Interagency Standards for Fire and Fire Aviation Operations

Department of the Interior
Bureau of Land Management
National Park Service
U.S. Fish and Wildlife Service

Department of Agriculture
Forest Service



January 2007
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Standards for Fire and Fire Aviation Operations

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3833 S. Development Avenue
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January 1, 2007

To: Agency Personnel

From: Fire and Aviation Directors;
Bureau of Land Management
Forest Service
U.S. Fish and Wildlife Service
National Park Service

Subject: *Interagency Standards for Fire and Fire Aviation Operations*

The Federal Fire and Aviation Leadership Council chartered a task group to annually revise, publish and distribute the federal *Interagency Standards for Fire and Fire Aviation Operations.*

Interagency Standards for Fire and Fire Aviation Operations, states, references, or supplements policy for Bureau of Land Management, Forest Service, Fish and Wildlife Service, and National Park Service fire and fire aviation program management.

Employees engaged in fire management activities will continue to comply with all agency specific health and safety policy documents. Employees engaged in fire suppression and other fire management activities will comply with standards stated in the *NWGC Incident Response Pocket Guide* (PMS 461, NFES 1077) and the *NWCG Fireline Handbook* (PMS 410-1, NFES 0065

For the Bureau of Land Management this document is supplemental policy.

For the USDA Forest Service this document is referenced in *Forest Service Manual 5108*.

For the U.S. Fish and Wildlife Service this document is supplemental policy.

For the National Park Service this document is supplemental policy, in addition to *Reference Manual 18*.

Release Date: January 2007

This document addresses specific action items that are contained in the Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy.

The contents of this book are not to be modified. Supplemental agency specific direction of a more restrictive nature may be issued separately.

Suggestions for modification of this publication should be sent to your agency representatives listed on this page.

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Chapter 01
Federal Wildland Fire Management Policy and Guidance Overview

Scope

Interagency Standards for Fire and Fire Aviation Operations, states, references, or supplements policy for Bureau of Land Management, Forest Service, Fish and Wildlife Service, and National Park Service fire and fire aviation program management. Original source policy is stated or referenced throughout this handbook. This handbook attempts to quote verbatim, rather than to paraphrase, policy that is stated elsewhere. It also attempts to limit duplication of source policy when a reference will suffice. *Interagency Standards for Fire and Fire Aviation Operations* is intended to comply with and support the *2001 Federal Wildland Fire Management Policy* and other existing federal policy.

Purpose

Interagency Standards for Fire and Fire Aviation Operations provides fire and fire aviation program management direction for Bureau of Land Management, Forest Service, Fish and Wildlife Service, and National Park Service managers. Employees engaged in fire management activities will continue to comply with all agency specific health and safety policy documents. Employees engaged in fire suppression and other fire management activities will comply with standards stated in the *NWGC Incident Response Pocket Guide* (PMS 461, NFES 1077) and the *NWCG Fireline Handbook* (PMS 410-1, NFES 0065).

2001 Federal Wildland Fire Management Policy

The 2001 Federal Fire Policy comprises the following Guiding Principles and discreet policies. As a whole these guiding principles and policy statements guide the philosophy, direction, and implementation of fire management planning, activities, and projects on federal lands.

Guiding Principles of the Federal Wildland Fire Management Policy

1. Firefighter and public safety is the first priority in every fire management activity.
2. The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process. Federal agency land and resource management plans set the objectives for the use and desired future condition of the various public lands.
3. Fire Management Plans, programs, and activities support land and resource management plans and their implementation.
4. Sound risk management is a foundation for all fire management activities. Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing an activity. Net

gains to the public benefit will be an important component of decisions.

5. Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives. Federal agency administrators are adjusting and reorganizing programs to reduce costs and increase efficiencies. As part of this process, investments in fire management activities must be evaluated against other agency programs in order to effectively accomplish the overall mission, set short- and long-term priorities, and clarify management accountability.
6. Fire Management Plans and activities are based upon the best available science. Knowledge and experience are developed among all wildland fire management agencies. An active fire research program combined with interagency collaboration provides the means to make these tools available to all fire managers.
7. Fire Management Plans and activities incorporate public health and environmental quality considerations.
8. Federal, state, tribal, local, interagency, and international coordination and cooperation are essential. Increasing costs and smaller work forces require that public agencies pool their human resources to successfully deal with the ever-increasing and more complex fire management tasks. Full collaboration among federal agencies and between the federal agencies and international, state, tribal, and local governments and private entities results in a mobile fire management work force available for the full range of public needs.
9. Standardization of policies and procedures among federal agencies is an ongoing objective. Consistency of plans and operations provides the fundamental platform upon which federal agencies can cooperate, integrate fire activities across agency boundaries, and provide leadership for cooperation with state, tribal, and local fire management organizations.

(2001 Federal Wildland Fire Management Policy, pages 21-22)

Elements of the Federal Wildland Fire Management Policy

1. Safety

Firefighter and public safety is the first priority. All Fire Management Plans and activities must reflect this commitment.

2. Fire Management and Ecosystem Sustainability

The full range of fire management activities will be used to help achieve ecosystem sustainability, including interrelated ecological, economic, and social components.

3. Response to Wildland Fire

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

4. Use of Wildland Fire

Wildland fire will be used to protect, maintain and enhance resources and, as nearly as possible, be allowed to function in its natural ecological role. Use of fire will be based on approved Fire Management Plans and will follow specific prescriptions contained in operational plans.

5. Rehabilitation and Restoration

Rehabilitation and restoration efforts will be undertaken to protect and sustain ecosystems, public health, safety, and to help communities protect infrastructure.

6. Protection Priorities

The protection of human life is the single overriding suppression priority. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources will be done based on the values to be protected, human health and safety, and the costs of protection. Once people have been committed to an incident, these human resources become the highest value to be protected.

7. Wildland Urban Interface

The operational roles of the federal agencies as a partner in the Wildland Urban Interface are wildland firefighting, hazard reduction, cooperative prevention and education, and technical assistance. Structural fire suppression is the responsibility of tribal, state or local governments. Federal agencies may assist with exterior structural fire protection activities under formal fire protection agreements that specify the mutual responsibilities of the partners, including funding. (Some federal agencies have full structural protection authority for their facilities on lands they administer and may also enter into formal agreements to assist state and local governments with structural protection.)

8. Planning

Every area with burnable vegetation must have an approved Fire Management Plan. Fire Management Plans are strategic plans that define a program to manage wildland and prescribed fires based on the area's approved Land Management Plan. Fire Management Plans must provide for firefighter and public safety; include fire management strategies, tactics, and alternatives; address values to be protected and public health issues; and be consistent with resource management objectives, activities of the area, and environmental laws and regulations.

9. Science

Fire management plans and programs will be based on a foundation of the best available science. Research will support ongoing efforts to increase our scientific knowledge of biological, physical, and sociological factors. Information needed to support fire management will be developed through an integrated interagency fire science program. Scientific results must be made available to managers in a timely manner and must be used in the development of land management plans, fire management plans, and implementation plans.

10. Preparedness

Agencies will ensure their capability to provide safe, cost-effective fire management programs in support of land and resource management plans through appropriate planning, staffing, training, equipment, and management oversight.

11. Suppression

Fires are suppressed at minimum cost, considering firefighter and public safety, benefits, and all values to be protected; consistent with resource objectives.

12. Prevention

Agencies will work together with their partners, other affected groups, and individuals to prevent unauthorized ignition of wildland fires.

13. Standardization

Agencies will use compatible planning processes, funding mechanisms, training and qualification requirements, operational procedures, values-to-protected methodologies, and public education programs for all fire management activities.

14. Interagency Cooperation and Coordination

Fire management planning, preparedness, prevention, suppression, fire use, restoration and rehabilitation, monitoring, research, and education will be conducted on an interagency basis with the involvement of cooperators and partners.

15. Communication and Education

Agencies will enhance knowledge and understanding of wildland 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.

16. Agency Administrator and Employee Roles

Agency administrators will ensure that their employees are trained, certified and made available to participate in the wildland fire program locally, regionally, and nationally as the situation demands. Employees with operational, administrative, or other skills will support the wildland fire programs as necessary. Agency administrators are responsible and will be held accountable for making employees available.

17. Evaluation

Agencies will develop and implement a systematic method of evaluation to determine effectiveness of projects through implementation of the 2001 Federal Wildland Fire Management Policy. The evaluation will assure accountability, facilitate resolution of areas of conflict, and identify resource shortages and agency priorities.

(2001 Federal Wildland Fire Management Policy, pages 22-24)

Fire Operations Doctrine

Purpose of Fire Operations Doctrine

Fire operations doctrine states the fundamental principles on the subject of fire operations. Doctrine establishes a particular way of thinking about fire operations. It provides a philosophy for leading firefighters in fire operations, a mandate for professionalism, and a common language. Fire operations doctrine does not consist of procedures to be applied to specific situations so much as it sets forth general guidance that requires judgment in application.

The Nature of Fire Operations

Fire is a complex, dynamic, and often unpredictable phenomenon. Fire operations require mobilizing a complex organization that includes management, command, support, and firefighting personnel, as well as

aircraft, vehicles, machinery, and communications equipment. While the magnitude and complexity of the fire itself, and of the human response to it, will vary, the fact that fire operations are inherently dangerous will never change. A firefighter utilizing the best available science, equipment, and training, and working within the scope of agency doctrine and policy, can still suffer serious injury or death.

Fire Operations Safety

The primary means by which we achieve safety in fire operations is through risk management. Our safety philosophy acknowledges that although the ideal level of risk may be zero, absolute safety is not a reasonable or achievable goal in fire operations. Our safety philosophy maintains that through organized, comprehensive, and systematic risk management, we will determine the acceptable level of risk that allows us to provide for safety yet still achieve fire operations objectives. Risk management is intended to minimize the number of injuries or fatalities experienced by wildland firefighters.

Fire Preparedness

Fire preparedness is the state of being prepared to provide an appropriate response to wildland fires based on identified objectives. Preparedness is the result of activities that are planned and implemented prior to fire ignitions. Preparedness requires identifying necessary firefighting capabilities and implementing coordinated programs to develop those capabilities. Preparedness requires a continuous process of developing and maintaining firefighting infrastructure, predicting fire activity, identifying values to be protected, hiring, training, equipping, pre-positioning and deploying firefighters and equipment, evaluating performance, correcting deficiencies, and improving operations. All preparedness activities should be focused on developing fire operations capabilities and on performing successful fire operations.

Fire Operations Command Philosophy

It is essential that our philosophy of command support the way we fight fire. First and foremost, in order to generate effective decision making in fire operations and to cope with the unpredictable nature of fire, command intent must be lucid and unambiguous, and lines of authority must be clearly articulated and understood. Subordinate commanders must make decisions on their own initiative based on their understanding of their commander's intent. A competent subordinate commander who is at the point of decision may understand a situation more clearly than a senior commander some distance removed. In this case, the subordinate commander must have the freedom to take decisive action directed toward the accomplishment of operational objectives.

However, this does not imply that unity of effort does not exist, or that actions are not coordinated. Unity of effort requires coordination and cooperation among all forces toward a commonly understood objective. Unified, coordinated action, whether between adjacent single resources on the fireline or between the highest command level and the most subordinate firefighter, is critical to successful fire operations.

Fire Suppression

The purpose of fire suppression is to put the fire out in a safe, effective, and efficient manner. Fires are easier and less expensive to suppress when they are smaller. When the management goal is full suppression, aggressive attack is the single most important method to ensure the safety of firefighters and the public, and to limit suppression costs. Aggressive attack provides the Incident Commander maximum flexibility in suppression operations. Successful attack relies on speed and appropriate force. All aspects of fire suppression benefit from this philosophy. Planning, organizing, and implementing fire suppression operations should always meet the objective of directly, quickly, and economically contributing to the suppression effort. Every firefighter, whether in a management, command, support, or direct suppression role, should be committed to maximizing the speed and efficiency with which the most capable firefighters can engage in suppression action. When the management goal is other than full suppression, or when conditions dictate a limited suppression response, decisiveness is still essential, and an aggressive approach toward accomplishment of objectives is still critical.

Principles of Suppression Operations

The primary means by which we implement command decisions and maintain unity of action is through the use of common principles of suppression operations. These principles guide our fundamental fire suppression practices, behaviors, and customs, and are mutually understood at every level of command. They include Risk Management, Standard Firefighting Orders and Watch Out Situations, LCES and the Downhill Line Construction Checklist. These principles are fundamental to how we perform fire suppression operations, and are intended to improve decision making and firefighter safety. They are not absolute rules. They require judgment in application.

Principles of Fire Suppression Action

The principles of fire suppression action provide a framework for developing fire suppression strategy and for conducting fire suppression operations. Again, these are not absolute, immutable rules. These five principles give us a consistent set of considerations with which to evaluate decisions, plans and actions in different situations.

1. Objective

The principle of the objective is to direct every fire suppression operation toward a clearly defined, decisive, and obtainable objective. The purpose of fire suppression operations is to achieve the suppression objectives that support the overall management goals for the fire.

2. Speed and Focus

Speed is rapidity of action. Focus is the convergence of appropriate resources at the desired position to initiate action. The principle of speed and focus maintains that rapidly deploying and concentrating firefighting resources, in a calculated fashion, at the decisive time and place increases the likelihood of successful suppression actions.

3. Positioning

The principle of positioning maintains that rapid, flexible and opportunistic movement increases the effectiveness of fire suppression resources. Positioning ranges from single resource offensive or defensive reactions to dynamic fire conditions, to pre-positioning of multiple resources based on predicted activity and values at risk. Positioning should always be undertaken with speed and focus in mind, and with sufficient time for positioning to occur before operations begin.

4. Simplicity

The principle of simplicity is that clear, uncomplicated plans and concise orders maximize effectiveness and minimize confusion. Simplicity contributes to successful actions.

5. Safety

The principle of safety maintains that ensuring the safety of firefighters and other persons affected by fire operations is fundamental to successful suppression action. Safety not only contributes to successful actions, it is indispensable to them.

Cost Effective Fire Operations

Maximizing the cost effectiveness of any fire operation is the responsibility of all involved; including those that authorize, direct or implement those operations. Cost effectiveness is the most economical use of the suppression resources necessary to accomplish mission objectives. Accomplishing fire operations objectives safely and efficiently will not be sacrificed for the sole purpose of "cost savings." Care will be taken to ensure that suppression expenditures are commensurate with values to be protected, while understanding that other factors may influence spending decisions, including the social, political, economic, and biophysical environments.

Fire Management Objectives

Federal agency fire management programs should help resource managers protect, maintain, and enhance federal lands in a cost effective manner. Wildland fire management objectives are:

- Protect human life, property, and natural/cultural resources both within and adjacent to agency administered lands.
- Minimize damages and maximize overall benefits of wildland fire within the framework of land use objectives and Resource Management Plans.
- Manage the wildland fire program in accordance with congressional intent as expressed in the annual appropriations act and enabling legislation, and comply with applicable departmental manual and agency policies and procedures.
- Promote an interagency approach to managing fires on an ecosystem basis.
- Employ strategies to manage wildland fires that provide for firefighter and public safety, minimize cost and resource damage, and are consistent with values to be protected and management objectives.
- Stabilize and rehabilitate resources and improvements lost in or damaged by fire or suppression activities.
- Minimize, and where necessary, mitigate human-induced impacts to resources, natural processes, or improvements attributable to wildland fire activities.
- Promote public understanding of fire management programs and objectives.
- Organize a fire staff that can apply the highest standards of professional and technical expertise.
- Encourage research to advance the understanding of fire behavior, effects, ecology, and management.
- Integrate fire management through all levels of the planning process.
- Prevent and investigate all unplanned human-caused fires.

Chapter 02
BLM Wildland Fire and Aviation Program Organization and Responsibilities

Introduction

This document states, references, or supplements policy for Bureau of Land Management (BLM) Fire and Aviation Program Management. The standards provided in this document are based on current Department of Interior (DOI) and Bureau policy, and are intended to provide fire program guidance. The intent is to ensure safe, consistent, efficient, and effective fire and aviation operations. This document will be reviewed and updated annually.

Office of Fire and Aviation

The Bureau of Land Management Office of Fire and Aviation (OF&A) consists of a Director (OF&A), Deputy Director (Boise), Deputy Director (Washington), Fire Operations Group Manager, Aviation Group Manager, Planning and Resources Group Manager, Support Services Group Manager, Budget and Evaluation Chief, External Affairs Group Manager, Equal Employment Opportunity Manager, and the International Program Manager.

Program Manager Responsibilities

Director, Office of Fire and Aviation

- Develops policies and standards for firefighting safety, training, and for the prevention, suppression, and use of wildland fires on Bureau lands.
- Provides guidance to State Directors on the use of prescribed fire and fuels management to achieve hazardous fuels reduction and resource management objectives.
- Integrates fire and aviation management procedures into natural resource management.
- Establishes position competencies, standards, and minimum qualifications for Fire Management Officers, Fire Management Specialists, and leaders based on federal interagency standards recommended by the National Fire and Aviation Executive Board.
- Implements the interagency Fire Program Analysis (FPA) process and develops procedures and standards for the distribution of program resources.
- Reviews and evaluates state fire and aviation management programs.
- Represents the Bureau of Land Management in the coordination of overall fire and aviation management activities at National Interagency Fire Center (NIFC), on intra- and interagency fire committees, groups, and working teams.
- In conjunction with Federal Fire Directors, establishes priorities for assignment of critical resources during wildland fire emergencies.

- Initiates or participates in Boards of Review concerning actions taken on selected wildland fires.
- Negotiates cooperative agreements and/or modifications of existing national level agreements to improve fire and aviation management activities on bureau lands.
- Reviews funding requests for severity, hazardous fuel reduction, and emergency rehabilitation of bureau lands damaged by wildland fires; makes determinations on funding levels and recommends approval to the Director, Bureau of Land Management.
- Serves as designated contact for the United States Department of the Treasury for the certification and revocation of Certifying Officers and Assistant Disbursing Officers (CO/ADO) and Designated Officials for emergency incident payments.

Fire Operations Group Manager

- Serves as the principal technical expert on fire operations to the Director, OF&A and to the BLM State Fire Programs.
- Provides the Director, OF&A, technical advice, operational oversight, and leadership in all aspects of fire operations.
- Performs annual fire program preparedness reviews. Evaluates compliance with policies, objectives, and standards. Assesses operational readiness and provides technical assistance to solve identified problems. Performs other operations reviews as required /requested.
- Assists the Director, OF&A, in the formulation and establishment of national policies and programs pertinent to wildland fire preparedness, suppression, shared national resources, safety, training, and equipment.
- Serves as the BLM technical expert on national interagency mobilization and utilization of fire suppression resources.
- Develops national plans, standards, and technical guides for the BLM and interagency fire management operations.

Aviation Group Manager

- Serves as principal aviation advisor to the Director, Office of Fire and Aviation, other staffs, states, and to the DOI.
- Identifies and develops bureau aviation policies, methods and procedures, as well as standardized technical specifications for a variety of specialized firefighting and other missions for incorporation into the directives system.
- Coordinates aviation-related activities between the Washington Office (WO), states, and with other wildland firefighting, regulatory, investigative, military agencies, and services.
- Coordinates provision and use of aviation resources with Business Practices, aviation user staffs at the WO, and state office level.
- Represents the BLM at interagency meetings, in interagency committees developing government-wide aviation policies, requirements, procedures, reports, and at aviation industry meetings and conventions.

- Develops and implements aviation safety programs, accident investigation procedures, and aviation safety trend analyses.
- Plans and conducts reviews and evaluations of state aviation programs.
- Plans and conducts technical and managerial analyses relating to the identification of aviation organization and resources appropriate for agency use, cost-effectiveness of aviation firefighting, other specialized missions, aircraft acquisition requirements, equipment developmental needs, and related areas.

Planning and Resources Group Manager

- Responsible for the development and implementation of the bureau wide fire planning program. Provides guidance and assistance in administering the technical and operational aspects of the Bureau's fire planning program at the regional and agency levels for the accurate identification of program funding needs. Checks for accuracy in computations with instructions and policies.
- Responsible for the development and coordination of the Bureau's prescribed fire, fuels management, and fire prevention annual program, and recommends the distribution of program funds to regions.
- Tracks all fuels management fund distributions and prior year carryover funds. Develops and maintains a national database for fuels management accomplishments in Indian Trust Lands.
- Analyzes hazards and risks in the wildland urban interface using fuels modification or reduction techniques, and develops recommendations for bureau-wide application. Examines and analyzes laws and regulations pertaining to prescribed fire use/fuels management in the wildland urban interface, and works with top level bureau representatives, states and rural fire districts to recommend policy which will achieve uniformity.
- Serves as the BLM's primary subject matter expert for National Fire Management Analysis System (NFMAS) fire planning, Personal Computer Historical Analysis (PCHA), Geographic Information System (GIS), Global Positioning System (GPS), Lightning Detection System (LDS), Weather Information Management System (WIMS), prescribed fire software programs, and provides user training in those applications.

Support Services Group Manager

- Manage all aspects of the responsibilities and programs under the jurisdiction of NIFC for the benefit of the BLM and cooperating agencies.
- Directs the accomplishment of the approved operating budget, exercising appropriate control to assure program quality goals are met according to established standards.
- Interprets departmental and bureau policies and directives as they affect NIFC programs.
- Participates in the bureau-wide and interagency task force activities as a leader or member.

- Responsible for the NIFC Site and Facilities Management, Business Practices, Human Resources, and Information Resource Management.
- Is a focal point and frequent spokesperson for the bureau and the national level management, assures a public awareness of bureau programs and coordinates with key officials in affected federal agencies, states, and occasionally with other entities such as: foreign governments, private individuals, private organizations, vendors, suppliers, transportation groups, airlines, and others.
- Supports the implementation of the Bureau's Automation/Modernization/ Information Resource Management (IRM) initiatives as they apply to BLM/NIFC.

External Affairs Group Manager

- Responsible for coordination of information between the Departmental Office of Wildland Fire Coordination to the BLM, BIA, USFWS, NPS, FS, National Association State Foresters (NASF), and Federal Emergency Management Agency (FEMA) at NIFC.
- Responsible for coordination of the responses to: Office of management and Budget (OMB), Government Accounting Office (GAO), congressional, political and other external inquires between agencies and departments, establishing and maintaining cooperative relationships resulting in quality work products.
- Serves as the manager of the External Affairs program for the National Interagency Fire Center.
- Develops recommendations pertaining to External Affairs aspects for BLM Fire and Aviation policies.
- Initiates External Affairs policies and procedures pertaining to Fire and Aviation for adoption at the department level in conjunction with other departments and agencies.
- Serves as personal and direct representative of the Director, Office of Fire and Aviation at various meetings and functions with members of congress and staff, state governors and legislatures, officials of local, state and federal agencies, major private corporations, public and private interest groups, and foreign governments.
- Serves as External Affairs expert and consultant to the Director, Office of Fire and Aviation on a wide variety of issues and policies of controversial nature, providing analysis and advice on public reaction to major policy and program issues.

Equal Employment Opportunity Manager (EEO)

- Manages the Equal Employment Opportunity (EEO) program in accordance with legal, regulatory, and policy requirements.
- Manages and directs the Counseling Program, and Alternative Dispute Resolution (ADR) programs, in accordance with Equal Employment

Opportunity Commission (EEOC) regulations and BLM policy as well as for other NIFC agencies.

- Advises managers and aggrieved persons of employee rights and responsibilities, procedural options and timeframes in conflict situations, formulates proposed resolutions.
- Negotiates with managers, aggrieved persons and their representatives to informally resolve EEO matters, and executes final settlement agreements.
- Manages the Affirmative Employment Program (AEP).
- Develops and maintains the accessibility program for the disabled, required under Section 504 of the *Rehabilitation Act of 1973*, as amended, and the *Americans with Disability Act* (ADA of 1990).
- Conducts analyses to evaluate progress in meeting equal employment opportunity program goals.
- Administers training activities for the organization.
- Provides managers and supervisors with guidance and advice on issues related to EEO/civil rights program activities.
- Represents the organization in meetings with public and private groups, universities, minority and women's organizations, other DOI components, and other federal agencies.

International Program Coordinator

- Defines the mission, goals, and objectives of the BLM Office of Fire and Aviation International Program (IP).
- Develops and updates written guidelines for Internal Affairs and manages the program on a day-to-day basis.
- Is the primary liaison between BLM and departmental level offices (Policy, Management and Budget, External and Inter-governmental Affairs, and the Solicitor's Office) on Fire and Aviation's IP activities.
- Initiates, plans, and coordinates the preparation of letters of invitation, necessary visas and clearances, prepares agendas, and presents briefings to high level international visitors brought to the United States through the IP.
- Collaborates in the formulation of interagency fire management and fire suppression program activities in order to identify and promote domestic "best practices" for potential use in the international fire management environment.
- Advises the Director and other senior managers within the Office of Fire and Aviation on issues related to BLM involvement in all-risk disasters such as wildfire, other natural disasters, and terrorism.
- Identifies qualified BLM employees for international disaster assistance support and international assignments.
- Coordinates the interagency relationship with the Forest Service's Disaster Assistance Support Program (DASP), the U.S. Agency for International Development's Office of Foreign Disaster Assistance (OFDA), and manages the Memorandum of Understanding (MOU) between DASP and BLM.

- Provides leadership in developing disaster management coordination mechanisms, procedures, methodologies, and written guidelines for use during international disaster response activities with DASP, OFDA, the Department of Defense, UN relief organizations, and humanitarian relief organizations.
- Performs as both the National Military Logistics Coordinator and the International Logistics Coordinator during National Preparedness Levels 4 and 5.

State Director

The State Director is responsible to the Director of BLM for fire management programs and activities within their state. The State Director will meet the required elements outlined in the *Interagency Fire Program Management Qualifications Standards and Guide* and ensure training is completed to support delegations to line managers and principal actings.

District/Field Manager

The District/Field Manager is responsible to the State Director for the safe and efficient implementation of fire management activities within their unit. This includes cooperative activities with other agencies or landowners in accordance with delegations of authorities. The District/Field Manager and their principal actings will meet the required elements outlined in the *Management Performance Requirements for Fire Operations* below.

Management Performance Requirements for Fire Operations

PERFORMANCE REQUIRED	OF&A Directorate	State Director /Associate	District /Resource Area Manager	Field Manager
1. Ensures that Fire Management Plans (FMP) reflects the agency commitment to firefighter and public safety, while utilizing the full range of fire management activities available for ecosystem sustainability.	X	X	X	X
2. Develops fire prevention, fire suppression, and fire use standards that are compliant with agency fire policies.	X	X	X	X

PERFORMANCE REQUIRED	OF&A Directorate	State Director /Associate	District /Resource Area Manager	Field Manager
3. Ensures use of fire funds is in compliance with department and agency policies.	X	X	X	X
4. Ensures that incident responses will be based on current and approved Resource Management Plans (RMP) and FMPs.		X	X	X
5. Attends the *Fire Management Leadership Course.* Ensure that personnel delegated fire program responsibilities have completed the *Fire Management Leadership Course.*			X	X
6. Provides a written Delegation of Authority to FMOs that gives them an adequate level of operational authority. If fire management responsibilities are zoned, ensure that all appropriate Agency administrators have signed the delegation.		X	X	X
7. Ensures that only trained, certified fire and non-fire personnel are available to support fire operations at the local and national level.	X	X	X	X
8. Ensures that master agreements with cooperators are valid and in compliance with agency policy, and that attached Annual Operating Plans are current.	X	X	X	X

PERFORMANCE REQUIRED	OF&A Directorate	State Director /Associate	District /Resource Area Manager	Field Manager
9. Personally visits at least one wildland and one prescribed fire each year.			X	X
10. Annually convenes and participates in pre-and post season fire meetings.	X	X	X	X
11. Reviews critical operations and safety policies and procedures with fire and fire aviation personnel.		X	X	X
12. Ensures timely follow-up to fire management program reviews.	X	X	X	X
13. Ensures that fire and fire aviation preparedness reviews are conducted annually in all unit offices. Personally participate in at least one review annually.	X	X	X	X
14. Ensures that investigations are conducted for incidents with potential, entrapments, and serious accidents as per agency policy.	X	X	X	X
15. Provides a written delegation of authority, WFSA, and an *Agency Administrator Briefing to Incident Management Teams.*		X	X	X
16. Ensures that resource advisors are identified, trained and available for incident assignment. Refer to *Resource Advisors Guide for Wildland Fire* PMS 313, NFES 1813, Jan 2004.			X	X

PERFORMANCE REQUIRED	OF&A Directorate	State Director /Associate	District /Resource Area Manager	Field Manager
17. Attends post fire closeout on Type 1 and Type 2 fires. (Attendance may be delegated.)		X	X	X
18. Ensures that a Wildland Fire Implementation Plans (WFIP) are completed, implemented and updated daily for all fires managed as wildland fire use.		X	X	X
19. Ensures that trespass actions are initiated and documented to recover cost of suppression activities, land rehabilitation, and damages to the resource and improvements for all human-caused fires where liability can be determined, as per *"Fire Trespass Handbook" H-9238-1*.		X	X	X
20. Ensures compliance with National and State Office policy for prescribed fire activities. Provides periodic reviews of the prescribed fire program.	X	X	X	X
21. Ensures that Prescribed Fire Plans are approved and meet agency policies.		X	X	X
22. Ensures that the Prescribed Fire Plan has been reviewed and recommended by a qualified technical reviewer who was not involved in the plan preparation.			X	X
23. Ensures that a policy has been established to review and sign the go-no/go checklist.			X	X

PERFORMANCE REQUIRED	OF&A Directorate	State Director /Associate	District /Resource Area Manager	Field Manager
24. Ensures Unit Safety Program is in place, has a current plan, has an active safety committee, and includes the fire program.	X	X	X	X
25. Annually updates and reviews the *Agency Administrator's Guide to Critical Incident Management* (NFES 1356)	X	X	X	X
26. Ensure that current fire and weather information is posted and available for all employees.			X	X

State Office

The State Fire Management Officer (SFMO) provides leadership for their agency fire and fire aviation management program. The SFMO is responsible and accountable for providing planning, coordination, training, technical guidance, and oversight to the state fire management programs. The SFMO also represents the State Director on interagency geographic coordination groups and Multi-Agency Coordination (MAC) groups. The SFMO provides feedback to Districts/Field Offices on performance requirements.

District/Field Office

The District/Field Office Fire Management Officer (FMO) is responsible and accountable for providing leadership for fire and fire aviation management programs at the local level. The FMO determines program requirements to implement land use decisions through the Fire Management Plan (FMP) to meet land management objectives. The FMO negotiates interagency agreements and represents the District/Field Office Manager on local interagency fire and fire aviation groups.

Manager's Oversight

Agency administrators are required to personally visit an appropriate number of fires each year. Appendix A contains information to support the Agency administrators during these visits.

After Action Review

Appendix B the "Managers Supplement for After Action Review" emphasizes the factors that are critical for ensuring safe and efficient wildland fire suppression, and provides examples for managers to use in their review of incident operations and incident commanders.

Requirements for fire management positions are outlined in the *Interagency Fire Program Management Qualifications Standards and Guide* (IFPM) Standard. The supplemental Qualification Standard for professional GS-0401 Fire Management Specialist positions, approved by the Office of Personnel Management, is also included in the IFPM Standard. The *Interagency Fire Program Management Qualification Standards and Guide* can be found in its' entirety on the IFPM website: http://www.ifpm.nifc.gov.

Training for Acting Agency Administrators

Agency administrators and their actings must complete one of the following courses within two years of being appointed to a designated management position.

- National- *Fire Management Leadership*
- Geographic- *Local Fire Management Leadership*

Either class is acceptable but the national course is preferred.

Experience requirements for positions in Alaska Fire Service, Oregon and California (O&C) Districts, NIFC, national office, and other fire management positions in units and state/regional offices will be established as vacancies occur, but will be commensurate with the position's scope of responsibilities. The developmental training to fully achieve competencies should be addressed in an IDP within a defined time period.

