale of surplus Federal property to specified entities, including real property, to help meet State, multi-state, and local special needs.
11. Healthy Forests Restoration Act, December 3, 2003 (Pub. L. 108-148, 16 U.S.C. 6501) [As Amended Through Pub. L. 110-246, Enacted May 22, 2008]. This act

improves the capability of the Secretary of Agriculture and the Secretary of the Interior to conduct hazardous fuels reduction projects across the landscape on National Forest System lands and Bureau of Land Management lands. Focus for these projects are to:

- a. Protect communities, watersheds, and other at-risk lands from catastrophic wildfire.
- b. Enhance efforts to protect watersheds.
- c. Address fire threats to forest and rangeland health across the landscape.

12. Indian Self-Determination and Education Assistance Act of 1975 (Pub. L. 93-638, 88 Stat. 2203). This act furthers the goal of Indian self-determination assuring maximum Indian participation in the management of Federal programs and services for Indians.

13. McSweeney-McNary Act of 1928 (45 Stat. 221; 16 U.S.C. 487). This act authorizes the Secretary of Agriculture to establish forest and rangeland research facilities and to provide competitive grants to public and private institutions, to agencies and to individuals to further such research activities. The act directs the Secretary to maintain a comprehensive survey and analysis of the present and prospective conditions of and requirements for the renewable resources of the forests and rangelands of the United States and of the supplies of such renewable resources.

14. National Indian Forest Resources Management Act, November 28, 1990 (Presidential Order 101-630, Pub. L. 101-630). This act requires the Secretary of the Interior to undertake management activities on Indian forest lands in furtherance of the U.S. trust responsibility for these lands. These activities must incorporate the principles of sustained yield and multiple-use and include Tribal participation.

15. National Park Service Acts (67 Stat. 495; 16 U.S.C. 1b). This act authorizes and provides the means for managing wildland fire on lands or threatened, adjacent lands under the jurisdiction of the DOI.

16. National Wildlife Refuge System Administration Act, October 15, 1966 (Pub. L. 89-669, 80 Stat. 927; 16 U.S.C. 668dd through 668ee). The act provides for the administration and management of the national wildlife refuge system, including wildlife refuges, areas for protection and conservation of fish and wildlife threatened with extinction, wildlife ranges, game ranges, wildlife management areas, and waterfowl production areas.

17. National Environmental Policy Act, January 1, 1970 (Pub. L. 91-190; 83 Stat. 852, 42 U.S.C. 4321-4347). This act requires all land management agencies to prepare environmental documents when there is an action that may have impact on the environment. The documents are prepared by interdisciplinary team members and must include assessments using natural and social sciences; alternative actions; a proposed action; public involvement and collaboration; and public notice before, during, and after decisions.

18. Oregon and California Act, August 28, 1937 (50 Stat. 875; 43 U.S.C. 1181e). This act authorizes and provides the means for managing emergency stabilization and rehabilitation following wildland fire on lands or threatened, adjacent lands under the jurisdiction of the DOI.
19. Protection Act of September 20, 1922 (42 Stat. 857; 16 U.S.C. 594). This act authorizes the Secretary of the Interior to protect from fire the lands under the Department's jurisdiction and to cooperate with other Federal agencies, States, or owners of timber.
20. Reciprocal Fire Protection Act, May 27, 1955 (69 Stat. 66, 42 U.S.C. 185a). This act authorizes reciprocal agreements with Federal, State, and other wildland fire protection organizations.
21. Supplemental Appropriation Act, September 10, 1982 (Pub. L. 100-428, 96 Stat. 837). This act authorizes the Secretary of Interior and Secretary of Agriculture to enter into contracts with State and local government entities, including local fire districts, for procurement of services in preparedness detection and suppression of fires.
22. Taylor Grazing Act, June 28, 1934 (48 Stat. 1269; 43 U.S.C. 315). This act was the first Federal effort to regulate grazing on DOI public lands. It establishes grazing districts and uses a permitting system to manage livestock grazing in the districts.
23. Tribal Forest Protection Act of 2004 (Pub. L. 108-278, 118 Stat. 868). This act authorizes the Secretary of the Interior (with respect to land under the jurisdiction of the Bureau of Land Management) or the Secretary of Agriculture (with respect to land under the jurisdiction of the Forest Service) to carry out a project to protect Indian forest land or rangeland (including a project to restore Federal land that borders on or is adjacent to such land) under the Secretary's jurisdiction and bordering or adjacent to the Indian forest land or rangeland under the Tribe's jurisdiction.
24. Tribal Self-Governance Act of 1994 (Pub. L. 103-413). This act establishes, within the DOI, a program of Tribal self-governance. The act directs the Secretary of the Interior to enter into annual funding agreements with the governing body of each participating Tribe.
25. Wildfire Suppression Assistance Act, April 7, 1989 (Pub. L. 100-428, 42 U.S.C. 1856). This act authorizes the Secretary of Agriculture to enter into agreements with fire organizations of foreign countries for assistance in wildland fire research, prevention, planning, and suppression protection.
26. Wilderness Act, September 3, 1964 (Pub. L. 88-577, 78 Stat. 890, 16 U.S.C. 1131, 1132). This act authorizes the Secretaries of Agriculture and Interior to take such measures as may be necessary in the control of fire within designated wilderness.

## **5102 - OBJECTIVE**

The vision of the Fire and Aviation Management program is to:

Safely and effectively extinguish fire, when needed; use fire where allowable; manage our natural resources; and as a Nation, live with wildland fire.

The following objectives support this vision:

1. Risk Management and Risk Reduction - Assure management of risk to people, communities and natural and cultural resources is the fundamental principle used to make informed decisions in all fire management programs. Minimize the risk to people, communities and natural and cultural resources by assessing the potential benefits of actions, severity of concerns, and probabilities of occurrences to reduce risk.
2. Ecological - Meet the Forest Service mission through the use of fire management programs to protect people and communities, conserve natural and cultural resources, and maintain and restore ecological health.
3. Collaboration - Implement the wildland fire management program through collaboration and partnerships.
4. Learning - Learn from science, and ours and our partners' experiences, to improve fire management programs.
5. Empowerment - Employees are expected and empowered to be creative and decisive, to exercise initiative and accept responsibility, and to use their training, experience, and judgment to implement the agency's mission.

## **5103 - POLICY**

Doctrine is beliefs and teachings which form the fundamental, core values of our work. The Forest Service will achieve the above objectives using a doctrinal approach which incorporates: Federal Wildland Fire Management Policy, the direction in Land and Resource Management

Plans, National Incident Management System (NIMS), and other Federal laws and regulations for all wildland fire management programs to assure the appropriate, risk-informed and effective management of wildland fire programs, consistent with land and resource management objectives.

Doctrinal approach goes beyond strict compliance with procedural rules, and promotes risk-based application of wildland fire management principles to improve decision making and firefighter safety. The following principles will guide fundamental wildland fire management policy, practices, behaviors and customs, which need to be mutually understood at every level of command.

### **5103.1 - Risk Management and Risk Reduction**

1. Firefighter and public safety is the first priority in every fire management activity. The wildland fire management environment is complex and possesses inherent hazards that can---even with reasonable mitigation---result in harm. In recognition of this fact, we are committed to the aggressive management of risk.
2. Analyze, communicate, and manage risks and uncertainties relating to fire management activities as they relate to the consequences of either doing or not doing an activity.
3. Where human life is immediately at risk or there is a clear emergency, and they are capable of assisting without undue risk to themselves or others, agency employees will respond appropriately.
4. To maximize effectiveness and minimize confusion, formulate and communicate clear, uncomplicated plans and concise orders.
5. Give to every incident and activity a risk-informed, effective, and efficient response.

### **5103.2 - Ecological**

1. Identify and use fire ecology to frame land and resource management objectives.
2. Use Fire Management programs and activities to implement Land and Resource Management Plans (L/RMP) objectives.
3. Incorporate public health and environmental quality considerations into fire management programs and activities.
4. Manage the land to make it more resilient to disturbance, in accordance with management objectives.

### **5103.3 - Collaboration**

1. Conduct all fire management activities on an interagency basis, with the proactive engagement and involvement of cooperators, partners and the public.
2. Communities of interest work towards mutual understanding and support one another with wildfire response, including proactive engagement in collaborative planning and the decision-making processes that take into account all lands and recognize the interdependence and statutory responsibilities among jurisdictions.
3. A collaborative relationship between the Forest Service and other agencies is essential. The Forest Service is committed to honor its part of the joint responsibility to proactively develop and maintain effective working relationships with its intergovernmental cooperators.

### **5103.4 - Learning**

1. Base fire management programs and activities upon the best available science. Knowledge and experience are developed among all Federal wildland fire management agencies. An active fire research program combined with interagency collaboration provides the means to make these tools available in a timely manner to all fire managers and leaders.
2. Research will be timely and support on-going efforts to increase our scientific knowledge of biological, physical, and sociological factors.
3. Use self-study, classroom instruction, experiential learning and program evaluation to improve all fire management activities. The Forest Service will enhance knowledge and understanding of fire management policies and practices through internal and external communication and education programs. These programs will be continuously improved through the timely and effective exchange of information among all affected agencies and organizations.

### **5103.5 - Empowerment**

1. Leaders will express clear and concise intent to ensure assignments are managed safely, effectively, and efficiently.
2. In situations where guidance is uncertain, individuals are expected to apply their judgment while acting within leadership intent, doctrine, principles, policy, guides and training.

## **5104 - RESPONSIBILITY**

### **5104.1 - Washington Office**

#### **5104.11 - Chief**

The Chief:

1. Retains the overall authority and responsibility for the fire and aviation management program.
2. Provides Forest Service leadership for the Federal Wildland Fire Policy.

#### **5104.11a - Deputy Chief, State and Private Forestry**

The Deputy Chief for State and Private Forestry:

1. Provides direction, leadership, and administration of service-wide fire and aviation management programs, policies, and procedures, and advises the Chief of current, national fire and aviation related issues.
2. Formulates, coordinates, and implements broad policies for administration of the fire and aviation management program.
3. Reviews, advises, and approves or disapproves policies, programs, and regulations proposed by the Director, Fire and Aviation Management, Washington Office.
4. Coordinates with the National Association of State Foresters Executive Committee as required by the Cooperative Forestry Assistance Act of July 1, 1978, as amended, (P.L. 95-313, 16 U.S.C. 2101 et seq.).
5. Provide liaison for planning and program coordination with other government entities, including the Department of the Interior, Department of Homeland Security, and State agencies.

#### **5104.11b - Director, Fire and Aviation Management**

In addition to the authority and responsibility contained in FSM 1204.24 and 1235.1, the Director of Fire and Aviation Management. (For further direction, see FSM 3104.2, 5120.42, 5130.41, 5160.41, 5191.04a, 5704.2, 5719.04a, and 5720.43):

1. Administers a national fire and aviation management program.
2. Provides liaison for planning and program coordination with other government entities, including the Department of the Interior, Department of Homeland Security, and State agencies.



3. Ensures appropriate oversight for financial management and program reviews for Forest Service fire and aviation management programs and resources, and make recommendations for the prioritization and allocation of resources.
4. Provides service wide technical requirements and standards for wildland fire, aviation, and wildland fire and aviation related emergency services (FSM 1590).
5. Provides fire and aviation management assistance to authorized cooperators (for example, State Foresters).
6. Provides leadership, oversight, technical expertise and coordination, for national fire and aviation management programs.
7. Assists the regions with technical support, coordination, and oversight to ensure standardization within the fire and aviation management program.
8. Acts as delegated by the Deputy Chief.

#### **5104.12 - Regional Foresters, Station, and Area Director**

##### **5104.12a - Regional Foresters and Area Director**

Regional Foresters and the Area Director have the responsibility to:

1. Ensure that fire and aviation management program direction is clear, available, and understood by regional employees.
2. Ensure employees are trained, certified, and made available to participate in the fire and aviation management program locally, regionally, and nationally. Ensure that employees with operations, administrative, or other skills support the fire and aviation management program as necessary.
3. Provide regional liaison for planning and program coordination with other government entities, including the Department of the Interior, Department of Homeland Security, and State agencies.

##### **5104.12b - Station Directors**

Station Directors have the responsibility to:

1. Support research to improve implementation of fire and aviation management programs.
2. Support and direct research that increases scientific knowledge of biological, physical, and sociological factors of fire science and fire effects.
3. Ensure that scientific results and science-based strategies are available to managers in a timely manner and in lay person's language.

### **5104.12c - Forest Supervisors**

Forest Supervisors have the responsibility to:

1. Establish and implement a fire and aviation management program which supports desired conditions contained in the Forest Land and Resource Management Plans.
2. Implement the annual fire and aviation management program of work efficiently, as identified in the Land and Resource Management Plans and Forest Service annual program and budget direction.
3. Ensure employees are trained, certified, and made available to participate in the fire and aviation management program locally, regionally, and nationally. Ensure that employees with operations, administrative, or other skills support the fire and aviation management program as necessary. Ensure that employees are mobilized only in incident response positions for which they are qualified.

### **5104.12d - District Rangers**

District Rangers have the responsibility to:

1. Ensure employees are trained, certified, and made available to participate in the fire and aviation management program locally, regionally, and nationally. Ensure that employees with operations, administrative, or other skills support the fire and aviation management program as necessary. Ensure that employees are mobilized only in incident response positions for which they are qualified.
2. Ensure that employees with operations, administrative or other skills will support the fire and aviation management program as necessary.
3. Refer to the Interagency Standards for Fire and Aviation Operations (NWCG, NFES 2724) for field level Agency Administrator Performance Standards.

## 5105 - DEFINITIONS

The "Glossary of Wildland Fire Terminology," located on-line at <http://www.nwccg.gov/pms/pubs/glossary/index.htm>, contains most definitions for terminology used by Wildland Fire Management agencies in the USDA and DOI. The following definitions are not contained in the Glossary of Wildland Fire Terminology:

Doctrine – The body of principles that guide the actions of an organization.

Policy – The structure and procedures used to put doctrinal principles into action. The Forest Service directive system consists of Forest Service manuals and handbooks which codify the agency's policy. Manuals and handbooks contain legal authorities, objectives, policies, responsibilities, instructions, and guidance needed by Forest Service agency administrators and primary staff to plan and execute assigned programs and activities.

Principles – The foundation of judgment, decision making and behaviors. From principles will come the strategies and tactics, the tools and techniques for executing them, and define the behaviors that are expected.

Risk Management – The continuous process of evaluating exposure and mitigating hazards. Risk management is a dynamic process exercised by employees engaged in wildfire response. It provides employees a way to evaluate risk and benefit relative to the overall incident objectives and course of action based on leader's intent.

## 5106 - INTERAGENCY AND COLLABORATIVE FIRE MANAGEMENT GOVERNANCE

In concert with our foundational principles, we develop and strengthen partnerships with stakeholder's at all organizational levels through shared governance whenever possible. The following councils and groups were established under agreements by the Secretaries of Agriculture and the Interior:

1. Wildland Fire Leadership Council (WFLC), established by Memorandum of Understanding (MOU) dated April 10, 2002 (and updated by MOU between USDA, DOI and US Department of Homeland Security, dated April 12, 2010), to provide an intergovernmental committee to support the implementation and coordination of Federal Fire Management Policy.
2. Wildland Fire Executive Council (WFEC), 2011. Established in accordance with the Federal Advisory Committee Act (FACA) to provide advice on the coordinated national level wildland fire policy leadership, direction, and program oversight in support to WFLC. Membership includes representatives from Federal, Tribal, State and local governments as well as non-governmental organizations.
3. National Wildfire Coordinating Group (NWCG), February 1976, FSM 1531.06b and 1353.11a. Instituted to provide interagency wildland fire standards.

4. Joint Fire Science Program, 1998. Established in the 1998 Joint Fire Science plan in response to Congressional direction that the Department of Interior (including the Bureau of Land Management (BLM), Bureau of Indian Affairs (BIA), National Park Service (NPS), Fish and Wildlife Service (FWS), U.S. Geological Survey (USGS)), and the Forest Service (FS) establish a Joint Fire Science Program to supplement existing fire research capabilities.

5. Fire Program Analysis (FPA) Oversight Group. 2002. The FPA was initiated in 2002 in response to a Congressional request that the Secretaries of the Interior and Agriculture develop a budget and allocation process for the wildland fire management program. Under the FPA Charter updated in 2010, the FPA Oversight Group is the interagency group designated to direct the future of FPA.

## **5107 - REFERENCES**

Operational procedures contained in the documents referenced below are used by Forest Service personnel in the conduct of fire management activities. The Forest Service recognizes that the nature of the wildland fire environment is often dynamic, chaotic, and unpredictable. In such an environment, reasonable discretion in decision-making may be required. Thus, the body of procedures, best practices, concepts, and principles described in the listed publications should be considered the best guidance available for the majority of circumstances. Forest Service employees must use their best judgment in applying the guidance contained in these references to real-life situations.

The National Wildfire Coordinating Group (NWCG) publications listed below can be ordered from the National Fire Equipment System Catalog, Part 2: Publications (NWCG, NFES 3362, PMS 449-2). The NFES publications catalog and publications ordering form can be found on the NWCG Website: <http://www.nwcg.gov/pms/pubs/pubs.htm>.

For hard copies, contact:

National Interagency Fire Center  
Great Basin Cache Supply Office  
3833 S. Development Avenue  
Boise, ID 83705-5354  
Fax Number: (208) 387-5548

Some of the following references are available electronically. The World Wide Web/internet address is provided after the publication.

1. Federal Wildland Fire Management Policy and Program Review, Final Report, January 18, 2001. This report establishes joint Federal wildland fire management principles, policy, and recommendations. Available at:  
[http://www.nwcg.gov/branches/ppm/fpc/archives/fire\\_policy/history/index.htm](http://www.nwcg.gov/branches/ppm/fpc/archives/fire_policy/history/index.htm)
2. Glossary of Wildland Fire Terminology (NWCG, NFES 1832, PMS 205). This glossary includes terms used by NWCG member agencies in wildland fire, prescribed fire, and incident management. Available at:  
<http://www.nwcg.gov/pms/pubs/glossary/index.htm>
3. Interagency Standards for Fire and Fire Aviation Operations (NWCG, NFES 2724). While not establishing policy, this interagency handbook provides guidance for implementing safe and effective fire and aviation management operations. Available at:  
[http://www.nifc.gov/policies/pol\\_ref\\_redbook\\_2011.html](http://www.nifc.gov/policies/pol_ref_redbook_2011.html)
4. Guidance for Implementation of Federal Wildland Fire Management Policy, February 2009. This document updates guidance approved by the Secretaries of Agriculture and Interior. It directs USDA and USDI agencies with fire management responsibilities to adopt common guidance and revise interagency training courses, operational guides, standards, terminology, reporting requirements, and skill qualifications/certification. It also directs the revision or development of accountability standards, performance measures, and tracking systems to assess objective attainment. Available at:  
[http://www.nifc.gov/policies/policies\\_documents/GIFWFMP.pdf](http://www.nifc.gov/policies/policies_documents/GIFWFMP.pdf)
5. FSH 6709.11, Health and Safety Code Handbook. This handbook provides direction for all Forest Service employees for any operation or procedure, including those required for fire and aviation. Resource is available electronically on the Forest Service intranet web.
6. Interagency Prescribed Fire Planning and Implementation Procedures Guide. This handbook provides standardized procedures associated with the planning and implementation of prescribed fire. Available at:  
<http://www.nwcg.gov/pms/RxFire/rxfireguide.pdf>

## **5109 - HANDBOOKS**

### **5109.1 - Internal Service wide Handbooks**

#### **5109.14 - Individual Fire Report Handbook, Form FS-5100-29 (FSH)**

This handbook provides detailed instructions for preparation and coding of form FS-5100-29, Individual Fire Report, to report data for individual fires (Report FS-5100-M). Form FS-5100-29 is available electronically.

#### **5109.17 - Fire and Aviation Management Qualifications Handbook (FSH)**

This handbook contains requirements for wildland fire positions and qualifications for Forest Service personnel. The goal is to align, as closely as possible, with the provisions of PMS 310-1,

Wildland Fire Qualification System Guide, while maintaining high performance fire and aviation management operations

### **5109.18 - Wildfire Prevention Handbook (FSH)**

This handbook provides a framework to develop and manage economically efficient wildfire prevention programs.

### **5109.19 - Fire Management Analysis and Planning Handbook (FSH)**

This handbook provides detailed instructions for fire management program analysis and evaluation, coordination with forest planning, program development, budgeting, and implementation planning.

### **5109.3 - External Handbooks**

### **5109.31 - Wildfire Cause Determination Handbook (NWCG Handbook 1) (FSH)**

This National Wildfire Coordinating Group (NWCG) handbook guides initial attack firefighters and others in determining the cause of a wildland fire.