Fire Management Staff Performance Requirements for Fire Operations

PERFORMANCE REQUIRED	State FMO	District/ Zone FMO	Field Office/ Resource Area FMO
1. Establishes and manages a safe, effective, and efficient fire program.	X	X	X
2. Ensures that the Fire Management Plan (FMP) reflects the agency commitment to firefighter and public safety, while utilizing the full range of fire management activities available for ecosystem sustainability. *(Federal Wildland Fire Management Plan 2001 [FWFMP])*	X	X	X

PERFORMANCE REQUIRED	State FMO	District/ Zone FMO	Field Office/ Resource Area FMO
3. Provides the expertise and skills to fully integrate fire and fire aviation management into interdisciplinary planning efforts.	X	X	X
4. Ensures that only trained and qualified personnel are assigned to fire and fire aviation duties.	X	X	X
5. Ensures completion of a Job Hazard Analysis (JHA)/Risk Assessment for fire and fire aviation activities so mitigation measures are taken to reduce risk.		X	X
6. Ensures compliance with work/rest guidelines during all fire and fire aviation activities.	X	X	X
7. Ensures that the fire and fire aviation management employees understand their role, responsibilities, authority, and accountability.	X	X	X
8. Organizes trains, equips, and directs a qualified work force. Establishes and implements performance review process.	X	X	X
9. Develops implements, evaluates, and documents fire and fire aviation training to meet current and anticipated needs.	X	X	X
10. Ensures fire and fire aviation policies are understood, implemented, and coordinated with other agencies as appropriate.	X	X	X
11. Monitors fire suppression activities to recognize when complexity levels exceed program capabilities. Increases managerial and operational resources to meet the need.	X	X	X
12. Monitors fire season severity predictions, fire behavior, and fire activity levels. Takes action to ensure safe, efficient, and effective operations.	X	X	X
13. Ensures that master agreements with cooperators are valid and in compliance with agency policy, and that attached Annual Operating Plans are current.	X	X	X
14. Develops, maintains and implements current operational plans. (e.g., dispatch, preparedness, prevention).		X	X

PERFORMANCE REQUIRED	State FMO	District/ Zone FMO	Field Office/ Resource Area FMO
15. Ensures use of fire funds is in compliance with department and agency policies.	X	X	X
16. Ensures that fire severity funding is requested, used, and documented in accordance with agency standards (*Interagency Standards for Fire and Fire Aviation Operations*, Chapter 9).	X	X	X
17. Reviews and approves appropriate overtime authorization requests for personnel providing fire suppression coverage during holidays, special events, and abnormal fire conditions.		X	X
18. Ensures a process is established to communicate fire info to public, media, and cooperators.	X	X	X
19. Annually convenes and participates in pre-and post season fire meetings. Specifically address management controls and critical safety issues.	X	X	X
20. Oversees pre-season preparedness review of fire and fire aviation program.	X	X	X
21. Initiates, conducts, and/or participates in fire program management reviews and investigations.	X	X	X
22. Personally participates in periodic site visits to individual incidents and projects.		X	X
23. Utilizes the Incident Complexity Analysis appendix F & G to ensure the proper level of management is assigned to all incidents.	X	X	X
24. Ensures that transfer of command occurs as per appendix D on incidents.		X	X
25. Ensures that incoming personnel and crews are briefed prior to fire and fire aviation assignments.		X	X
26. Ensures an accurate and defensible Wildland Fire Situation Analysis (WFSA) is completed and updated daily for all fires that escape initial attack.	X	X	X
27. Ensures that a Wildland Fire Implementation Plan (WFIP) is completed, approved, and certified daily for all fires managed for Wildland Fire Use objectives.	X	X	X

PERFORMANCE REQUIRED	State FMO	District/ Zone FMO	Field Office/ Resource Area FMO
28. Works with cooperators, groups, and individuals to develop and implement processes and procedures for providing fire safe communities within the wildland urban interface.	X	X	X
29. Ensures that trespass actions are initiated and documented to recover cost of suppression activities, land rehabilitation, and damages to the resource and improvements for all human-caused fires where liability can be determined, as per H-9238-1.	X	X	X
30. Ensures training for fire cause determination and fire trespass.	X	X	X
31. Ensures compliance with National and State Office policy for prescribed fire activities. Provides periodic reviews of the prescribed fire program.	X	X	X
32. Annually updates and reviews the *Agency Administrator's Guide to Critical Incident Management.* (NFES 1356)	X	X	X
33. Ensures that fire season severity predictions, weather forecasts, fire behavior predictors, and fire activity levels are monitored and communicated daily to all employees (hard copy, web page, email, radio, or fax).		X	X
34. Uses current National and Local Mobilization Guides and ensures that national, geographic and local mobilization standards are followed.	X	X	X
35. Complies with established property control/management procedures.	X	X	X

Delegation of Authority

Delegation for State Fire Management Officers

In order to effectively perform their duties, a SFMO must have certain authorities delegated from the State Director. This delegation is normally placed in the state office supplement to agency manuals. This delegation of authority should include the following roles and responsibilities:

- Serve as the State Director's authorized representative on geographic area coordination groups, including MAC groups.
- Coordinate and establish priorities on uncommitted fire suppression resources during periods of shortages.
- Coordinate logistics and suppression operations statewide.
- Relocate agency pre-suppression/suppression resources within the state/region based on relative fire potential/activity.
- Correct unsafe fire suppression activities.
- Direct accelerated, aggressive initial attack when appropriate.
- Enter into agreements to provide for the management, fiscal, and operational functions of combined agency operated facilities.
- Suspend prescribed fire activities when warranted.
- Give authorization to hire Emergency Firefighters in accordance with the DOI Pay Plan for Emergency Workers.
- Approve emergency fire severity funding expenditures not to exceed the agency's annual authority.
- Appendix C provides a sample "Delegation of Authority".

Safety Officer

Safety and occupational health program responsibilities are interwoven throughout Bureau program areas, including fire management. Safety of our employees lies within every level of the organization and program implementation can have a direct impact on firefighting personnel. To ensure that program requirements are met, the following checklist shall be utilized.

Safety Responsibilities to the Fire Program

PERFORMANCE REQUIRED	State Safety Manager	District/Zone Safety Manager	Unit Fire Management Officer	Field/Resource Area Manager
1. A Unit Safety Plan, addressing general safety and health program management, has been approved by the Agency Administrator.		X	X	X
2. A work place hazard/risk assessment has been completed for non suppression related fire activities.		X		
3. An individual has been designated as the Unit Safety Officer.	X			X
4. Maintains a working relationship with all facets of the fire organization including outstations.		X	X	

PERFORMANCE REQUIRED	State Safety Manager	District/Zone Safety Manager	Unit Fire Management Officer	Field/Resource Area Manager
5. A safety committee or group which includes fire representation is organized to monitor safety and health concerns and activities.		X	X	X
6. Written safety and health programs required by OSHA are in place and being implemented to include fire personnel.	X	X		
7. Employees are being provided mandatory safety and health training.		X	X	
8. Fire safety programs (e.g., SAFENET, 6 Minutes for Safety, Safety Alerts) are known and being utilized.			X	
9. Safety publications are available to all fire employees (e.g., *Incident Response Pocket Guide, 1112-2 Manual, Fireline Handbook 410-1).*			X	
10. Procedures are in place to ensure *Interagency Standards for Fire and Fire Aviation Operations* is being followed.			X	
11. Procedures are in place to monitor WCT results and ensure medical examination policies are followed.			X	
12. Material Safety Data Sheets (MSDS) are present, accessible, and available for all hazardous materials used and stored in the work area.		X	X	
13. Special projects risk assessments are completed and crew briefings are given prior to beginning work.		X	X	

PERFORMANCE REQUIRED	State Safety Manager	District/Zone Safety Manager	Unit Fire Management Officer	Field/Resource Area Manager
14. Procedures are in place to purchase non-standard equipment as identified in the JHA/Risk Assessment process, and to ensure compliance with consensus standards (e.g., ANSI, NIOSH) for PPE.	X	X		X
15. PPE is being supplied, serviceable, and being utilized.		X	X	
16. Ensures tailgate safety meetings are held and documented.			X	
17. Monitors and reviews wildland fire activities to ensure adherence to agency safety policy.		X	X	
18. Procedures are in place for reporting unsafe and unhealthful working conditions.		X		X
19. Accident reporting procedures are documented and supervisors are trained in the use of Safety Management Information System (SMIS).	X	X		X
20. Injury data is monitored and reviewed to determine trends affecting the health and welfare of employees.	X	X		
21. General facility and work areas inspections are conducted to ensure requirements are met per 29 CFR 1910.	X	X		

Employee Responsibility

All employees, cooperators, contractors, and volunteers who participate in wildland fire operations have the duty to treat one another with respect and to maintain a work environment free of misconduct and harassment.

Misconduct includes but is not limited to: alcohol misuse, driving while intoxicated, the use of illegal drugs, hazing, insubordination, disregard for policies and procedures and the destruction or theft of government property.

Harassment is coercive or repeated, unsolicited and unwelcome verbal comments, gestures or physical contacts and includes retaliation for confronting or reporting harassment.

Harassment and misconduct will not be tolerated under any circumstances and will be dealt with in the strictest of terms. We must all take responsibility for creating and ensuring a healthy and safe work environment. Employees who experience or witness harassment, misconduct or any inappropriate activity should report it to the proper authority immediately.

Examples of harassment and misconduct

- **Physical conduct -** Unwelcome touching, standing too close, looking up and down, inappropriate or threatening staring or glaring, obscene, threatening, or offensive gestures.
- **Verbal or written misconduct -** Inappropriate references to body parts; derogatory or demeaning comments, jokes, or personal questions; sexual innuendoes; offensive remarks about race, gender, religion, age, ethnicity, or sexual orientation, obscene letters or telephone calls, catcalls, whistles or sexually suggestive sounds.
- **Visual or symbolic misconduct -** Display of nude pictures, scantily-clad, or offensively-clad people; display of offensive, threatening, demeaning, or derogatory symbols, drawings, cartoons, or other graphics; offensive clothing or beverage containers, bumper stickers, or other articles.
- **Hazing -** Hazing is considered a form of harassment. "Hazing" is defined as "*any action taken, or situation created intentionally, to produce mental or physical discomfort, embarrassment, or ridicule"*.
- **Alcohol -** The use of alcohol during any work period is strictly prohibited. The performance of job duties while under the influence of alcohol is prohibited. Underage personnel alcohol use is prohibited at all times.

Chapter 03
National Park Service Program Organization & Responsibilities

Agency Administrator Roles

Director

The Director of the National Park Service is responsible to the Secretary of the Interior for fire management programs on public lands administered by the National Park Service. The Division of Fire and Fire Aviation Management is responsible to the Director for policy formulation and program oversight.

The Chief, Division of Fire and Aviation Management will meet the required elements outlined in the *Management Performance Requirements for Fire Operations.*

Regional Director

The Regional Director is responsible to the Director for fire management programs and activities within their region.

The Regional Director will meet the required elements outlined in the *Management Performance Requirements for Fire Operations* and ensure training is completed to support delegations to line managers and principal actings.

Park Superintendent

The Park Superintendent is responsible to the Regional Director for the safe and efficient implementation of fire management activities within their unit, including cooperative activities with other agencies or landowners in accordance with delegations of authorities. The Park Superintendent or principal acting will meet the required elements outlined in the *Management Performance Requirements for Fire Operations*.

Management Performance Requirements for Fire Operations

PERFORMANCE REQUIRED	NPS Director.	Regional Director.	Park Supt.
1. Take necessary and prudent actions to ensure firefighter and public safety.	X	X	X
2. Ensure sufficient qualified fire and non-fire personnel are available to support fire operations at a level commensurate with the local and national fire situations.	X	X	X
3. Ensure Fire Management Officers (FMOs) are fully qualified as identified in the *Interagency Fire Program Management Qualification Standards.*	X	X	X

PERFORMANCE REQUIRED	NPS Director.	Regional Director.	Park Supt.
4. Provide a written Delegation of Authority to individual(s) responsible for wildland fire management activities to ensure an adequate level of operational authority, including MAC Group authority, as appropriate. These written delegations may be provided to the Chief Ranger, FMO, designated Fire Coordinator, Park Group FMO, or to individuals from neighboring fire management organizations, provided a written agreement or memorandum of understanding is in-place. Where applicable, an Inter-park Agreement that specifies the reciprocal responsibilities of the Superintendent and Park Group FMO will be prepared. This Inter-park Agreement will be accompanied by an annual delegation of authority.	X	X	X
5. Identify resource management objectives to maintain a current fire management plan (FMP) that identifies an accurate and defensible Normal Year Readiness of funding and personnel.		X	X
6. Develop protection and use standards and constraints that are in compliance with agency fire policies.		X	X
7. Ensure use of fire funds is in compliance with Department and Agency policies.	X	X	X
8. Management teams will meet once a year to review fire and aviation policies, roles, responsibilities, and delegations of authority. Specifically address oversight and management controls, critical safety issues, and high-risk situations such as team transfers of command, periods of multiple fire activity, and Red Flag Warnings.	X	X	X

PERFORMANCE REQUIRED	NPS Director.	Regional Director.	Park Supt.
9. Review safety policies, procedures, and concerns with field fire and fire aviation personnel. Discussions should include issues that could compromise safety and effectiveness during the upcoming season.			X
10. Ensure timely follow-up actions to program reviews, fire preparedness reviews, fire and fire aviation safety reviews, fire critiques, and post-season reviews.	X	X	X
11. Ensure fire and fire aviation preparedness reviews are conducted in all unit offices each year.		X	X
12. Ensure an approved burn plan is followed for each prescribed fire project, including follow-up monitoring and documentation to ensure management objectives are met.		X	X
13. Meet annually with major cooperators and review interagency agreements to ensure their continued effectiveness and efficiency. (may be delegated).		X	X
14. Ensure that a Wildland Fire Situation Analysis (WFSA) is completed and approved on all fires that escape initial attack.			X
15. Ensure reviews are conducted on all fires that require a WFSA. Personally attend reviews on Type 1 and Type 2 fires (Regional Director may delegate).		X	X
16. Ensure that a Wildland Fire Implementation Plan (WFIP) is completed and implemented for all fires managed for resource benefits.			X
17. Provide management oversight by personally visiting wildland and prescribed fires each year.		X	X
18. Provide incident management objectives, written delegations of authority, and Agency Administrator briefings to Incident Management Teams.			X

PERFORMANCE REQUIRED	NPS Director.	Regional Director.	Park Supt.
19. Monitor the fire situation and provide oversight during periods of critical fire activity/situations of high risk.	X	X	X
20. Evaluate the need for resource advisors for all fires, and assign as appropriate.			X
21. Convene and participate in annual pre- and post-season fire meetings.	X	X	X
22. Attend *Fire Management Leadership Course.*		X	X
23. Ensure appropriate investigations are conducted for incidents, entrapments, and serious accidents.	X	X	X
24. For all unplanned human-caused fires where liability can be determined, ensure trespass actions are initiated to recover cost of suppression activities, land rehabilitation, and damages to the resource and improvements.		X	X
25. Certify Wildland Fire Implementation Plan or Wildland Fire Situation Analysis on a daily basis.			X
26. Complete Go/No-Go checklist for prescribed fire.			X
27. Ensure there is adequate direction in fire management plans to identify fire danger awareness with escalating fire potential.			X
28. Ensure compliance with National and Regional Office policy and direction for prescribed fire activities and ensure that periodic reviews and inspections of the prescribed fire program are completed.	X	X	X
29. Review Prescribed Fire Plans and recommend or approve the plans depending upon the delegated authority. Ensure that the Prescribed Fire Plan has been reviewed and recommended by a qualified technical reviewer who was not involved in the plan preparation.		X	X

1

Fire Management Staff Roles

National Office

The Fire Director, NPS-NIFC, provides leadership for their fire and aviation management programs, and assists regions and parks to develop, implement, and maintain safe, effective, and efficient fire and aviation management programs that meet land management objectives.

The Fire Director is responsible and accountable for developing policy, program direction, and international coordination. The Fire Director works with interagency cooperators to coordinate, reduce duplication, increase efficiencies in wildland fire management, and provide feedback to regional offices on performance requirements.

Regional Office

The Regional Fire Management Officer (RFMO) provides leadership for their fire and fire aviation management program.

The RFMO is responsible and accountable for providing planning, coordination, training, technical guidance, and oversight to the park fire management programs. The RFMO also represents the Regional Director on interagency geographic coordination groups and Multi-Agency Coordination (MAC) Groups. The RFMO provides feedback to units on performance requirements.

Park

The Fire Management Officer (FMO) is responsible and accountable for providing leadership for fire and fire aviation management programs at the local level. The FMO determines program requirements to implement land use decisions through the Fire Management Plan (FMP) to meet land management objectives. The FMO negotiates interagency agreements and represents the Agency Administrator on local interagency fire and fire aviation groups.

The Superintendent annually shall provide and update the expectations of the FMO duties by means of two instruments. One is a limited Delegation of Authority (DOA) that encompasses the scope of duties outlined above. The other is an Inter-park Agreement for those cases where a Park Group FMO handles defined duties on behalf of another NPS unit within the defined FIREPRO Park Group.

1 **Fire Management Staff Performance Requirements for Fire Operations**

PERFORMANCE REQUIRED	Fire Director	RFMO	FMO
1. Maintain safety first as the foundation for all aspects of fire and fire aviation management.	X	X	X
2. Ensure completion of a job hazard analysis (JHA) for fire and fire aviation activities so mitigation measures are taken to reduce risk.			X
3. Ensure work/rest and length of assignment guidelines are followed during all fire and fire aviation activities. Deviations must be approved and documented.	X	X	X
4. Ensure that only trained and qualified personnel are assigned to fire and fire aviation duties.	X	X	X
5. Develop, implement, evaluate, and document fire and fire aviation training program to meet current and anticipated needs.	X	X	X
6. Establish an effective process to gather, evaluate, and communicate information to managers, supervisors, and employees. Ensure clear and concise communications are maintained at all levels.	X	X	X
7. Develop and maintain an open line of communication with public and cooperators.	X	X	X
8. Ensure that the fire and fire aviation management staff understand their role, responsibilities, authority, and accountability.	X	X	X
9. Based on allocated funding level, provide a safe, effective, and efficient fire protection and use program.	X	X	X
10. Organize, train, equip, and direct a qualified work force. An Individual Development Plan must be provided for incumbents who do not meet new standards. Establish qualification review committees.	X	X	X
11. Take appropriate action when performance is exceptional or deficient.	X	X	X
12. Ensure fire and fire aviation policies are understood, followed, and coordinated with other agencies as appropriate.	X	X	X

PERFORMANCE REQUIRED	Fire Director	RFMO	FMO
13. Monitor to recognize when complexity levels exceed program capabilities. Increase managerial and operational resources to meet the need.	X	X	X
14. Initiate, conduct, and/or participate in fire management related reviews and investigations.	X	X	X
15. Provide for and personally participate in periodic site visits to individual incidents and projects.	X	X	X
16. Utilize the incident complexity analysis to ensure the proper level of management is assigned to all incidents.		X	X
17. Review and evaluate performance of the fire management organization and take appropriate actions.	X	X	X
18. Ensure incoming personnel and crews are briefed prior to fire and fire aviation assignments.		X	X
19. Ensure a Wildland Fire Situation Analysis (WFSA) is completed and retained for all fires that escape initial attack.		X	X
20. Monitor fire season severity predictions, fire behavior, and fire activity levels. Take appropriate actions to ensure safe, efficient, and effective operations.	X	X	X
21. Ensure that adequate resources are available to implement fire management operations.	X	X	X
22. Provide fire personnel with adequate guidance, training and decision-making authority to ensure timely decisions.		X	X
23. Ensure a written/approved burn plan exists for each prescribed fire project.		X	X
24. Ensure all escaped prescribed fires receive a review at the proper level.	X	X	X
25. Ensure effective transfer of command of incident management occurs and oversight is in place.	X	X	X
26. Develop and maintain agreements, annual operating plans, and contracts on an interagency basis to increase effectiveness and efficiencies.	X	X	X
27. Provide the expertise and skills to fully integrate fire and fire aviation management into interdisciplinary planning efforts.	X	X	X

PERFORMANCE REQUIRED	Fire Director	RFMO	FMO
28. Work with cooperators to identify processes and procedures for providing fire safe communities within the wildand urban interface.	X	X	X
29. Develop, maintain, and annually evaluate the FMP to ensure accuracy and validity.		X	X
30. Ensure budget requests and allocations reflect Normal Year Readiness in the FMP.	X	X	X
31. Develop and maintain current operational plans, e.g., dispatch, pre-attack, prevention.	X	X	X
32. Ensure that reports and records are properly completed and maintained.	X	X	X
33. Ensure fiscal responsibility and accountability in planning and expenditures.	X	X	X
34. Assess, identify, and implement program actions that effectively reduce unwanted wildland fire ignitions and mitigate risks to life, property, and resources.		X	X
35. Effectively communicate the "natural role" of wildland fire to internal and external agency audiences.	X	X	X
36. Complete trespass actions when unplanned human-caused fires occur.		X	X
37. Ensure compliance with National and Regional Office policy and direction for prescribed fire activities and ensure that periodic reviews and inspections of the prescribed fire program are completed.	X	X	X

Requirements for Fire Management Positions

All NPS employees assigned dedicated fire management program responsibilities at the park, regional, or national level shall meet established interagency and NPS competencies (knowledge, skills and abilities) and associated qualifications.

All NPS employees assigned to wildland fire management incidents will meet the training and qualification standards set by the National Wildfire Coordinating Group.

All wildland fires will be managed by an individual qualified and certified at the command level appropriate to the complexity level of the incident.

The qualification standards identified in the *Interagency Fire Program Management Qualifications Standards* will be required, in conjunction with specific agency requirements, when filling vacant fire program positions, and as an aid in developing Individual Development Plans (IDPs) for employees.

Training

Training for Park Superintendents

The following training is required for park superintendents with significant fire programs, including but not limited to those that are fire program funded.

Fire Management Leadership

The national course is the preferred alternative to the regionally-sponsored course. The training should be completed within two years of appointment to a designated management position.

Training for Fire Management Officers

The following training is required for fire management officers.

- Fire Program Management

Delegation of Authority

Delegation for Regional Fire Management Officers

In order to effectively perform their duties, the RFMO must have certain authorities delegated from the Regional Director. The delegation of authority should include the following roles and responsibilities:

- Serve as the Regional Director's authorized representative on geographic area coordination groups, including MAC groups.
- Coordinate and establish priorities on uncommitted fire suppression resources during periods of shortages.
- Coordinate logistics and suppression operations regionwide.
- Relocate agency pre-suppression/suppression resources within the region based on relative fire potential/activity.
- Correct unsafe fire suppression activities.
- Direct accelerated, aggressive initial attack when appropriate.
- Enter into agreements to provide for the management, fiscal, and operational functions of combined agency operated facilities.
- Suspend prescribed fire activities when warranted.
- Give authorization to hire Emergency Firefighters in accordance with the DOI Pay Plan for Emergency Workers.
- Approve emergency fire severity funding expenditures not to exceed the Regional annual authority.

Chapter 04
U.S. Fish & Wildlife Service Program Organization & Responsibilities

Introduction

The purpose of the *Interagency Standards for Fire and Fire Aviation Operations* handbook is to provide program guidance to ensure safe, consistent, efficient and effective fire and aviation operations. This handbook supplements the policies, objectives, and standards for fire management presented in the *U.S. Fish and Wildlife Service Manual* and the *Department of the Interior Departmental Manual*. This handbook will be reviewed and updated annually.

Agency Administrator Roles

The Secretary of the Interior, through the Directors of the Bureau of Land Management (BLM), Fish and Wildlife Service (FWS), National Park Service (NPS) and the Deputy Commissioner of Indian Affairs (BIA) is responsible for wildland fire management activities of the Department (including such activities when contracted for, in whole or in part, with other agencies or tribes) under the statutes cited in *620 DM 1.1.*

Director

The Director of the Fish and Wildlife Service has overall responsibility for the service wildland fire management program. The Director will ensure that all regional fire management activities are formally evaluated.

Chief, National Wildlife Refuge System

The National Wildlife Refuge System under the Chief provides leadership for the wildland fire management program. The National Wildlife Refuge System also formally evaluates all regional fire activities at least every five years. The Assistant Director is authorized to promulgate and approve the *Fire Management Handbook* and other fire related handbooks as needed to provide guidance.

Regional Director

The Regional Director is responsible for the wildland fire management program in the region and for designating a qualified Regional Fire Management Coordinator. The Regional Director, through the Regional Fire Management Coordinator, will provide wildland fire management program support to service lands located within their geographic region. The Regional Director will identify and clarify the roles and responsibilities of other Regional Office staff that might provide oversight to the Fire Management Program.

Project Leader

The Project Leader is responsible for planning and implementing an effective wildland fire management program on service lands under his/her jurisdiction. The Project Leader, in conjunction with fire management specialists, determines the level of fire management effort required to meet wildland fire management

objectives of each unit. The Project Leader will ensure that an approved FMP is prepared for service lands under their jurisdiction. This would include appropriate consultation with staff specialists such as the Regional Historic Preservation Officer or Service Archeologist if appropriate. If the fire management program warrants, the Project Leader will establish a position to function as the Fire Management Officer for the field office. Otherwise, the Project Leader will assign the fire management responsibilities to a staff member as a collateral duty. A staff member, assigned fire management responsibilities as a collateral duty, will meet fire management qualification requirements established by the service. Project Leaders are to ensure that personnel hired in dedicated, fire funded positions are made available for dispatch to off-refuge/interagency wildland and prescribed fire management operations. Project Leaders will meet fire management training requirements established by the service for their positions.

Management Performance Requirements for Fire Operations

PERFORMANCE REQUIRED	FWS Director	Regional Director	Project Leader
1. Take necessary and prudent actions to ensure firefighter and public safety.	X	X	X
2. Ensure sufficient qualified fire and non-fire personnel are available to support fire operations at a level commensurate with the local and national fire situations.	X	X	X
3. Ensure Fire Management Officers (FMOs) are fully qualified.	X	X	X
4. Provide a written Delegation of Authority to FMOs that provides an adequate level of operational authority. Include Multi-Agency Coordinating (MAC) Group authority, as appropriate.	X	X	X
5. Identify resource management objectives to maintain a current fire management plan (FMP) that identifies an accurate and defensible Normal Year Readiness of funding and personnel.		X	X
6. Develop protection and use standards and constraints that are in compliance with agency fire policies.		X	X
7. Ensure use of fire funds is in compliance with Department and Agency policies.	X	X	X

PERFORMANCE REQUIRED	FWS Director	Regional Director	Project Leader
8. Management teams will meet once a year to review fire and aviation policies, roles, responsibilities, and delegations of authority. Specifically address oversight and management controls, critical safety issues, and high-risk situations such as team transfers of command, periods of multiple fire activity, and Red Flag Warnings.	X	X	X
9. Review safety policies, procedures, and concerns with field fire and fire aviation personnel. Discussions should include issues that could compromise safety and effectiveness during the upcoming season.			X
10. Ensure timely follow-up actions to program reviews, fire preparedness reviews, fire and fire aviation safety reviews, fire critiques, and post-season reviews.	X	X	X
11. Ensure fire and fire aviation preparedness reviews are conducted in all unit offices each year.		X	X
12. Ensure an approved burn plan is followed for each prescribed fire project, including follow-up monitoring and documentation to ensure management objectives are met.		X	X
13. Meet annually with major cooperators and review interagency agreements to ensure their continued effectiveness and efficiency (may be delegated by Regional Level).		X	X
14. Ensure that a Wildland Fire Situation Analysis (WFSA) is completed and approved on all fires that escape initial attack.			X
15. Ensure reviews are conducted on all fires that require a WFSA. Personally attend reviews on Type 1 and Type 2 fires. (Regional Director may delegate)		X	X

PERFORMANCE REQUIRED	FWS Director	Regional Director	Project Leader
16. Ensure that a Wildland Fire Implementation Plan (WFIP) is completed and implemented for all fires managed for resource benefits.			X
17. Provide management oversight by personally visiting wildland and prescribed fires each year.			X
18. Provide incident management objectives, written delegations of authority, and agency administrator briefings to incident management teams.			X
19. Monitor the fire situation and provide oversight during periods of critical fire activity/situations of high risk.	X	X	X
20. Evaluate the need for resource advisors for all fires, and assign as appropriate.			X
21. Convene and participate in annual pre- and post-season fire meetings.	X	X	X
22. Attend *Fire Management Leadership Course.*		X	X
23. Ensure appropriate investigations are conducted for incidents, entrapments, and serious accidents.	X	X	X
24. For all unplanned human-caused fires where liability can be determined, ensure trespass actions are initiated to recover cost of suppression activities, land rehabilitation, and damages to the resource and improvements.		X	X
25. Certify Wildland Fire Implementation Plan or Wildland Fire Situation Analysis on a daily basis.			X
26. Complete Go/No-Go checklist for prescribed fire.			X
27. Ensure there is adequate direction in fire management plans to identify fire danger awareness with escalating fire potential.			X
28. Ensure compliance with National and Regional Office policy and direction for prescribed fire activities and ensure that periodic reviews and inspections of the prescribed fire program are completed.	X	X	X

PERFORMANCE REQUIRED	FWS Director	Regional Director	Project Leader
29. Ensure that the Prescribed Fire Plan has been reviewed and recommended by a qualified technical reviewer who was not involved in the plan preparation.		X	X

Fire Management Staff Roles

National Office

Service Fire Management Coordinator (SFMC)

The Service Fire Management Coordinator is the Chief of the Fire Management Branch in the National Wildlife Refuge System, and is the Service representative at the National Interagency Fire Center (NIFC). The SFMC, through *Service Manual 621 FW 1*, is delegated authority by the Director to represent the Service on the National Multi-Agency Coordinating Group (MAC Group). The SFMC is responsible for implementing the decisions of the MAC Group as they affect U.S. Fish and Wildlife Service areas. The decisions of the MAC Group include the prioritizing of incidents nationally and the allocation or reallocation of firefighting resources to meet national priorities.

The Fire Management Branch is responsible for providing technical direction and coordination of fire management planning, policy development, and procedures servicewide.

Regional Office

Regional Fire Management Coordinator (RFMC)

The RFMC provides coordination, training, planning, evaluation, and technical guidance for the region and is available to provide assistance for intra-agency and interagency wildland fire management needs. The RFMC will meet qualification requirements established by the service for the position. The RFMC, through written delegation by the Regional Director, is delegated authority to represent the region on the Geographic Multi-Agency Coordinating Group (GMAC Group). The RFMC is responsible for implementing the decisions of the MAC Group as they affect U.S. Fish and Wildlife Service areas. The decisions of the GMAC Group include the prioritizing of incidents and the allocation or reallocation of firefighting resources to meet wildland fire management priorities.

Refuge Fire Management Officer (FMO)

Fire Management Officers will be assigned where an individual refuge wildland fire management program requires wildland fire management expertise. An FMO may be assigned to provide wildland fire management support to a group of refuges (zone or district) when individually each refuge does not warrant a fulltime FMO. These are dedicated, fire funded positions, and as such are a regional and national resource. The FMO may be called upon to assist in both

intra agency and interagency wildland fire management needs. The FMO will meet qualification standards established or adopted by the Service for the position.

Fire Management Staff Performance Requirements for Fire Operations

PERFORMANCE REQUIRED	Fire Director	RFMC	FMO
1. Maintain safety first as the foundation for all aspects of fire and fire aviation management.	X	X	X
2. Ensure completion of a job hazard analysis (JHA) for fire and fire aviation activities so mitigation measures are taken to reduce risk.			X
3. Ensure work/rest and R&R guidelines are followed during all fire and fire aviation activities. Deviations are approved and documented.	X	X	X
4. Ensure that only trained and qualified personnel are assigned to fire and fire aviation duties.	X	X	X
5. Develop, implement, evaluate, and document fire and fire aviation training program to meet current and anticipated needs.	X	X	X
6. Establish an effective process to gather, evaluate, and communicate information to managers, supervisors, and employees. Ensure clear and concise communications are maintained at all levels.	X	X	X
7. Develop and maintain an open line of communication with public and cooperators.	X	X	X
8. Ensure that the fire and fire aviation management staff understand their role, responsibilities, authority, and accountability.	X	X	X
9. Based on allocated funding level, provide a safe, effective, and efficient fire protection and use program.	X	X	X
10. Organize, train, equip, and direct a qualified work force. An Individual Development Plan must be provided for incumbents who do not meet new standards. Establish qualification review committees.	X	X	X
11. Take appropriate action when performance is exceptional or deficient.	X	X	X

PERFORMANCE REQUIRED	Fire Director	RFMC	FMO
12. Ensure fire and fire aviation policies are understood, followed, and coordinated with other agencies as appropriate.	X	X	X
13. Monitor to recognize when complexity levels exceed program capabilities. Increase managerial and operational resources to meet the need.	X	X	X
14. Initiate, conduct, and/or participate in fire management related reviews and investigations.	X	X	X
15. Provide for and personally participate in periodic site visits to individual incidents and projects.	X	X	X
16. Utilize the incident complexity analysis to ensure the proper level of management is assigned to all incidents.		X	X
17. Review and evaluate performance of the fire management organization and take appropriate actions.	X	X	X
18. Ensure incoming personnel and crews are briefed prior to fire and fire aviation assignments.		X	X
19. Ensure a Wildland Fire Situation Analysis (WFSA) is completed and retained for all fires that escape initial attack.		X	X
20. Monitor fire season severity predictions, fire behavior, and fire activity levels. Take appropriate actions to ensure safe, efficient, and effective operations.	X	X	X
21. Ensure that adequate resources are available to implement fire management operations.	X	X	X
22. Provide fire personnel with adequate guidance, training and decision-making authority to ensure timely decisions.		X	X
23. Ensure a written, approved burn plan exists for each prescribed fire project.		X	X
24. Ensure all escaped prescribed fires receive a review at the proper level.	X	X	X
25. Ensure effective transfer of command of incident management occurs and oversight is in place.	X	X	X
26. Develop and maintain agreements, annual operating plans, and contracts on an interagency basis to increase effectiveness and efficiencies.	X	X	X

PERFORMANCE REQUIRED	Fire Director	RFMC	FMO
27. Provide the expertise and skills to fully integrate fire and fire aviation management into interdisciplinary planning efforts.	X	X	X
28. Work with cooperators to identify processes and procedures for providing fire safe communities within the wildland urban interface.	X	X	X
29. Develop, maintain, and annually evaluate the FMP to ensure accuracy and validity.		X	X
30. Ensure budget requests and allocations reflect Normal Year Readiness in the FMP.	X	X	X
31. Develop and maintain current operational plans, e.g., dispatch, pre-attack, prevention.	X	X	X
32. Ensure that reports and records are properly completed and maintained.	X	X	X
33. Ensure fiscal responsibility and accountability in planning and expenditures.	X	X	X
34. Assess, identify, and implement program actions that effectively reduce unwanted wildland fire ignitions and mitigate risks to life, property, and resources.		X	X
35. Effectively communicate the "natural role" of wildland fire to internal and external agency audiences.	X	X	X
36. Complete trespass actions when unplanned human-caused fires occur.		X	X
37. Ensure compliance with National and Regional Office policy and direction for prescribed fire activities and ensure that periodic reviews and inspections of the prescribed fire program are completed.	X	X	X

Delegation of Authority

Delegation for Regional Fire Management Coordinators (RMFC)

In order to effectively perform their duties, a RFMC must have certain authorities delegated from the Regional Director. This delegation is normally placed in the regional office supplement to agency manuals. This delegation of authority should include:

- Serve as the Regional Director's authorized representative on geographic area coordination groups, including MAC groups.