### **5109.32a - Fireline Handbook (NWCG, NFES 0065, PMS 410-1)**

This NWCG handbook provides wildfire suppression principles, organization, and procedures utilizing the Incident Command System.

### **5109.34 - Interagency Incident Business Management Handbook (NWCG, NFES 2160, PMS 902)**

This NWCG handbook provides finance and business management procedures for interagency fire suppression. Available at: [http://www.nwcg.gov/pms/pubs/iibmh2/pms902\\_iibmh.pdf](http://www.nwcg.gov/pms/pubs/iibmh2/pms902_iibmh.pdf)

## **FSM 5100 - FIRE MANAGEMENT**

### **CHAPTER 5130 - WILDLAND FIRE SUPPRESSION**

**Amendment No.:** 5100-2011-1

**Effective Date:** August 2, 2011

**Duration:** This amendment is effective until superseded or removed.

**Approved:** JAMES E. HUBBARD  
Deputy Chief, S&PF

**Date Approved:** 07/28/2011

**Posting Instructions:** Amendments are numbered consecutively by title and calendar year. Post by document; remove the entire document and replace it with this amendment. Retain this transmittal as the first page(s) of this document. The last amendment to this title was 5100-2008-1 to FSM 5140.

<b>New Document</b>	5130	26 Pages
<b>Superseded Document(s) by Issuance Number and Effective Date</b>	5130 (Amendment 5100-2004-1, 07/19/2004) id_5130-2010-1 (01/13/2010)	27 Pages 3 Pages

**Digest:**

5130 – Makes minor technical and editorial changes throughout the chapter.

5130.43 - Incorporates Interim Directive number 5130-2010-1 to add direction on employee performance required by Office of the Inspector General audits (08601-38-SF, “Forest Service Firefighting Safety Program,” and 08601-58-SF, “Forest Service Firefighting Safety Follow-Up”).

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## 5130.1 - Authority

For related authority, see FSM 5101.

## 5130.2 - Objective

Safely suppress wildfires at minimum cost consistent with land and resource management objectives and fire management direction as stated in Fire Management Plans (FSM 5120; FSH 5109.17).

## 5130.3 - Policy

1. Wildland Fire Suppression Planning and Operations. Line officers shall conduct wildland fire suppression planning and operations in compliance with servicewide and interagency wildland fire suppression principles and practices established in the Fireline Handbook (FSH 5109.32a); the Firefighters Guide (FSM 5108); Interagency Standards for Fire and Aviation Operations (FSM 5108); the Incident Response Pocket Guide (FSM 5108); the Health and Safety Code Handbook (FSH 6709.11); and the Annual Fire and Aviation Management Operations Plan (FSM 5121.3).
2. Priority for Safety. In conducting wildland fire suppression, responsible officials shall give first priority to the safety of firefighters, other personnel, and the public. Consistent with this priority, responsible officials shall conduct wildland fire suppression in a timely, effective, and efficient manner.
3. Wildland Fire Management Leadership. Line officers shall annually communicate their expectations of leadership in fire management to all of their employees.
4. Wildland Fire Suppression Strategies. Line officers shall use a Wildland Fire Situation Analysis (WFSA) to document wildland fire suppression strategy decisions for any incident that is expected to exceed, or has exceeded, the action planned in the Fire Management Plan (FSM 5131.1). In making decisions about how to organize and conduct suppression operations, line officers shall minimize both suppression cost and resource loss consistent with the resource management objectives for the values to be protected. Line officers shall consider fire behavior, the availability of suppression resources, the values of the natural resources and property at risk, direction in the Forest land and resource management plan, and the potential cost of suppression.
  - a. Choosing Fire Suppression Strategies.
    - (1) The primary criteria for choosing fire suppression strategies and tactics are to ensure the safety of the public and firefighting resources while minimizing suppression costs, resource loss, environmental damage, and the threat of wildland fire escaping onto non-Federal lands.
    - (2) Estimated suppression costs used in the WFSA must include costs that are necessary to mitigate risk to firefighter and public safety and that are commensurate with the values to be protected. These suppression costs must be included and

displayed in the WFSA, and when costs are exceeded, revision and reapproval of the WFSA are required.

(3) Under no circumstances are suppression strategies and tactics to be tailored to achieve resource benefits. Even if resource benefits may result in some areas of the fire, do not spend suppression dollars with the objective of achieving resource benefits. Do not use unplanned wildland fires to achieve resource benefits unless such actions are consistent with the applicable forest land and resource management plan.

(4) The selection of less aggressive containment strategies in areas of minimal potential negative impacts is appropriate if it is determined to be the safest and least-cost alternative.

b. Management During Transition From Initial to Extended Attack Fires. Transition from initial attack to extended attack can be especially dangerous. During this transition, the fire must be managed as a potentially life-threatening event.

c. Exception to Consideration of Suppression Costs or Resource Loss. When a potentially life-threatening event exists, action must be taken to provide for the safety of firefighters, other personnel, and the public, regardless of suppression costs or resource loss. For related direction concerning Endangered Species Act consultation, see FSM 2671.45f, Consultation in Emergencies.

d. Identification of Fire Behavior Thresholds for Large Fires. Identification of the fire behavior thresholds at which large fires typically occur is important because these thresholds indicate fire danger levels that compromise safety and control. When such thresholds are approached, fire program managers shall request additional supervisory and suppression support. Consult the Incident Response Pocket Guide (FSM 5108) for extended attack transition analysis.

5. Response to Human-Caused Ignitions. Unit managers shall ensure that a cost-effective initial attack on any human-caused ignition is conducted.

6. Response to Wildland Fire. Unit managers shall ensure a response to each reported wildland fire with planned forces and tactics as directed in the fire management plan (FSM 5110, 5140).

7. Expectations of Employees in Reporting Fires and Participating in Suppression Actions. All employees are expected to promptly report wildland fires to the nearest unit. Employees who discover wildland fires are expected to take initial action consistent with their wildland fire qualifications. Employees without wildland fire qualifications are not expected to take initial action.

a. Every Forest Service employee has a responsibility to support and participate in wildland fire suppression activities as the situation demands. Wildland fire suppression is not limited to those employees with skills in wildland fire suppression operations; rather, it also requires the skills of employees in fiscal, human resources, telecommunications, communications, and other areas.

b. Employees who are not sent to provide direct support to a wildland fire suppression action are expected to fill in as directed to ensure that critical work at the home unit is performed in the absence of other employees who are deployed to provide direct support in wildland fire suppression emergencies.

8. Notification of Wildland Fire Entrapment.

a. Line officers shall notify the National Interagency Coordination Center (NICC) and the appropriate regional Fire Operations Safety Program manager immediately of any wildland fire entrapment. Entrapments are situations where personnel are unexpectedly caught in a fire-behavior-related, life-threatening position where planned escape routes or safety zones are absent, inadequate, or compromised. An entrapment may or may not include deployment of a fire shelter. These situations may or may not result in injury; and include near misses.

b. The Designated Agency Safety and Health Official (DASHO) shall investigate all wildland fire shelter deployments or entrapments. The DASHO may delegate responsibility to conduct the investigation to the regional forester in the region where the accident occurred (FSM 6731.3).

## **5130.4 - Responsibility**

### **5130.41 - Washington Office, Director, Fire and Aviation Management Staff,**

The Washington Office, Director, Fire and Aviation Management, through the National Interagency Coordination Center (NICC), has the responsibility to coordinate all requests for national shared resources and overhead personnel from resources outside the requesting region. Procedures for mobilization and demobilization of resources are contained in the National Interagency Mobilization Guide, NFES 2092 (FSM 5108).

### **5130.42 - Deputy Chiefs, Regional Foresters, Area Director, Forest Supervisors, and District Rangers**

The deputy chiefs, regional foresters, Area Director, forest supervisors, and district rangers have the responsibility to ensure that:

1. Employees under their supervision are appropriately trained and are made available as needed to support wildland fire suppression.
2. Employees with supervisory or managerial responsibilities in wildland fire management stay abreast of current fire suppression information, such as factors affecting wildland fire behavior, wildland fire suppression management and organization, contents of agency and interagency wildland fire management directives; fire management plans; and economic and risk analysis.
3. The assigned line officer declares each wildfire out.
4. All fire entrapments are promptly and aggressively investigated (FSM 5130.3).
5. Fatigue in firefighters and other wildland fire suppression personnel is identified and appropriately addressed (FSH 5109.34).
6. Employees are mobilized in wildland fire positions for which they are qualified pursuant to the Fire and Aviation Management Qualifications Handbook (FSH 5109.17).
7. An investigation team is appointed for any accident with serious potential or serious consequences that are not investigated by a Chief's Office or Washington Office appointed team. This includes single fatalities, serious injuries or illnesses, major property damage, aircraft accidents, and incidents with serious potential.
8. Accident review boards are convened as necessary (FSM 6732.3).

### **5130.43 - Forest Supervisors and District Rangers**

In addition to the responsibilities set out in FSM 5130.42, forest supervisors and district rangers have the responsibility to:

1. Make the safety of firefighters, other personnel, and the public the highest priority in wildland fire suppression activities (FSM 5130.3).
2. When a potentially life-threatening situation may exist, use their authority to supersede natural and cultural resource considerations and constraints to provide for the safety of firefighters, other personnel, and the public (FSM 5130.3).
3. Annually convey responsibilities, expectations, and authorities of Type 3, 4, and 5 incident commanders to:
  - a. Provide for safety and welfare of all personnel and the public.
  - b. Develop and implement viable strategies and tactics.
  - c. Monitor effectiveness of planned strategy and tactics.
  - d. Execute suppression actions when and where they are safe and effective.

- e. Ensure that all firefighting actions are in full compliance with the Ten Standard Fire Orders and that the mitigation of applicable Eighteen Watch Out Situations has been accomplished (FSH 5109.32a).
  - f. Immediately delay, modify, or abandon firefighting on any part of a wildland fire where strategies and tactics cannot be safely implemented.
  - g. Maintain command and control of all firefighting resources.
4. Ensure that supplemental inspections for safety and health hazards, including compliance with the Ten Standard Fire Orders and mitigation of the Eighteen Watch Out Situations (FSH 5109.32a), are documented in the incident records on a minimum of 10 percent of the unit's Type 3, 4, and 5 wildland fires. (See FSH 5109.17 for an explanation of Type 1-5 wildland fires.)
  5. Ensure that incident commanders on Type 1, 2, and 3 wildland fires have no collateral duties, except for those of unfilled command and general staff positions as described in the Fireline Handbook (FSH 5109.32a).
  6. Assign an individual from the local unit to provide oversight to administrative and financial activities and to ensure fiscal integrity; to assign an incident business advisor (IBA) to all Type 1 or complex incidents; and to ensure IBA oversight on Type 2, 3, 4, and 5 incidents. All wildfires projected to exceed \$5 million require the assignment of an incident business management advisor. The incident business advisor reports directly to the responsible line officer or agency administrator.
  7. Conduct a complexity analysis of fires at the time of initial size-up and thereafter, as appropriate, to assure the qualifications of the assigned incident commander are commensurate with the complexity of the incident.
  8. Regularly monitor operations for effectiveness, and take action when there is recognition of exceptional or problematic employee performance.
    - a. In the event of firefighter misconduct or serious violation of safety standards identified, forest supervisors shall convene a panel of fire operations experts to evaluate and document the involved individual's decisions and performance against currently accepted fire operations policy and principles for fire operations. Forest supervisors shall implement measures, such as qualification decertification, additional training, or administrative action, and so forth, as necessary to correct any identified safety performance issues.
    - b. Both positive reinforcement and discipline will be based on individual behavior as measured by: adherence to the rules; appropriate application of doctrine, principles and guidelines; execution of responsibilities commensurate with role; and appropriate use of available information.

- c. Administrative actions are based on agreed to and known distinctions between acceptable and unacceptable behavior, on agreed to and known distinctions between errors and willful violations.

### **5130.44 - District Rangers**

In addition to the responsibilities set out in FSM 5130.42 and 5130.43, district rangers have the responsibility to ensure accomplishment of after-action reviews as described in the Incident Response Pocket Guide (FSM 5108) for all Type 3 fires and for selected Type 4 and 5 fires.

### **5130.45 - Incident Commanders**

Incident commanders have the authority and responsibility:

1. To make the safety of firefighters, other personnel, and the public the highest priority in wildland fire suppression activities (FSM 5130.3). When a potentially life-threatening situation may exist, the incident commanders have the authority to supersede natural and cultural resource considerations and constraints to provide for the safety of firefighters, other personnel, and the public (FSM 5130.3).
2. To assign personnel to fireline positions for which they are fully qualified, as certified by their employing agency. Trainees may be assigned pursuant to the direction in the Fire and Aviation Management Qualifications Handbook (FSH 5109.17).
3. To ensure that performance ratings are completed on Type 3, 4, and 5 fires for all ground fireline personnel assigned from outside the local area. Ratings must include compliance with the Ten Standard Fire Orders and the Eighteen Watch Out Situations. Performance ratings must be maintained in the official incident files and distributed to the rated individuals and their home units.
4. To monitor the effectiveness of the planned strategy and tactics and to:
  - a. Immediately delay, modify, or abandon firefighting action on any part of a wildland fire where strategies and tactics cannot be safely implemented.
  - b. Execute suppression actions when and where it is safe and effective.
  - c. Ensure that all firefighting actions are in full compliance with the Ten Standard Fire Orders and that the mitigation of the applicable Eighteen Watch Out Situations (5109.32a) is accomplished.
  - d. Maintain command and control of all fireline resources.
5. To address fatigue (FSH 5109.34) in firefighters and other fire suppression personnel and to ensure compliance with required work/rest rotations and the length of commitment guidelines:

- a. Document actions to manage fatigue for all fires that exceed one operational period.
  - b. Document preapprovals and justifications for excessively long work shifts and actions taken to ensure compliance with guidelines for work, rest, and length of commitment.
6. To personally conduct inspections for safety and health hazards (including compliance with the Ten Standard Fire Orders and mitigation of the Eighteen Watch Out Situations on Type 3, 4, and 5 fires) and, in conjunction with the safety officer on Type 1 and 2 fires, to document these inspections in unit logs and to include the documentation in incident records.
  7. To ensure that the arriving ground fireline personnel on Type 3, 4, and 5 fires have positive and documented contact with appropriate incident management personnel to address the briefing checklist elements in the Incident Response Pocket Guide prior to commencing work (FSM 5108).

## **5131 - SUPPRESSION OF WILDFIRES**

### **5131.03 - Policy**

1. Ensure a prompt and appropriate response to each wildfire that exceeds the parameters in the Fire Management Plan (FSM 5121). Initial response should comply with direction contained in the Fire Management Plan.



2. Make timely decisions regarding management of a wildland fire. If a wildfire that is not caused by humans is burning in an area covered by an approved land and resource management plan and an approved fire management plan, and the objectives of the plans are being met, document the response decision and take appropriate action. If events cause a delay in the decision, and this delay may result in an increased risk to firefighter or public safety, the only appropriate response is to control the fire.
3. Request the appropriate level of an Incident Management Team using the incident complexity analysis ratings, provided as part of the Wildland Fire Situation Analysis software program as a guide, or the Interagency Standards for Fire and Fire Aviation Operations Guide, NFES 2724, for completing the Incident Complexity Analysis for Type 1, 2 (Appendix H-1). The responsible line officer shall ensure that the designated incident commander is briefed regarding suppression objectives, considerations, and constraints. A delegation letter (FSM 1230) outlining authority and responsibility must be issued by the appropriate line officer to the assigned area commander(s) or to Type 1 and 2 incident commanders (National Interagency Mobilization Guide, FSM 5108).

#### **5131.04 - Responsibility**

Line officers are responsible for all aspects of fire management, including financial oversight of a wildland fire incident. Unlike other responsibilities, financial oversight must not be delegated. Line officers have the responsibility to certify a Wildland Fire Situation Analysis (WFSA) and issue delegations of authority to the appropriate level of the fire management team. The appropriate line officer authority is based on the estimated suppression cost of an incident or by the complexity level developed in the WFSA, as set out in FSM 5131.04a through 5131.04d.

#### **5131.04a - Chief and Deputy Chiefs**

The Chief or a designated deputy chief has the authority and responsibility to certify a WFSA over \$50 million with any level of team activation. Certification or revision of the WFSA must be completed within 24 hours of escape of initial action, unless agreed to otherwise.

#### **5131.04b - Regional Foresters and Area Director**

Regional foresters have the authority and responsibility to certify a WFSA up to \$50 million or with any level of team activation. Certification or revision of the WFSA must be completed within 24 hours of escape of initial action, unless agreed to otherwise, once all files and the approved WFSA are received by the certifying administrator's representative.

#### **5131.04c - Forest Supervisors**

Forest supervisors have the authority and responsibility to develop and approve all WFSAs over \$2 million, and to certify a WFSA up to \$10 million or with a Type 1 or area command team activation.

#### **5131.04d - District Rangers**

District rangers have the authority and responsibility to develop and approve all WFSAs up to \$2 million.

### **5131.1 - Wildland Fire Situation Analysis**

The Wildland Fire Situation Analysis (WFSAs) is a decision support process intended to help the line officer make the best decision possible that considers all available factors. The strategy selected (alternative) can directly affect costs. All WFSAs are required to produce well considered alternatives that display a range of options with cost accountability included as an integral element. The initial WFSAs must be approved prior to initiation of a new strategy and within 12 hours of a fire escaping initial actions. A brief Wildland Fire Situation Analysis shall be developed to define suppression objectives for extended attack operations.

The National Wildland Coordinating Group - Wildland Fire Situation Analysis (WFSAs) (NWCG-WFSAs) documents the decisionmaking process for determining the appropriate suppression action and estimated cost of an incident that is expected to, or has exceeded, the action planned in the Fire Management Plan.

### **5131.11 - Qualifications for Wildland Fire Situation Analysis (WFSAs) Certification**

Line officers shall have the required level of experience and training to be qualified to approve and certify a Wildland Fire Situation Analysis (WFSAs) and issue delegations of authority. To obtain certifying authority, the line officer shall have completed the required experience and training as set out in FSM 5131.11a through 5131.11c or must participate in an approved alternative experience and training until required qualification is obtained.

#### **5131.11a - Regional Forester and Deputy Chief Qualifications**

1. Qualifications required for WFSAs certification:
  - a. Attend an annual National Leadership Team Fire Preparedness Briefing, or
  - b. Qualify as a Type 1 or 2 command and general staff position.
2. Approved alternatives until qualification is obtained:
  - a. Participate in a regional line officer seminar covering the WFSAs and delegation of authority process, or
  - b. Conduct any WFSAs certification process utilizing a team consisting of a WFSAs analyst/mentor and a qualified line officer.

#### **5131.11b - Forest Supervisor Qualifications**

1. Qualifications required for WFSAs certification:
  - a. Participate in a minimum of one WFSAs certification process and complete the National Fire Management Leadership course,

- b. Attend a regional WFSA training course, or
  - c. Qualify for a Type 1 or 2 command and general staff position.
2. Alternative until the above qualification is obtained: Attend a regional line officer seminar covering WFSA, or assign a qualified line officer and WFSA analyst to mentor and advise throughout the WFSA development and certification process.

### **5131.11c - District Ranger Qualifications**

1. Qualifications required for WFSA certification:
  - a. Participate in a minimum of one WFSA certification process and complete the Local Fire Management Leadership course,
  - b. Attend a regional WFSA training course, or
  - c. Qualify in a Type 1 or 2 command and general staff position.
2. Alternative until the above qualification is obtained: Attend a regional line officer seminar covering WFSA and assign a qualified line officer and WFSA analyst to mentor and advise throughout the WFSA development and certification process.

### **5131.12 - Preparation Requirements**

A Wildland Fire Situation Analysis must be completed when:

1. Wildland fire escapes initial action or is expected to exceed initial action.
2. A wildland fire being managed for resource benefits exceeds prescription parameters in the fire management plan.
3. A prescribed fire exceeds its prescription and is declared a wildfire.

### **5131.13 - Analysis Requirements**

A Wildland Fire Situation Analysis (WFSA) must include the following steps:

1. Identification of Criteria for Evaluating Suppression Alternatives. Develop criteria that reflect the priority for firefighter and public safety, that reflect forest plan objectives and constraints (including environmental and social concerns), that permit assessments of potential resource damage, and that allow for estimates of potential suppression rehabilitation costs. A suppression cost objective must be included as an incident objective and must be included in the delegation of authority. These cost objectives must include all required risk mitigation measures, be commensurate with the values to be protected, and minimize the threat of wildfire escaping onto non-Federal lands. Consider local, regional, and national fire suppression activities and reinforcement capabilities in establishing cost objectives.