- Coordinate and establish priorities on uncommitted fire suppression resources during periods of shortages.
- Coordinate logistics and suppression operations regional-wide.
- Relocate agency pre-suppression/suppression resources within the region based on relative fire potential/activity.
- Correct unsafe fire suppression activities.
- Direct accelerated, aggressive initial attack when appropriate.
- Enter into agreements to provide for the management, fiscal, and operational functions of combined agency operated facilities.
- Suspend prescribed fire activities when warranted.
- Give authorization to hire Emergency Firefighters in accordance with the DOI Pay Plan for Emergency Workers.
- Approve emergency fire severity funding expenditures not to exceed the agency's annual authority.

Zone/District Fire Management Officer

In order to effectively perform their duties, the FMO may have certain authorities delegated from the Agency Administrator(s). A sample "Delegation of Authority" can be found in Appendix WFS 01 at the end of this chapter.

APPENDIX FWS-01
Delegation for Zone/District Fire Management Officer

The Fire Management Officer for the Arizona Fire District (including; Buenos Aires NWR, San Bernardino NWR, Leslie Canyon NWR, Imperial NWR, Cibola NWR, Bill Williams NWR, Kofa NWR, Havasu NWR, Alchesay-Williams Creek Fish Hatchery Complex) is delegated authority to act on my behalf for the following duties and actions:

1. Provide direction, supervision and leadership to District Fire Management Staff outlined in the attached organization chart.

2. Coordinate with and provide timely and accurate reports to Project Leaders, Deputy Project Leaders, and Appropriate Refuge Managers on all activities of the district and personnel.

3. Responsible for Fire Budget coordination and oversight to assure the fiscal guidelines are adhered to within the District.

4. Coordinate all prescribed fire activities for the district including requests and oversight of funding for Hazardous Fuel and WUI projects.

5. Assure personnel participating in prescribed fire and wildfire operations are fully qualified.

6. Request and Oversee distribution of Severity and Emergency Pre-suppression Funding for District Fire and Aviation.

7. Ensure all district incidents are managed in a safe and cost-effective manner.

8. Oversee the recruitment and hiring of district fire personnel.

9. Responsible for representing the Arizona Fire District in all matters related to the Wildland/Prescribed Fire Management Program with local cooperators and on the Southeast Zone and Central West Zone Boards.

10. Coordinate district fire and prevention activities and provide appropriate program direction and guidance.

11. Provide for management of property records for equipment and supplies purchased with program allocations.

12. Coordinate, preposition, send and order fire and aviation resources in response to current and anticipated district, regional and national fire conditions.

13. Hire emergency firefighters in accordance with Department of Interior "Pay Plan for Emergency Workers."

14. Manage Incident Qualification Certification System and certify Incident Qualification Cards within the District.

_____ _____
Buenos Aires NWR Refuge Manager Date

_____ _____
San Bernardino/ Date
Leslie Canyon NWR Refuge Manager

_____ _____
Imperial NWR Refuge Manager Date

_____ _____
Cibola NWR Refuge Manager Date

_____ _____
Bill Williams River NWR Refuge Manager Date

_____ _____
Kofa NWR Refuge Manager Date

_____ _____
Havasu NWR Refuge Manager Date

_____ _____
Alchesay-Williams Creek Complex Manager Date

_____ _____
FWS Region 2 Fire Management Coordinator Date

_____ _____
Arizona Fire Management District FMO Date

Chapter 05
USDA Forest Service Wildland Fire and Aviation Program Organization and Responsibilities

Introduction
This handbook is intended to be a program reference guide that documents the standards for operational procedures and practices for the USDA Forest Service Fire and Aviation Management program. The standards provided in this handbook are based on current agency and interagency wildland fire management policy, and is intended to provide fire and aviation program guidance and to ensure safe, consistent, efficient, and effective fire and aviation operations. This document will be reviewed and updated annually.

Foundational Doctrine
The following collection of principles and beliefs form the foundational doctrine for fire suppression in the U.S. Forest Service. These principles and beliefs operate at multiple organizational levels, including:

- Forest Service Wide (i.e., apply to all employees and activities)
- Fire and Aviation Management (i.e., are specific to the fire and aviation management program)
- Fire Suppression (i.e., are specific to fire fighting activities).

The Operational Environment

Fire Suppression
No resource or facility is worth the loss of human life, however the wildland fire suppression environment is complex and possesses inherent hazards that can---even with reasonable mitigation---result in harm to fire fighters engaged in fire suppression operations. In recognition of this fact, we are committed to the aggressive management of risk.

Mission
Forest Service Wide
The Forest Service is prepared and organized to support national and international emergencies with trained personnel and other assets when requested.

Forest Service Wide
Agency employees respond when they come across situations 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.

Forest Service Wide
In responding to emergencies, we will bring the same professionalism and passion for safety as we do to non-emergency situations.

Forest Service Wide
Support for local fire emergencies takes priority over accomplishment of local resource targets. Support of non-local fire emergencies will be at the discretion of the local line officer, as bounded by agency agreements and Regional or National direction.

Forest Service Wide
A cooperative relationship between the Forest Service and other agencies is essential. The Forest Service is committed to honor its part of the joint responsibility to develop and maintain effective working relationships with its intergovernmental cooperators.

Fire & Aviation Management
Fire management is central to meeting the Forest Service mission – conserving natural resources, restoring ecological health, and protecting communities.

Fire Suppression
Successful fire suppression is essential to support the Forest Service mission.

Fire Suppression
The intent of wildfire suppression is to protect human life, property, and at risk lands and resources.

Leadership and Accountability
Forest Service Wide
The hallmarks of Forest Service leadership are action, attitude, and accountability.

Forest Service Wide
Leaders express clear and concise intent to ensure assignments are managed safely, effectively, and efficiently.

Forest Service Wide
Leaders regularly monitor operations for effectiveness, and take action when there is recognition of exceptional or problematic employee performance.

Forest Service Wide
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.

Fire Suppression
Demonstrated fitness for command is a requirement for leadership positions associated with fire fighting.

Roles and Relationships

Forest Service Wide
Commitment to duty, respect for others, and personal integrity are expected. Every employee fosters a work environment that is enjoyable, rewarding, recognizes the value of diversity, and is free of harassment.

Fire Suppression
Every Forest Service employee has a responsibility to support fire suppression emergencies in a manner that meets identified needs, and is within their qualifications and capabilities.

Fire & Aviation Management
Contracted resources will meet identified standards for qualifications, training, productivity, and efficiency necessary to meet emergency response needs.

Fire & Aviation Management
It is the Forest Service responsibility to initiate and participate in public education efforts to promote support for necessary fire management activities.

Forest Service Wide
Line officers with fire management responsibilities will have knowledge and understanding of fire program management.

Operations

Forest Service Wide
Employees are expected and empowered to be creative and decisive, to exercise initiative and accept responsibility, and to use their training, experience, and judgment in decision-making to carry out their leader's intent.

Forest Service Wide
Employees are expected and empowered to make reasonable and prudent decisions to accomplish the agency mission while minimizing exposure to hazards.

Forest Service Wide
Clear, uncomplicated plans and concise orders maximize effectiveness and minimize confusion.

Fire Suppression
When it is time to fight fire, we do so in a manner that maximizes effectiveness of effort, has highest regard for firefighter and public safety, and controls costs.

Fire Suppression
Every fire suppression operation is directed toward clearly-defined, decisive, and obtainable objectives.

Fire Suppression
Command and control must be decentralized to cope with the unpredictable nature of fire. To achieve their leader's intent and accomplish operational objectives, subordinate commanders are required to make decisions on their own initiative, and to coordinate their efforts.

Fire Suppression
Unity of effort is maintained and suppression actions are coordinated at all times.

Fire Suppression
Using principles requires judgment in application, while adherence to rules does not. In combination principles and rules guide our fundamental wildland fire suppression practices and behaviors, and are mutually understood at every level of command.

Fire Suppression
Rapid deployment and concentration of fire suppression resources at the decisive time and place is essential to successful fire suppression actions.

Fire Suppression
Maintaining high capability for initial attack is essential to public and fire fighter safety, accomplishment of management objectives, and cost containment.

Risk Management

Fire Suppression
We practice risk management to minimize the exposure and affects of the inherent hazards in fire suppression while maximizing the opportunities to achieve leader intent.

Agency Administrator Positions

The Forest Service Director of Fire and Aviation Management, the Director of Human Resources and the Forest Service Line Officer Team have developed core fire management competencies for inclusion into the position descriptions and in selection criteria for agency administrators. They are presented here for reference.

Evaluation Criterion

Knowledge of fire program management including ability to integrate fire and fuels management across all program areas and functions; ability to implement fire management strategies and integrate natural resource concerns into collaborative community protection and ecosystem restoration strategies; knowledge to oversee a fire management program including budget, preparedness, prevention, suppression, and hazardous fuels reduction; ability to serve as an agency administrator during an incident on an assigned unit; and ability to provide a fully staffed, highly qualified, and diversified firefighting workforce that exists in a "safety first" and "readiness" environment.

Training and Core Competencies

- Attend a regional or national *"Fire Management Leadership for Agency Administrators"* training session.
- Require a shadow assignment with a fully qualified agency administrator.
- Receive training or experience in the Wildfire Situation Analysis (WFSA) and Wildland Fire Implementation Plan (WFIP).
- Provide a Delegation of Authority to Incident Commanders.

Performance Standards

Add the following standards to the existing performance standards for Forest Supervisors and District Rangers under Performance Standard #4, Leadership, Coaching, and Supervising:

- Integrate fire and fuels management across all functional areas.
- Implement fire management strategies and integrate natural resource concerns into collaborative community protection and ecosystem restoration strategies on the unit.
- Manage a budget that includes fire preparedness, prevention, suppression, and hazardous fuels in an annual program of work for the unit.
- Perform duties of agency administrator and maintain those qualifications.
- Provide a fully staffed, highly qualified, and diverse workforce in a "safety first" environment.

These standards are based on current policy and provide program guidance to ensure safe, consistent, efficient, and effective Fire and Aviation Operations. This document will be reviewed and updated annually.

Specific Agency Administrator Performance Standards for Fire and Aviation at the Field Level

Preparedness

- Take all necessary and prudent actions to ensure firefighter and public safety.
- Ensure sufficient qualified fire and non-fire personnel are available to support fire operations at a level commensurate with the local and national fire situation.
- Ensure accurate position descriptions are developed and reflect the complexity of the unit. Individual Development Plan promote and enhance FMO currency and development.
- Provide a written Delegation of Authority to FMOs that provides an adequate level of operational authority at the unit level. Include Multi-Agency Coordinating (MAC) Group authority, as appropriate.
- Identify resource management objectives to maintain a current Fire Management Plan (FMP) that identifies an accurate level of funding for personnel and equipment.
- Develop preparedness and fire use standards that are in compliance with agency fire policies.
- Management teams meet once a year to review fire and aviation policies, roles, responsibilities, and delegations of authority. Specifically address oversight and management controls, critical safety issues, and high-risk situations such as transfers of incident command, periods of multiple fire activity, and Red Flag Warnings.
- Ensure fire and aviation preparedness reviews are conducted each year.
- Meet annually with major cooperators and review interagency agreements to ensure their continued effectiveness and efficiency.
- Convene and participate in annual conferences and fire reviews.

Suppression

- Ensure use of fire funds is in compliance with Agency policies.
- Wildland Fire Situation Analysis (WFSA) is completed and approved on all fires that escape initial attack. Alternative evaluation and certification requirements are followed.
- WFSA's that are expected to exceed $10,000.000.00 in suppression costs are forwarded to the Regional Office for review and approval.
- Management reviews are conducted on all fires that require a WFSA. Personally attend reviews on Type 1 and Type 2 fires.
- Provide incident management objectives, written delegations of authority, and a complete agency administrator Briefing to Incident Management Teams.
- Evaluate the need for resource advisors for all fires, and assign as appropriate.

- For all unplanned human-caused fires where responsibility can be determined, ensure actions are initiated to recover cost of suppression activities, land rehabilitation, damages to the resource, and improvements.

Safety

- Review safety policies, procedures, and concerns with field fire and aviation personnel.
- Ensure timely follow-up actions to program reviews, fire preparedness reviews, fire and aviation safety reviews, and management reviews.
- Monitor the fire situation and provide oversight during periods of critical fire activity and situations of high risk.
- Ensure there is adequate direction in fire management plans to maintain fire danger awareness.
- Take appropriate actions with escalating fire potential.
- Ensure appropriate investigations are conducted for incidents, entrapments, and serious accidents.

Fire Use

- Ensure an approved burn plan is followed for each prescribed fire project, including follow-up monitoring and documentation to ensure management objectives are met.
- Ensure that a Wildland Fire Implementation Plan (WFIP) is completed and implemented for all fires managed for resource benefits.
- Provide management oversight by personally visiting wildland and prescribed fire activities each year.
- Ensure compliance with National and Regional Office policy and direction for prescribed fire activities and ensure that periodic reviews and inspections of the prescribed fire program are completed.
- Approve Prescribed Fire Plans. Authority may be delegated to the agency administrators as provided under specific directions.
- Review Prescribed Fire Plans and recommend or approve the plans depending upon the delegated authority. Ensure that the Prescribed Fire Plan has been reviewed and recommended by a qualified technical reviewer who was not involved in the plan preparation.

Fire Management Positions

The following lists show the minimum operational experience recommended for fire management positions. The *Interagency Fire Program Management Qualifications Standards* will be used as guidelines in conjunction with specific agency requirements when filling vacant fire program positions, and as an aid in developing Individual Development Plans (IDPs) for employees.

Specific Fire Management Staff Performance Standards for Fire Operations at the Field Level

Preparedness

- Maintain "safety first" as the foundation for all aspects of fire and aviation management.
- Ensure that only trained and qualified personnel are assigned to fire and aviation duties.
- Develop, implement, evaluate, and document fire and aviation training program to meet current and anticipated needs.
- Establish an effective process to gather, evaluate, and communicate information to managers, supervisors, and employees. Ensure clear concise communications are maintained at all levels.
- Ensure fire and aviation management staffs understand their roles, responsibilities, authority, and accountability.
- Develop and maintain an open line of communication with public and cooperators.
- Regardless of funding level, provide a safe, effective, and efficient fire preparedness and fire use program.
- Organize, train, equip, and direct a qualified work force. An Individual Development Plan (IDP) must be provided for incumbents who do not meet new standards. Establish qualification review process.
- Take appropriate action when performance is exceptional or deficient.
- Ensure fire and aviation policies are understood, followed, and coordinated with other agencies as appropriate.
- Ensure that adequate resources are available to implement fire management operations.
- Provide fire personnel with adequate guidance, training, and decision-making authority to ensure timely decisions.
- Develop and maintain agreements, annual operating plans, and contracts on an interagency basis to increase effectiveness and efficiencies.
- Develop, maintain, and annually evaluate the FMP to ensure accuracy and validity.
- Ensure budget requests and allocations reflect preparedness requirements in the FMP.
- Develop and maintain current operational plans. (e.g., dispatch, pre-attack, prevention).
- Ensure that reports and records are properly completed and maintained.
- Ensure fiscal responsibility and accountability in planning and expenditures.
- Assess, identify, and implement program actions that effectively reduce unwanted wildland fire ignitions and mitigate risks to life, property, and resources.
- Work with cooperators to identify processes and procedures for providing fire safe communities within the wildland urban interface.

Suppression

- Ensure completion of a job hazard analysis (JHA) for fire and fire aviation activities, and implement applicable risk mitigation measures.
- Provide for and personally participate in periodic site visits to individual incidents and projects.
- Utilize the incident complexity analysis to ensure the proper level of management is assigned to all incidents.
- Ensure incoming personnel and crews are briefed prior to fire and aviation assignments.
- Coordinate the development of the Wildland Fire Situation Analysis (WFSA) with local unit staff specialists for all fires that escape initial attack.
- Ensure effective transfer of command of incident management occurs and safety is considered in all functional areas.
- Monitor fire activity to anticipate and recognize when complexity levels exceed program capabilities. Increase managerial and operational resources to meet needs.
- Complete cost recovery actions when unplanned human-caused fires occur.

Safety

- Ensure work/rest and R&R guidelines are followed during all fire and aviation activities. Deviations are approved and documented.
- Initiate, conduct, and/or participate in fire management related reviews and investigations.
- Monitor fire season severity predictions, fire behavior, and fire activity levels. Take appropriate actions to ensure safe, efficient, and effective operations.

Fire Use

- Ensure a written, approved burn plan exists for each prescribed fire project.
- Ensure all escaped prescribed fires receive a review at the proper level.
- Provide the expertise and skills to fully integrate fire and aviation management into interdisciplinary planning efforts.
- Effectively communicate the “natural role” of wildland fire to internal and external agency audiences.
- Ensure compliance with National and Regional Office policy and direction for prescribed fire activities and ensure that periodic reviews and inspections of the prescribed fire program are completed.

Chapter 06
Administration

Introduction

All federal agencies have adopted the *National Wildfire Coordinating Group (NWCG) Interagency Incident Business Management Handbook (IIBMH)* as the official guide to provide execution of each agency's incident business management program. Unit offices, geographic areas, or NWCG may issue supplements, as long as policy or conceptual data is not changed.

Policy

Since consistent application of interagency policies and guidelines is essential, procedures in the *IIBMH* will be followed. Agency manuals provide a bridge between manual sections and the *IIBMH* so that continuity of agency manual systems is maintained and all additions, changes, and supplements are filed in a uniform manner.

- ***BLM -*** *The IIBMH replaces BLM Manual Section 1111.*
- ***FWS -*** *Refer to Service Manual 095 FW 3 Wildland Fire Management.*
- ***NPS -*** *Refer to RM-18.*
- ***FS -*** *Refer to FSH 5109.34.*

Use of Pay Plan for Hazardous Fuel Reduction

Refer to the Department of the Interior (DOI) Pay Plan for Emergency Workers for information regarding the use of emergency workers for hazardous fuel reduction projects on Departmental lands. Refer to the Forest Service Pay Plan for Emergency Workers for information regarding the use of emergency workers for hazardous fuel reduction projects on Forest Service Lands.

Cache Management

The DOI-BLM manages two National Interagency Support Caches (NISC), and USDA-Forest Service manages nine national caches. Agencies often serve as interagency partners in local area support caches, and operate single agency initial attack caches. All caches will maintain established stocking levels, receive and process orders from participating agencies, and follow ordering and fire replenishment procedures as outlined by the national and geographic area cache management plans and mobilization guides.

- ***FS -*** *Refer to FSM 5160 for specific requirements.*

National Interagency Support Caches

The eleven national caches are part of the National Fire Equipment System (NFES). Each of these caches provides incident support in the form of equipment and supplies to units within their respective geographic areas. The NFES cache system may support other emergency, disaster, fire-related or land management activities, provided that such support is permitted by agency policies and does not adversely affect the primary mission. These national caches do not provide supplies and equipment to restock local caches for non-

incident requests. Non-emergency (routine) orders should be directed to the source of supply, e.g., GSA or private vendors. The Great Basin Cache at NIFC provides publications management support to the National Wildfire Coordinating Group (NWCG). Reference the NWCG, *National Fire Equipment System Catalog (NFES 0362)* for more detailed information.

Forest Service National Symbols Program distribution is through the Northeast Area National Interagency Support Cache. This material is coordinated by the USDA Forest Service, under advisement of the National Association of State Foresters' (NASF) Cooperative Forest Fire Prevention Committee (CFFP), and the DOI Bureau of Land Management. Materials include Smokey Bear prevention items, and Junior Forest Ranger environmental educational materials. Northeast Area National Interagency Support Cache also distributes DOI Fire Education materials and provides resource kits for National Fire Prevention Teams. The website at www.symbols.gov contains the catalog of these materials and offers information having to do with these programs.

Local Area Interagency Support Caches

These caches directly support more than one agency, and generally cover more than one administrative unit. They will maintain stocking levels to meet the identified needs of the multiple agencies for whom service is provided.

Initial Response Caches

Numerous caches of this level are maintained by each agency. These caches will establish and maintain stocking levels to meet the initial response needs of the local unit(s).

Inventory Management

System Implementation

Each fire cache, regardless of size, should initiate and maintain a cache inventory management system. Agency management systems provide a check out/return concept that incorporates a debit/crediting for all items leaving the cache. This system is strictly followed in the NISC's. Inventory management processes should be implemented for all local interagency support and initial action caches.

Reporting Requirements

By April 1st of each year, all local interagency support and initial action caches will submit inventories to their servicing NISC.

All items reported will conform to refurbishment standards set forth in *NFES 2249, Fire Equipment Storage and Refurbishment Standards*. Those items not identified in *NFES 2249* will not be refurbished.

Accountability

Fire loss/use rate is defined as all property and supplies lost, damaged or consumed on an incident. It is reported as a percentage that is calculated in dollars of items issued compared to items returned. The reasonable anticipated fire loss/use rate for all items issued to an incident is 15 percent of trackable and durable items. Consumable items are not included in this total. All items stocked in agency fire caches will be categorized for return (loss tolerance/use rate) and accountability purposes.

Trackable Items

Include items that a cache may track due to dollar value, sensitive property classification, limited quantities available, or other criteria set by each NISC. Items that are considered trackable are usually engraved or tagged with a cache identification number. These items must be returned to the issuing cache at the end of the incident use, or documentation must be provided to the issuing cache as to why it was not returned. All trackable items are also considered durable. 100 percent accountability is expected on trackable items.

Durable Items

Include cache items considered to have a useful life expectancy greater than one incident. High percentages of return for these items are expected. These items are not specifically cache identified/tagged/engraved. Acceptable loss tolerance/ use rates for the following durable goods have been established:

- 10% for water handling accessories, helicopter accessories, tents, and camp items such as heaters, lights, lanterns, tables, and chairs.
- 20% for hose, tools, backpack pumps, sleeping bags, pads, and cots.
- 30% for personal protective equipment.

Consumable Items

Include items normally expected to be consumed during incident use. Consumable items returned in unused condition are credited to the incident. Examples of consumable items are: batteries, plastic canteens, cubitainers, forms, MREs, fusees, hot food containers, petroleum products, and medical supplies.

Incident to Incident Transfer of Supplies and Equipment

Transfer of supplies and equipment between incidents is not encouraged, due to the increased possibility of accountability errors. In instances when it is determined to be economically feasible and operationally advantageous, the following must be accomplished by the Supply Unit Leader from the incident that is releasing the items.

Documentation will be completed on the *Interagency Incident Waybill (NFES #1472)*, and must include the following:

- NFES Number
- Quantity

- Unit of Issue
- Description
- Property number, if item is trackable
- Receiving incident name, incident number and resource request number
- The Supply Unit Leader will send the waybill transfer information to the servicing NISC to maintain proper accountability recording.

Upon request, the servicing NISC can provide the Supply Unit Leader with and Outstanding Items Report to facilitate accurate waybill documentation.

Fire Loss Tolerance Reporting for Type 1 and 2 Incidents

In order to help managers keep incident-related equipment and supply loss to a minimum, incident management teams (IMT)'s are required to maintain accountability and tracking of these items. Guidelines and procedures to assist with this accountability are provided in Chapter 30 of the *IIBMH*. To further facilitate these procedures and provide oversight, a fire loss report has been developed that provides detailed information regarding used and trackable item use. This report has been accepted by NWCG for all wildland fire agencies and will be compiled for all Type 1 and Type 2 incidents. Investigations may be conducted in those cases where loss/use tolerances rates may have been exceeded.

These reports are complied by the NISC servicing the particular incident. Reports will then be forwarded to the responsible local office, with a copy to the state/regional FMO, within 60 days of the close of the incident to meet these time limits. The following steps must be followed to insure accurate reports:

- At the close of each incident, all property must be returned to the servicing NFES cache.
- If accountable property has been destroyed or lost, appropriate documentation must be provided to the cache for replacement and updating property records.
- All property purchased with emergency fire funds for an incident must be returned to the NFES cache system.
- All unused consumable and/or durable NFES items must be returned to the servicing NFES cache within 30 days of control of the incident.
- Agency administrators/fire management officers must review the fire loss report and recommend appropriate follow-up action if losses are excessive. Those actions and recommendations should be documented and filed in the final incident records.

Incident Supply and Equipment Return Procedures

Supplies and equipment ordered with suppression funds will be returned to the ordering unit at the close of the incident and dispersed in one of three ways:

- Items meeting NFES standards will be returned to the local or geographic area cache for reuse within the fire supply system.

- Items not meeting the prescribed NFES standards will either be purchased with project funds by the local unit if the items are needed for program use.
- Items will be delivered to the unit's excess property program for disposal.

Cache Returns and Restock Procedures

All returns for credit and restock of caches to specific incident charges should be made within 30 days after the close of the incident. If that timeframe cannot be met, it is required that returns and restock be made during the same calendar year as items were issued. All returns should be tagged with appropriate incident number, accompanied by an interagency waybill identifying the appropriate incident number, or accompanied by issue documents to ensure proper account credit is given. Any items returned after the calendar year of issue will be returned to multiple-fire charges, unless specific incident charge documentation (issues) can be provided with the return.

Incident Replacement of Government Property

Refer to the *IIBMH, Chapter 30* for procedures governing property management relating to incident activities. The agency administrator is responsible for providing agency property management guidelines and/or procedures to incident personnel.

Damage or Loss for assigned property is addressed under IIBMH Chapter 30, 35.4. Specialty or non-cache items originally provided by the home unit through the use of preparedness funds will be replaced by home unit funds if the loss is due to normal wear and tear. If the government property is damaged on the incident due to a specific event, eg., wind event damages tent, the incident may, upon receipt of required documentation and proof of damage, authorize replacement using the *Incident Replacement Requisition (OF315)*. Cache items will be replaced at the incident if available. Cache items that are not available at the incident may be authorized for restocking at the home unit via an authorized *Incident Replacement Requisition.*

Mobile Fire Equipment Policy

It is agency policy to maintain each piece of mobile fire equipment at a high level of performance and in a condition consistent with the work it has been designed to perform. This shall be accomplished through application of a uniform preventive maintenance program, timely repair of components broken or damaged while on assignment, and in accordance with all agency fiscal requirements. Repairs shall be made and parts replaced, as identified, to keep the equipment functional. Priority will be given to any item required for the equipment to be kept safe and operational.

- ***BLM -*** *Mobile fire equipment is not to be altered or modified without approval of the BLM National Fire Equipment Committee.*

Fire Equipment Management

Introduction

This section contains specific guidance on activities, standards, and procedures in the management of the agencies' fire equipment.

- ***BLM -*** *The BLM's fire equipment program designs, develops, and acquires specialized equipment, cabs, chassis, utility bodies, and pump packages to meet the BLM's annual fire engine replacement and fire suppression requirements. Fire engine design is accomplished through the analysis of performance needs identified, survey of new technologies, and the development of test models and prototype units. Acquisition of these components is done through a combination of contracting, remanufacture of existing units, and in-house assembly. The BLM operates a fire vehicle program that balances state of the art technology with overall cost efficiency, to provide maximum safety for personnel while effectively meeting suppression needs. Also refer to the BLM Manual H-9216-1, Fire Equipment Supply Management.*
- ***NPS -*** *The NPS manages the Working Capital Fund (WCF) Fire Equipment Program through the Fire Management Program Center. The working capital funding for the program is administered through an interagency agreement with the BLM. The NPS's WCF fire equipment program acquires specialized equipment, cabs, chassis, utility bodies, and pump packages to meet the NPS's annual fire engine replacement and fire suppression requirements. Fire engine design is accomplished through the analysis of performance needs identified, and survey of new technologies. Acquisition of these components is done through contracting with venders identified on GSA contracts.*

Standards and Specifications

- ***BLM -*** *Standardization of our mobile fire equipment fleet aides in the ability to produce equipment that effectively meets the user's needs at the lowest possible cost, and with the least impact on the BLM workforce.*

Fire Equipment Development

- ***BLM -*** *The BLM maintains a Fire Equipment Development Unit located at NIFC. This unit is responsible for the ordering, receiving, inspection, distribution, and development of new fire equipment that will meet or exceed the minimum performance standards established by the BLM National Fire Equipment Committee.*
- ***NPS -*** *The Fire Equipment and Facilities Specialist, located at NIFC, is responsible for ordering, receiving, inspection, and distribution of new fire equipment.*

Equipment Development Process

- ***BLM -*** *The BLM has established a fire equipment development process to ensure that any new fire equipment, engine models, or technologies meet*

or exceed established performance standards. All new fire engines, new equipment models, vehicle chassis, and major components will follow this development process, and are tested and evaluated under actual field conditions prior to being made available for general ordering. While it may take only a few weeks to complete the development and evaluation process for a minor component, it takes several years to develop a new chassis, fire engine model, or other major component.

Management of Standards

- ***BLM -*** *BLM's specifications and standards are maintained by the Fire Equipment Development Unit at NIFC. Equipment standards and options are managed under a "sealed pattern" concept. Major changes to equipment are made once a year during the BLM National Fire Equipment Committees fall meeting. This is done through a formal documented process.*
- ***BLM -*** *Minor changes to blueprints and specifications are the responsibility of the Fire Equipment Development Unit to ensure that equipment in production is not delayed. Major changes must be addressed through the BLM fire equipment development process.*
- ***BLM -*** *Procurement of nonstandard equipment with fire management funds, when standard equipment is available, has to have written approval from the Director, Office of Fire and Aviation. The BLM Fire Equipment Committee has the responsibility to approve and establish the minimum performance standards of all BLM/WCF mobile fire equipment.*

Classes of Standard Units

Each agency has established classes for all GSA and agency-owned vehicles.

Equipment Deficiencies and Improvements

- ***BLM -*** *The BLM fire engine fleet is in a constant state of development. Improvements to the equipment begins only after field service has identified that a specific item of equipment is not operating to its optimum performance, a deficiency has been encountered, or that an improvement to the equipment would allow it to be easier to operate and maintain.*
- ***BLM -*** *To help identify items found deficient or in need of improvement an Improvement/Report of Deficiency form is available on the Fire Equipment Development Unit web site at http://web.blm.gov/internal/fire/EquipDev/index.htm This deficiency and improvement reporting method will allow for the documentation of the where, what, when, and how the deficiency or improvement was identified and status of its correction or implementation. It will also allow the BLM to monitor fire equipment over the long term and aide in identifying trends.*

Funding Accessories and Upgrades

Any equipment added to a fire engine which is not part of the current agency standard for the vehicle class (supplemental lighting, winches, special painting, radios, etc.) are add-on items and are not funded with WCF funds. The cost of fire engine package modifications and optional equipment, which is not in the current fire engine standard, (including the replacement/modification of equipment provided with the vehicle), is the responsibility of the state/region or local office.