2. Development of Suppression Alternatives. Develop alternatives, consistent with forest plan goals that represent a range of strategies for the wildfire suppression situation. Each alternative must:

- a. Assess the risks to firefighter and public safety and identify the measures necessary to mitigate them.
- b. Be implementable.
- c. Include documentation of strategic objectives.
- d. Consider the resources required for implementation, and the availability of those resources for the incident.
- e. Assess the probability of success and consequences of failure using decision trees (for example, WFSAs software (FSM 5131.1)).
- f. Estimate the time to accomplish containment and control, acres burned, suppression cost, and resource damage.
- g. Show results in unique outcomes, changes in wildland fire perimeter, resources required for control, a range of costs, and variability of timeframes to achieve containment and control.
- h. Consider strategies that are legally and technically implementable and are estimated to result in suppression cost savings.

3. Analysis of Suppression Alternatives. Use the developed evaluation criteria and objectives to analyze alternatives. Determine whether estimates of expected wildfire and suppression actions are consistent with the forest plan objectives and values.

4. Least Suppression-Cost Option. This alternative must be implementable, consistent with firefighter and public safety, so that when expected fire suppression costs are compared, this alternative is the least expensive. All WFSAs will have this alternative identified within the documentation of the decision.

5. Approval.

- a. The responsible line officer selects the WFSAs suppression alternative and approves any revisions and shall:
  - (1) Select the alternative that best meets the overall criteria and objectives established for the fire.
  - (2) Provide sufficient documentation to convey the rationale for the selection.
  - (3) Document the rationale for the decision, if the least expected suppression cost alternative is not selected.

- b. Certification or revision of a WFSA being approved by the Chief must be completed in consultation with the regional forester and forest supervisor submitting the WFSA.
  - c. The line officer ensures that an appropriate level Incident Management Team is assigned, based upon an incident complexity analysis.
6. Notification. The line officer ensures that the public and cooperators are informed of the selected alternatives and ensures that the geographic area coordination center is notified of the selected alternative, probable commitment of resources, and critical resource needs.
  7. WFSA Monitoring and Evaluation. The assigned line officer shall daily validate the selected suppression alternative, including cost containment measures, based on the current and predicted situation. Revision or amendment of the WFSA is required if incident objectives, including cost objectives, are exceeded. The responsible line officer and the incident commander shall revise, amend, and approve the WFSA, if needed; the appropriate line officer shall certify the revised WFSA following all guidelines for this process.
  8. Documentation. Before leaving an incident, the incident commander shall ensure that the WFSA, including any revisions, is documented and filed with form FS-5100-29, Individual Fire Report.
  9. Evaluation. Incident suppression cost objectives must be included as a performance measure in Incident Management Team evaluations.

## **5132 - SUPPRESSION ACTION ON PRIVATE LAND**

### **5132.01 - Authority**

Pursuant to Title 42, United States Code, section 1856b (42 U.S.C. 1856b), the Agency regulations at section 211.5 of Title 36 of the Code of Federal Regulations (36 CFR 211.5) permit the Forest Service, in the absence of a written reciprocal agreement with a fire organization, to render emergency assistance in suppressing wildland fires and in preserving life and property from the threat of fire, within the vicinity of the Agency's fire protection facilities.

1. This assistance may be offered without reimbursement if a Forest Service-initiated prescribed fire escapes onto non-Forest Service lands.
2. This assistance may be offered on a reimbursable basis on non-Forest Service lands when requested, without regard to the threat to National Forest System lands or resources.

### **5132.03 - Policy**

Permission to conduct suppression activities on private land should be obtained from the landowner when feasible; however, suppression action should not be delayed while permission is being sought.

### **5132.1 - Structure Fires**

Refer to FSM 5137 for direction regarding suppression of structure fires on private land.

### **5132.2 - Wildland/Urban Interface**

Refer to FSM 5106 for direction regarding cooperative suppression activities within wildland urban interface.

## **5133 - ORGANIZATION AND MANAGEMENT OF WILDFIRE SUPPRESSION OPERATIONS**

All wildland fire protection agencies are organized to handle a reasonable amount of forest, brush, and grass fires within their jurisdictions. They usually can fight larger, more destructive fires with their own resources plus aid from other agencies. However, additional or substantial outside assistance may be required at times. In these cases, National Interagency Incident Management System (NIIMS) provides a total systems approach for response in a wide range of emergency situations (including fires, floods, earthquakes, and other natural or human-caused incidents).

### **5133.02 - Objective**

To establish positions, qualifications, and certification requirements in wildland fire suppression to ensure that Forest Service personnel have the organization, training, and qualifications to carry out fire management policies and programs in a safe, cost-efficient manner.

### **5133.03 - Policy**

1. Comply with the qualification requirements for the skills and knowledge unique to wildland fire suppression and the Incident Command System (ICS) as established by the National Wildfire Coordinating Group (NWCG) in section 12 of the Wildland and Prescribed Fire Qualification System Guide, PMS 310-1 (FSM 5108) and with additional Forest Service requirements as set forth in FSH 5109.17.
2. Accept the participation in cooperative fire suppression efforts of personnel from other agencies or of cooperators not hired by the Forest Service, who comply with the minimum requirements specified by the NWCG Wildland and Prescribed Fire Qualification System Guide, PMS 310-1 (FSM 5108).
3. Employ the Incident Command System (ICS) in Forest Service fire suppression activities and in other incidents as appropriate.
4. Prepare agreements covering the use of active duty military forces assigned to Department of Defense installations adjacent to National Forest System lands, National Guard, State, and local cooperator forces in advance of wildfire emergencies.
5. Manage wildfires involving multiple jurisdictions as mutually agreed-upon unified commands, when possible. Commands should be unified as early in the incident as possible. The rapid exchange of information and coordinated tactics are, first, a safety precaution and, second, a cost containment protocol. Cost apportionments will be based on mutually agreed upon criteria and reflected in the delegation of authority from the line officer or agency administrators.

### **5133.04 - Responsibility**

#### **5133.04a - Washington Office, Director, Fire and Aviation Management Staff**

The Washington Office, Director, Fire and Aviation Management, is authorized to:

1. Plan, provide, and coordinate needs for national suppression resources (FSM 5133.2); infrared detection; mapping aircraft; national incident radio support cache; and utilization of Department of Defense resources.
2. Identify national resources and list them in the National Interagency Mobilization Guide (FSM 5108).
3. Annually determine and approve the number of national suppression resources and their period of availability, location, and funding to support preparedness and suppression activities.

### **5133.04b - Regional Foresters and Area Director**

Regional foresters and the Area Director are responsible for negotiating and having in place, in advance of wildfire emergencies, agreements covering the use of National Guard, State, and local cooperator forces.

### **5133.04c - Forest Supervisors**

Forest supervisors are responsible for:

1. Ensuring wildland fire management actions, including wildfire suppression, are managed in a safe and efficient manner.
2. Overseeing management of wildfire suppression on all incidents.

### **5133.1 - Wildland Fire Management Organization**

Follow the Fireline Handbook (FSH 5109.32a), the Wildland and Prescribed Fire Qualification System Guide (PMS 310-1) (FSH 5108), and the Fire and Aviation Management Qualifications Handbook (FSH 5109.17) for organizing and managing wildfire suppression activities. Assign personnel to wildfire suppression positions on the basis of qualification and demonstrated ability rather than on the basis of administrative rank (FSH 5109.17). Manage all incidents using the National Interagency Incident Management System/Incident Command System (NIIMS/ICS). Assign the appropriate level of Incident Management Team based on a complexity analysis done within the Wildland Fire Situation Analysis.

### **5133.2 - National Wildland Fire Suppression Resources**

National suppression resources are established to provide cost-efficient and effective levels of staffing, location, and availability.

All national suppression resources and equipment must meet established Forest Service and interagency standards, availability dates, and staffing levels. These standards are described in the National Interagency Mobilization Guide (FSM 5108). The regional Fire and Aviation Management director shall obtain written agreement from the Washington Office, Director, Fire and Aviation Management staff, for any proposed deviations from national standards, availability, and funding.



The following national resources must be identified in the National and Regional Mobilization Guides:

1. Airtankers, Modular Airborne Fire Fighting Systems (MAFFS), lead planes, and pilots;
2. Call-When-Needed (CWN) Type 1 and Type 2 exclusive-use helicopters and pilots (Type 2 helicopters identified by the National Fire Management Analysis Systems (NFMAS) as initial attack resources are not considered national resources);
3. Smokejumpers, aircraft, and pilots;
4. Air transportable mobile weather units;
5. Contracted large transport aircraft;
6. National Incident Management Teams and National Area Command Teams;
7. Type 1 crews; and
8. National Fire Equipment System (NFES) National Interagency Support fire caches (category 1) and designated Local Area Interagency Support fire caches (category 2). Consult the National Interagency Mobilization Guide for additional resource information (FSM 5108).

### **5133.3 - Job Corps and Non-Federal Organized Suppression Crews**

Job Corps and non-Federal organized suppression crews shall meet the same physical fitness and training requirement as organized firefighting agency crews (FSM 5126.03, 5126.1 and 5133.1 and FSH 5109.17). The responsible line officer shall ensure qualified personnel are assigned to manage these crews on all fires.

### **5133.4 - Military, State, and Local Forces**

Pre-emergency agreements cover the use of National Guard, State, and local cooperator forces (FSM 5133.03). Establish the method and rate of payment in these agreements as directed in the Interagency Incident Business Management Handbook (FSH 5109.34).

### **5133.5 - Interregional Detail of Crews**

Assign a crew representative with each Type 2 crew (National Interagency Mobilization Guide, FSM 5108) when the crew is dispatched out of the region. The crew boss may serve as the crew representative if qualified (FSH 5109.17, ch. 20).

### **5133.6 - National Incident Management Teams**

All regions must provide interagency Incident Management Teams, as required by the National Interagency Mobilization Guide (FSM 5108), that are qualified for interregional and interagency assignments. Each region must annually furnish the National Interagency Coordination Center (NICC) with the names of team personnel, overhead position, highest qualification, and home units as part of the Regional Mobilization Guide. National Incident Management Team standards and operational procedures are contained in the National Interagency Mobilization Guide (FSM 5108).

### **5133.7 - Rest Periods, Assignments, and Shift Duration**

To maintain safe, productive fire suppression activities, fire management personnel shall manage work and rest periods, assignment duration, and shift length. Comply with the standards in FSH 5109.34, chapter 10, Interagency Incident Business Management Handbook.