Valid/Invalid Expenditures of WCF Funds

Travel on WCF Funds

- ***BLM -*** *Travel using WCF funds is allowed only for NIFC Fire Equipment Development Unit and National Business Center personnel attending pre-work conferences, serving as contracting officers, contracting officer representatives, or project inspectors on fire vehicle related contracts, and for other personnel associated with the delivery of a new fire engine or support vehicle.*
- ***NPS -*** *Travel using WCF funding is allowed only for Fire Management Program Center and Accounting Operation Center staff attending pre-work conferences, serving as contracting officers or project inspectors on fire equipment related contracts. The WCF program also provides travel funding for park fire personnel to transport new fire equipment back their respective parks. WCF funds will not be used to transport new equipment back to parks commercially except under extenuating circumstances. Retrieval of new fire vehicles should* be *done by park fire individuals so as to obtain a through briefing of the operational features of that vehicle by the manufacturers.*

Vehicle Repairs, Maintenance

- ***BLM -*** *The costs of routine maintenance and repairs may be charged to the WCF. Repairs necessitated by fire operations must be charged to the benefiting activity.*
- ***NPS -*** *The cost of WCF vehicle repairs and maintenance is the responsibility of the individual parks.*

Mid-Cycle Maintenance

- ***BLM -*** *Mid-cycle maintenance on fire engines may be required to help ensure that the vehicles reliability, integrity, safety, and cosmetic value are up to minimum standards. It is known that some wear and tear cannot be resolved through a regular maintenance schedule; and it is necessary to perform special maintenance on the vehicle. These costs are chargeable to the WCF but, before this mid-life maintenance can be initiated, required repairs must be identified. Estimates of the maintenance and repair cost must be completed prior to having the work completed. A copy of the*

estimate and approval shall be forwarded to the Fire Equipment Development Unit at NIFC so it can be placed in the vehicles history file.

- ***BLM -*** *Mid-cycle maintenance does not include the cost of any item that should have been corrected at the time the damage occurred or repairs to equipment, which was not standard at the time of original purchase. Mid-cycle maintenance costs must not exceed 10% of the original acquisition cost of the vehicle without approval from the BLM Fleet Manager in coordination with the NIFC Fire Equipment Development Unit.*

Fixed Ownership Rates (FOR's)

These are the fees that are charged for each hour of operation for each fire vehicle in service. These fees continue to accumulate over the life of a vehicle, and are used to replace each vehicle at the end of its life cycle. The FOR is adjusted annually by the WCF manager to reflect changes in replacement costs due to inflation and/or changes in performance.

Use Rates

- ***BLM -*** *Use rates are independent of the FOR rates, and are adjusted annually to reflect all WCF costs associated with the administration, delivery, maintenance, and repair of vehicles in each vehicle class. These use rates may vary significantly from year to year, particularly in those vehicle classes which have low number of vehicles. (To aid in keeping these rates low, where possible, benefiting activities should be responsible and charged for any non-routine repairs and maintenance.)*

Fire Equipment Committees

- ***BLM -*** *BLM National Fire Equipment Committee. The committee consists of the national chairperson, state equipment committee chairpersons (or designated representatives), a national office representative, Fire Equipment Development Unit supervisor, and National Business Center (NBC) equipment management specialist. Meetings are scheduled twice a year. Agenda items and topics aresolicited from the national office and states. Formal meeting minutes containing findings and equipment recommendations are distribute for review prior to adoption.*
- ***BLM -*** *BLM State/Geographic Area Fire Equipment Committees. Each state/geographic area should maintain a fire equipment committee which provides the following:*
  - *Establishes, coordinates, and standardizes internal (state) fire equipment management practices.*
  - *Identifies equipment needs, deficiencies and develops proposals for presentation to the BLM National Equipment Committee.*
  - *Provides a representative to the National Equipment Committee to present the states equipment requirements, improvements, and deficiencies.*
- ***NPS -*** *The NPS equipment committee meets twice yearly to identify equipment problems, needs, and NPS standards. This committee is*

comprised of engine foremen (captains), fire management officers, and representation from the Fire Use Modules. The permanent chairperson is the Fire Equipment and Facilities Specialist at the Fire Management Program Center.

Property Transfer/Replacement

- ***BLM –*** *Surplus - early turn-ins, and transfer fire vehicles may be transferred to another area for continued service with the approval of the State Director and BLM Fleet Manager. In these instances, the vehicle remains in the same class, and the FOR and use rates will continue to be charged to the unit acquiring the vehicle. Field Offices wishing to dispose of fire engine equipment prior to the normal replacement date may do so. In these instances, no future replacement is automatically provided and there is no accrued credit from the FOR collected on that unit prior to disposal. Field offices acquiring this type of equipment continue payment of the FOR and use rates.*
- ***BLM -*** *Replacements - Vehicles are replaced when they have met utilization replacement standards determined by hours or miles of use for each WCF vehicles class. If a vehicle must be replaced before it has met the replacement standard, the benefiting activity must fund the difference between the revenue collected by the WCF to replace the vehicle and cost of the replacement vehicle.*
- ***BLM -*** *Conversions - Offices in possession of fire engine equipment due for replacement have the option of replacing that equipment with vehicle(s) of another class. The change in NUS must be consistent with the approved FMP (conversion of two light engines to one heavy engine). State Director and Property Manager approval and sufficient contributions through the FOR or other funds to make up any difference in cost are required.*
- ***NPS -*** *Surplus vehicles for NPS will be excessed through the BLM Working Capital Fund Program. An SF-126 form will be submitted to the NPS Fire Equipment and Facilities Specialist upon receipt of new vehicle. After review, the form will be transferred to BLM. BLM will manage the disposal of all surplused WCF equipment. Residual value of sold excessed fire vehicles is returned back into the NPS WCF. Parks should not excess WCF fire equipment through normal GSA channels.*

Fitness Equipment and Facilities

- ***NPS -*** *BDO-57 Occupational Medical Standards, Health and Fitness defines the minimum equipment needed to meet physical fitness goals. The following guidance will be used to specifically determine FIREPRO allocations for equipment purchase:*
- ***NPS -*** *The FIREPRO funding allocation will represent the percentage of mandatory fitness participants in a park. For example, park AX may have 20 total mandatory fitness participants in its health and fitness program, five (5) of whom are wildland firefighters. FIREPRO would pay 25 percent of the cost of equipment purchase.*

- ***NPS -*** *The regional fire management officer's approval is required for any anticipated purchases requiring FIREPRO contributions in excess of $1,200.*
- ***NPS -*** *Where all of a park's mandatory fitness participants are wildland firefighters; FIREPRO will fund up to a maximum of $1,200 per park for equipment purchase. The regional fire management officer's approval is required for purchases in excess of that amount.*
- ***NPS -*** *DO-57 indicates that health club costs must be borne by park management for mandatory fitness participants. However, in-park exercise facility development is the preferred option. Where this is not possible, health club costs, not to exceed $360 per year, may be paid from FIREPRO funds for each wildland firefighter mandatory program participant. Approval from the regional fire management officer is required for annual fees that exceed $360.*

Wildland Fire Uniform Standards

- ***NPS -*** *The Servicewide Uniform Program Guideline (DO-43) sets forth the Servicewide policies and associated legal mandates for wearing the National Park Service (NPS) uniform and for authorizing allowances to employees.*
- ***NPS -*** *The guideline states that superintendents administer the uniform program within their areas, and are responsible for developing and communicating local uniform and appearance standards in accordance with DO-43, determining who will wear the uniform and what uniform will be worn, and enforcing uniform and appearance standards. Three options exist for uniforms for wildland fire personnel:*
  - ***NPS -*** *Within the context of the uniform standards, if the conventional NPS uniform is identified at the local level as required for specified fire management staff, FIREPRO program management funds may be used to support uniform purchases in accordance with allowance limits identified in DO-43.*
  - ***NPS -*** *While Nomex outerwear (i.e., shirts, trousers, brush-coats), routinely issued as personal protective equipment, has become recognized as the uniform of the wildland firefighter as a matter of necessity, these apparel also have justifiable utility as a uniform standard at the park level for certain FIREPRO and/or ONPS base-funded wildland fire staff.*
  - ***NPS -*** *When the conventional NPS uniform or the full Nomex outerwear is not appropriate or justified, local management with park superintendent approval may establish a predetermined dress code for fire staff. The goals of the NPS uniform program can appropriately be applied (with common sense) to this departure from the norm.*
- ***NPS -*** *Where appropriate and justified, FIREPRO funds may be applied to the purchase of 100 percent cotton tee shirts and sweatshirts, and ball caps, with appropriate logo and color scheme, to augment the Nomex*

outerwear worn in conjunction with project or wildland fire management incidents. Nomex outerwear will usually be returned to the park's fire cache based on the tour of duty (end of season, transfer to another park, etc.).

- ***NPS -*** *The fire management officer is responsible for establishing a reasonable allotment schedule for new or returning employees, commensurate with supplies provided in previous seasons. A suggested per person issuance is three to four tee shirts, one ball cap, and one sweatshirt (where appropriate). $75 would normally be adequate to cover costs of this issuance.*
- ***NPS -*** *Just as with uniform allowance discussed in DO-43, the intent of FIREPRO-funded purchases is to defray the cost of the appropriate apparel, not necessarily to cover the cost of all items. This will not only be factored into the quantities deemed necessary for the individual, but would also preclude FIREPRO-funded purchases of fleece jackets, rain gear, and other personal items generally considered the responsibility of those employees not covered by the NPS uniform program.*

Fire Management Credentials

- ***NPS -*** *Official fire management credentials, with numbered badge, can be obtained by approved permanent or permanent less-than-full-time NPS employees. These credentials will be utilized for identification purposes only and will not be worn with the official NPS uniform or otherwise conflict with DO-43. Lost or stolen credentials, as government property, should be entered into NCIC for confiscation and return when found.*

Professional Liability Insurance

With the passage of Public Law 106-58, agencies are now required to pay up to 50% (no more than $150) of the annual professional liability insurance premiums for qualified supervisors, management officials, and law enforcement officers who choose to purchase this insurance. Fire Management personnel may fall within the qualified supervisors and management official's categories. Refer to agency specific policies.

- ***NPS -*** *December 14, 1999 memorandum from the Associate Director, Administration to Regional Directors [P34 (2653)] transmitted the NPS policy on these reimbursements and should be referred to for qualifications and reimbursement criteria.*

Chapter 07
Safety

Policy

Firefighter and public safety is our first priority. All Fire Management Plans and activities must reflect this commitment. The commitment to and accountability for safety is a joint responsibility of all firefighters, managers, and administrators. Individuals must be responsible for their own performance and accountability.

Every supervisor, employee, and volunteer is responsible for following safe work practices and procedures, as well as identifying and reporting unsafe conditions.

All firefighters, fireline supervisors, fire managers, and agency administrators have the responsibility to ensure compliance with established safe firefighting practices.

Agency Specific Safety Policy Guides:

- ***BLM -*** *BLM Handbook 1112-1, 1112-2*
- ***FWS -*** *Service Manual 241 FW7, Firefighting*
- ***NPS -*** *DO-50 and RM-50 Loss Control Management Guideline*
- ***FS -*** *FSH-6709.11 Health and Safety Code Handbook*

Goal

The goal of the fire safety program is to provide direction and guidance for safe and effective management in all activities. Safety is the responsibility of everyone assigned to wildland fire, and must be practiced at all operational levels from the national fire director, state/regional director, and unit manger - to employees in the field. Agency administrators need to stress that firefighter and public safety always takes precedence over property and resource loss. Coordination between the fire management staff and unit safety officer(s) is essential in achieving this objective. For additional safety guidance and reference refer to:

- *Fireline Handbook (PMS 410-1, NFES 0065).*
- *Incident Response Pocket Guide (PMS 461, NFES 1077).*
- *Wildland Firefighter Health & Safety Report (Annual MTDC Publication).*
- *National Interagency Mobilization Guide (NFES 2092).*

Risk Management Process

The Risk Management Process identified in the *NWCG Incident Response Pocket Guide (IRPG)* helps ensure that critical factors and risks associated with fireline operations are considered during decision making. This process enhances safety practices when applied to fire operations prior to taking action. The Risk Management Process is found on the inside of the back cover of this document.

Job Hazard Analysis (JHA)

A completed Job Hazard Analysis is required for:

- Jobs or work practices that have potential hazards.
- New, non-routine, or hazardous tasks to be performed where potential hazards exist.
- Jobs that may require the employee to use non-standard personal protective equipment (PPE).
- Changes in equipment, work environment, conditions, policies, or materials.
- Supervisors and appropriate line managers must ensure that established JHAs are reviewed and signed prior to any non-routine task or at the beginning of the fire season. Additional JHA information can also be obtained at: http://www.fs.fed.us/r1/people/jha/jha_index_www.html.
- ***BLM*** *- A risk assessment (in lieu of JHA) must be completed for all non-suppression work practices/projects that have potential hazards.*

Work/Rest

To assist in mitigating fatigue, days off are allowed during and after assignments. If necessary to reduce fatigue, the Type 1 or 2 Incident Commander (IC) or agency administrator (AA) (incident host or home unit) may provide time off supplementary to mandatory days off requirements. For Type 3-5 incidents, paid days off should be rare exceptions. However, if necessary, the agency administrator (incident host or home unit) may authorize day(s) off with pay.

The IC or AA authority to grant a day off with pay lies within 5 U.S.C. 6104, 5 CFR 610.301-306, and 56 Comp. Gen. Decision 393 (1977).

- Plan for and ensure that all personnel are provided a minimum 2:1 work to rest ratio (for every 2 hours of work or travel, provide 1 hour of sleep and/or rest).
- Work shifts that exceed 16 hours and/or consecutive days that do not meet the 2:1 work/rest ratio should be the exception, and no work shift should exceed 24 hours. However, in situations where this does occur (for example, initial attack), incident management personnel will resume 2:1 work/rest ratio as quickly as possible.
- The Incident Commander or agency administrator must justify work shifts that exceed 16 hours and those that do not meet 2:1 work to rest ratio.

Justification will be documented in the daily incident records. Documentation shall include mitigation measures used to reduce fatigue.

- The Time Officer's/Unit Leader's approval of the Emergency Firefighter Time Report (OF-288), or other agency pay document, certifies that the required documentation is on file and no further documentation is required for pay purposes.

The work/rest guidelines do not apply to aircraft pilots assigned to an incident. Pilots must abide by applicable Federal Aviation Administration (FAA) guidelines, or agency policy if more restrictive.

Length of Assignment

Assignment Definition

An assignment is defined as the time period (days) between the first full operational period at the first incident or reporting location on the original resource order and commencement of return travel to the home unit.

Length of Assignment

Standard assignment length is 14 days, exclusive of travel from and to home unit, with possible extensions identified below. Time spent in staging and preposition status counts toward the 14-day limit, regardless of pay status, for all personnel, including Incident Management Teams.

Days Off

After completion of a 14 day assignment and return to the home unit, two mandatory days off will be provided (2 after 14). Days off must occur on the calendar days immediately following the return travel in order to be charged to the incident. (See Section 12.1-2) (5 U.S.C. 6104, 5 CFR 610.301-306, and 56 Comp. Gen. Decision 393 (1977). If the next day(s) upon return from an incident is/are a regular work day(s), a paid day(s) off will be authorized. Regulations may preclude authorizing this for non-NWCG and state/local employees.

Pay entitlement, including administrative leave, for a paid day(s) off cannot be authorized on the individual's regular day(s) off at their home unit. Agencies will apply holiday pay regulations, as appropriate. A paid day off is recorded on home unit time records according to agency requirements. Casuals (AD) are not entitled to paid day(s) off upon release from the incident or at their point of hire.

Contract resources are not entitled to paid day(s) off upon release from the incident or at their point of hire.

Home unit agency administrators may authorize additional day(s) off with compensation to further mitigate fatigue. If authorized, home unit program funds will be used.

All length of assignment rules apply to aviation resources, including aircraft pilots, notwithstanding the FAA and Agency day off regulations.

Assignment Extension

Prior to assigning incident personnel to back-to-back assignments, their health, readiness, and capability must be considered. The health and safety of incident personnel and resources will not be compromised under any circumstance.

- Assignments may be extended when:
  - life and property are imminently threatened,
  - suppression objectives are close to being met,
  - a military battalion is assigned,
  - replacement resources are unavailable, or have not yet arrived.

Upon completion of the standard 14 day assignment, an extension of up to an additional 14 days may be allowed (for a total of up to 30 days, inclusive of mandatory days off, and exclusive of travel). Regardless of extension duration, two mandatory days off will be provided prior to the 22nd day of the assignment.

Contracts and Emergency Equipment Rental Agreements (EERA) should be reviewed for appropriate pay requirements and length of assignment. If the contract or EERA do not address this, the incident Finance/Administration Section Chief or the procurement official should be consulted as to whether compensation for a day off is appropriate.

Single Resource/Kind Extensions

The Section Chief or Incident Commander will identify the need for assignment extension and will obtain the affected resource's concurrence. The Section Chief and affected resource will acquire and document the home unit supervisor's approval.

The Incident Commander approves the extension. If a convened geographic or national multi-agency coordinating group (GMAC/NMAC) directs, the Incident Commander approves only after GMAC/NMAC concurrence.

If the potential exists for reassignment to another incident during the extension, the home unit supervisor and affected resource will be advised and must concur prior to reassignment.

Incident Management Team Extensions

Incident management team extensions are to be negotiated between the incident Agency administrator, the Incident Commander, and the GMAC/NMAC (if directed).

Upon release from the assignment, regardless of extension duration, two mandatory days off will be provided immediately following the return to the

home unit, and are chargeable to the incident. (See above for compensation and days off guidelines).

Management Directed Days Off at Home Unit

Supervisors must manage work schedules for initial attack, dispatch and incident support personnel during extended incident situations. During periods of non-routine or extended activity, these employees will have a minimum of 1 day off in any 21-day period.

Driving Standard

All employees driving motor vehicles are responsible for the proper care, operation, maintenance and protection of the vehicle. The use of government-owned, rented, or leased motor vehicles is for official business only. Unauthorized use is prohibited.

General Driving Policy

- Employees must have a valid state driver's license in their possession for the appropriate vehicle class before operating the vehicle. Operating a government-owned or rental vehicle without a valid state driver's license could result in disciplinary action.
- All drivers whose job duties require the use of a motor vehicle will receive initial defensive driver training within three months of entering on duty and refresher driver training every three years thereafter.
- The operator and all passengers are required to wear seat belts and obey all federal and state laws.
- All traffic violations or parking tickets will be the operator's responsibility.
- All driving requiring a CDL will be performed in accordance with applicable Department of Transportation regulations.
- ***BLM -*** *All employees operating a Government motor vehicle will be required to submit Form DI-131 (Application for U.S. Government Motor Vehicle Operator's Identification Card) and OF-345 (Physical Fitness Inquiry for Motor Vehicle Operators). When the supervisor signs the DI-131, the employee is authorized to operate Government-owned or leased vehicles, or privately-owned vehicles on official business. Individual office forms equivalent to the OF-345 and DI-131 are acceptable.*
- ***BLM -*** *Employees operating any motor vehicle with a GVWR of 26,000 pounds or more, towing a vehicle 10,000 pounds GVWR or more, hauling hazardous material requiring the vehicle to be placarded, or transporting, 16 or more persons, including the driver, must possess a valid Commercial Drivers License (CDL) with all applicable endorsements.*
- ***BLM -*** *Seat belts must be available and used in Bureau motor vehicles. Without exception, seat belts must be worn at all times by motor vehicle operators and passengers, regardless of the distance to be traveled or the time involved. If any employee fails to fasten their seat belt while riding in*

a vehicle on official business, they are subject to disciplinary action as determined by local management.

- ***FS -*** *Policy requires all operators of government owned, or leased vehicles to have a Forest Service issued identification card indicating the type of vehicles or equipment the holder is authorized and qualified to operate.*
- ***BLM/FWS/NPS -*** *The DOI has granted wildland fire agencies a waiver to allow employees between the ages of 18 and 21 to operate agency commercial fire vehicles using a state issued CDL under the specific conditions as stated below:*
  - Drivers with a CDL may only drive within the state that has issued the CDL and must comply with the state's special requirements and endorsements.
  - These drivers must only drive vehicles that are equipped with visible and audible signals, and are easily recognized as fire fighting equipment. This excludes, but is not limited to, school buses used for crew transport and "low-boy" tractor trailers used for construction equipment transport.
  - Supervisors must annually establish and document that these drivers have a valid license (i.e. that the license has not been suspended, revoked, canceled, or that the employee has not been otherwise unqualified from holding a license - 485 DM 16.3.B (1), ensure that the employee has the ability to operate the vehicle(s) safely in the operational environment assigned (485 DM 16.3.B (2), and review and validate the employee's driving record (485 DM 16.3.B(4)).
  - Wildland fire driving safety statistics from the Safety Management Information System (SMIS) will be reviewed at the end of the 2007 fire season to determine if there is any reason why the waiver should not become permanent policy.

Non-incident Operations Driving

Refer to the current Driving Standards for each individual agency.

Incident Operations Driving

This policy addresses driving by personnel actively engaged in wildland fire suppression or all-risk activities; including driving while assigned to a specific incident (check-in to check-out) or during initial attack fire response (includes time required to control the fire and travel to a rest location).

- Agency resources assigned to an incident or engaged in initial attack fire response will adhere to the current agency work/rest policy for determining length of duty day.
- No driver will drive more than 10 hours (behind the wheel) within any duty-day.
- Multiple drivers in a single vehicle may drive up to the duty-day limitation provided no driver exceeds the individual driving (behind the wheel) time limitation of 10 hours.

- A driver shall drive only if they have had at least 8 consecutive hours off duty before beginning a shift. Exception to the minimum off-duty hour requirement is allowed when essential to:
  - Accomplish immediate and critical suppression objectives.
  - Address immediate and critical firefighter or public safety issues.
- As stated in the current agency work/rest policy, documentation of mitigation measures used to reduce fatigue is required for drivers who exceed 16 hour work shifts. This is required regardless of whether the driver was still compliant with the 10 hour individual (behind the wheel) driving time limitations.
- ***FWS/NPS -*** *Program funds are authorized to pay for the cost of CDL licensing fees and exams, necessary for employees to operate fire equipment, with one exception. That exception involves those cases where a test has been failed and must be retaken, in which case the employee will be responsible for costs associated with additional testing.*

Fire Vehicle Operation Standards

Operators of all vehicles must abide by state traffic regulations. Operation of all vehicles will be conducted within the limits specified by the manufacturer. Limitations based on tire maximum speed ratings and Gross Vehicle Weight restrictions must be followed. It is the vehicle operator's responsibility to ensure vehicles abide by these and any other limitations specified by agency or state regulations.

Headlights and taillights will be illuminated at all times while the vehicle is in motion. Emergency lighting will not be used except when performing suppression or prescribed fire operations, or to mitigate serious safety hazards. Overhead lighting and other emergency lighting must meet state code requirements, and will be illuminated whenever the visibility is reduced to less than 300 feet. Blue lights are not acceptable for wildland fire operations.

Personal Protective Equipment (PPE)

All personnel are required to use Personal Protective Equipment (PPE) appropriate for their duties and/or as identified in JHAs. Employees must be trained to use safety equipment effectively. PPE devices will be used only when equipment guards, engineering controls, or management control do not adequately protect employees.

- ***NPS -*** *No required personal protective equipment will be purchased that does not meet or exceed USDA-Forest Service or National Fire Protection Association Standards.*

Required Fireline PPE includes:

- 8-inch high, lace-type exterior leather work boots with non-slip, Vibram-type, melt-resistant soles. The 8-inch height requirement is measured from the bottom of the heel to the top of the boot. Alaska is exempt from the

Vibram-type sole requirement. All boots that meet the footwear standard as described above are authorized for firefighting.

- fire shelter
- hard hat with chinstrap
- goggles/safety glasses
- ear plugs/hearing protection
- yellow aramid shirts
- aramid trousers
- leather gloves
- Wear additional PPE as identified by local conditions, material safety data sheet (MSDS), or JHA.

Permanent-press materials are not to be worn, as they melt and stick to the skin when exposed to flame or heat. Because most synthetic fibers melt when exposed to flame or extreme radiant heat, personnel should wear only undergarments made of 100 percent cotton or wool, aramid, or other fire resistant materials.

Aramid clothing should be cleaned or replaced whenever soiled, especially when soiled with petroleum products. Aramid clothing will be replaced when the fabric is so worn as to reduce the protection capability of the garment or is so faded as to significantly reduce the desired visibility qualities. Any modification to personal protective equipment that reduces the fire protection capability such as iron-on logos, and stagging of pants, is an unacceptable practice and will not be allowed on fires.

Head Protection

Personnel must be equipped with hard hats and wear them at all times while on the fireline. Hard hats must be equipped with a chinstrap, which must be fastened while riding in, or in the vicinity of, helicopters.

Acceptable helmets for fireline use are "Helmet, Safety, Plastic" (NFES #0109, NSN 8415-01-055-2265) listed in NWCG *National Fire Equipment System Catalog: Fire Supplies and Equipment*, or equivalent helmets meeting the National Fire Protection Association (NFPA) Standard 1977, *Standard on Protective Clothing and Equipment for use in Wildland Firefighting* and American National Standards Institute (ANSI) Z89.1-1986.

Hard hats consist of two components - the shell and the suspension - which work together as a system. Both components require periodic inspection and maintenance. Specific inspection and maintenance instructions are found in Missoula Technology and Development Center (MTDC) Tech Tip publication, *Your Hardhat: Inspection and Maintenance* (0267-2331-MTDC).

Eye and Face Protection

The following positions require the wearing of eye protection:

- nozzle operator
- chainsaw operator/faller
- helibase and ramp personnel
- retardant mixing crews
- other duties may require eye protection as identified in a specific JHA.

In addition to goggles full face protection in the form of a face shield in compliance with ANSI Z87.1 shall be worn when working in any position where face protection has been identified as required in the job specific JHA/risk assessment: Terra-Torch®, power sharpener operators, etc.

Hearing Protection

Personnel who are exposed to a noise level in excess of 85db must be provided with, and wear, hearing protection. This includes, but is not limited to:

- chainsaw operators/fallers
- pump operators
- helibase and aircraft ramp personnel
- retardant mixing personnel
- any other personnel exposed on a regular basis to damaging noise levels.

Other duties may require hearing protection as identified in a specific JHA.

Employees with a time weighted average exposure of 85 db or higher are required to be placed under a hearing conservation program as required by *29 CFR 1910.9.* Consult with local safety & health personnel for specifics.

Neck Protection

Face and neck shrouds are not required PPE. However, if used, face and neck shrouds shall meet the requirements of FS specification 5100-601 or *NFPA 1977 Standard on Protective Clothing and Equipment for Wildland Fire Fighting, 1998 ed*.

Shrouds should not routinely worn throughout the operational period, due to increases in physiological heat stress.

Leg Protection

All chainsaw operators will wear chainsaw chaps meeting the FS 6170-4 specification. Chainsaw chaps shall be maintained in accordance with MTDC Publication, *Inspecting and Repairing Your Chainsaw Chaps User Instructions* (0567-2816-MTDC).

Foot Protection

Personnel assigned to fires must wear 8-inch high, lace-type exterior leather work boots with non-slip, Vibram-type, melt-resistant soles. The 8-inch height requirement is measured from the bottom of the heel to the top of the boot. Alaska is exempt from the Vibram-type sole requirement. All boots that meet the footwear standard as described above are authorized for firefighting.

The boots are a condition of employment for firefighting positions and are purchased by the employee prior to employment.

- ***FWS -*** *Red carded fireline permanent, temporary and seasonal Fish and Wildlife personnel will be provided with these boots from station funds not more often than every three years. Emergency or casual firefighters will provide their own boots. Some refuge situations may require special footwear such as waders, hip boots, snake boots, etc.*
- ***NPS -*** *Government funds will be utilized for purchase of wildland fire boots for those employees currently red carded/certified in positions which require wildland and prescribed fireline duties. The individual employee must be available to perform those duties when assigned; if not routinely available for park fire assignments, FIREPRO funds should not be used to purchase boots for that employee.*
- ***NPS -*** *FIREPRO funds, not to exceed $100 a pair, may be used to purchase or repair boots. Other government funds, such as from safety, protection or maintenance accounts, may also be used for purchase or to augment FIREPRO funds, dependent on local management direction. Costs to repair boots not damaged on fire should be charged to other appropriate accounts.*
- ***NPS -*** *It is the responsibility of the local FMO to determine those employees requiring boots as personal protective equipment, and the frequency of necessary replacement or repair. Boots will be considered similar to uniform items and will not be subject to cache item return, due to health, sanitation, and individual sizing considerations.*

Respiratory Protection

The use of respiratory protection (e.g., dust masks, half-mask respirators) must be in compliance with agency safety and health regulations and *OSHA's Respiratory Protection Standard 29 CFR 1910.134*.

- ***BLM/FWS/NPS -*** *Managers and supervisors will not knowingly place wildland firefighters in positions where exposure to noxious gases or chemicals would require the use of self-contained breathing apparatus.*
- ***FS - FSM - 5135.3 - Self-Contained Breathing Apparatus -*** *Wildland firefighters may use only an open-circuit, self-contained breathing apparatus (SCBA) of the positive pressure type when smoke from vehicle, dump, structure, or other non-wildland 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.*

- ***FS -*** *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 1910.134I, and 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 and FSM 5130.3.*

Fire Shelters

Fire shelters will be issued and carried in a readily accessible manner by all line personnel. Fire shelters will be inspected regularly, to ensure they meet agency and manufacturer standards. New Generation fire shelters will replace existing stock of old fire shelters by the end of calendar year 2008 for all federal wildland firefighters and by the end of calendar year 2009 for all other firefighters. Training in the deployment of new generation fire shelters will be provided prior to issuance.

Training Shelters will be deployed at required Annual Fireline Safety Refresher Training. No live fire exercises for the purpose of fire shelter deployment training will be conducted.

The deployment of shelters is to be viewed as a last resort, and will not be used as a tactical tool. Supervisors and firefighters must never rely on fire shelters instead of using well-defined escape routes and safety zones. When deployed on a fire, fire shelters will be left in place and not be removed pending approval of authorized investigators.

Specialized or Non Standard PPE

Specialized Personal Protective Equipment not routinely supplied by the agency required to perform a task safely must be ordered in accordance with agency direction.

A JHA/risk assessment must be completed and reviewed by the Unit Safety Officer and the supervisor's approval is required. Items must meet agency and industry standards for specific intended use. Cold weather flame resistant outer wear shall be in compliance with NFPA 1977, *Standard on Protective Clothing and Equipment for Wildland Firefighting*. All cold weather inner wear should be composed of 100% cotton/wool, or of aramid and other flame resistant materials.

Fireline Safety

Incident Briefings

Fire managers must ensure that safety briefings are occurring throughout the fire organization, and that safety factors are addressed through the IC and communicated to all incident personnel at operational briefings. The

identification and location of escape routes and safety zones must be stressed. A briefing checklist can be found in the *Incident Response Pocket Guide (IRPG).*

LCES - A System for Operational Safety

LCES will be used in all operational briefings and tactical operations as per the *Incident Response Pocket Guide (IRPG)*.

- L - Lookout(s)
- C - Communication(s)
- E - Escape Route(s)
- S - Safety Zone(s)

Incident Safety Oversight

Agency administrators must be actively involved in the management of wildland fires, and personally visit an appropriate number of escaped fires each year. Fire and aviation management staff can provide the appropriate PPE and guidance.

- ***FS -*** *Agency administrators, Fire Program Managers, and/or Safety and Health Program Managers shall conduct after action reviews on all type 3 fires and a minimum of 10% of their unit's Type 4, and 5 fires and document their inspections in the incident records.*

Incident Commanders are responsible for personnel safety. Additional safety oversight may be requested when:

- A fire escapes initial attack or when extended attack is probable.
- There is complex or critical fire behavior.
- There is a complex air operation.
- The fire is in an urban intermix/interface.

Every individual has the right to turn down unsafe assignments. When an individual feels an assignment is unsafe they also have the obligation to identify, to the degree possible, safety alternatives for completing that assignment. The *IRPG* contains process for *How to Properly Refuse Risk*.

Unit/Area Closures

Threats to public safety may require temporary closure of a unit/area, or a portion of it. When a fire threatens escape from the unit/area, adjacent authorities must be given as much advance notice as possible in order to achieve orderly evacuation.

Standard Safety Flagging

The NWCG recommends the following Safety Zone/Escape Route flagging for wildland fire activities:

- Hot-pink flagging marked "Escape Route" (NFES 0566). Crews with colorblind members may wish to carry and utilize XXX fluorescent chartreuse flagging (NFES #2396).
- Hazards. Yellow with black diagonal stripes, 1 inch wide (NFES 0267).

If the above recommendation is not utilized on an incident, the incident will need to identify the selected color and it make known to all firefighters.

Unexploded Ordnance (UXO)

General guidance is as follows: If UXO is suspected, do not enter the area. Small arms (rifle and shotgun) munitions areas should be flagged and avoided by fire personnel. For suspected larger munitions, the area must be avoided by fire personnel and contact local law enforcement bomb squad or nearest Department of Defense agency. Each unit will determine which employees are authorized to enter known or potential hazardous substance release sites, and the responsibility for these determinations remains with each agency administrator. The general rule of UXO is, "if you did not drop it, do not pick it up, kick it or hit it with equipment".

Hazardous Materials

Employees that discover any unauthorized waste dump or spill site that contains indicators of potential hazardous substances (e.g, containers of unknown substances, pools of unidentifiable liquids, piles of unknown solid materials, unusual odors, or any materials out of place or not associated with an authorized activity) should take the following precautions:

- Follow the procedures in the Incident Response Pocket Guide.
- Treat each site as if it contains harmful materials.
- Do not handle, move, or open any container, breathe vapors, or make contact with the material.
- Move a safe distance upwind from the site.
- Contact appropriate personnel. Generally, this is the Hazardous Materials Coordinator for the local office.
- ***BLM/FWS/NPS -*** *Agencies require that all field personnel complete a First Responder Awareness training. Firefighters are required to take an annual refresher for Hazardous Material protocol.*

The following general safety rules shall be observed when working with chemicals:

- Read and understand the Material Safety Data Sheets.
- Keep the work area clean and orderly.
- Use the necessary safety equipment.
- Label every container with the identity of its contents and appropriate hazard warnings.
- Store incompatible chemicals in separate areas.
- Substitute less toxic materials whenever possible.
- Limit the volume of volatile or flammable material to the minimum needed for short operation periods.
- Provide means of containing the material if equipment or containers should break or spill their contents.

Heat Stress

There are three forms of heat stress. The mildest is heat cramps. Heat stress can progress to heat exhaustion and eventually heat stroke. Heat stroke is a medical emergency. Delayed treatment can result in brain damage and even death. At the first sign of heat stress, stop work, get into the shade, and begin drinking fluid. *See Chapter 05 of Fitness and Work Capacity, 2nd ed. (1997).*

Smoke and Carbon Monoxide

For information of this subject call USDA Forest Service, Technology and Development Program, Publications, (406) 329-3978, and ask for *Health Hazards of Smoke, Recommendations of the Consensus Conference, April 1997 (item Number 97512836).* Copies are available free of charge in limited numbers.

Six Minutes for Safety Training

It is recommended that daily "Six Minutes for Safety" training be conducted that focuses on high-risk, low frequency activities that fire personnel may encounter during a fire season. A daily national "Six Minutes for Safety" briefing can be found at http://www.nifc.gov/sixminutes/dsp_sixminutes.php and in the National Situation Report.

Safety for Non-Operational Personnel Visiting Fires

A wide variety of personnel such as agency administrators, other agency personnel, dignitaries, members of the news media, etc may visit incidents. The following standards apply to all visitors.

Visits to an Incident Base

The minimum recommendation for PPE at an incident base is the same as all field locations.

- Lace-up shoes with non-slip soles and heels
- Long trousers
- Long-sleeve shirt
- For agency personnel, the field uniform is appropriate; however for more flexibility the aramid fire shirts and trousers or flight suit may be worn.
- ***BLM -*** *Refer to BLM Handbook 1112-2, 3.3 BLM requires 6" shoes.*

Visits to the Fireline

Visits to the fireline must have the approval of the IC.

- Visitors must maintain communications with the DIVS or appropriate fireline supervisor of the area they are visiting.
- Required PPE:
  - 8-inch high, lace-type exterior leather work boots with non-slip, Vibram-type, melt-resistant soles. The 8-inch height requirement is measured from the bottom of the heel to the top of the boot. Alaska is exempt from the Vibram-type sole requirement. All boots that

meet the footwear standard as described above are authorized for firefighting.
  - Yellow aramid shirts
  - aramid trousers
  - hard hat with chinstrap
  - leather gloves
  - fire shelter
- Required equipment/supplies:
  - hand tool
  - water canteen

Visitors to the Fireline may be "Escorted" or "Non-Escorted" depending on the following requirements:

Non-Escorted Visits

- Visitors must have a minimum physical fitness level of "light".
  - Must have adequate communications and radio training.
  - Completed the following training:
    - Introduction to Fire Behavior (S-190)
    - Firefighter Training (S-130)
    - Annual Fireline Safety Refresher Training.
  - Deviation from this requirement must be approved by the IC for other non-escorted support personnel involved in vehicle operations or other support functions on established roadways and working in areas which pose no fire behavior threat.
- ***BLM/FWS*** *- Law Enforcement physical fitness standard is accepted as equivalent to a "light" WCT work category.*

Escorted Visits

All non-incident, non-agency, visitors lacking the above training and physical requirements must be escorted while on the fireline.

- Visitors must receive training in the proper use of PPE.
- Requirement for handtool and water to be determined by escort.
- Visitors must be able to walk in mountainous terrain and be in good physical condition with no known limiting conditions.
- Escorts must be minimally qualified at the Single Resource Boss. Any deviation from this requirement must be approved by the IC.

Helicopter Observation Flights

Visitors who take helicopter flights to observe fires must receive a passenger briefing and meet the following requirements:

- **Required PPE:**
  - Flight helmet
  - Leather boots
  - Fire-resistant clothing

- All leather or leather and aramid gloves

Occasional passengers/visitors have no training requirement, but a qualified flight manager must supervise loading and unloading of passengers.

Fixed-Wing Observation Flights

- **Required PPE**
  - No PPE is required for visitors and agency personnel who take fixed-wing flights to observe fires. However, a passenger briefing is required, and the flight level must not drop below 500 feet AGL.

SAFENET

SAFENET is a form, process, and method for reporting and resolving safety concerns encountered in any aspect (e.g., preparedness, training, etc.) of wildland fire or all risk incident management. The information provided on the form will provide important, safety-related data to the National Interagency Fire Center, and determine long-term trends and problem areas.

The objectives of the form and process are:

- To provide immediate reporting and correction of unsafe situations or close calls in wildland fire.
- To provide a means of sharing safety information throughout the fire community.
- To provide long-term data that will assist in identifying trends.
- Primarily intended for wildland and prescribed fire situations, however, SAFENET can be used for training and all-risk events.

Individuals who observe or who are involved in an unsafe situation shall initiate corrective actions if possible, and then report the occurrence using SAFENET. You are encouraged, but not required, to put your name on the report. Prompt replies to the originator (if name provided), timely action to correct the problem, and discussion of filed SAFENETs at local level meetings encourage program participation and active reporting.

SAFENET is not the only way to correct a safety-related concern and it does not replace accident reporting or any other valid agency reporting method. It is an efficient way to report a safety concern. It is also a way for front line firefighters to be involved in the daily job of being safe and keeping others safe, by documenting and helping to resolve safety issues. SAFENETs may be filed:

- electronically at http://safenet.nifc.gov
- postage paid mail-in form (PMS 405-2, NFES 2633)
- verbally by telephone at 1-888-670-3938.

Accident/Injury Reporting

The Occupational Safety and Health Administration (OSHA) mandate that all accidents and injuries be reported in a timely manner. This is important for the following reasons:

- To protect and compensate employees for incidents that occur on-the-job.
- To assist supervisors and safety managers in taking corrective actions and establish safer work procedures.
- To determine if administrative controls or personal protective equipment are needed to prevent a future incident of the same or similar type.
- To provide a means for trend analysis.

Employees are required to immediately report to their supervisor every job-related accident or incident. Managers and supervisors shall ensure that an appropriate level of investigation is conducted for each incident and record all personal injuries and property damage. Coordinate with your human resources office or administrative personnel to complete appropriate Officer of Worker's Compensation (OWCP) forms.

- Reporting is the responsibility of the injured employee's home unit regardless of where the accident or injury occurred.
- DOI employees will report accidents using the Safety Management Information System (SMIS) at www.smis.doi.gov within six working days of the incident.
- Forest Service employees will use the Safety and Health Information Portal System (SHIPS) through the Forest Service Dashboard at https://asp.talx.com/dashboard/usdafs/ within six working days of the incident.

Critical Incident Management

The National Wildfire Coordinating Group has published the *Agency Administrator's Guide to Critical Incident Management (PMS 926, NFES 1356).* The guide is a series of subject-area checklists designed to be reviewed in detail before a critical incident occurs, during the actual management of the incident, and after the incident has taken place. It is a compilation of lessons learned and suggestions that are designed to assist an agency administrator in the management of a critical incident. The guide is not intended to replace local emergency plans or other specific guidance that may be available, but should be used in conjunction with existing SOPs. It is available through the Publications Management System website http://www.nwcg.gov/pms/pubs/PMS926-DRAFT.pdf

Chapter 08
Interagency Coordination & Cooperation

Introduction

Fire management planning, preparedness, prevention, suppression, fire use, restoration and rehabilitation, monitoring, research, and education will be conducted on an interagency basis with the involvement of cooperators and partners. The same capabilities used in wildland fire management will also be used, when appropriate and authorized, on non-fire incidents in the United States and on both wildland fires and non-fire incidents internationally.

National Wildland Fire Cooperative Agreements

USDOI and USDA Interagency Agreement for Fire Management

The objectives of the *Interagency Agreement for Fire Management Between the Bureau of Land Management (BLM), Bureau of Indian Affairs (BIA), National Park Service (NPS), Fish and Wildlife Service (FWS) of the United States Department of the Interior (DOI) and the Forest Service (FS) of the United States Department of Agriculture* are:

- To provide a basis for cooperation among the agencies on all aspects of wildland fire management and as authorized in non-fire emergencies.
- To facilitate the exchange of personnel, equipment (including aircraft), supplies, services, and funds among the agencies.

DOI, USDA, and DOD Interagency Agreement

The purpose of the *Interagency Agreement for the Provision of Temporary Support During Wildland Firefighting Operations among the United States Department of the Interior, the United States Department of Agriculture, and the United States Department of Defense* is

- To establish the general guidelines, terms and conditions under which NIFC will request and DOD will provide temporary support to NIFC in wildland fire emergencies occurring within all 50 States, the District of Columbia, and all U.S. Territories and Possessions, including fires on States and private lands. It is also intended to provide the basis for reimbursement of DOD under the Economy Act.

These and other agreements pertinent to interagency wildland fire management can be found in their entirety in the *National Interagency Mobilization Guide* (NFES #2092).

National Wildland Fire Oversight Structure

Wildland Fire Leadership Council (WFLC)

The Council is a cooperative, interagency organization dedicated to achieving consistent implementation of the goals, actions, and policies in the National Fire Plan and the Federal Wildland Fire Management Policy. The Council provides

leadership and oversight to ensure policy coordination, accountability and effective implementation of the National Fire Plan and the Federal Wildland Fire Management Policy.

The Council consists of the Department of Agriculture's Undersecretary for Natural Resources and the Environment and the Chief of the U.S. Forest Service, the Department of the Interior's Directors of the National Park Service, Fish and Wildlife Service, Bureau of Land Management, the Assistant Secretary of Indian Affairs and the Chief of Staff to the Secretary of the Interior. Staffing the Council will be coordinated by the Department of Agriculture's Office of Fire and Aviation Management and the Department of the Interior's Office of Wildland Fire Coordination.

Office of Wildland Fire Coordination (OWFC)

The Office of Wildland Fire Coordination (OWFC) is a Department of the Interior organization responsible for managing, coordinating and overseeing the Department's wildland fire management programs and policies. They include: smoke management, preparedness, suppression, emergency stabilization and rehabilitation, rural fire assistance, prevention, biomass, hazardous fuels, budget and financial initiatives, and information technology. The OWFC also coordinates with interagency partners including government and non-government groups.

The National Fire and Aviation Executive Board (NFAEB)

The National Fire and Aviation Executive Board (NFAEB) is a self-directed group comprised of the federal agency Fire Directors established to resolve wildland fire management issues common to its members. The board seeks to improve coordination and integration of federal fire and aviation programs, while recognizing individual agency missions. The Board focuses on issues currently impacting wildland fire management and provides a forum for better utilization of fire management resources.

National Wildfire Coordinating Group (NWCG)

The National Wildfire Coordinating Group (NWCG) is made up of the USDA Forest Service (FS); four Department of the Interior agencies: Bureau of Land Management (BLM), National Park Service (NPS), Bureau of Indian Affairs (BIA), and the Fish and Wildlife Service (FWS); and State forestry agencies through the National Association of State Foresters (NASF). The mission of the NWCG is to provide leadership in establishing and maintaining consistent interagency standards and guidelines, qualifications, and communications for wildland fire management. Its goal is to provide more effective execution of each agency's fire management program. The group provides a formalized system to agree upon standards of training, equipment, qualifications, and other operational functions.

Multi-Agency Management and Coordination

National Multi-Agency Coordinating Group

National multi-agency coordination is overseen by the National Multi-Agency Coordination (NMAC) Group, which consists of one representative each from the following agencies: BLM, FWS, NPS, BIA, FS, NASF, and the Federal Emergency Management Agency - United States Fire Administration (FEMA-USFA), who have been delegated authority by their respective agency directors to manage wildland fire operations on a national scale when fire management resource shortages are probable. The delegated authorities include:

- Provide oversight of general business practices between the National Multi-Agency Coordination (NMAC) group and the Geographic Area Multi-Agency Coordination (GMAC) groups.
- Establish priorities among geographic areas.
- Direct, control, allocate and reallocate resources among or between geographic areas to meet NMAC priorities.
- Implement decisions of the NMAC.

Geographic Area Coordinating Groups

Geographic area multi-agency coordination is overseen by GMAC Groups, which are comprised of geographic area (State, Region) lead administrators or fire managers from agencies that have jurisdictional or support responsibilities, or that may be significantly impacted by resource commitments. GMAC responsibilities include:

- Establish priorities for the geographic area.
- Acquire, allocate, and reallocate resources.
- Issue coordinated and collective situation status reports.

Sub-Geographic/Local Area Multi-Agency Coordinating Groups

Sub-geographic or local area multi-agency coordination is overseen by Sub-Geographic/Local Area Multi-Agency Coordinating Groups, which are comprised of local area lead administrators or fire managers from agencies that have jurisdictional or support responsibilities, or that may be significantly impacted by resource commitments. Local MAC responsibilities include:

- Establish priorities for the local area.
- Acquire, allocate, and reallocate resources.
- Issue coordinated and collective situation status reports.

For additional information on MAC Groups see Chapter 11 of this book, Chapter 30 of the *National Interagency Mobilization Guide* or pertinent Geographic Area mobilization guides.

National Dispatch/Coordination System

The wildland fire dispatch system in the United States has three levels (tiers):

- National
- Geographic
- Local

Logistical dispatch operations occur at all three levels, while initial attack dispatch operations occur primarily at the local level. Any geographic area or local dispatch center using a dispatch system outside the three-tier system must justify why a non-standard system is being used.

- ***BLM -*** *Any geographic area or local dispatch center using a dispatch structure outside the approved three-tier system must annually request written authorization from the Director, Office of Fire and Aviation.*
- ***FS -*** *Any geographic area or local dispatch center using a dispatch structure outside the approved three-tier system must annually request written authorization from the Forest Service Regional Director of Fire and Aviation.*

National Interagency Mobilization Guide

The *National Interagency Mobilization Guide* (NFES 2092) identifies standard procedures which guide the operations of multi-agency logistical support activity throughout the coordination system. The guide is intended to facilitate interagency dispatch coordination, ensuring timely and cost effective incident support. Local and Geographic Area Mobilization Guides should be used to supplement the *National Interagency Mobilization Guide.*

National Interagency Coordination Center (NICC)

The National Interagency Coordination Center (NICC) is located at the National Interagency Fire Center (NIFC), Boise, Idaho. The principal mission of the NICC is the cost-effective and timely coordination of land management agency emergency response for wildland fire at the national level. This is accomplished through planning, situation monitoring, and expediting resources orders between the BIA Areas, BLM States, NASF, FWS Regions, FS Regions, NPS Regions, National Weather Service (NWS) Regions, Federal Emergency Management Agency (FEMA) Regions through the United States Fire Administration (USFA), and other cooperating agencies.

NICC supports non-fire emergencies when tasked by an appropriate agency, such as FEMA, through the National Response Plan. NICC collects and consolidates information from the GACCs and disseminates the *National Incident Management Situation Report* through the NICC website at http://www.nifc.gov/nicc/sitreprt.pdf

Geographic Area Coordination Centers (GACCs)

There are 11 GACCs, each of which serves a specific geographic portion of the United States. Each GACC interacts with the local dispatch centers, as well as with NICC and neighboring GACCs. Refer to the *National Interagency Mobilization Guide* for a complete directory of GACC locations, addresses, and personnel.

The principal mission of each GACC is to provide the cost-effective and timely coordination of emergency response for all incidents within the specified geographic area. GACCs are also responsible for determining needs, coordinating priorities, and facilitating the mobilization of resources from their areas to other geographic areas.

Each GACC prepares an intelligence report that consolidates fire and resource status information received from each of the local dispatch centers in its area. This report is sent to NICC and to the local dispatch centers, caches, and agency managers in the geographic area.

Local Dispatch Centers

Local dispatch centers, are located throughout the country as dictated by the needs of fire management agencies. The principal mission of a local dispatch center is to provide safe, timely, and cost-effective coordination of emergency response for all incidents within its specified geographic area. This most often entails the coordination of initial attack responses and the ordering of additional resources when fires escape initial attack.

Local dispatch centers are also responsible for supplying intelligence information relating to fires and resource status to their GACC and to their agency managers and cooperators. Local dispatch centers may work for or with numerous agencies, but should only report to one GACC.

Some local dispatch centers are also tasked with law enforcement and agency administrative workloads for non-fire operations; if this is the case, a commensurate amount of funding and training should be provided by the benefiting activity to accompany the increased workload. If a non-wildland fire workload is generated by another agency operating in an interagency dispatch center, the agency generating the additional workload should offset this increased workload with additional funding or personnel.

Standards for Cooperative Agreements

Agreement Policy

Agreements will be comprised of two components: the actual agreement and an operations plan. The agreement will outline the authority and general responsibilities of each party and the operations plan will define the specific operating procedures.

Any agreement which obligates federal funds or commits anything of value must be signed by the appropriate warranted contracting officer. Specifications for funding responsibilities should include billing procedures and schedules for payment.

Any agreement that extends beyond a fiscal year must be made subject to the availability of funds. Any transfer of federal property must be in accordance with federal property management regulations.

All agreements must undergo periodic joint review; and, as appropriate, revision.

Assistance in preparing agreements can be obtained from local or state office fire and/or procurement staff.

All appropriate agreements and operating plans will be provided to the servicing dispatch center. The authority to enter into interagency agreements is extensive.

- ***BLM*** *- BLM Manual 9200, Departmental Manual 620 DM, the Reciprocal Fire Protection Act, 42 U.S.C. 1856, and the Federal Wildland Fire Management Policy and Program Review.*
- ***FWS*** *- Service Manual, Departmental Manual 620 DM, and Reciprocal Fire Protection Act, 42U.S.C. 1856.*
- ***NPS*** *- Chapter 2, Federal Assistance and Interagency Agreements Guideline (DO-20), and the Departmental Manual 620 (DM-620). NPS-RM-18, Interagency Agreements, Release Number 1, 02/22/99.*
- ***FS*** *- FSM 1580, 5106.2 and FSH 1509.11.*

Elements of an Agreement

The following elements should be addressed in each agreement:

- The authorities appropriate for each party to enter in an agreement.
- The roles and responsibilities of each agency signing the agreement.
- An element addressing the cooperative roles of each participant in prevention, pre-suppression, suppression, fuels, and prescribed fire management operations.
- Reimbursements/Compensation - All mutually approved operations that require reimbursement and/or compensation will be identified and agreed to by all participating parties through a cost-share agreement. The mechanism and timing of the funding exchanges will be identified and agreed upon.
- Appropriation Limitations - Parties to this agreement are not obligated to make expenditures of funds or reimbursements of expenditures under terms of this agreement unless the Congress of the United States of America appropriates such funds for that purpose by the Counties of - _____, by the Cities of _____, and/or the Governing Board of Fire Commissioners of_____.

- Liabilities/Waivers - Each party waives all claims against every other party for compensation for any loss, damage, personal injury, or death occurring as a consequence of the performance of this agreement unless gross negligence on any part of any party is determined.
- Termination Procedure - The agreement shall identify the duration of the agreement and cancellation procedures.
- A signature page identifying the names of the responsible officials should be included in the agreement.
- ***NPS -*** *Refer to DO-20 for detailed instructions and format for developing agreements.*

Annual Operating Plans (AOPs)

Annual Operating Plan, shall be reviewed, updated, and approved prior to the fire season. The plan may be amended after a major incident as part of a joint debriefing and review.

- The plan shall contain detailed, specific procedures which will provide for safe, efficient, and effective operations.

Elements of an AOP

The following items shall be addressed in the AOP:

- **Mutual Aid**
  The AOP should address that there may be times when cooperators are involved in emergency operations and unable to provide mutual aid. In this case other cooperators may be contacted for assistance.
- **Command Structure**
  Unified command should be used, as appropriate, whenever multiple jurisdictions are involved, unless one or more parties request a single agency incident commander (IC). If there is a question about jurisdiction, fire managers should mutually decide and agree on the command structure as soon as they arrive on the fire; agency administrators should confirm this decision as soon as possible. Once this decision has been made, the incident organization in use should be relayed to all units on the incident as well as dispatch centers. In all cases, the identity of the IC must be made known to all fireline and support personnel.
- **Communications**
  Radios being used in wildland firefighting operations must be able to function in both wideband and narrowband mode. In mutual aid situations, a common designated radio frequency identified in the AOP should be used for incident communications. All incident resources should utilize and monitor this frequency for incident information, tactical use, and changes in weather conditions or other emergency situations. In some cases, because of equipment availability/ capabilities, departments/ agencies may have to use their own frequencies for tactical operations, allowing the "common" frequency to be the link between departments. It is important that all department /agencies change to a single frequency or

establish a common communications link as soon as practical. Clear text should be used. Avoid personal identifiers, such as names. This paragraph in the Annual Operating Plan shall meet Federal Communications Commission (FCC) requirements for documenting shared use of radio frequencies.

- **Distance/Boundaries**
  Responding and requesting parties should identify any mileage limitations from mutual boundaries where "mutual aid" is either pay or non-pay status. Also, for some fire departments, the mileage issue may not be one of initial attack "mutual aid," but of mutual assistance. In this situation, you may have the option to make it part of this agreement or identify it as a situation where the request would be made to the agency having jurisdiction, which would then dispatch the fire department.
- **Time/Duration**
  Responding and requesting parties should identify time limitations (usually 24 hours) for resources in a non-reimbursable status, and "rental rates" when the resources are in a reimbursable status. Use of geographic area interagency equipment rates is strongly encouraged.
- **Qualifications/Minimum Requirements**
  Agencies, under the National Interagency Incident Management System (NIIMS) concept, have agreed to accept cooperator's standards for fire personnel qualifications and equipment during initial attack. Once jurisdiction is clearly established, then the standards of the agency(s) with jurisdiction prevail. This direction may be found in the documents *NWCG Clarification of Qualifications Standards - Initial Attack 6/20/01.*
- **Reimbursement/Compensation**
  Compensation should be "standard" for all fire departments in the geographic area. The rates identified shall be used. Reimbursements should be negotiated on a case-by-case basis, as some fire departments may not expect full compensation, but only reimbursement for their actual costs. Vehicles and equipment operated under the federal excess property system will only be reimbursed for maintenance and operating costs.
- **Cooperation**
  The annual operating plan will be used to identify how the cooperators will share expertise, training, and information on items such as prevention, investigation, safety, and training.
- **Dispatch Center**
  Dispatch centers will ensure all resources know the name of the assigned IC and announce all changes in incident command. Geographic Area Mobilization Guides, Zone Mobilization Guides and Local Mobilization Guides should include this procedure as they are revised for each fire season.

Types of Agreements

National Interagency Agreements

The national agreement, which serves as an umbrella for interagency assistance among federal agencies is the Interagency Agreement Between the Bureau of Land Management, Bureau of Indian Affairs, National Park Service, Fish and Wildlife Service of the United States Department of the Interior, and the Forest Service of the United States Department of Agriculture. This and other national agreements give substantial latitude while providing a framework for the development of state and local agreements and operating plans.

Regional/State Interagency Agreements

Regional and state cooperative agreements shall be developed for mutual aid assistance. These agreements are essential to the fire management program. Concerns for area-wide scope should be addressed through these agreements.

Local Interagency Agreements

Local units are responsible for developing agreements or contracts with local agencies and fire departments to meet mutual needs for suppression and/or prescribed fire services.

Emergency Assistance

Approved, established interagency emergency assistance agreements are the appropriate and recommended way to provide emergency assistance. If no agreements are established, refer to your agency administrator to determine the authorities delegated to your agency to provide emergency assistance.

Contracts

Contracts may be used where they are the most cost-effective means of providing for protection commensurate with established standards. A contract, however, does not absolve an agency administrator of the responsibility for managing a fire program. The office's approved fire management plan must define the role of the contractor in the overall program.

Contracts should be developed and administered in accordance with federal acquisition regulations. In particular, a contract should specify conditions for abandonment of a fire in order to respond to a new call elsewhere.

Domestic Non-Wildland Fire Coordination and Cooperation

Homeland Security Act

The Homeland Security Act of 2002 (Public Law 107-296) established the Department of Homeland Security with the mandate and legal authority to protect the American people from the continuing threat of terrorism. In the act, Congress also assigned DHS as the primary focal point regarding natural and manmade crises and emergency planning.

Stafford Act Disaster Relief and Emergency Assistance

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288, as amended) establishes the programs and processes for the Federal Government to provide disaster and emergency assistance to states, local governments, tribal nations, individuals, and qualified private non-profit organizations. The provisions of the Stafford Act cover all hazards including natural disasters and terrorist events. In a major disaster or emergency as defined by the act, the President "may direct any federal agency, with or without reimbursement, to utilize its authorities and the resources granted to it under federal law (including personnel, equipment, supplies, facilities, and managerial, technical, and advisory services) in support of state and local assistance efforts."

Homeland Security Presidential Directive-5

HSPD-5, Management of Domestic Incidents, February 28, 2003, is intended to enhance the ability of the United States to manage domestic incidents by establishing a single, comprehensive national incident management system. HSPD-5 designates the Secretary of Homeland Security and the Principal Federal Official (PFO) for domestic incident management and empowers the Secretary to coordinate Federal resources used in response to or recovery from terrorist attacks, major disasters, or other emergencies in specific cases.

National Incident Management System (NIMS)

HSPD-5 directed that the DHS Secretary develop and administer a National Incident Management System (NIMS) to provide a consistent, nationwide approach for Federal, State, and local governments to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity. To provide for interoperability and compatibility among federal, state, and local capabilities, the NIMS will include a core set of concept, principles, terminology, and technologies covering the incident command system: multi-agency coordination systems; unified command; training; identification and management of resources (including systems for classifying types of resources); qualifications and certification; and the collection, tracking, and reporting of incident information and incident resources.

National Response Plan

Federal disaster relief and emergency assistance are managed under the Department of Homeland Security/Emergency Preparedness and Response/Federal Emergency Management Agency (DHS/EPR/FEMA) using the National Response Plan (NRP). The NRP, using the NIMS, is an all-hazards plan that establishes a single, comprehensive framework for the management of domestic incidents. The NRP provides the structure and mechanisms for the coordination of Federal support to State, local, and tribal incident managers and for exercising direct Federal authorities and responsibilities.

Emergency Support Function (ESF) Annexes

The NRP includes 15 Emergency Support Function (ESF) Annexes, which are a component of the NRP that detail the mission, policies, structures, and responsibilities of Federal agencies for coordinating resource and programmatic support to the States, tribes, and other Federal agencies or other jurisdictions and entities during Incidents of National Significance. Each ESF Annex identifies the ESF coordinator and the primary and support agencies pertinent to the ESF. The primary agency serves as a Federal executive agent under the Federal Coordinating Officer to accomplish the ESF mission. Support agencies, when requested by the DHS or the designated ESF primary agency, are responsible for conducting operations using their own authorities, subject-matter experts, capabilities, or resources. USDA-FS is the coordinator and primary agency for ESF #4 – Firefighting. Other USDA-FS and DOI responsibilities are:

ESF Support Annex	USDA-FS Role	DOI Role
# 1 Transportation	Support	Support
# 2 Communications	Support	Support
# 3 Public Works and Engineering	Support	Support
# 4 Firefighting	Coord. & Primary	Support
# 5 Emergency Management	Support	Support
# 6 Mass Care, Housing, and Human Services	Support	Support
# 7 Resource Support	Support	
# 8 Public Health and Medical Services	Support	
# 9 Urban Search and Rescue	Support	
# 10 Oil and HazMat Response	Support	Support
# 11 Agriculture and Natural Resources		Primary
# 12 Energy		Support
# 13 Public Safety and Security	Support	Support
# 14 Long-term Community Recovery and Mitigation		Support
#15 External Affairs		Support

Non-Stafford Act Non-Wildland Fire Coordination and Cooperation

In an actual or potential Incident of National Significance that is not encompassed by the Stafford Act, the President may instruct a Federal department or agency, subject to any statutory limitations on the department or agency, to utilize the authorities and resources granted to it by Congress. In accordance with Homeland Security Presidential Directive-5, Federal departments and agencies are expected to provide their full and prompt cooperation, available resources, and support, and appropriate and consistent with their own responsibilities for protecting national security.

International Wildland Fire Coordination and Cooperation

U.S. - Mexico Cross Border Cooperation on Wildland Fires

In June of 1999, the Department of Interior and the Department of Agriculture signed a Wildfire Protection Agreement with Mexico. The agreement has two purposes:

- To enable wildfire protection resources originating in the territory of one country to cross the United States-Mexico border in order to suppress wildfires on the other side of the border within the zone of mutual assistance (10 miles/16 kilometers) in appropriate circumstances.
- To give authority for Mexican and U.S. fire management organizations to cooperate on other fire management activities outside the zone of mutual assistance.

National Operational Guidelines for this agreement are located in Chapter 40 of the *National Interagency Mobilization Guide*. These guidelines cover issues at the national level and also provide a template for those issues that need to be addressed in local operating plans. The local operating plans identify how the agreement will be implemented by the GACCs (and Zone Coordination Centers) that have dispatching responsibility on the border. The local operating plans will provide the standard operational procedures for wildfire suppression resources that could potentially cross the U.S. border into Mexico.

U.S. - Canada, Reciprocal Forest Firefighting Arrangement

Information about United States - Canada cross border support is located in Chapter 40 of the *National Interagency Mobilization Guide*. This chapter provides policy guidance, which was determined by an exchange of diplomatic notes between the U.S. and Canada in 1982. This chapter also provides operational guidelines for the Canada – U.S. Reciprocal Forest Fire Fighting Arrangement. These guidelines are updated yearly.

U.S. - Australia/New Zealand Wildland Fire Arrangement

Information about United States - Australia/New Zealand support is located in Chapter 40 of the *National Interagency Mobilization Guide*. This chapter provides a copy of the arrangements signed between the U.S. and the states of Australia and the country of New Zealand for support to one another during severe fire seasons. It also contains the Annual Operating Plan that provides more detail on the procedures, responsibilities, and requirements used during activation.

International Non-Wildland Fire Coordination and Cooperation

International Disasters Support

Federal wildland fire employees may be requested through the Forest Service, to support the U.S. Government's (USG) response to international disasters by serving on Disaster Assistance Response Teams (DARTs). A DART is the

operational equivalent of an ICS team used by the U.S. Agency for International Development's Office of Foreign Disaster Assistance (OFDA) to provide an on-the-ground operational capability at the site of an international disaster. Prior to being requested for a DART assignment, employees will have completed a weeklong DART training course covering information about:

- USG agencies charged with the responsibility to coordinate USG responses to international disaster.
- The purpose, organizational structure, and operational procedures of a DART.
- How the DART relates to other international organizations and countries during an assignment. Requests for these assignments are coordinated through the FS International Programs, Disaster Assistance Support Program (DASP).
- DART assignments should not be confused with technical exchange activities, which do not require DART training. More information about DARTs can be obtained at the FS International Program's website: http://www.fs.fed.us/global/aboutus/dasp/welcome.htm.