## **5134 - EMERGENCY FIREFIGHTERS**

### **5134.04 - Responsibility**

Line officers have the responsibility for determining the need to train and mobilize emergency firefighters in order to provide additional expertise and skills to supplement regular Forest Service forces during emergency situations (FSH 5109.34).

### **5134.1 - Emergency Firefighter Requirements**

Persons employed under the Administratively Determined (AD) Pay Plan for Emergency Firefighters shall meet Agency standards; for training and physical fitness requirements (FSM 5126.03, 5126.1 and 5130; FSH 5109.17 and the Wildland and Prescribed Fire Qualification System Guide (PMS 310-1 FSM 5108)).

### **5134.2 - Technical Specialist Requirements**

The employing officer may waive the physical fitness test and firefighter training course requirements, except fire shelter training (FSM 5135.11), for emergency firefighters used as technical specialists, such as fallers and equipment operators, when employed specifically for their occupational skills (FSH 5109.17, sec. 12).

## **5135 - FIRE SUPPRESSION SAFETY**

All activities must reflect a commitment to firefighter and public safety as the first priority.

### **5135.04 - Responsibility**

#### **5135.04a - Regional Foresters and Area Director**

Regional foresters and the Area Director are responsible for establishing procedures for issuance, use, and accountability of personal protective clothing and equipment.

## **5135.04b - Forest Supervisors**

It is the responsibility of the forest supervisor to:

1. Determine the need for and approval of self-contained breathing apparatus (SCBA) and all other nonmandatory personal protective equipment, consistent with direction in FSM 5135.11 and 5135.3.
2. Ensure that training, use, appropriate employee medical surveillance programs, and maintenance and storage of the protective equipment comply with applicable standards (FSM 5135.1 and 5135.3).
3. Provide 8 hours of annual fire safety refresher training to personnel directly involved with fire management activities (FSH 5109.17, ch. 20 and 30).

## **5135.04c - Work Supervisors**

As directed in the Health and Safety Code Handbook (FSH 6709.11) and FSM 5720 (for requirements related to aviation safety), work supervisors are responsible for the safety of employees engaged in wildland fire management activities.

## **5135.04d - All Employees**

All employees have the personal responsibility for protecting themselves and other workers from injury or accidents through safe work practices and compliance with the requirements for safe operation of equipment.

## **5135.1 - Protective Clothing and Equipment**

The protective clothing and equipment requirements in FSM 6716, the Health and Safety Code Handbook (FSH 6709.11), and the Fireline Handbook (FSH 5109.32a) must be met by all employees. Personal protective gear must not be modified.

## **5135.11 - Flame-Resistant Clothing and Fire Shelters**

1. Flame-Resistant Clothing. For all wildland fire duties, flame-resistant clothing (FSH 6709.11) must comply with the following requirements:
  - a. Flame-resistant shirts must meet the requirements of Forest Service specification 5100-91.
  - b. Flame-resistant pants must meet the requirements of Forest Service specification 5100-92.
  - c. Flame-resistant face and neck shrouds must meet the requirements of Forest Service specification 5100-601.

- d. Wildland fire work gloves must meet the requirements of Forest Service specification 6170-5.
  - e. Stencils, patches, or silk-screens must not be attached to flame-resistant clothing.
  - f. The clothing must be loose fitting to provide air flow and an air gap to protect against radiant heat.
2. Fire Shelters. All Forest Service employees, cooperators, and contractors shall carry fire shelters while on the fireline of any uncontrolled wildland fire. This requirement applies to all wildland fires, including wildfires being managed by other agencies. For prescribed fire, use the Job Hazard Analysis (FSH 6709.12, sec. 14) to determine the need for the use of fire shelters. Fire shelters must meet the requirements in Forest Service specification 5100-320 or 5100-606, Shelter, Fire (developed by the Missoula Technology and Development Center).
3. Distribution and Training for Flame-Resistant Clothing and Fire Shelters.
- a. Forest Service Employees. Forest supervisors shall ensure that fire shelters and flame-resistant clothing are issued to each Forest Service employee who has current fireline and prescribed fire qualifications and who may be assigned to Forest Service or other agency wildland fire projects. For aviation-related assignments, see the requirements in FSM 5723.
  - b. Cooperators. Local fire management officers shall issue fire shelters to cooperators and provide instruction for their use. Local fire management officers shall issue flame-resistant clothing to cooperators at the time of their training and assignment to fireline duties when they are employed directly by the Forest Service and their agencies have not provided the clothing. For aviation-related assignments, see the requirements in FSM 5723.
  - c. Purchase. The purchase and use of flame-resistant clothing does not require a Job Hazard Analysis (FSH 6709.12, sec. 14).

### **5135.2 - Hazardous Materials**

Limit actions of Forest Service personnel on incidents involving hazardous materials 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).

### **5135.3 - Self-Contained Breathing Apparatus**

Wildland firefighters may deploy only an open-circuit, self-contained breathing apparatus (SCBA) of the positive pressure type when smoke from vehicle, dump, structure, or other nonwildland fuel fire cannot be avoided while meeting wildland fire suppression objectives

(29 CFR 1910.134, Respiratory Protection). If such an apparatus is not available, avoid exposure to smoke from these sources.

The acquisition, training, proper use, employee health surveillance programs, inspection, storage, and maintenance of an SCBA must comply with the National Fire Protection Association Standard, NFPA-1981 and 29 CFR 1910.134, and must be justified by a Job Hazard Analysis.

Where an SCBA is approved, it may be carried only on a fire engine and its use must be consistent with FSM 5130.2, 5130.3, and this section.

### **5135.4 - Safety Guidance**

The Fire Orders, Lookouts/Communication/Escapes Routes and Safety Zones (LCES), and Watch Out Situations contain important basic guidance for safe fire management activities. The Fireline Handbook (FSH 5109.32a), and Health and Safety Code Handbook (FSH 6709.11), list the Fire Orders and Watch Out Situations and provide additional information and direction that support effective and safe firefighting. Wildfire suppression actions must comply with the Fire Orders, and levels of engagement must be determined by and based upon iterative risk assessment and management (IRPG).

### **5135.5 - Annual Refresher Training**

All personnel who may receive a wildfire fireline assignment shall complete a minimum of 8 hours of fire safety refresher training annually (5135.04b and 5109.17, ch. 20 and 30). Refresher training must consist of fire shelter purpose and use, practice deployments, and any pertinent fire safety related topics such as: Fire Orders and Watch Out Situations; Lookouts, Communications, Escape Routes, and Safety Zones (LCES); and Look up, Look down, and Look Around. The Interagency Incident Qualification Card, NFES 1578, must not be issued until supervisors certify that the individuals have completed annual Fire Safety Refresher training.

## **5136 - CIVIL RIGHTS AND HUMAN RESOURCE PROGRAMS**

### **5136.03 - Policy**

A human resource specialist shall be assigned to any incident involving 300 or more people. Prior to leaving an incident, the human resource specialist shall prepare documentation in a package for the agency administrator that lists corrective actions taken during the incident regarding civil rights and employee conduct and any follow-up actions required; label the package “Administratively Confidential - For Official Use Only,” and deliver the package to the responsible line officer or designated agency administrator.

### **5136.04 - Responsibility**

#### **5136.04a - Regional Foresters and Area Director**

It is the responsibility of the regional forester and the Area Director to assign a human resource specialist to incidents with 300 or more people.

## **5136.04b - Human Resource Specialists**

1. Human resource specialists assigned to wildland fire management projects or incidents are responsible for:
  - a. Monitoring civil rights and human resource concerns.
  - b. Providing appropriate behavior awareness/education.
  - c. Initiating corrective action to resolve problems as directed by FSH 5109.17, Fire and Aviation Management Qualifications Handbook, chapter 20.
2. The human resource specialists assigned to a wildland fire suppression incident or project shall prepare an annual report of statistics of human resource and civil rights related concerns from incident personnel.
  - a. The report lists incidents which have occurred within the region or the Area.
  - b. Documentation should follow direction required in FSM 5136.03.
  - c. After the report is consolidated, it is forwarded to the National Human Resource Specialist Program Coordinator.

## **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.

### **5137.02 - Objective for Structure Fire Protection**

The Forest Service's primary responsibility and objective for structure fire protection is to suppress wildfire before it reaches structures. The Forest Service may assist State, county, and local fire departments in exterior structure fire protection when requested under terms of an approved cooperative agreement.

### **5137.03 - Policy for Structure Fire Suppression**

1. Fire Suppression for Non-Forest Service Structures. Structure fire suppression, which includes exterior and interior actions on burning structures, is the responsibility of State, tribal, county, or local fire departments.
  - a. Forest Service officials shall avoid giving the appearance that the Agency is prepared to serve as a structure fire suppression organization.
  - b. Forest Service employees shall limit fire suppression actions to exterior structure protection measures as described in FSM 5137.

2. Fire Protection and Suppression for Forest Service Structures.

a. At Forest Service administrative sites, outside the jurisdiction of State, county, and local fire departments, limit fire protection measures to:

- (1) Prevention.
- (2) Use of fire extinguishers on incipient stage fires (FSH 6709.11, sec. 35.11a).
- (3) Safe evacuation of personnel.
- (4) Containment by exterior attack.
- (5) Protection of exposed improvements.

b. At Forest Service administrative sites located within the jurisdiction of State, county, and local structural fire departments, structure fire suppression responsibility must be coordinated with State, county, and local fire departments.

3. 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.

**FSM 5100 – WILDLAND FIRE MANAGEMENT**

**CHAPTER 5140 – HAZARDOUS FUELS MANAGEMENT AND PRESCRIBED FIRE**

**Amendment No.:** 5100-2014-3

**Effective Date:** September 24, 2014

**Duration:** This amendment is effective until superseded or removed.

**Approved:** JAMES E. HUBBARD  
Deputy Chief, S&PF

**Date Approved:** 09/17/2014

**Posting Instructions:** Amendments are numbered consecutively by title and calendar year. Post by document; remove the entire document and replace it with this amendment. Retain this transmittal as the first page(s) of this document. The last amendment to this title was 5100-2014-2 to FSM 5190.

<b>New Document</b>	5140	14 Pages
<b>Superseded Document(s) by Issuance Number and Effective Date</b>	5140 (Amendment 5100-2008-1, 04/18/2008)	10 Pages

**Digest:**

5140 - Changes chapter caption from “Fire Use” to “Hazardous Fuels Management and Prescribed Fire”.