Chapter 09
Fire Management Planning

Policy

Planning: Every area with burnable vegetation must have an approved Fire Management Plan (FMP). FMPs are strategic plans that define a program to manage wildland and prescribed fires based on the area's approved Resource Management Plan. FMPs must provide for firefighter and public safety; include fire management strategies, tactics, and alternatives; address values to be protected and public health issues; and be consistent with resource management objectives, activities of the area, and environmental laws and regulations. (*2001Federal Wildland Fire Management Policy).*

Concepts and Definitions

Land/Resource Management Plan (L/RMP)

A document prepared with public participation and approved by the agency administrator that provides general guidance and direction for land and resource management activities for an administrative area. The L/RMP identifies the need for fire's role in a particular area and for a specific benefit. The objectives in the L/RMP provide the basis for the development of fire management objectives and the fire management program in the designated area. (*Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy, June 2003*)

Fire Management Plan (FMP)

A plan which identifies and integrates all wildland fire management and related activities within the context of the approved L/RMP. It defines a program to manage wildland fires (wildfire, prescribed fire, and wildland fire use). The plan is supplemented by operations plans, including but not limited to preparedness plans, preplanned dispatch plans, prescribed fire burn plans, and prevention plans. Fire Management Plans assure that wildland fire management goals and components are coordinated. (*Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy, June 2003*)

Fire Management Unit (FMU)

Any land management area definable by objectives, management constraints, topographic features, access, values to be protected, political boundaries, fuel types, major fire regime groups, and so on, that set it apart form the management characteristics of an adjacent FMU. The FMU may have dominant management objectives and pre-selected strategies assigned to accomplish these objectives. (*Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy, June 2003*)

Wildland Fire
Any non-structure fire that occurs in the wildland. Three distinct types of wildland fire have been defined and include wildfire, wildland fire use, and prescribed fire. (*Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy, June 2003*)

- **Wildfire -** An unplanned, unwanted wildland fire including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out. (*Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy, June 2003*)
- **Prescribed Fire -** Any fire ignited by management action to meet specific objectives. (*Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy, June 2003*)
- **Wildland Fire Use (WFU) -** The application of the appropriate management response to naturally-ignited wildland fires to accomplish specific resource management objectives in predefined designated areas outlined in Fire Management Plans. Operational management is described in the wildland fire implementation plan (WFIP). (*Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy, June 2003*)

Appropriate Management Response (AMR)
Any specific action suitable to meet fire management unit (FMU) objectives. Typically, the AMR ranges across a spectrum of tactical operations (from monitoring to intensive management actions). The AMR is developed by using fire management unit strategies and objectives identified in the fire management plan. (*Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy, June 2003, p. 17*).

Initial Action
The actions taken by the first resources to arrive at a wildfire. Initial actions may be size up, patrolling, monitoring, holding actions, or aggressive initial attack (*NWCG Glossary of Wildland Fire Terminology, January 2005*)

Initial Attack
A planned response to a wildfire given the wildfire's potential behavior. The objective of initial attack to stop the spread of the fire and put it out at least cost. An aggressive suppression action consistent with firefighter and public safety and values to be protected. (*NWCG Glossary of Wildland Fire Terminology, January 2005*)

Extended Attack
Suppression activity for a wildfire that has not been contained or controlled by initial attack or contingency forces and for which more firefighting resources are arriving, en route, or being ordered by the initial attack incident commander. (*NWCG Glossary of Wildland Fire Terminology, January 2005*)

Wildfire Suppression
An appropriate management response to wildfire, escaped wildland fire use or prescribed fire that results in curtailment of fire spread and eliminates all identified threats from the particular fire. (*NWCG Glossary of Wildland Fire Terminology, January 2005*)

Wildland Fire Management Objectives
Only one management objective will be applied to wildland fire. Wildland fires will either be managed for resource benefits or suppressed. A wildfire cannot be managed for resource benefits and suppression concurrently. If two wildland fires converge they will be managed as a single wildland fire. (*2006 Federal Fire & Aviation Operations Action Plan*)

Human caused Wildland fires will be suppressed in every instance and will not be managed for resource benefits.

Once a Wildland fire has been managed for suppression objectives, it may never be managed for resource benefit objectives.

Wildland Fire Responses

Operational Use of Fire Management Plans
Fire organizations responding to wildland fires must utilize the direction in the FMP to guide the fire management response.

Response to Wildland Fire
Response to wildland fires is based on ecological, social, and legal consequences of the fire. The circumstances under which a fire occurs, and the likely consequences on firefighter and public safety and welfare, natural and cultural resources, and, values to be protected, dictate the appropriate response to the fire. *(Federal Wildland Fire Management Policy, January 2001)*

Determining Type of Fire
When a wildland fire is reported, according to the pre-established fire management plan, the fire will be designated either a wildfire or a wildland fire use fire. Pre-planned, specific prescription criteria must be established prior to fire occurrence so that the decision to designate the fire either a wildfire or a wildland fire use fire is immediate.

Responding to a Wildfire
When the wildland fire is determined to be a wildfire, it is “an unplanned, unwanted wildland fire including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out.” Initial attack is generally the most effective response option to achieve that objective.

Escaped Initial Attack

A fire has escaped initial attack when:

- The fire has not been contained by the initial attack resources dispatched to the fire and there is no estimate of containment or control and;
- The fire will not have been contained within the initial attack management objectives established for that zone or area.

Wildland Fire Situation Analysis (WFSA)

A WFSA is a decision making process that evaluates alternative wildfire suppression strategies against selected environmental, social, political, and economic criteria and provides a record of those decisions. (*Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy, June 2003*). The WFSA process is used when a wildfire escapes initial attack. The WFSA is a document in which the agency administrator or representative describes the wildfire situation, compares several strategic wildfire management alternatives, evaluates the expected effects of the alternatives, establishes objectives and constraints for the management of the fire, selects the preferred alternative, and documents the decision. The WFSA evaluates alternative suppression strategies against selected environmental, social, political, and economic criteria, provides a record of those decisions, and helps the agency administrator select the appropriate suppression strategy. The level of detail required depends on the specific incident and its complexity. The key is to document the decision made. The agency administrator or representative will complete a WFSA whenever a wildfire escapes initial attack.

- The WFSA program (WFSA Plus Version 6.2) may be found at: http://www.wfsaonline.net/.
- Additional information about the WFSA (as well as the Wildland Fire Implementation Plan) is located at: http://www.wildlandfireamr.net/.
- The previous WFSA version (5.1) is downloadable at: http://www.fs.fed.us/fire/wfsa.
- It is acceptable to use this version. A description of the WFSA Elements with guidance for the completion can be found in Appendix S.

WFSA approval authority levels are stated below. Funding approval levels for multiple jurisdiction incidents are determined based on each agency's funding commitment and not upon the total funding.

WFSA Approval Authority Limits by Agency

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

Responding to a Wildland Fire Use Event

When the wildland fire is determined to be a wildland fire use event, the required action is "the application of the appropriate management response to naturally-ignited wildland fires to accomplish specific resource management objectives in pre-defined designated areas outlined in the FMP". Operational management is described in the wildland fire implementation plan (WFIP). (*Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy, June 2003*)

Wildland Fire Implementation Plan (WFIP)

A WFIP is a progressively developed assessment and operational management plan that documents the analysis and describes the appropriate management response for a wildland fire use activity. The WFIP is a plan that guides the management of a Wildland Fire Use fire. (An approved FMP) is required in all cases. The FMP identifies specific resource and fire management objectives, a predefined geographic area, and specific, required prescription criteria that must be met prior to designating a wildland fire for fire use. The WFIP is continually evaluated and tested to ensure that the objectives of the Wildland Fire Use fire are being met. If the objectives are not being met, mitigation actions identified in the WFIP are implemented. Mitigation actions are not presented formally as a distinct plan, but are integrated throughout the short term (WFIP Stage 2) and long term (WFIP Stage 3) implementation actions. If the combined set of mitigation actions is not meeting objectives, the WFU fire is converted to a wildfire, suppression action is taken and a WFSA is prepared. If the mitigation actions are successful in keeping the WFU fire within the parameters of the WFIP, the fire continues to be managed as a WFU fire.

A WFIP will be completed for all naturally ignited wildland fires that are managed for resource benefit. It is an operational plan for assessing, analyzing, and selecting strategies for wildland fire use. It is progressively developed and documents appropriate management responses for any wildland fire managed for resource benefits. The plan will be completed in compliance with the guidance found in the *Wildland Fire Use, Implementation Procedures Reference Guide*, May 2005 (March/April 2006 revision).

A WFIP consists of three distinct stages:

- **Stage I** - The initial fire assessment, or size-up, is the preliminary information gathering stage. It compares current information to established prescription criteria found in the FMP. This is an initial decision making tool which assists managers in classifying fires for resource benefit or suppression actions. Components include: Strategic Fire Size-Up, Decision Criteria Checklist, Management Actions, and Periodic Fire Assessment.
- **Stage II** - Defines management actions required in response to a changing fire situation as indicated by monitoring information and the periodic fire assessment from Stage I. This stage is used to manage larger, more active fires with greater potential for geographic extent than Stage I. Components include: Objectives, Fire Situation, Management Actions, Estimated Costs, and Periodic Fire Assessment.
- **Stage III** - Defines management actions required in response to an escalating fire situation, potential long duration, and increased need for management activity, as indicated by the periodic assessment completed in Stage II. Components include: Objectives and Risk Assessment Considerations, Maximum Manageable Area Definition and Maps, Weather Conditions and Drought Prognosis, Long-term Risk Assessment, Threats, Monitoring Actions, Mitigation Actions, Resources Needed to Manage the Fire, Contingency Actions, Information Plan, Estimated Costs, Post-burn Evaluation, Signatures and Date, and Periodic Fire Assessment.

WFIP Completion Timeframes	
WFIP Stage	Maximum Completion Timeframe
Stage I	8 hours after confirmed fire detection and Strategic Fire Size-Up.
Stage II	48 hours after need indicated by Planning Needs Assessment.
Stage III	7 days after need indicated by Planning Needs Assessment
Periodic Fire Assessment	As part of all stages and on assigned frequency thereafter.

- ***NPS*** *- Wildland Fire Use Program Oversight. Regional office fire management officers are responsible for appraising and surveying all wildland fire use activities within their region. The regional office fire staff will review implementation plans for fires with a Complex Rating. Direct contact with parks may be necessary in order to stay apprised of complex situations. On rare occasions, circumstances or situations may*

exist which require the regional director to intervene in the wildland fire use decision process.

- ***NPS** - Review by the regional fire management officer or acting is mandatory for Wildland Fire Implementation Plans with a projected cost of greater than $500,000. Review by the NPS National Fire Management Officer at NIFC, or Acting, is mandatory for Wildland Fire Implementation Plans with a projected cost of greater than $1,000,000.*

Emergency Non-Wildland Fire Response

Emergency Non-Wildland Fire Response-Wildland Urban Interface

The operational roles of the federal agencies as a partner in the Wildland Urban Interface are wildland firefighting, hazard reduction, cooperative prevention and education, and technical assistance. Structural fire suppression is the responsibility of tribal, state or local governments. Federal agencies may assist with exterior structural fire protection activities under formal fire protection agreements that specify the mutual responsibilities of the partners, including funding. (Some federal agencies have full structural protection authority for their facilities on lands they administer and may also enter into formal agreements to assist state and local governments with structural protection.) *2001 Federal Wildland Fire Management Policy, page 23.*

Although funding is not provided to prepare for or respond to emergency non-wildland fire response activities such as structure fires, vehicle fires, dump fires, hazardous materials releases, and emergency medical responses, managers must ensure that fire management plans, interagency agreements, and annual operating plans clearly state agency and cooperator roles and responsibilities for non-wildland fire response activities that agency personnel are exposed to as a result of working in the wildland urban interface environment.

Emergency Non-Wildland Fire Response-Management Controls to Mitigate Exposure

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

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

Emergency Non-Wildland Fire Response-Structure, Vehicle, and Landfill Fires

Structure, vehicle, and dump fire suppression is not a functional responsibility of wildland fire suppression resources. These fires have the potential to emit high levels of toxic gases. Firefighters will not be dispatched to structure, vehicle, or dump fires unless there is a significant threat to lands and resources that are under agency protection, including by protection agreement. Firefighters will not take direct suppression action on structure, vehicle, or dump fires. This policy will be reflected in suppression response plans.

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

- ***FS - FSM-5137 - Structure Fires*** *Structure fire protection activities include suppression of wildfires that are threatening improvements. Exterior structure protection measures include actions such as foam or water application to exterior surfaces of buildings and surrounding fuels, fuel removal, and burning out around buildings.*
- ***FS - FSM-5137.02 - Objective for Structure Fire Protection****. The Forest Service's primary responsibility is to suppress wildfire before it reaches structures. The Forest Service may assist state and local fire departments in exterior structure fire protection when requested under terms of an approved cooperative agreement.*
- ***FS - FSM-5137.03 - Policy for Structure Fire Suppression.*** *Structure fire suppression, which includes exterior and interior actions on burning structures, is the responsibility of state, tribal, or local fire departments.*
  - ***FS -*** *Forest Service officials shall avoid giving the appearance that the agency is prepared to serve as a structure fire suppression organization.*
  - ***FS -*** *Forest Service employees shall limit fire suppression actions to exterior structure protection measures as described in Section 5137.*
- ***FS - FSM-5137.03 2 - Structure Fire Protection and Suppression for Forest Service Facilities.*** *At those Forest Service administrative sites, outside the jurisdiction of state and local fire departments, limit fire protection measures to prevention, use of fire extinguishers on incipient stage fires (FSH 6709.11, Sec. 6-4c), safe evacuation of personnel, containment by exterior attack, and protection of exposed improvements.*
  - ***FS -*** *At Forest Service administrative sites located within the jurisdiction of state and local structural fire departments, structure fire suppression responsibility must be coordinated with state and local fire departments.*

- ***FS - FSM-5137.033 - Vehicle and Dump Fires***
  - ***FS -*** *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.*
  - ***FS -*** *For additional fire service and homeowner information regarding wildland/urban fire refer to http://firewise.org on the Internet.*
- ***NPS - Structural Fire (including Vehicle Fires) Response Requirements.*** *Structural fire suppression is a functional responsibility in many NPS units. Any structural fire response shall only be by personnel who have received the required training and are properly equipped. Vehicle fires contain a high level of toxic emissions and must be treated with the same care that structural fires are treated. Firefighters must be in full structural fire personal protective clothing including self-contained breathing apparatus. Situations exist during the incipient phase of a vehicle fire where the fire can be quickly suppressed with the discharge of a handheld fire extinguisher. Discharging a handheld fire extinguisher during this phase of the fire will normally be considered an appropriate action. If the fire has gone beyond the incipient stage, employees are to protect the scene and request the appropriate suppression resources. In order to protect the health and safety of National Park Service personnel, no employee shall be directed, dispatched, (including self-dispatching) to the suppression of structural fires, including vehicle fires, unless they are provided with the required personal protective equipment, firefighting equipment and training. All employees must meet or exceed the standards and regulations identified in Director's Order and Reference Manual #58, Structural Fire.*
- ***NPS - Training Requirements for Firefighters Responding to Structural Fires (including Vehicle Fires)****. All wildland firefighters who respond to structural fires will meet the training requirements identified in Director's Order and Reference Manual #58, Structural Fire and will be qualified at least at the Structural Firefighter level.*
- ***NPS - Medical Examination Requirements for Firefighters Responding to Structure Fires (including Vehicle Fires)****. All wildland firefighters who respond to structural fires will meet the medical requirements identified in Director's Order and Reference Manual #58, Structural Fire. Medical requirements include respiratory testing and some other components not included in the wildland fire medical examination.*
- ***NPS - Physical Fitness for Wildland Firefighters Responding to Structure Fires (including Vehicle Fires)****. The physical fitness requirements as the same as for wildland fire arduous duty.*

Emergency Non-Wildland Fire Response-Hazardous Materials

Wildland firefighters have the potential to be exposed to hazardous materials releases while performing their jobs. Hazardous materials or waste may be

found on public lands in a variety of forms (e.g. clandestine drug lab waste, mining waste, illegal dumping, and transportation accidents).

In order to meet 29 CFR 1910.120, and to ensure familiarity with hazardous materials releases, all wildland firefighters will complete a one-time, two-hour First Responder Awareness training course and an annual refresher course thereafter (First Responders are individuals who are likely to witness or discover a hazardous substance release, and who have been trained to initiate an emergency response sequence by notifying proper authorities of the release). Awareness Class module 1703-07/11 is available from the BLM National Training Center and may be taught in the field office by the Hazardous Materials Coordinator.

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

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

Emergency Non-Wildland Fire Response-Emergency Medical Response

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

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

Chapter 10
Preparedness

Preparedness

Preparedness is the result of activities that are planned and implemented prior to wildland fire ignitions. Preparedness is a continuous process that includes developing and maintaining unit, state/regional, and national level firefighting infrastructure, predicting fire activity, hiring, training, equipping, and deploying firefighters, evaluating performance, correcting deficiencies, and improving overall operations. The preparedness process includes routine pre-season actions as well as incremental in-season actions conducted in response to increasing fire danger.

Preparedness actions are based on operational plans such as fire danger operating plans, which use information from decision support tools such as the National Fire Danger Rating System (NFDRS), the Canadian Forest Fire Danger Rating System (CFFDRS, used in interior Alaska), the Palmer Drought Index, live fuel moisture data, Monthly or Seasonal Wildland Fire Outlooks, Seasonal Climate Forecasts, and Wildland Fire Risk Analyses.

Fire Danger Rating Operating Plan

A Fire Danger Rating Operating Plan is a fire danger applications guide for agency users at the local level. A Fire Danger Rating Operating Plan documents the establishment and management of the local unit fire weather station network and describes how fire danger ratings are applied to local unit fire management decisions. Fire danger rating operating plans may be packaged as either stand-alone documents or as part of a larger planning effort; such as a fire management plan. Fire danger rating operating plans include, but are not limited to, the following components:

- **Roles and Responsibilities**
  Defined for those responsible for maintenance and daily implementation of the plan, program management related to the plan, and associated training. Training for development of fire danger rating areas is available through NWCG-sponsored NFDRS courses.
- **Operational Procedures**
  This section establishes the procedures used to gather and process data in order to integrate fire danger rating information into decision processes. The network of fire weather stations whose observations are used to determine fire danger ratings is identified. Station maintenance schedules are defined as appropriate.
  - NFDRS offers several choices of fuel model and output to the user. Distinct selections of fuel model and index/component are appropriate for different management decisions (such as internal readiness or industrial and public restrictions). The choice of NFDRS

fuel model and index or component used to determine fire danger ratings to support particular decisions is explained in this section.

- NFDRS requires periodic management in order to produce appropriate results that are applied in a timely manner. Some daily observation variables (such as state of the weather, fuels, red flags) are entered manually. This procedure (often called "taking the weather") also initiates the calculation of daily and forecasted outputs in the Weather Information Management System (WIMS) and ensures data storage in the National Interagency Fire Management Integrated Database (NIFMID). These efforts are coordinated with the local National Weather Service fire weather meteorologists and Geographic Area Coordination Center (GACC) predictive services meteorologists to provide timely forecasted NFDRS outputs. Observed (afternoon) and forecasted (tomorrow) NFDRS outputs are communicated daily. Live fuel moisture model inputs (such as herbaceous vegetation stage, season code, greenness factor) are adjusted seasonally in WIMS (http://famweb.nwcg.gov/) at appropriate times. Decision points (such as percentiles discussed below) are determined in FireFamily Plus and reviewed and adjusted annually or more often as appropriate in WIMS and/or other fire danger platforms.

- **Fire Danger Rating Inventory**
  Identifies basic components of the operating plan such as dispatch response areas, protection units, administrative units, fire history, land management planning direction, standards and guidelines, etc; aggregates NFDRS fuel models, slope classes (topography), and weather/climatology into fire danger rating areas; validates the existing weather station network and identifies any additional stations to support fire danger rating needs.

- **Climatic Breakpoints and Fire Business Thresholds**
  Climatological breakpoints and fire business thresholds are established to provide NFDRS-based decision points for all appropriate management responses in a fire danger rating area. Climatological breakpoints are points on the cumulative distribution of one fire weather/danger index computed from climatology without regard for associated fire occurrence/business. For example, the value of the 90th percentile ERC is the climatological breakpoint at which only 10 percent of the ERC values are greater in value. The percentiles for climatological breakpoints predetermined by agency directive are shown below.
  - ***BLM -*** *80th and 95th percentiles*
  - ***FWS -*** *90th and 97th percentiles*
  - ***NPS -*** *90th and 97th percentiles*
  - ***FS -*** *90th and 97th percentiles*

It is equally important to identify the period or range of data analysis used to determine the agency percentiles. The percentile values for 12 months of data will be different from the percentile values for the fire season. Year round data should be used for percentiles for severity type decisions, and percentiles based on fire season data for staffing levels and adjective fire danger.

Fire business thresholds are values of one or more fire weather/fire danger indexes that have been statistically related to occurrence of fires (fire business). Generally the threshold is a value or range of values where historical fire activity has significantly increased or decreased. Assuming historical climate and occurrence patterns can be applied today, fire business thresholds are expected to more closely predict significant fire occurrence than climatological breakpoints.

Climatological breakpoints or fire business thresholds are used to compute staffing levels and adjective fire danger ratings.

Staffing Level

The Staffing Level is used to make daily internal fire operations decisions. A unit can operate with anywhere from 3 to 9 levels of staffing. Most units typically use 5 (1,2,3,4,5) or 6 (1,2,3L,3H,4,5). Staffing Level is a direct output of the danger rating processor and is based on one of the following:

- NFDRS (Burning Index, Energy Release Component, Spread Component, or Ignition Component)
- Keetch-Byram Drought Index

Additional Considerations:

- Palmer Drought Index or other drought index
- Live Fuel Moisture (calculated or sampled)
- Canadian Forest Fire Danger Rating System
- Soil Moisture

Adjective Fire Danger Rating

Adjective Fire Danger Rating (low, moderate, high, very high, extreme) is based on the NFDRS index or component used to compute staffing level and the ignition component. It is a general description of fire danger for the purpose of informing the public. Adjective ratings are computed automatically in the Weather Information Management System (WIMS) based on NFDRS parameters provided by local fire managers.

Climatic breakpoints and fire business thresholds are developed with NFDRS software, such as FIREFAMILY PLUS, and are applied to appropriate NFDRS processors, such as WIMS, to determine daily staffing levels and adjective

ratings. Training for the FIREFAMILY PLUS program is available at local, regional, and national NFDRS courses.

Fire Danger Pocket Card for Firefighter Safety

The Fire Danger Pocket Card is used to communicate information on fire danger to firefighters. The prime objective of fire danger rating is to provide a measure of the seriousness of local burning conditions. The Pocket Card provides a visual reference of those conditions and how they compare to previous fire seasons. Pocket Cards are developed and implemented according to NWCG guidelines posted at http://famweb.nwcg.gov/pocketcards/. Fire Danger Pocket Cards are recommended at each local unit where weather data exists.

- ***BLM -*** *Fire Danger Pocket Cards are developed for and implemented at each local unit.*
- ***FS -*** *Forest Supervisors will develop and distribute Fire Danger Pocket Cards to each fireline supervisor.*

Preparedness Plan

Preparedness plans provide management direction given identified levels of burning conditions, fire activity, and resource commitment, and are required at national, state/regional, and local levels. Preparedness Levels (1-5) are determined by incremental measures of burning conditions, fire activity, and resource commitment. Fire danger rating is a critical measure of burning conditions. Refer to the *National Interagency Mobilization Guide* for more information on preparedness plans.

Preparedness Level/Step-up Plans

Preparedness Level/Step-up Plans are designed to direct incremental preparedness actions in response to increasing fire danger. Those actions are delineated by "staffing levels." Each Step-Up Plan should address the five preparedness levels (1, 2, 3, 4, and 5) and the corresponding planned actions that are intended to mitigate those fire danger conditions. Several assessment tools are available to measure fire danger.

Outputs from the fire danger rating operating plan process, such as staffing levels, are used to support the decisions found in staffing plans, step-up staffing plans, preparedness levels, dispatch response plans, dispatch response levels, etc. Increasing fire danger results in increasing staffing levels, suggesting a corresponding increase in preparedness actions intended to mitigate those fire danger conditions.

The Staffing Plan describes escalating responses that are pre-approved in the fire management plan. Mitigating actions are designed to enhance the unit's fire management capability during short periods (one burning period, Fourth of July or other pre-identified events) where normal staffing cannot meet initial attack,

prevention, or detection needs. The difference between preparedness level/step-up and severity is that preparedness level/step-up actions are established in the unit fire management plan, and implemented by the unit when those pre-identified conditions are experienced. Severity is a longer duration condition that cannot be adequately dealt with under normal staffing, such as a killing frost converting live fuel to dead fuel or drought conditions. Severity is discussed later in this chapter.

Mitigating actions identified in the fire management plan should include, but are not limited to, the following items:

- Management direction and considerations
- Fire prevention actions, including closures/restrictions, media messages, signing, and patrolling
- Prepositioning suppression resources
- Cooperator discussion and/or involvement
- Safety considerations: safety message, safety officer
- Augmentation of suppression forces
- Support function: consideration given to expanded dispatch activation, initial attack dispatch staffing, and other support needs (procurement, supply, ground support, and communication)
- Support staff availability outside of fire organization
- Communication of Fire Weather Watch and Red Flag Warning conditions
- Fire danger/behavior assessment
- Briefings for management and fire suppression personnel
- Fire information - internal and external
- Multi-agency coordination groups/area command activation
- Prescribed fire direction and considerations
- Increased detection activities

Seasonal Risk Analysis

A Seasonal Risk Analysis requires fire managers to review current and predicted weather and fuels information, compare this information with historic weather and fuels records, and predict the upcoming fire season's severity and duration for any given area. It is important to incorporate drought indices into this assessment.

Information from a Seasonal Risk Analysis can be used to modify the AOP, step-up and pre-attack plans. It provides the basis for actions such as prepositioning critical resources, requesting additional funding, or modifying Memoranda of Understanding (MOU) to meet anticipated needs.

Each unit selects, and compares to normal, the current value and seasonal trend of one or more of the following indicators which are most useful in predicting fire season severity and duration in its area:

- NFDRS (or CFFDRS) index values (ERC, BI)
- Temperature levels
- Precipitation levels
- Humidity levels
- Palmer Drought or Standardized Precipitation Index
- 1000-hour fuel moisture (timber fuels)
- Vegetation moisture levels
- Live fuel moisture (brush fuels)
- Curing rate (grass fuels)
- Episodic wind events (moisture drying days)
- Unusual weather events (early severe frost)
- Fires to date

The seasonal trend of each selected indicator is graphically compared to normal and all-time worst. This comparison is updated regularly and posted in dispatch and crew areas.

If the Seasonal Risk Analysis suggests an abnormal fire season might be anticipated, a unit should notify the state/regional office and request additional resources commensurate with the escalated risk.

Seasonal Risk Analyses are prepared, issued, and updated each year by GACC Predictive Service Units. Seasonal Assessment Workshops are conducted to facilitate these seasonal outlook reports. Local risk analyses should be compiled at the state/regional office to determine the predicted fire season severity within the state/region, and then forwarded to the respective national office for use in determining national fire preparedness needs. Risk analysis is ongoing. It should be reviewed periodically and revised when significant changes in key indicators occur. All reviews of seasonal risk analysis, even if no changes are made, should be documented.

Fire Severity Funding

Definition

Fire severity funding is the authorized use of suppression operations funds (normally used exclusively for suppression operations, and distinct from preparedness funds) for extraordinary preparedness activities that are required due to an abnormal increase in fire potential or danger, or to fire seasons that either start earlier or last longer than planned in the fire management plan. The fire danger rating operating plan or annual operating plan should identify thresholds for identifying the need for severity resources.

Objective

The objective of fire severity funding is to mitigate losses by improving suppression response capability when there is:

- Potential for abnormally severe fire behavior, or
- Fire occurrence outside of the normal fire season.

When either of these conditions exist, and when suppression resources that were acquired through the approved fire planning process (e.g. NFMAS, IIAA, FPA) are insufficient to meet the extraordinary need, suppression resources may be requested through the severity funding process. Fire severity funding is not intended to raise preparedness funding levels to cover differences that may exist between funds actually appropriated (including rescissions) and those identified in the fire planning process.

Typical Uses

Severity funds are typically used to:

- Increase prevention activities
- Temporarily increase firefighting staffing
- Pay for standby
- Preposition initial attack suppression forces
- Provide additional aerial reconnaissance
- Provide for standby aircraft availability

Authorization

Authorization to use severity funding is provided in writing based on a written request with supporting documentation. Authorization is on a line item basis and comes with a severity cost code. Agencies will follow their administrative procedures for issuing severity cost codes. Authorization is provided for a maximum of thirty days per request; however, regardless of the length of the authorization, use of severity funding must be terminated when abnormal conditions no longer exist. If the fire severity situation extends beyond the thirty day authorization, the State/Region must prepare a new severity request.

State/Regional Level Severity Funding

Each fiscal year the national office will provide each state/region with $100,000 and a severity cost code for state/regional short-term severity needs (e.g., wind events, cold dry front passage, lightning events, and unexpected events such as off road rallies that are expected to last less than one week). Expenditure of these funds is authorized by the state/regional directors at the written request of the agency administrator. State/regional directors are responsible and accountable for ensuring that these funds are used only to meet severity funding objectives and that amounts are not exceeded. The national office will notify the state/regional director, state/regional budget officer, and the state/regional FMO when the severity cost code is provided.

- ***FWS -*** *Short-term severity or "step-up" cost codes are established yearly (at the Regional level) as PE01, PE02, etc (numeric value indicates the specific region utilizing short-term severity funding).*
- ***NPS -*** *Parks have the authority to approve "Step-up" actions only, as defined in their fire management plan. Regional offices approve severity (long term - up to 30 days) for parks up to $100,000.*
- ***FS -*** *Severity funding direction is found in FSM 5190.*

National Level Severity Funding

National Agency Fire Directors or their delegates are authorized to allocate fire severity funding under specific conditions stated or referenced in this chapter. Expenditure of these funds is authorized by the appropriate approving official at the written request of the state/regional director. Approved severity funding will be used only for the preparedness activities and timeframes specifically outlined in the authorization, and only for the objectives stated above.

- ***NPS -*** *National office approves all requests over $100,000.*

Appropriate Severity Funding Charges

Labor

Appropriate labor charges include:

- Regular pay for non-fire personnel
- Regular pay for seasonal/temporary fire personnel outside their normal fire funded activation period
- Overtime pay for all fire and non-fire personnel
- Severity funded personnel and resources must be available for immediate initial attack regardless of the daily task assignment
- Severity funded personnel and resources will not use a severity cost code while assigned to wildfires. The wildfire firecode number will be used.
- Overtime pay for severity funded personnel will be paid by severity funds, unless the personnel are assigned to a wildfire.

Vehicles and Equipment

- GSA lease rate and mileage
- Hourly rate or mileage for Agency owned vehicles
- Commercial rentals and contracts
- ***FWS -*** *Repair and maintenance of Fish and Wildlife vehicles and equipment; FWS does not have a Use Rate covering these charges.*

Aviation

This includes:

- Contract extensions
- The daily minimum for call when needed (CWN) aircraft

- Preposition flight time
- Support expenses necessary for severity funded aircraft (facility rentals, utilities, telephones, etc.)

Travel and Per Diem

Severity funded personnel in travel status are fully subsisted by the government in accordance with their agency regulations. Costs covered include:

- Lodging
- Government provided meals (in lieu of per diem)
- Airfare (including returning to their home base)
- Privately owned vehicle mileage (with prior approval)
- Other miscellaneous travel and per diem expenses associated with the assignment

Prevention Activities

These include:

- Funding Prevention Teams (Preventions teams will be mobilized as referred in the *National Mobilization Guide,* Chapter 20)
- Implementing local prevention campaigns, to include community risk assessment, mitigation planning, outreach and education
- Augmenting patrols
- Note: Non-fire funded prevention team members should charge base 8 and overtime to the severity cost code for the length of the prevention activities assignment. Fire funded personnel should charge overtime only to the severity cost code for the length of the prevention activities assignment.

Inappropriate Fire Severity Funding Charges

- To cover differences that may exist between funds actually appropriated (including rescissions) and those identified in the fire planning process
- Administrative surcharges, indirect costs, fringe benefits
- Equipment purchases
- Purchase, maintenance, repair, or upgrade of vehicles
- Purchase of radios
- Purchase of telephones
- Purchase of pumps, saws, and similar suppression equipment
- Aircraft availability during contract period
- Cache supplies which are normally available in fire caches
- Fixed ownership rate vehicle costs

Emergency Equipment Rental Agreements

Emergency Equipment Rental Agreements (EERAs) are used during emergency incidents under authorities that allow for direct, non-competitive ordering using established procedures in the event of immediate threat to life and property.

EERAs will not be used for non-emergency activities, including severity activities, rehabilitation projects, and hazardous fuels projects.

Interagency Requests

Agencies working cooperatively in the same geographic area should work together to generate and submit joint requests, and to utilize severity funded resources in an interagency manner. However, each agency should request funds only for its own agency specific needs. The joint request should be routed simultaneously through each agency's approval system, and the respective approving official will issue an authorization that specifies allocations by agency.

Requesting Fire Severity Funding

Fire severity funding requests should be submitted on the Interagency Severity Funding Request Form found at the website listed below. The completed and signed request is submitted from the state/regional director to the appropriate approving official as per the sequence of action outlined below. Authorizations will be returned in writing.

The Standard format for fire severity funding requests may be found at: http//www.fire.blm.gov/Standards/BLM_Fire_Severity_Funding_Request.htm.

Sequence of Action and Responsible Parties for Severity Funding Requests

Action	Responsible Party
Identify and develop severity funding request.	Unit FMO
Review, modify, and approve (or reject) request. Forward to state/regional office.	Unit agency administrator
Review, modify, and approve (or reject) unit request. Add state/regional needs and consolidate. Forward to state/regional director for approval within 48 hours.	State/Regional FMO
Review, modify, and approve (or reject) request. Forward to the appropriate National Fire Director/approving official within 48 hours. Notify the fire budget staff.	State/Regional Director
Review, modify, and approve (or reject) the request within 48 hours. Issue written authorization with a severity cost code.	Appropriate National Fire Director/Approving Official
Establish severity cost code in the appropriate finance system within 24 hours.	Applicable National Finance System
Notify unit office(s) and state/regional budget lead upon receipt of authorization.	State/Regional FMO

Execute severity cost code. Ensure that project expenditures are only used for authorized purposes.	Unit Office
Maintain severity files, including requests, authorizations, and summary of expenditures and activities.	Unit/State/Regional/ National Offices

Labor Cost Coding For Severity Funded Personnel

Fire personnel outside their normal activation period and employees whose regular salary are not funded by fire preparedness, and Administratively Determined (AD) employees hired under an approved severity request should charge regular time and approved non-fire overtime to the severity suppression operations subactivity and the requesting office's severity cost code.

Fire funded personnel should charge their regular planned salary (base-eight) to preparedness using their home unit's location code. Overtime associated with the severity request should be charged to the severity suppression operations subactivity and the requesting office's severity cost code.

Regular hours worked in suppression operations will require the use of the appropriate fire subactivity with the appropriate firecode number. Overtime in fire suppression operations will be charged to the suppression operations subactivity with the appropriate firecode number.

Employees from non-federal agencies should charge their time in accordance with the approved severity request and the appropriate local and statewide agreements. A task order for reimbursement will have to be established and is authorized under the Interagency Agreement for Fire Management.

- ***FS -*** *Labor Cost Coding. Forest Service severity funding direction in FSM 5190 provides agency specific direction.*

Documentation

The state/regional and national office will document and file accurate records of severity funding activity. This will include complete severity funding requests, written authorizations, and expenditure records.

Severity Funding Audits

State/regional and national offices should ensure appropriate usage of severity funding and expenditures. This may be done as part of their normal agency fire program review cycle. The severity funding audit checklist may be used as a guide for this process. Interagency Preparedness Review checklists can be found at: http://www.nifc.gov/references/prep_review.html

- ***BLM -*** *Severity funding is not a reviewed item of the BLM national Preparedness Review. BLM Preparedness Review Checklists can be found at: http://www.fire.blm.gov/Standards/FIRE_AVIATION_PREPAREDNESS_REVIEW_GUIDE.htm*

Fire Prevention/Mitigation

Wildland Fire Cause Determination & Fire Trespass

Agency policy requires any wildfire to be investigated to determine cause, origin, and responsibility.

For all human-caused fires where the guilty party has been determined, actions must be taken to recover the cost of suppression activities, land rehabilitation, and damages to the resources and improvements.

Wildland Fire Mitigation and Prevention

Fire programs are required to fund and implement unit level Fire Prevention Plans by completing a wildland mitigation/prevention assessment. The purpose of this is to reduce undesirable human caused ignitions, to reduce damages and losses caused by unwanted wildland fires, and to reduce the suppression costs of wildland fires. Wildland fire mitigation/prevention programs based on the Risk Assessment and Mitigation Strategies (RAMS) process can reduce damages and losses during periods of average weather, fuels, and human activity. As weather and fuel conditions move from average to above average or severe, and/or human activity increases, mitigation and prevention activities must be strengthened to maintain effectiveness.

Prevention includes education (sign posting plans, school programs, radio and news releases, recreation contacts, local business contacts, exhibits), industrial program monitoring (timber, mining, power line maintenance operations), reconnaissance patrols, and other activities to prevent and mitigate wildfire damage and loss.

- ***NPS -*** *Only units that experience more than an average 26 human caused fires per ten-year period are required to develop a fire prevention plan, based upon a prevention analysis such as RAMS; however, use of this software is not required.*
- ***FS -*** *Forest Service direction for wildland prevention and investigation is found in FSM 5110 and 5300.*

Chapter 11
Incident Management

National Interagency Incident Management System (NIIMS)

The National Interagency Incident Management System (NIIMS) is sponsored by the National Wildfire Coordinating Group (NWCG). It provides a universal set of structures, procedures, and standards for agencies to respond to all types of emergencies. NIIMS is compliant with the National Incident Management System (NIMS). NIIMS will be used to complete tasks assigned to the interagency wildland fire community under the National Response Plan.

Incident Command System (ICS)

The Incident Command System is the on-site management system used in NIIMS/NIMS. The ICS is a standardized emergency management construct specifically designed to provide for an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, communications, and procedures operating within a common organizational structure to manage incidents. ICS will be used by the agencies to manage wildland fire operations.

Wildland Fire Complexity Analysis

Wildland fires are typed by complexity, from Type 5 (least complex) to Type 1 (most complex). The ICS organizational structure develops in a modular fashion based on the complexity of the incident. Complexity is determined by performing an Incident Complexity Analysis - (Refer to samples in Appendix F & G). Units may develop their own Complexity Analysis format to replace Appendix G. It is the Incident Commander's responsibility to continually reassess the complexity level of the incident. When the complexity analysis indicates a higher complexity level, the IC must ensure that suppression operations remain within the scope and capability of the existing organization. Incident Commanders must continually reassess incident complexity to ensure the appropriate command organization is either in place or on order.

Fire Management Organization Assessment

The Fire Management Organization Assessment is a short checklist that agency administrators may use to identify conditions associated with heavy fire activity that may overload the local fire staff, reducing its effectiveness to manage the situation. Identifying these conditions may help the agency administrator determine whether increasing staffing levels might be an appropriate action to take. See Appendix K.

Incident Management and Coordination Components of NIIMS

Effective incident management requires:

- Command Organizations to manage on-site incident operations.
- Coordination and Support Organizations to provide direction and supply resources to the on-site organization.

On site Command Organizations	Off site Coordination and Support
Type 5 Incident Command	Initial Attack Dispatch
Type 4 Incident Command	Expanded Dispatch
Type 3 Incident Command	Buying /Payment Teams
Type 2 Incident Command	Local, Geographic, or National
Type 1 Incident Command	Geographic and National
Fire Use Management Teams	Coordination Centers
Unified Command	Multi-Agency Coordinating Groups
Area Command	

Command Organization

Incident Command

All fires, regardless of complexity, will have an Incident Commander (IC). The IC is a single individual responsible to the agency administrator(s) for all incident activities; including the development of strategies and tactics, and the ordering, deployment, and release of resources. The IC develops the organizational structure necessary to manage the incident. ICS Command Staff (Safety Officer and Information Officer) and General Staff (Operations Section Chief, Planning Section Chief, Logistics Section Chief, and Finance Section Chief) are established as required to perform key functional responsibilities for the IC.

For purposes of initial attack the first Incident Commander (IC) on scene, qualified at any level, will assume the duties of initial attack incident commander. The initial attack incident commander will assume the duties and responsibility (ies) for all suppression efforts on the incident, up to their level of qualification, until relieved by an IC, qualified at a level commensurate with incident complexity, arrives on scene.

Type 4 and 5 Incident Command

Type 4 and 5 Incident Commanders (ICs) are qualified according to the *NWCG Wildland Fire Qualifications Systems Guide PMS 310-1 (NFES # 310-1).* The Type 4 or 5 IC may assign personnel to any combination of ICS functional area duties in order to operate safely and effectively. ICS functional area duties should be assigned to the most qualified or competent individuals available.

Type 5 Incident Characteristics

- Ad hoc organization managed by a Type 5 Incident Commander.
- Primarily local resources used.
- ICS command and general staff positions are not activated.
- Resources vary from two to six firefighters.
- Incident is generally contained within the first burning period and often within a few hours after resources arrive on scene.
- Additional firefighting resources or logistical support are not usually required.

Type 4 Incident Characteristics

- Ad hoc organization managed by a Type 4 Incident Commander.
- Primarily local resources used.
- ICS command and general staff positions are not activated.
- Resources vary from a single resource to multiple resource task forces or strike teams.
- Incident is usually limited to one operational period in the control phase. Mopup may extend into multiple operational periods.
- Written incident action plan (IAP) is not required. A documented operational briefing will be completed for all incoming resources. Refer to the *Incident Response Pocket Guide* for a briefing checklist.

Type 3 Incident Command

Type 3 Incident Commanders (ICT3s) are qualified according to the *310-1*. ICT3s are required to manage the incident. They must not have concurrent responsibilities that are not associated with the incident, and they must not concurrently perform single resource boss duties. It is important to note that not all Type 3 complexity incidents require a full complement of individuals at the command and general staff positions. A Type 3 Incident Commander (ICT3) is expected to exercise their authority and establish the appropriate organizational structure for each incident as based on complexity, and span of control.

As an incident escalates, a continuing assessment of the complexity level should be completed to validate the continued ICT3 effort or the need for a higher level of incident management.

The following chart illustrates the minimum qualifications required for individuals performing Type 3 complexity functions:

Type 3 Functional Responsibility	Specific 310-1 or equivalent qualification standards required to perform ICS functions at Type 3 level
Incident Command	Incident Commander Type 3
Safety	Line Safety Officer
Operations	Strike Team Leader or Task Force Leader
Division	Single Resource Boss
Plans	Local entities can establish level of skill to perform function.
Logistics	Local entities can establish level of skill to perform function.
Information	Local entities can establish level of skill to perform function.
Finance	Local entities can establish level of skill to perform function.

- ***FS -*** *Refer to FSM 5109.17 for Additional standards.*

Type 3 experience that is input into the Incident Qualification and Certification System (IQCS) will not exceed an individual's current Red Card qualifications.

Type 3 Incident Characteristics

- Ad hoc or pre-established Type 3 organization managed by a Type 3 Incident Commander.
- The IC develops the organizational structure necessary to manage the incident. Some or all of ICS functional areas are activated, usually at the division/group supervisor and/or unit leader level.
- The Incident Complexity Analysis process is formalized and certified daily with the jurisdictional agency. It is the IC's responsibility to continually reassess the complexity level of the incident. When the complexity analysis indicates a higher complexity level the IC must ensure that suppression operations remain within the scope and capability of the existing organization, and that span of control is consistent with established ICS standards.
- Local and non-local resources used.
- Resources vary from several resources to several task forces/strike teams.
- May be divided into divisions.
- May require staging areas and incident base.
- May involve low complexity aviation operations.
- May involve multiple operational periods prior to control, which may require a written Incident Action Plan (IAP).
- Documented operational briefings will occur for all incoming resources and before each operational period. Refer to the *Incident Response Pocket Guide* for a briefing checklist.
- Type 3 IC will not serve concurrently as a single resource boss or have any non incident related responsibilities.

Type 1 and 2 Incident Command

Type 1 and 2 Incident Commanders are qualified according to the *310-1*. These ICs command pre-established Incident Management Teams that are configured with ICS Command Staff, General Staff, and other leadership and support positions. Personnel performing specific Type 1 or Type 2 command and general staff duties must be qualified at the Type 1 or Type 2 level according to the 310-1 standards.

Type 2 Incident Characteristics

Type 2 teams are managed by Geographic Area Multi-Agency Coordinating Groups, and are coordinated by the Geographic Area Coordination Centers.

- Pre-established incident management team managed by Type 2 Incident Commander.
- ICS command and general staff positions activated.
- Many ICS functional units required and staffed.
- Geographic and functional area divisions established.
- Complex aviation operations involving multiple aircraft.
- Incident command post, base, camps, staging areas established.
- Incident extends into multiple operational periods.
- Written incident action plan required for each operational period.
- Operations personnel often exceed 200 per operational period and total personnel may exceed 500.
- Requires a Wildland Fire Situation Analysis (WFSA).
- Requires a written Delegation of Authority to the Incident Commander.

Type 1 Incident Characteristics

Type 1 teams are managed by Geographic Area Multi-Agency Coordinating Groups, and are coordinated by the Geographic Area Coordination Centers. At national preparedness levels 4 and 5 these teams are coordinated by the National Interagency Coordination Center.

- Pre-established incident management team managed by Type 1 Incident Commander.
- ICS command and general staff positions activated.
- Most ICS functional units required and staffed.
- Geographic and functional area divisions established.
- May require branching to maintain adequate span of control.
- Complex aviation operations involving multiple aircraft.
- Incident command post, incident camps, staging areas established.
- Incident extends into multiple operational periods.
- Written incident action plan required for each operational period.
- Operations personnel often exceed 500 per operational period and total personnel may exceed 1000.
- Requires a Wildland Fire Situation Analysis. (WFSA)
- Requires a written Delegation of Authority to the Incident Commander.

Fire Use Management Teams (FUMT)

Fire Use Management Teams provide land managers with skilled and mobile personnel to assist with the management of Wildland Fire Use (WFU) fires and with prescribed fires. Fire Use Management Teams are available as an interagency resource for assignment to all agencies and units. FUMTs consist of the following positions:

- Incident Commander Type 2 (ICT2)
- Safety Officer 2 (SOF2)
- Public Information Officer 2 (POI2)
- Operations Sections Chief Type 2 (OSC2)
- Planning Section Chief Type 2 (PSC2)
- Long Term Fire Behavior Analyst (LTAN)
- Logistics Section Chief Type 2 (LSC2)
- Three additional positions

National Incident Management Organization Teams

Two National Incident Management Organization (NIMO) teams are configured as short Type I incident management teams. Each team has a full-time Incident Commander and six full-time Command & General Staff. One NIMO team is mobilized from Atlanta and the other from Boise. NIMO teams will be assigned to incidents as appropriate.

Area Command

Area Command is an Incident Command System organization established to oversee the management of multiple incidents that are each being managed by an ICS organization or to oversee the management of large or multiple incidents to which several Incident Management teams have been assigned. Area Command may become Unified Area Command when incidents are multi-jurisdictional. The determining factor for establishing area command is the span of control of the agency administrator.

Area Command Functions

- Establish overall strategy, objectives, and priorities for the incident(s) under its command.
- Allocate critical resources according to priorities.
- Ensure that incidents are properly managed.
- Coordinate demobilization.
- Supervise, manage, and evaluate Incident Management Teams under its command.
- Minimize duplication of effort and optimize effectiveness by combining multiple agency efforts under a single Area Action Plan.

Area Command Teams

National Area Command teams are managed by National Multi-Agency Coordinating (NMAC) and are comprised of the following:

- Area Commander (ACDR)
- Assistant Area Commander, Planning (AAPC)
- Assistant Area Commander, Logistics (AALC)
- Area Command Aviation Coordinator (ACAC)
- Area Command Trainees (2, as identified by the Area Commander)

Depending on the complexity of the interface between the incidents, specialists in other areas such as aviation safety or information may also be assigned.

Unified Command

Unified Command is an application of the Incident Command System used when there is more than one agency with incident jurisdiction or when incidents cross political jurisdictions. Under Unified Command, agencies work together through their designated incident commanders at a single incident command post to establish common objectives and issue a single Incident Action Plan. Unified Command may be established at any level of incident management or area command. Under Unified Command all agencies with jurisdictional responsibility at the incident contribute to the process of:

- Determining overall strategies.
- Selecting alternatives.
- Ensuring that joint planning for tactical activities is accomplished.
- Maximizing use of all assigned resources.

Advantages of Unified Command are:

- A single set of objectives is developed for the entire incident.
- A collective approach is used to develop strategies to achieve incident objectives.
- Information flow and coordination is improved between all jurisdictions and agencies involved in the incident.
- All involved agencies have an understanding of joint priorities and restrictions.
- No agency's legal authorities will be compromised or neglected.

Coordination and Support Organizations

Initial Attack Dispatch

Initial Attack is the planned response to a wildfire, given the wildfire's potential fire behavior. The command decision to move suppression resources is made by an authorized person at a local Initial Attack Dispatch Center.

Expanded Dispatch

Expanded Dispatch is the organization needed to support an incident which expands along with the Incident Command System. Expanded dispatch is

established when a high volume of activity indicates that increased dispatch and coordination capability is required.

Expanded Dispatch Organization

An Expanded Dispatch operations center may be established. The Expanded Dispatch coordinator facilitates accomplishment of goals and direction of the Agency administrator and, when activated, the Multi Agency Coordinating Group. The position may be filled by the person normally managing the day-to-day operations of the center or an individual from a higher level of management. The Expanded Dispatch center coordinator is responsible for:

- Filling and supervising necessary positions, if they are necessary, in accordance with coordination complexity.
- Implementing decisions made by the Multi-Agency Coordination (MAC) group.

Expanded Dispatch Facilities and Equipment

Expanded Dispatch facilities and equipment should be pre-identified, procured, and available for immediate setup. The following key items should be provided for:

- Work space separate from, but accessible to, the initial attack organization.
- Adequate office space (lighting, heating, cooling, security).
- Communications equipment (telephone, fax, computer hardware with adequate data storage space, priority use, and support personnel).
- Area suitable for briefings (agency administrators, media).
- Timetable/schedule should be implemented and adhered to (operational period changes, briefings, strategy meetings).
- A completed and authorized Continuation of Operations Plan (COOP).
- Qualified personnel on site to staff operations for the entire operational

Buying/Payment Teams

Buying/Payment Teams support incidents by procuring services and supplies and renting land and equipment. These teams may be ordered when incident support requirements exceed local unit capacity. These teams report to the agency administrator or the local unit administrative officer. See the *Interagency Incident Business Management Handbook* for more information.

Multi-Agency Coordination (MAC) Group

Multi-Agency Coordination Groups are part of the National Interagency Incident Management System (NIIMS) and are an expansion of the off-site coordination and support system. MAC Groups are activated by the Agency administrator(s) when the character and intensity of the emergency situation significantly impacts or involves other agencies. A MAC Group may be activated to provide support when only one agency has incident(s). The MAC group is made up of agency representatives who are delegated authority by their respective Agency administrators to make agency decisions and to commit

agency resources and funds. The MAC Group relieves the incident support organization (dispatch, expanded dispatch) of the responsibility for making key decisions regarding prioritization of objectives and allocation of critical resources. The MAC Group makes coordinated Agency administrator level decisions on issues that affect multiple agencies. The MAC Group is supported by situation, resource status, and intelligence units who collect and assemble data through normal coordination channels.

MAC Group Direction

MAC Group direction is carried out through dispatch and coordination center organizations. When Expanded Dispatch is activated, MAC group direction is carried out through the expanded dispatch organization. The MAC Group organization does not operate directly with Incident Management Teams or with Area Command teams, which are responsible for on-site management of the incident.

MAC Group Activation Levels

MAC groups may be activated at the local, state, regional, or national level. National level and Geographic Area level MAC Groups should be activated in accordance with the preparedness levels criteria established in the National and Geographic Area Mobilization Guides.

MAC Group Coordinator

The MAC Group coordinator facilitates organizing and accomplishing the mission, goals, and direction of the MAC group. The MAC Group coordinator:

- Provides expertise on the functions of the MAC Group and on the proper relationships with dispatch centers and incident managers.
- Fills and supervises necessary unit and support positions as needed, in accordance with coordination complexity.
- Arranges for and manages facilities and equipment necessary to carry out the MAC group functions.
- Facilitates the MAC group decision process. Implements decisions made by MAC group.

MAC Group Functions

Activation of a MAC Group improves interagency coordination and provides for allocation and timely commitment of multi-agency emergency resources. Participation by multiple agencies in the MAC effort will improve:

- Overall situation status information.
- Incident priority determination.
- Resource acquisition and allocation.
- State and Federal disaster coordination.
- Political interfaces.
- Consistency and quality of information provided to the media and involved agencies.
- Anticipation of future conditions and resource needs.

Managing the Incident

Agency Administrator Responsibilities

The agency administrator (AA) manages the land and resources on their organizational unit according to the established land management plan. Fire management is part of that responsibility. The AA establishes specific performance objectives for the Incident Commander (IC), and delegates the authority to the IC to take specific actions to meet those objectives.

AA responsibilities to a Type 1 or 2 Incident Management Team (IMT) or Fire Use Management Team (FUMT) include:

- Conduct an initial briefing to the Incident Management Team (Appendix D).
- Provide an approved and certified Wildland Fire Situation Analysis (WFSA) or Wildland Fire Implementation Plan (WFIP). The WFSA is validated daily and the WFIP is validated as required.
- Complete an Incident Complexity Analysis (Appendix F & G) to accompany the WFSA.
- Issue a written Delegation of Authority (Appendix H) to the Incident Commander and to other appropriate officials (agency administrator Representative, Resource Advisor, and Incident Business Advisor). For Type 3, 4, or 5 Incidents, delegations may be written or oral. The delegation should:
  - State specific and measurable objectives, priorities, expectations, constraints, and other required direction.
  - Establish the specific time for transfer of command.
  - Assign clear responsibilities for initial attack.
  - Define your role in the management of the incident.
  - Assign a resource advisor(s) to the IMT.
  - Define public information responsibilities.
  - If necessary, assign a local government liaison to the IMT.
  - Assign an Incident Business Advisor (IBA) to provide incident business management oversight commensurate with complexity.

  - Direct IMT to address rehabilitation of areas affected by suppression activities.
- Coordinate Mobilization with the Incident Commander:
  - Negotiate filling of mobilization order with the IC.
  - Establish time and location of Agency administrator briefing.
  - Consider approving support staff additional to the IMT as requested by the IC.
  - Consider authorizing transportation needs as requested by the IC.

In situations where one agency provides fire suppression service under agreement to the jurisdictional agency, both jurisdictional and protecting agencies will be involved in the development of, and signatories to, the delegation of authorities and the WFSA to the incident management teams.

A website for agency administrators managing a large fire incident in which a IMT will be assigned is located at: http://www.fs.fed.us/r3/fire/swamgmt/admin/aa_guidelines/swa_aa_guidelines.htm.

Agency Administrator Representative Responsibilities

The agency administrator representative (the on-scene agency administrator) is responsible for representing the political, social, and economic issues of the agency administrator to the Incident Commander. This is accomplished by participating in the agency administrator briefing, in the IMT planning and strategy meetings, and in the operational briefings. Responsibilities include representing the agency administrator to the IMT regarding:

- Compliance with the Delegation of Authority and the WFSA.
- Public Concerns (air quality, road or trail closures, smoke management, threats)
- Public Safety (evacuations, access/use restrictions, temporary closures)
- Public Information (fire size, resources assigned, threats, concerns, appeals for assistance)
- Socioeconomic, Political, or Tribal Concerns
- Land and Property Ownership Concerns
- Interagency and Inter-governmental Issues
- Wildland Urban Interface Impacts
- Media Contacts

Resource Advisor Responsibilities

The Resource Advisor is responsible for anticipating the impacts of fire operations on natural and cultural resources and for communicating protection requirements for those resources to the Incident Commander. The Resource Advisor should ensure IMT compliance with the Land Management Plan and Fire Management Plan direction, and provide the Incident Commander with information, analysis, and advice on these areas:

- Rehabilitation requirements and standards
- Land Ownership
- Hazardous Materials
- Fuel Breaks (locations and specifications)
- Water Sources and Ownership
- Critical Watersheds
- Critical Wildlife Habitat
- Noxious Weeds
- Special Status Species (threatened, endangered, proposed, sensitive)
- Fisheries
- Poisonous Plants, Insects, and Snakes
- Mineral Resources (oil, gas, mining activities)
- Archeological Site, Historic Trails, Paleontological Sites
- Riparian Areas
- Military Issues
- Utility Rights-of-way (power, communication sites)
- Native Allotments
- Grazing Allotments
- Recreational Areas
- Special Management Areas (Wilderness Areas, Wilderness Study Areas, Recommended Wilderness, National Monuments, National Conservation Areas, National Historic Landmarks, Areas Of Critical Environmental Concern, Research Natural Areas, Wild And Scenic Rivers)

The Resource Advisor and agency administrator representative positions are generally filled by local unit personnel. These positions may be combined and performed by one individual. Duties are stated in the *Resource Advisor's Guide for Wildland Fire* (NWCG PMS 313, NFES 1831, Jan 2004).

Transfer of Command

The following guidelines will assist in the transfer of incident command responsibilities from the local unit to incoming Type 1 or 2 Incident Management Team, and back to the local unit.

- The local team or organization already in place remains in charge until the local representative briefs their counterparts on the incoming team, a delegation of authority has been signed, and a mutually agreed time for transfer of command has been established.
- The ordering unit will specify times of arrival and transfer of command, and discuss these timeframes with both the incoming and outgoing command structures.
- Clear lines of authority must be maintained in order to minimize confusion and maintain operational control.
- Transfers of command should occur at the beginning of an operational period, whenever possible.

- All operational personnel will be notified on incident command frequencies when transfer of command occurs.

Release of Teams

The release of a Type 1 or 2 IMT should follow an approved transfer of command process. The agency administrator must approve the date and time of the transfer of command. The transition plan should include the following elements:

- Remaining organizational needs and structure
- Tasks or work to be accomplished
- Communication systems and radio frequencies
- Local safety hazards and considerations
- Incident Action Plan, including remaining resources and weather forecast
- Facilities, equipment, and supply status
- Arrangement for feeding remaining personnel
- Financial and payment processes needing follow-up
- Complexity Analysis

Team Evaluation

At completion of assignment, Incident Commanders will receive a written performance evaluation from the agency administrators prior to the teams release from the incident. Certain elements of this evaluation may not be able to be completed at the closeout review. These include; accountability and property control; completeness of claims investigation/documentation; and completeness of financial and payment documentation. The final evaluation incorporating all of the above elements should be sent to the Incident Commander within 60 days. See Appendix J for the IMT evaluation form.

The Delegation of Authority, the WFSA, and agency administrator's direction will serve as the primary standards against which the IMT is evaluated.

The agency administrator will provide a copy of the evaluation to the IC, the state/regional FMO, and retain a copy for the final fire package.

The state/regional FMO will review all evaluations and will be responsible for providing a copy of evaluations documenting performance to the geographic area board managing the IMT.

Financial Records

The ordering host unit will be responsible for retaining the incident documentation package and financial records.

Post Wildfire Activities

Each wildland fire management agency is responsible for taking prompt action to determine the need for and to prescribe and implement emergency treatments to minimize threats to life or property or to stabilize and prevent unacceptable degradation to natural and cultural resources resulting from the effects of a fire on the lands they manage.

Damages resulting from wildland fires are addressed through four activities:

- **Wildfire Suppression Activity Damage Repair -** Planned actions taken to repair the damages to resources, lands, and facilities resulting from wildfire suppression actions and documented in the Incident Action Plan. These actions are usually implemented immediately after containment of the wildfire by the Incident Management Team before demobilization.
- **Emergency Stabilization -** Planned actions to stabilize and prevent unacceptable degradation to natural and cultural resources, to minimize threats to life or property resulting from the effects of a wildfire, or to repair/replace/construct physical improvement necessary to prevent degradation of land or resources. Emergency stabilization actions must be taken within one year following containment of a wildland fire and documented in a Burned Area Emergency Response Plan.
- **Rehabilitation -** Efforts taken within three years of containment of a wildland fire to repair or improve wildfire-damaged lands unlikely to recover naturally to management approved conditions, or to repair or replace minor facilities damaged by wildfire. These efforts are documented in a separate Burned Area Rehabilitation Plan.
- **Restoration -** The continuation of rehabilitation beyond the initial three years or the repair or replacement of major facilities damaged by the wildfire.

Burned Area Emergency Response (BAER) Teams

BAER Teams are a standing or ad hoc group of technical specialists (e.g., hydrologists, biologists, soil scientists, etc.) that develop and may implement portions of the Burned Area Emergency Response Plans. They will meet the requirements for unescorted personnel found in Chapter 06 under "Visitors to the Fireline" when working within the perimeter of an uncontrolled wildfire. The team's skills and size should be commensurate with the size and complexity of the wildfire.

- It is the agency administrator's (not the Incident Commander's) responsibility to designate an interdisciplinary BAER team. However, BAER teams must coordinate closely with IC and Incident Management teams to work safely and efficiently. Initial requests for funding for BAER should be submitted to the appropriate agency administrator for approval within 7 calendar days after the total containment of the fire. If additional time is needed, extensions may be negotiated with those having approval authority.

- ***DOI -*** *The Department of the Interior maintains one standing National BAER Team with pre-identified positions listed in the National Interagency Mobilization Guide and are comprised of personnel from the Bureau of Indian Affairs, Bureau of Land Management, National Park Service, Fish and Wildlife Service, and Forest Service. The DOI-BAER Team is dispatched by the National Interagency BAER Team Dispatch Prioritization Criteria Evaluation. The DOI-BAER Teams should be requested at least 10 days prior to expected date of wildfire containment.*
- ***FS -*** *The Forest Service utilizes BAER Teams through a pool of resources with the skills identified by the receiving unit. When needed, BAER personnel from other units can either be contacted directly or through dispatch. Placing a general fire resource order for BAER team members via dispatch is not appropriate for ad hoc Forest Service teams. See FSM 2523 and FSH 2509.13 for agency specific policy and direction for BAER team.*

Cost Containment

The primary criteria for choosing suppression strategies are to minimize costs without compromising safety. Planned and actual suppression costs must be commensurate with the values to be protected. They must be included and displayed in the Wildland Fire Situation Analysis. Even though resource benefits may result in some areas of a fire, it is inappropriate to expend suppression dollars with the explicit objective of achieving resource benefit. Indirect containment strategies are appropriate only if they are the safest or least cost option. Selection of these strategies must be carefully scrutinized when fire danger trends are rising. Long duration wildfires need to be closely evaluated by cost containment teams to ensure that operations are not occurring beyond the point of diminishing returns.

An Incident Business Advisor (IBA1) must be assigned to any fire with suppression costs of more than $5 million. An IBA2 is advised for fires with suppression costs of $1-5 million. If a certified IBA is not available, the approving official will appoint a financial advisor to monitor expenditures.

Incident suppression cost objectives will be included as a performance measure in Incident Management Team evaluations.

Incident Action Plan

When a written Incident Action Plan is required, suggested components may include objectives, organization, weather forecast, fire behavior forecast, division assignments, air operations summary, safety message, medical plan, communications plan, and incident map.

Incident Status Reporting

The Incident Status Summary (ICS-209), submitted to the GACC, is used to report large wildland fires, and any other significant events on lands under

federal protection or federal ownership. Lands administered by states and other federal cooperators may also report in this manner.

Large fires are classified as 100 acres or larger in timber fuel types, 300 acres or larger in grass fuel types, or when a Type 1 or 2 Incident Management Team is assigned. A report should be submitted daily until the incident is contained. The agency administrator may require additional reporting times. Refer to local, zone, and/or GACC guidance for additional reporting requirements.

Chapter 12
Suppression Chemicals & Delivery Systems

Policy for Use of Fire Chemicals

Use only products qualified and approved for intended use. Follow safe handling procedures and use personal protective equipment recommended on the product label and *Material Safety Data Sheet* (MSDS).

A current list of qualified products and approved uses can be found on the Wildland Fire Chemical Systems website:

- www.fs.fed.us/rm/fire
- Click on Wildland Fire Chemicals
- Click the appropriate Qualified Products List

Refer to local jurisdictional policy and guidance related to use of wildland fire chemicals for protection of historic structures.

Retardant Policy

Using approved long-term retardants in wildland fire suppression efforts is standard in fire management and planning. The retardants are most often delivered in fixed or rotor-wing aircraft. Some products are formulated specifically for delivery from ground sources.

Foam Policy

Standard operating procedures for fire management and suppression activities involving water as the suppression or protection agent delivered by engines and portable pumps, shall include the use of Class A fire suppressant to improve the efficiency of water. The exception is near watercourses where accidental spillage or over spray of the chemical could be harmful to the aquatic ecosystem (see Environmental Guidelines page 12-03). Helicopters and Single Engine Airtankers (SEATs) can also deliver foam. Some agencies also allow application of foam from fixed-wing water scoopers.

Water Enhancer Policy

These products may be used in structure protection within the wildland interface or on wildland fuels. These products are qualified for use in helicopter buckets and ground engines.

Types of Fire Chemicals

Long-Term Retardant

Long-term retardants contain fertilizer salts that change the way fuels burn. They are effective even after the water has evaporated.

Principles of application and coverage levels are outlined in *Recommended Retardant Coverage Levels NFES 2048, PMS 440-2.* Retardant mixing,

blending, testing, and sampling requirements can be found in *Lot Acceptance, Quality Assurance and Field Quality Control for Fire Retardant Chemicals, NFES 1245, PMS 444-1*.

Fire Suppressant Foam

Fire suppressant foams are combinations of wetting and foaming agents added to water to improve the effectiveness of the water. They are not effective once the water has evaporated.

Technical guidelines for equipment operations and general principles of foam application are discussed in *Foam vs. Fire, Class A Foam for Wildland Fires, NWCG, PMS 446-1, NFES 2246, 2nd ed., October 1993, and Foam vs. Fire, Aerial Applications, NWCG, PMS 446-3, NFES 1845, October 1995.*

Water Enhancers for Wildland Fire Suppression

Water enhancers, such as fire fighting gels, are products added to water to improve one or more of the physical properties of water. These products are suited for exposure protection for vertical surfaces. They are not effective once the water has evaporated. Water enhancers are typically applied from ground equipment and especially suited to exposure protection for vertical surfaces. They are fully approved for use in helicopter bucket and engine application. See the Qualified Product List for updated uses.