Revised in its entirety, to reflect changes in fire management policy and doctrine, and to be consistent with the recently revised FSM 5100 zero code. Relevant portions of FSM 5150 have been added and the obsolete chapter 5150 will be removed by separate amendment. References to the new Fire Management Planning Guide are added, as this Guide will replace the handbook at FSH 5109.19, chapter 50.



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This chapter provides direction on mitigating hazardous fuels and using fire to achieve desired landscape conditions and attain Land and Resource Management Plan objectives.

### **5140.1 - Authority**

See FSM 5101.

### **5140.2 - Objectives**

1. Understand the role of fire on the landscape in order to integrate fire, as a critical natural process, into land and resource management plans, and develop achievable and sustainable Land and Resource Management Plan (LRMP) objectives that provide for landscapes which are resilient to fire related disturbances and climate change.
2. In cooperation with partners, strategically plan and implement on a landscape scale, risk-informed, and cost-effective hazardous fuel modification and vegetation management treatments (wildland fire (wildfire and prescribed), mechanical manipulation, biological, and chemical) to attain management objectives identified in Land and Resource Management Plans, to protect, sustain, and enhance resources and, where appropriate, emulate the ecological role of natural fire.

### **5140.3 - Policy**

Plan and implement a hazardous fuels management and prescribed fire program applying:

1. Principles and policy elements described in FSM 5103 and Wildland Fire Doctrine (FSM 5131).
2. Principles from the Cohesive Strategy (A National Cohesive Wildland Fire Management Strategy Phase II National Report, May 2012).
3. Guidelines from The Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide (NWCG, PMS 484; see <http://www.nwcg.gov/pms/RxFire/rx.htm>).
4. Consideration of greenhouse gas emissions and effects on carbon sequestration.

### **5140.31 - Hazardous Fuels and Prescribed Fire in Wilderness**

1. Unplanned ignitions from lightning may be used to achieve wilderness objectives.
2. Forest Service Managers may ignite a prescribed fire in wilderness to reduce unnatural buildups of hazardous fuels only if necessary to meet at least one of the wilderness fire management objectives set forth in FSM 2324.21 and if all of the following conditions are met:
  - a. The use of prescribed fire or other fuel treatment measures outside of wilderness is not sufficient to achieve fire management objectives within wilderness.

- b. An interdisciplinary team of Resource Specialists has evaluated and recommended the proposed use of prescribed fire.
- c. The interested public has been involved appropriately in the decision.
- d. The use of lightning-caused fires will pose serious threats to life and/or property within wilderness or to life, property, or natural resources outside of wilderness.
- e. Do not use prescribed fire in wilderness to benefit wildlife, maintain vegetative types, improve forage production, or enhance other resource values. Although these additional effects may result from a decision to use prescribed fire, use fire in wilderness only to meet wilderness fire management objectives.
- f. Do not use management ignited fire to achieve wilderness fire management objectives where lightning-caused fires can achieve them (FSM 2324).

## **5140.4 - Responsibility**

### **5140.41 - Deputy Chief, State and Private Forestry**

The Deputy Chief must communicate with the Regional Foresters to establish priorities and create a shared vision for the hazardous fuels management and prescribed fire program.

### **5140.42 - Washington Office, Director, Fire and Aviation Management**

The Director, Fire and Aviation Management must coordinate implementation of the hazardous fuels management and prescribed fire program by:

Collaborating with Federal and non-Federal partners to:

1. Develop qualification standards for personnel implementing hazardous fuels management and prescribed fire programs;
2. Develop national standards and procedures for planning, establishing program priorities, and implementing hazardous fuels management and prescribed fire programs.
3. Recommend to the Deputy Chief, State and Private Forestry, national strategies, program priorities, and implementing measures to attain the National Cohesive Strategy vision “To safely and effectively extinguish fire when needed; use fire where allowable; manage our natural resources: and as a Nation, live with wildland fire.”
4. Develop, provide oversight, and maintain systems to monitor the impacts and effectiveness of hazardous fuels management and prescribed fire programs to achieve Agency goals and objectives.

### **5140.43 - Regional Foresters**

Regional Foresters must:

1. Establish direction that supports the risk-based, strategically planned, prioritized, and cost-effective application of hazardous fuels management and prescribed fire practices to achieve Land and Resource Management Plans objectives.
2. Ensure that Forests and Grasslands coordinate planning and implementation of hazardous fuels management and prescribed fire practices with State and local cooperators and partners.
3. Manage and provide oversight of the regional hazardous fuels management and prescribed fire program and ensure that Forests and Grasslands implement hazardous fuels management and prescribed fire practices in compliance with National and Regional policies and standards.

#### **5140.44 - Regional Directors, Fire and Aviation Management**

Regional Directors, Fire and Aviation Management must:

1. Coordinate and provide oversight of the regional hazardous fuels management and prescribed fire program to monitor Forests and Grasslands compliance with National and Regional fire management policies and standards.
2. Coordinate the Regional hazardous fuels management and prescribed fire program with the National program, ensuring accurate and timely reporting of all hazardous fuels management and prescribed fire activity.

#### **5140.45 - Forest Supervisors**

Forest Supervisors must:

1. Establish fire management direction in the Land and Resource Management Plan to integrate the role and use of wildland fire and hazardous fuels management in defining and achieving resource objectives.
2. Ensure that the Fire Management Reference System (see the Fire Management Planning Guide, <http://fsweb.wo.fs.fed.us/fire/fmp>) is current and accurately reflects hazardous fuels management, wildfire response and prescribed fire implementation procedures and standards (FSM 5141).
3. Ensure a fuel treatment effectiveness assessment is conducted on all wildfires which start in or burn areas where hazardous fuels were treated (including treatments by wildfire) (FSM 5144).

#### **5140.46 - District Rangers**

District Rangers must:

1. Integrate the role and use of wildland fire and establish fire management direction to meet resource objectives in the Land and Resource Management plan and other applicable forest-level plans.
2. Assess conditions, plan, and implement a fuels program meeting National standards and Land and Resource Management Plan objectives.
3. Collaborate with State and local partners to coordinate hazardous fuels management and prescribed fire projects and activities.

### 5140.5 - Definitions

Administrative Burning - The burning of debris (forest vegetation) at administrative sites, sites under special use permit, or sites covered under formal agreements. The debris being burned is generated by routine administrative activities, such as fall leaf and needle raking, right-of-way clearing, and trimming or removal of trees and shrubs adjacent to structures for defensible space.

Hazard Fuel - A fuel complex defined by kind, arrangement, volume, condition, and location that presents a threat of ignition and resistance to control.

For additional definitions of terms used in this chapter, refer to FSM 5105.

### 5140.6 - References

Operational procedures contained in publications listed in FSM 5107 and the documents listed below are used by Forest Service personnel in the conduct of prescribed fire activities. The nature of the wildland fire environment is often dynamic, chaotic, and unpredictable and in such an environment, reasonable discretion in decision-making may be required. Thus, the body of procedures, best practices, concepts, and principles described in the listed publications should be considered the best guidance available for the majority of circumstances. Forest Service employees shall use their best judgment in applying the guidance contained in these references to real-life situations.

1. Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide (NWCG, PMS 484).
2. The guidance in the Fire Management Reference System (see the Fire Management Planning Guide, <http://fsweb.wo.fs.fed.us/fire/fmp>) (formerly FSH 5109.19).
3. Prescribed Fire Complexity Rating System Guide (NWCG, NFES 2474, PMS 424).
4. Prescribed Fire Smoke Management Guide (NWCG, NFES 1279, PMS 420-1).
5. NWCG PMS 310-1 Wildland Fire and Prescribed Fire Qualifications System Guide (NWCG PMS 310-1 and FSH 5109.17).
6. National Mobilization Guide (NFES 2092, <http://www.nifc.gov/nicc/mobguide/index.html>).

7. Guidance for Implementation of Federal Wildland Fire Management Policy (February 13, 2009).
8. Federal Wildland Fire Management Policy and Program Review, Final Report, December 18, 1995.
9. Interagency Standards for Fire and Fire Aviation Operations (NWCG, NFES 2724).
10. Basic Smoke Management Practices. USDA Natural Resources Conservation Service and Forest Service Technical Note (2011).  
[http://www.airquality.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb1046311.pdf](http://www.airquality.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046311.pdf)
11. Forest Service Fire & Aviation Qualification Guide (FSFAQG)  
<http://www.fs.fed.us/fire/publications/index.html>

## **5141 - HAZARDOUS FUELS MANAGEMENT AND PRESCRIBED FIRE PLANNING**

1. Overall direction for hazardous fuels management and prescribed fire is provided by the Land/Resource Management Plan. The LRMP serves as the document to initiate, analyze, and provide the basis for implementing hazardous fuels management and prescribed fire projects to meet resource management objectives.
2. The broad direction for implementing the hazardous fuels management and prescribed fire program is documented in the Fire Management Reference System (see the Fire Management Planning Guide, <http://fsweb.wo.fs.fed.us/fire/fmp>).
3. Resource objectives for specific hazardous fuels management and prescribed fire projects are derived from the NEPA analysis. The entire project area must be analyzed under NEPA. Environmental Impact Statements (EIS), Environmental Assessments (EA), and Categorical Exclusion (CE) will be used to identify objectives and analyze the effects of hazardous fuels management and prescribed fire projects.

## **5142 - PRESCRIBED FIRE**

### **5142.3 - Policy**

1. When appropriate, use prescribed fire in a safe, carefully planned, and cost-effective manner to achieve desired conditions and attain management objectives identified in Land and Resource Management Plans (FSM 1920).
2. The NWCG Interagency Prescribed Fire Planning and Implementation Procedures Guide - PMS 484, is Forest Service policy (incorporated by reference at: <http://www.nwcg.gov/pms/RxFire/rxfireguide.pdf>).
3. Declared wildfires.

- a. Review all prescribed fires declared a wildfire. Use FSM 5137.1 and guidelines from the Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide (NWCG, PMS 484) to dictate the nature and intensity of the review.
  - b. Wildfire response with Agency assets may be implemented without reimbursement if a Forest Service-initiated prescribed fire escapes onto non-National Forest or Grassland System lands (FSM 5133.1).
4. Weather conditions must be monitored during all phases (including mop up) of prescribed fire implementation.
- a. Long-term weather conditions such as drought must be considered in all phases of prescribed fire planning and implementation.
  - b. A project-specific spot weather forecast must be obtained prior to ignition; for each day that ignition continues; on any day the fire is actively spreading; or when conditions adversely affecting the prescribed fire are predicted in the general forecast.
  - c. The authorizing Line Officer may make an exemption from the spot weather forecast requirement using criteria listed below. When daily spot weather forecasts are exempted, the general weather forecast must be reviewed daily until the prescribed burn is declared “out” to ensure prescribed fire and smoke management requirements are met. The line officer need only approve such an exemption once and it can be documented separately or on the Agency Administrators Ignition Authorization. The burn boss may then invoke the exemption after documenting that the conditions meeting the criteria have been observed.

(1) The general fire weather forecast for the Fire Weather Zone in which the prescribed burn is occurring is usually the same as any spot forecast within the Fire Weather Zone. This situation may occur in Fire Weather Zones which have little topographic relief.

(2) There is a low threat of escape due to weather/fuel moisture conditions. This exemption is intended for situations such as burning piles with snow on the ground where fire cannot spread outside the burning pile on the day of the exemption.

## **5142.4 - Responsibility**

### **5142.41 - Deputy Chief, State and Private Forestry**

The Deputy Chief must ensure coordination with the State Foresters, relevant State and Federal agencies, cooperators and partners to communicate the goals and objectives of the prescribed fire program.

### **5142.42 - Washington Office, Director, Fire and Aviation Management**

The Director, Fire and Aviation Management must:

1. Advise Regions of national conditions (for example, asset constraints, broad scale weather patterns, wildland fire activity, and so forth) that may compromise the ability to support prescribed fire activities.
2. Develop and support training to qualify personnel to implement prescribed fire programs.
3. Ensure collection and analysis of Regional, Unit, and project Prescribed Fire Reviews to improve policy and implementation practices.

### **5142.43 - Regional Foresters**

Regional Foresters must:

1. Establish guidance for approval of prescribed fire initiation based on regional conditions and resource capability; and approve or disapprove new prescribed fires or continue existing prescribed fire at National Preparedness Levels IV and V.
2. Ensure Forest Supervisors are qualified to approve Prescribed Fire Burn Plans on Forests and Grasslands. See FSM 5142.51 for Forest Supervisor qualifications.



3. Conduct reviews (and report review results to the Chief within 90 days) of all prescribed fires resulting in serious or multiple personal injuries; that are converted to wildfire status and result in significant cost or social impacts, particularly to private or other agency lands; or result in the issuance of an air quality regulatory Notice-of-Violation from the State, air pollution control district, and/or county.

#### **5142.44 - Regional Directors, Fire and Aviation Management**

Regional Directors, Fire and Aviation Management must:

1. Provide oversight to ensure that Forests and Grasslands apply prescribed fire safely and cost effectively to achieve Land and Resource Management Plans objectives.
2. Provide recommendations to the Regional Forester to establish guidance for approval of prescribed fire initiation based on regional conditions and resource capability; and whether to approve or disapprove new prescribed fires or continue existing prescribed fire at National Preparedness Levels IV and V.
3. Monitor conditions and advise Forests and Grasslands of conditions which may compromise successful implementation of prescribed fire activities.
4. Provide recommendations to the Regional Forester on the qualifications of Forest Supervisors to make Line Officer prescribed fire decisions on forests and grasslands. See FSM 5142.51 for Forest Supervisor qualifications.
5. Ensure forests complete a fuel treatment effectiveness assessment (see sec. 5144) (and enter assessment results in the Fuel Treatment Effectiveness Monitoring database within 90 days of control of the fire) on all wildfires which start in or burn into a fuel treatment that has been completed within the last 10 years (within the last 3 years in the Southern Region or in portions of other regions designated by the Regional Forester).
6. Monitor prescribed fire activity and ensure accurate and timely reporting (tabular and spatial) of all Forest or Grassland prescribed fire activity.

#### **5142.45 - Forest Supervisors**

Forest Supervisors must:

1. Approve or reject Prescribed Fire Plans, ensuring that Prescribed Fire Plans (RxBPs) are designed to achieve Land and Resource Management Plan objectives, and meet service-wide and regional requirements found in FSM 5140 and the Interagency Prescribed Fire Planning and Implementation Procedures Guide. This authority may be delegated to a District Ranger on the basis of qualification, experience, and demonstrated ability (see FSM 5142.51).
2. Approve or disapprove ignition of new prescribed fire. This authority may be delegated to a District Ranger on the basis of qualification, experience, and demonstrated ability (see FSM 5140.7).

3. Request Regional Forester approval for new prescribed fire as required by Regional direction, or National direction for Preparedness Levels IV and V.
4. Ensure and document the relevant training and experience that demonstrate that personnel implementing Prescribed Fire Plans meet service-wide and regional requirements found in FSM 5140 and the Interagency Prescribed Fire Planning and Implementation Procedures Guide.
5. Ensure accurate and timely reporting of all Forest or Grassland prescribed fire activity and report all wildfires resulting from prescribed fire actions to the Regional Forester within 12 hours of the wildfire declaration. Report exceedances of the National Ambient Air Quality Standards (NAAQS) to the Regional Forester as soon as practicable.
6. Conduct reviews of all prescribed fires that are converted to wildfire status that do not meet criteria for a Regional Forester review (FSM 5142.42). Report the results of the review to the Regional Forester within 60 days after the wildfire declaration.
7. Ensure that prescribed fire personnel are trained in the After Action Review (AAR) process and that they routinely complete AARs after prescribed fire operations.
8. Conduct an administrative review or facilitated learning analysis on causes of any exceedances of the NAAQS associated with prescribed fire within three months of notification.

#### **5142.46 - District Rangers**

District Rangers must:

1. If delegated by the Forest Supervisor, approve or disapprove ignition of new prescribed fire, or request Regional Forester approval for new prescribed fire as required by Regional direction, or National direction for Preparedness Levels IV and V.
2. If delegated by Forest Supervisor, approve or reject Prescribed Fire Plans, ensuring that Prescribed Fire Plans (RxBPs) are designed to achieve Land and Resource Management Plan objectives, and meet service-wide and regional requirements found in FSM 5140 and the Interagency Prescribed Fire Planning and Implementation Procedures Guide.
3. Ensure that personnel implementing Prescribed Fire Plans meet service-wide and regional qualifications (FSM 5142.5) and the Interagency Prescribed Fire Planning and Implementation Procedures Guide.
4. Ensure adequate oversight and status reporting of all prescribed fires at the district level; reporting all wildfires resulting from prescribed fire actions to the Forest Supervisor within 4 hours.
5. Report potential and actual exceedances of the National Ambient Air Quality Standards (NAAQS) as soon as practicable.

## **5142.5 - Qualifications for Implementing Prescribed Fire**

### **5142.51 - Agency Personnel**

1. Minimum qualifications for Forest Supervisors, District Rangers, other Line Officers, and formally delegated “Acting” Line Officers to approve Prescribed Fire Plans and authorize ignition are described in the Interagency Standards for Fire and Fire Aviation Operations (NWCG, NFES 2724, Chapter 5).
2. Delegations for prescribed fire plan approval may be limited based upon the complexity of the prescribed fire. Delegations should be based on successful completion of the minimum training and experience as well as demonstrated ability. Document relevant training and experience that demonstrates sufficient prescribed fire management knowledge.
3. Additional qualification standards for prescribed fire implementation positions are described in the Forest Service Fire & Aviation Qualification Guide.

### **5142.52 - Contractors**

Include qualifications requirements for any specific skill position that the Contractor must provide in any contracts for prescribed fire operations. Qualification clauses in contracts must require Contractors to meet requirements listed in NWCG PMS 310-1 Wildland Fire and Prescribed Fire Qualifications System Guide or FSH 5109.17 for positions (for example: RXB3) not included in NWCG PMS 310-1.

### **5142.6 - Prescribed Fire Plans**

1. Prepare a site-specific Prescribed Fire Burn Plan as described in the Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide for each prescribed fire in advance of the ignition. If more than 1 year has elapsed since approval, a burn plan will be reviewed, updated, as necessary, and approved before implementation.
2. The Agency Administrator Ignition Authorization (NWCG PMS 485) is required to be completed prior to ignition.
3. The Prescribed Fire Plan will specify who has the authority to declare a wildfire.

### **5142.7 - Prescribed Fire Operations and Organization**

See the Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide as referenced in FSM 5140.3.

## **5142.8 - Smoke Management**

1. Coordinate prescribed fire program activities with Regional air quality specialists and Federal, State, Tribal, air pollution control district or county regulatory authorities to ensure compliance with their regulations which are supported by the Clean Air Act.
2. When multiple wildland fire events are occurring within an airshed, or any airshed is impacted by ongoing wildland fire events, fire managers will consider the cumulative impact to air quality which their management actions might cause and implement prescribed fire only if compliance with air quality regulations can be maintained.
3. All prescribed fires should be conducted using Basic Smoke Management Practices. USDA Natural Resources Conservation Service and Forest Service Technical Note (2011).  
[http://www.airquality.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb1046311.pdf](http://www.airquality.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046311.pdf)

## **5143 - ADMINISTRATIVE BURNING**

Administrative burning is exempted from the requirements of FSM 5140. This type of burning will adhere to local government debris burning requirements, air quality regulations or codes, and follow additional requirements as determined by the Forest Supervisor or other delegated Line Officer.

## **5144 - ASSESSING AND REPORTING HAZARDOUS FUELS TREATMENT EFFECTIVENESS**

All wildfires which start in or burn into a fuel treatment that has been completed within the last ten years (within the last three years in the Southern Region) must have a fuel treatment effectiveness assessment conducted and results entered into the Fuel Treatment Effectiveness Monitoring (FTEM) database. All fuel treatment effectiveness assessments must be entered into the FTEM database within 90 days of control of the fire. Individual forests have the option of documenting interactions between wildfire and fuel treatments that are older than the ten years (three in Southern Region), where applicable.

Qualifying fuel treatments include all activities reported as fuels accomplishments in the Forest Activity Tracking System (FACTS). This includes management implemented activities (prescribed fire, mechanical thinning, and so forth) as well as unplanned events (such as wildfires, or portions of wildfires that were reported as accomplishment). Optional documentation such as written reports, photos, video, and such, may also be entered for archive in the database.

The Fuel Treatment Effectiveness Monitoring (FTEM) database can be found at the following website: [www.fireportal.usda.gov](http://www.fireportal.usda.gov). Links to User Guides, optional reporting templates, and other information related to the FTEM reporting requirement can be found at: <http://fsweb.wo.fs.fed.us/fire/fam/fuels/hazardous.html>.