General Safety Criteria

All wildland fire chemicals must meet minimum requirements with regard to aquatic and mammalian toxicity, which includes acute oral toxicity, acute dermal toxicity, primary skin irritation, and primary eye irritation *(International Specification for Fire Suppressant Foam for Wildland Fires, Aircraft or Ground Application, July 2000.)*

Personnel involved in handling, mixing, and applying fire chemicals or solutions will be trained in proper procedures to protect their health and safety, as well as that of the environment.

Personnel must follow the manufacturer's recommendations, including use of PPE (i.e. goggles, gloves, eyewash kits on site) as found on the product label and product *Material Safety Data Sheet* (MSDS). Approved fire chemicals are mildly to severely irritating to the eyes. Anyone involved with or working in the vicinity of fire chemical concentrates should use protective splash goggles.

Human health risk from accidental drench with retardant can be mitigated by removing any residue from exposed skin by washing with water.
Containers of any fire chemical, including backpack pumps and engine tanks, should be labeled to alert personnel that they do not contain plain water, and that the contents must not be used for drinking purposes. Slickness is a hazard at storage areas and unloading and mixing sites. Because all fire chemical

concentrates and solutions contribute to slippery conditions, all spills must be cleaned up immediately, preferably with a dry absorbent pad or granules.

Personnel applying foam should stand in untreated areas. A foam blanket can be dangerous to walk through because it conceals ground hazards. Foam readily penetrates and deteriorates leather boots, resulting in wet feet and potentially ruined leather.

All safety precautions associated with ground crews near retardant drops also apply to aerial foam drops.

Aerial Application Safety

Persons downrange, but in the flight path of intended retardant drops, should move to a location that will decrease the possibility of being hit with a drop.

Persons near retardant drops should be alert for objects (tree limbs, rocks, etc.) that the drop could dislodge.

During training or briefings, inform field personnel of environmental guidelines and requirements for fire chemicals application and avoid contact with natural bodies of water.

Notify incident or host authorities promptly of any fire chemicals applied within 300 feet of, or spilled into, a body of water. The incident or host authorities must immediately contact appropriate regulatory agencies and specialists within the local jurisdiction. Also spills will be immediately reported to Wildland Fire Chemicals Systems in Missoula, Montana at phone 406-329-3900 or to individuals listed in website referenced above.

Avoid dipping from rivers or lakes with a helicopter bucket containing residual fire chemicals. Set up an adjacent reload site and manage the fire chemicals in portable tanks, or terminate the use of chemicals for that application.

Quality control maintenance and safety requirements dictate that mixing or blending of retardants be accomplished by standard approved methods. Powdered or liquid retardants must be blended or mixed at the proper ratio prior to being loaded into the aircraft.

Environmental Guidelines for Delivery of Fire Chemicals near Waterways

Definition

Waterway - Any body of water including lakes, rivers, seeps, intermittent streams and ponds whether or not they contain aquatic life.

Aerial Application Guidelines

Avoid aerial or ground application of fire chemicals within 300 feet of waterways.

These guidelines do not require the pilot-in-command to fly in such a way as to endanger his or her aircraft, other aircraft, structures, or compromise ground personnel safety.

Exceptions

When alternative line construction tactics are not available due to terrain constraints, congested area, life and property concerns, or lack of ground personnel, it is acceptable to anchor the fire chemical application to the waterway. When anchoring a fire chemical line to a waterway, use the most accurate method of delivery in order to minimize placement of retardant or foam in the waterway.

Deviations from these guidelines are acceptable when life or property is threatened, and the use of fire chemicals can be reasonably expected to alleviate the threat. When potential damage to natural resources outweighs possible loss of aquatic life, the agency administrator may approve a deviation from these guidelines.

Environmental Procedures for Application of Fire Chemicals

Threatened and Endangered (T&E) Species

The following provisions are guidance for complying with the emergency Section 7 consultation procedures of the Endangered Species Act (ESA) with respect to aquatic species. These provisions do not alter or diminish an agency's responsibilities under (ESA).

Where aquatic T&E species or their habitats are potentially affected by aerial application of retardant or foam, the following additional procedures apply:

- As soon as practical after the aerial application of fire chemicals near waterways, determine whether the aerial application has caused any adverse effect on T&E species or their habitat using the following criteria:
  - Aerial application of fire chemicals outside 300 feet of a waterway is presumed to avoid adverse effects to aquatic species and no further consultation for aquatic species is necessary.
  - Aerial application of fire chemicals within 300 feet of a waterway requires that the unit administrator determine whether there have been any adverse effects to T&E species within the waterway.
  - If the action agency determines that there were adverse effects on T&E species or their habitats, then the agency must consult with Fish and Wildlife Service (FWS) or National Marine Fisheries Service (NMFS) as required by 50 CFR 402.05 (Emergencies). Procedures for emergency consultation are described in the *Interagency*

Consultation Handbook, Chapter 8 (March 1998). In the case of a long duration incident, emergency consultation should be initiated as soon as practical during the event. Otherwise, post-event consultation is appropriate. The initiation of the consultation is the responsibility of the unit administrator. These procedures shall be documented in a Biological Assessment (BA). All occurrences of adverse effects will be immediately reported to Wildland Fire Chemicals Systems in Missoula, Montana at phone 406-329-3900 or to individuals listed in website referenced above.

- Each agency is responsible for ensuring that their appropriate agency specific guides and training manuals reflect these standards.

Ground Application of Fire Suppressant Foams

Proportioners

Proportioners are designed to provide an appropriate mix of foam concentrate and water during pumping operations, rather than relying on batch mixing to prepare foam solutions. Both manual and automatic proportioner systems are available. Specific agency standards may require the use of a specific type of system. Proportioners should be flushed after every operational period of use.

Agency standards for foam proportioners on engines are an automatically regulated proportioners, such as Robwen Flowmix 500, or FoamPro 1600. These devices are available as a foam kit for use with portable pumps. Automatic proportioners are required for compressed air foam systems to prevent slug flow.

- ***FS -*** *Manually regulated proportioners, such as around-the-pump proportioners, in-line and by-pass eductors, and suction-side regulators, are acceptable for remote portable pump use when the operator understands the device limitations.*

Wet Water

Using foam concentrates at a mix ratio of 0.1 percent will produce a wet water solution.

Conventional Nozzles and Backpack Pumps

Mix ratio is 0.1 - 0.3%. Hydraulic considerations are the same as water.

Aspirating Nozzles

Mix ratio is 0.2 - 1.0%. But generally 0.5%, depending on nozzle, “foaminess” of concentrate used, and type of application. Adjust the ratio to best meet needs and objectives. Foam production and delivery should occur as readily as water delivery.

Compressed Air Foam Systems (CAFS) Operating Standards

- Keep static air and water pressures equal.
- Start with a 0.3% mix ratio; adjust if necessary.

- Typical operation with 1 cfm of air for every gpm of water; adjust if necessary.
- Employ a motionless mixer or 100 feet of hose to develop foam in the hose.
- Foam production and delivery should occur as readily as water delivery.
- Recommended minimum hose diameter is 1.5 inches when using foam on wildland/urban interface and vehicle fires.
- CAFS Safety - Mandatory training for personnel operating a CAFS includes: operating the nozzle, working around charged hoselays, and how to prevent slug flow.

Chapter 13
Training & Qualifications

Introduction

Agency standards for training and qualifications which may exceed the minimum standards established by National Wildfire Coordinating Group (NWCG) are coordinated through the National Fire and Aviation Executive Board. Such additional standards will be approved by the Fire Directors, and implemented through the Incident Qualifications and Certification System (IQCS).

Policy

It is agency policy that only qualified personnel will be assigned duties in wildland fire suppression or prescribed fire. All employees assigned dedicated fire program management responsibilities at the local, geographic area, or national level shall meet established interagency and agency competencies (knowledge, skills, and abilities) and associated qualifications. The NWCG, *Wildland Fire Qualifications Systems Guide* PMS 310-1 is the policy.

Requirements for fire management positions are outlined in the *Interagency Fire Program Management Qualifications Standards and Guide*, referred to as the IFPM Standard. The supplemental Qualification Standard for professional GS-0401 Fire Management Specialist positions, approved by the Office of Personnel Management, is also included in the IFPM Standard. *The Interagency Fire Program Management Qualification Standards and Guide* can be found in it's entirety on the IFPM website: http://www.ifpm.nifc.gov

- ***FS -*** *Standards which may exceed the minimum standards established by NWCG are identified in FSH 5109.17. AD hires will meet FSH 5109.17 qualification standards.*
- ***NPS-*** *L380 Fireline Leadership is recommended training for single resource bosses; L-381 Incident Leadership is recommended training for RXB1.*

Incident Qualifications and Certification System (IQCS)

The Incident Qualifications and Certification System (IQCS) is the fire qualifications and certification record keeping system. The Responder Master Record report provided by the IQCS meets the agency requirement for maintaining fire qualification records. The system is designed to provide managers at the local, state/regional, and national levels with detailed qualification, experience, and training information needed to certify employees in wildland fire positions. The IQCS is a tool to assist managers in certification decisions, however, it does not replace the manager's responsibility to validate that employees meet all requirements for position performance based on standards.

A hard copy file folder will be kept for each employee. The contents will include, but are not limited to: training records for all agency required courses, evaluations from assignments, position Task Book verification, yearly updated IQCS forms, and Responder Master Record (RPTC028) from IQCS.
All records will be stored and/or destroyed in accordance with agency policies.

- ***BLM -*** *These policies can be found at: http://www.blm.gov/nhp/records/blmgrs/toc.html*

Certification of Non-Agency Personnel

Non-agency firefighters will be certified by state or local fire departments, or private training providers with approved Memorandum of Understanding (MOU) through their local GACC. Agencies will not assist in the administration, or sponsor the Work Capacity Test (WCT), as the certifying agency.

Incident Qualifications Card (Red Card)

The agency administrator (or delegate) is responsible for annual certification of all agency and Administrative Determined (AD) personnel serving in wildland and prescribed fire positions. Agency certification is issued annually in the form of an Incident Qualification Card (Red Card), which certifies that the individual is qualified to perform in a specified position. The Red Card must be reviewed for accuracy and signed by the agency administrator or delegated official. The agency administrator, fire manager, and individual are responsible for monitoring medical status, fitness, training, performance, and for taking appropriate action to ensure the employee meets all position performance requirements.

Training, medical screening, and successful completion of the appropriate WCT must be properly accomplished. All Red Cards issued to agency employees, with the exception of Emergency Firefighter (EFF)-paid or temporary employees at the FFT2 level, will be printed using the IQCS. Red Cards issued to EFF or temporary employees at the FFT2 level may be printed at the local level without use of the IQCS.

Each agency will designate employees at the national, regional/state, and local levels as Fire Qualifications Administrators, who ensure all incident experience, incident training, and position Task Books for employees within the agency are accurately recorded in the IQCS. All records must be updated annually or modified as changes occur.

NPS - *Certification for type 1 Command and General Staff positions will be done at the national office level; certification for type 2 positions and for FUM1 will be done at the regional level. All other positions may be certified at the local unit level.*

The Incident Qualifications Card Expiration Dates

- Red Card positions requiring Work Capacity Tests (WCT) are valid through the fitness expiration date listed on the card.
- Red Card positions not requiring WCT for issuance are valid for 12 months from the date the card was signed by a certifying official.

Qualification System

Minimum Training Requirements

All personnel filling ICS positions on the fireline must have completed S-130, *Firefighter Training*, S-190, *Introduction to Wildland Fire Behavior*, L-180, *Human Factors on the Fireline* and I-100.

- ***NPS -*** *It is NPS policy that two or more assignments be accomplished after completing a Position Task Book, and receiving certification, before an individual begins movement to the next higher level. It is also NPS policy to require two or more qualified assignments be accomplished in a position before an individual may become a position performance evaluator. Exceptions to this should be rare and well founded. The only exceptions to this policy are unit leader positions leading to Planning Section Chief, Logistics Section Chief, or Finance Section Chief. Subordinate unit leader positions require a minimum of one assignment after the PTB completion and position certification.*
- ***FS -*** *Forest Service direction is found in FSH 5109.17.*

Annual Fireline Safety Refresher Training

Annual Fireline Safety Refresher Training is required for all personnel participating in wildland fire who may be subject to assignments on the fireline. Any unescorted visitors must meet the requirements specified in Chapter 06 of this volume. Annual Fireline Safety Refresher Training must include the following core topics:

- **Avoiding Entrapments -** Use training and reference materials to study the risk management process as identified in the *Incident Response Pocket Guide* and rules of engagement as appropriate to the participants, e.g., LCES, Standard Firefighting Orders, Eighteen Watch Out Situations, Wildland Fire Situation Analysis (WFSA) direction, Fire Management Plan priorities, etc.
- **Current Issues -** Review and discuss identified "hot topics" as found on the current *Wildland Fire Safety Training Annual Refresher* (WFSTAR) website. Review forecasts and assessments for the upcoming fire season and discuss implications for firefighter safety.
- **Fire Shelter -** Review and discuss last resort survival. Conduct "hands-on" fire shelter inspections. Practice shelter deployments in applicable crew/module configurations. No "live fire" exercises for the purpose of fire shelter deployment training will be conducted.

- **Other Hazards and Safety Issues -** Choose additional hazard and safety subjects, which could include SAFENET, current safety alerts, site/unit specific safety issues and hazards.

These core topics must be sufficiently covered to ensure that personnel are aware of safety concerns and procedures and can demonstrate proficiency in fire shelter deployment. The minimum refresher training hour requirements for each agency is identified below. Training time may be extended in order to effectively complete this curriculum or to meet local training requirements.

- ***BLM -*** *4 hours*
- ***FWS -*** *8 hours*
- ***NPS -*** *8 hours*
- ***FS -*** *8 hours*

Annual Fireline Safety Refresher Training will have a 12-month currency. A web site, http://www.nifc.gov/wfstar/index.htm, titled *Wildland Fire Safety Training Annual Refresher* (WFSTAR) is available to assist in this training.

- ***BLM -*** *The "Do What's Right" training is required annual training but is not a perquisite for issuance of a red card.*
- ***FS -*** *The Incident Complexity Analysis found in Appendix G will be shared with all Type 3, 4, & 5 Incident Commanders. Review of this guide should be a part of your annual refresher training.*

Entrapment avoidance and deployment protocols are identified in the *Incident Response Pocket Guide* (PMS No. 461/NFES No.1077). The guide contains a specific "Risk Management Process" and "Last Resort Survival Checklist".

An *Incident Response Pocket Guide* will be issued to every fireline supervisor.

Non-NWCG Agencies' Qualifications

Personnel from other agencies who do not subscribe to the NWCG qualification standards may be used on agency managed fires. However, agency fire managers must ensure these individuals are only assigned to duties commensurate with their abilities, agency qualifications, and equipment capabilities.

For prescribed fires evaluated to have low complexity, the agency and its local cooperators will jointly agree on qualification requirements. An agency can also establish its own qualifications for higher complexity prescribed fires where the resources of other agencies are not utilized. For prescribed fires which are of moderate complexity or higher and on which resources of more than one agency are utilized, the minimum qualifications established in NWCG 310-1 are required. (*NWCG PMS 310-1, page 11*)

- ***BLM/NPS/FWS -*** *Other agencies personnel, meeting NWCG 310-1, prerequisites, can participate in and receive certificates for successful*

completion of BLM/NPS/FWS taught courses. BLM/NPS/FWS employees can complete the Task Blocks, Evaluation Record and Verification/ Certification sections of a cooperating organizations employee Position Task Book. BLM/NPS/FWS employees will not initiate or complete the Agency Certification sections of Position Task Book for non-agency employees.

Qualification and Certification Process

Each unit with fire management responsibilities will establish a Red Card qualification and certification process. In areas cooperating with other federal, state, or local agencies, an interagency qualification and certification committee should include representatives from each unit. These qualification and certification committees provide management oversight and review of the wildland and prescribed fire positions under their jurisdiction. The committee also:

- Ensures that qualifications generated by IQCS or other agency systems for employees are valid by reviewing the training and experience of each employee.
- Evaluates if each employee possesses the personal characteristics necessary to perform the wildland and prescribed fire positions in a safe and efficient manner.
- Makes recommendations to the appropriate agency administrator or designee who is responsible for final certification signature.
- Develops interagency training needs and sponsors courses that can be offered locally.
- Ensures training nominees meet minimum requirements for attending courses.
- ***NPS -*** *For type 2 complexity qualifications final verification of the Position Task Book will be completed by a regional certifier.*
- ***NPS -*** *For type 1 complexity qualifications final verification of the Position Task Book will be completed by a national certifier.*

Physical Fitness

Physical Fitness and Conditioning

Agency administrators are responsible for ensuring the overall physical fitness of firefighters. The agency administrator may authorize employees who are available and/or serving in wildland fire positions that require a physical fitness rating of arduous, one hour each day for fitness condition. Non fire personnel who hold arduous ratings on their red card may be authorized up to three hours per week of duty time for fitness conditioning. All other wildland firefighting personnel with a rating other than arduous may be authorized up to three hours per week of duty time for fitness conditioning. Individuals who have a position with an arduous physical requirement may be periodically tested (check FS policy re: union agreement) during the fire season to ensure they are retaining the required level of fitness and conditioning.

Fitness conditioning periods may be identified and structured to include aerobic and muscular exercises. Team sports are not authorized for fitness conditioning. Chapters 7, 8, and 9 of *Fitness and Work Capacity, 2nd ed. (1997)*, and the FireFit Program (http://www.nifc.gov/FireFit/index.htm) provide excellent guidance concerning training specifically for the pack test, aerobic fitness programs, and muscular fitness training.

- ***FS -*** *Forest Service direction is found in FSH 5109.17.*

Medical Examinations

Agency administrators and supervisors are responsible for the occupational health and safety of their employees performing wildland fire activities, and may require employees to take a medical examination at any time.

Established medical qualification programs, as stated in 5 CFR 339, provide consistent medical standards in order to safeguard the health of employees whose work may subject them or others to significant health and safety risks due to occupational or environmental exposure or demand.

Information on any medical records is considered confidential and must be kept in the employee's medical file.

Federal Interagency Wildland Firefighter Medical Qualification Standards

The Federal Interagency Wildland Firefighter Medical Qualification Standards continue to be implemented throughout the DOI and FS organizations. Those units who have not yet implemented the new standards must continue to comply with the current agency standards as stated under Agency Specific Medical Examinations section below until implementation of the new standards is accomplished. Additional information regarding the Federal Interagency Wildland Firefighter Medical Qualification Standards program can be obtained at www.nifc.gov/medical_standards.

All permanent, career-seasonal, temporary, Student Career Experience Program (SCEP) employees, and AD/EFF who participate in wildland fire activities requiring a fitness level of arduous must participate in the Federal Interagency Wildland Firefighter Medical Qualification Standards program at the appropriate level (see Medical Examination Requirements Appendix N) and must be medically cleared prior to attempting the WCT.

Under the Federal Interagency Wildland Firefighter Medical Qualification Standards, the *Health Screen Questionnaire* (HSQ) will only be required for arduous duty AD/EFF hires less than 45 years of age. The HSQ is not required prior to taking the WCT for all other employment categories.

No employee or applicant who fails to meet the Federal Interagency Wildland Firefighter Medical Qualification Standards as a seasonal/temporary or permanent employee may be hired as an AD/EFF.

Agency Specific Medical Examinations

This section applies only to those units who have not yet implemented the Federal Interagency Wildland Firefighter Medical Qualification Standards for arduous duty and for all employees and AD/EFF who participate in wildland fire activities requiring a fitness level of moderate or light.

The *Health Screen Questionnaire* (HSQ) will be utilized as a means to identify individuals who may be at risk in taking the Work Capacity Test (WCT) and recommend an exercise program and/or medical examination prior to taking the WCT.

If any "Yes" answer is indicated on the HSQ, a medical examination is required prior to the employee taking the WCT. If there is a known pre-existing medical condition that is already being monitored under medical care (e.g., high blood pressure), a medical clearance statement will be provided by the physician in lieu of a medical examination prior to taking WCT.

Medical examinations will be performed utilizing the U.S. Civil Service *Commission Certificate of Medical Examination Form*, SF-78. Stress EKGs are not required as part of the medical examination and will only be approved if recommended and administered by the medical examining physician. Cost for exams will be borne by the home unit. If medical findings during exam require further evaluation, then the cost of any further evaluation or treatment is borne by the employee/applicant.

The examining physician will submit the completed SF-78 (and applicable supplements) to the employee's servicing human resources office, where it will be reviewed and retained in the employee's medical file.

- ***NPS -*** *"Wildland Firefighter" Defined: Those employees who perform duties of a hazardous and/or strenuous nature are targeted. Therefore, within this section, "wildland firefighter" hereinafter refers to an employee whose wildland fire position(s) qualifications require an "Arduous" fitness level, as defined in the current PMS 310-1 "Wildland and Prescribed Fire Qualifications System Guide"*
- ***NPS -*** *For health and fitness purposes, those who are fire-qualified at less than the Arduous fitness level are not required to meet the mandatory fitness program requirements of DO-57 for wildland fire management. However, they are strongly encouraged to participate in the voluntary fitness program, and must still meet physical fitness/work capacity requirements as outlined in 310-1 "Wildland and Prescribed Fire Qualification System Guide" for positions with Moderate and Light fitness requirements.*
- ***NPS -*** *Health Screening: Arduous duty medical exams must be taken once every 3 years by wildland firefighters. They do not include stress EKGs, except for those 41 years or older if required by the examining physician. Those cases would be considered exceptional. FIREPRO funding will not*

be used to pay for stress EKGs, except in exceptional cases, which require prior approval by the regional fire management officer.

- ***NPS -*** *FIREPRO funding may be used to pay for medical exams for mandatory fitness program participants within the following limits:*
  - ***NPS -*** *Those who meet the definition of "wildland firefighter" will have costs of all required medical examinations paid for by FIREPRO, not to exceed $350. Anything in excess of $350 requires prior approval of the regional fire management officer. This includes recent requirements for blood screenings.*
  - ***NPS -*** *In the event an employee-selected physician indicates that an EKG or other advanced test is needed, the government may require a second opinion from an appointed physician.*
- ***NPS -*** *The law enforcement medical exam for NPS rangers, who are collateral duty wildland firefighters, will suffice for wildland fire health screening purposes.*
- ***NPS -*** *Employees requiring medical exams on the 3-year cycle will have exams conducted prior to taking the Arduous fitness WCT (Pack Test).*

Health Screen Questionnaire (HSQ)

Title 5 CFR Part 339 - Medical Qualification Determinations, which provides a determination of an individual's fitness-for-duty, authorizes solicitation of this information.

The HSQ can be found in Appendix L.

The information on the HSQ is considered confidential and once reviewed by the test administrator to determine if the WCT can be administered, it must be kept in the employee's medical file (EMF). This file may only be viewed by Human Resource Management (HRM) or Safety personnel.

- ***FS -*** *Servicing Personnel Office will notify the test administrator once the employee is cleared to complete the WCT.*

Work Capacity Tests (WCTs) Administration

The Work Capacity Tests (WCT) is the official method of assessing wildland firefighter fitness levels. See *"Work Capacity Tests for Wildland Firefighters, Test Administrator's Guide"* PMS 307, NFES 1109.

WCT Administrators must ensure that WCT participants have been medically cleared, either through *Wildland Firefighter Medical Qualification Standards* or agency specific medical examination.

WCTs are administered annually to all employees, including AD/EFF who will be serving in wildland fire positions that require a fitness level. The currency for the WCT is 12 months.

The WCT Record (see Appendix M) captures information that is covered under the Privacy Act and should be maintained in accordance with agency Freedom of Information Act (FOIA) guidelines.

Administration of the WCT of non-federal firefighters is prohibited for liability reasons. Potential emergency firefighters who would be hired under Emergency Hire authority by the agency must be in AD pay status or sign an agency-specific volunteer services agreement when given the WCT.

A Job Hazard Analysis (JHA) shall be developed and approved for each field office prior to administrating the WCT.

Document using the WCT Record (see Appendix M). This document must be retained until the next testing. Units may also be requested to provide data from these records to assist in the evaluation of the WCT process.

Personnel taking the WCT will only complete the level of testing (Pack, Field, Walk) required by the highest fitness level identified for a position on their red card. To further clarify, employees shall not take the WCT unless they have a red card qualification that requires it, and only at the fitness level required by that position as identified in the NWCG 310-1 or agency specific guidance or policy.

Test results must also be entered in the IQCS annually to update the fitness level and date that will appear on the Red Card. Physical fitness dates entered in IQCS will reflect the date the employee passed the fitness test.

- ***NPS -*** *For those parks that experience severe winter conditions and must test personnel during those conditions, work capacity testing may be conducted using industrial grade treadmills. This least-preferred option should only be considered when all other indoor facilities are unavailable (gyms, indoor tracks, malls, etc.), and requires Regional Fire Management Officer approval. For safety reasons, these treadmills must have suitable handrails and kill-switches, preferably switches physically attached to the user via a cord. The Job Hazard Analysis must address all possible balance/fall mitigations. Specific questions are answered in the "Work Capacity Administrators Guide" (PMS 307,NFES 1109).*

WCT Retesting

Those who do not pass the WCT will be provided another opportunity to retest. Employees will have to wait at least 48 hours before retaking the WCT. If an employee sustains an injury (verified by a licensed medical provider) during a test, the test will not count as an attempt. Once an injured employee has been released for full duty, the employee will be given time to prepare for the test (not to exceed 4 weeks). The numbers of retesting opportunities that will be allowed include:

- Three opportunities for permanent employees required to pass a test for duties in the fire program.
- One opportunity for temporary employees required to pass a test (a second chance maybe provided at the discretion of fire management).
- ***FS -*** *The Forest Service also uses the WCT as the official method of assessing wildland firefighter fitness levels. The specific direction, Implementation Guide, Health Screen Questionnaire, and required processes can be found at the following web site: http://www.fs.fed.us/fire/*

WCT Categories

The *NWCG Wildland Fire Qualification System Guide, 310-1* identifies fitness levels for specific positions. There are three fitness levels - Arduous, Moderate, and Light - which require an individual to demonstrate their ability to perform the fitness requirements of the position. Duties in the "None" category are normally performed in a controlled environment, such as an incident base.

- ***BLM/FWS -*** *Law Enforcement physical fitness standard is accepted as equivalent to a "light" WCT work category.*

Work Capacity Test

Work Category	Test	Distance	Weight	Time
Arduous	Pack Test	3 miles	45 lb.	45 min.
Moderate	Field Test	2 miles	25 lb.	30 min.
Light	Walk Test	1 mile	None	16 min.

- **Arduous -** Duties involve field work requiring physical performance with above average endurance and superior conditioning. These duties may include an occasional demand for extraordinarily strenuous activities in emergencies under adverse environmental conditions and over extended periods of time. Requirements include running, walking, climbing, jumping, twisting, bending, and lifting more than 50 pounds; the pace of the work typically is set by the emergency conditions.
- **Moderate -** Duties involve field work requiring complete control of all physical faculties and may include considerable walking over irregular ground, standing for long periods of time, lifting 25 to 50 pounds, climbing, bending, stooping, twisting, and reaching. Occasional demands may be required for moderately strenuous activities in emergencies over long periods of time. Individuals usually set their own work pace.
- **Light -** Duties mainly involve office type work with occasional field activity characterized by light physical exertion requiring basic good health. Activities may include climbing stairs, standing, operating a vehicle, and long hours of work, as well as some bending, stooping, or light lifting. Individuals can usually govern the extent and pace of their physical activity.

Chapter 14
Firefighting Personnel

Introduction
Firefighting personnel from all federal agencies, state organizations, and the private sector are used in the suppression and management of wildland fires. These resources fill all positions in the Incident Management System.

Leadership
The most essential element of successful wildland firefighting is competent and confident leadership. Leadership means providing purpose, direction, and motivation for wildland firefighters working to accomplish difficult tasks under dangerous, stressful circumstances. This concept can be applied to all individuals and not just those in a leadership role.

Policy
Requirements for fire management positions are outlined in the *Interagency Fire Program Management Qualifications Standards and Guide*, referred to as the IFPM Standard. The supplemental Qualification Standard for professional GS-0401 Fire Management Specialist positions, approved by the Office of Personnel Management, is also included in the IFPM Standard. The *Interagency Fire Program Management Qualification Standards and Guide* can be found in it's entirety on the IFPM website: http://www.ifpm.nifc.gov

All individuals filling positions with in a fire management organization must be qualified according to agency direction found in *PMS 310-1 National Interagency Incident Management System Wildland Qualifications Guide.*

- ***FS -*** *FS5109.17 - Fire and Aviation Management Qualifications Handbook.*

Minimum Age Requirements for Hazardous Duty Assignments on Federal Incidents
Persons under 18 years old will not perform hazardous duties during wildland fire management operations on federal jurisdictions.

Engine Modules
Staffing levels and specific requirements for engine personnel may be found in Chapter 15, Fire Fighting Equipment.

Helicopter Modules
Staffing levels and specific requirements for helicopter personnel may be found in Chapter 17, Aviation.

Smokejumpers
Smokejumpers provide professional and effective fire suppression, fuels reduction, and fire management services to help land managers meet objectives.

Policy

Smokejumper operations are guided by direction in the *Interagency Smokejumper Operations Guide*.

Each base will comply with smokejumper operations standards. The arduous duties, specialized assignments, and operations in a variety of geographic areas require smokejumpers to have uniform training, equipment, communications, organization, and operating procedures.

- ***BLM -*** *Smokejumper operations use the ram air (square) parachute exclusively.*
- ***FS -*** *FS smokejumper operations are guided by direction in FSH 5709.14, and the Interagency Smokejumper Operations Guide. Smokejumpers use the round FS14 parachute system exclusively.*

Smokejumper Organization

The operational unit for smokejumpers is "one load."

- ***BLM -*** *A load is typically one plane with pilot(s), one or two spotters, and eight smokejumpers.*
- ***FS -*** *A load is typically 8-20 smokejumpers and varies as per aircraft type.*

Concurrence with National Interagency Coordination Center (NICC) must be obtained prior to configuring smokejumpers as a Type 2 IA crew.

Coordination & Dispatch

Smokejumpers are a national resource and are ordered according to geographic area or national mobilization guides.

- ***BLM -*** *Specific information on the coordination, dispatch, ordering, and use of BLM smokejumpers in the contiguous 48 states can be found in the BLM Boise Smokejumpers User Guide, and in the Alaska Fire Service operational procedures, policies, and guidelines. Contact the BLM smokejumpers in Boise at (208) 387-5426 or the Alaska smokejumpers in Ft. Wainwright at (907) 356-5670 for these publications.*
- ***FS -*** *FS bases have operations plans pertinent to each base.*

Communications

All smokejumpers carry programmable radios and are proficient in their use and programming procedures.

Transportation

Smokejumper retrieval is accomplished by coordinating with the requesting dispatch center. More detailed information can be found in the guides mentioned above.

Safety
All aviation and parachute operations will be accomplished in accordance with standard operating procedures and regulations.

Training
To ensure proficiency and safety, smokejumpers complete annual training that covers aspects of aviation, parachuting, fire suppression tactics, administrative procedures, and safety, related to the smokejumper mission and fire operations. The training program for first-year smokejumpers is four weeks long. Candidates are evaluated to determine:

- Level of physical fitness
- Ability to learn and perform smokejumper skills
- Ability to work as a team member
- Attitude
- Ability to think clearly and remain productive in a stressful environment

Physical Fitness Standards
The national minimum standards for smokejumpers are:

- 1.5 mile run in 11:00 minutes or less
- 45 sit-ups in 60 seconds
- 25 pushups in 60 seconds
- 7 pull-ups
- 110 lb. packout over 3 miles/level terrain/90 minutes
- Successful completion of the WCT at the arduous level.

Interagency Hotshot Crews
Interagency Hotshot Crews (IHCs) provide an organized, mobile, and skilled hand crew for all phases of wildfire suppression.

Policy
IHC standards provide consistent planning, funding, organization, and management of the agency IHCs. The sponsoring unit will ensure compliance with the established standards. The arduous duties, specialized assignments, and operations in a variety of geographic areas required of IHCs dictate that training, equipment, communications, transportation, organization, and operating procedures are consistent for all agency IHCs.

As per agency policy all IHCs will be managed under the *National Interagency Hotshot Crew Operations Guide* (NIHCOG).

- ***BLM/NPS -*** *BLM Preparedness Review Checklist #12 (Hotshot Crew) supercedes the checklist found in the NIHCOG.*

Certification
Annual certification of IHC's is required prior to being made available for assignment as an IHC. For certification the crew superintendent will:

- Submit a completed NIHCOG Appendix C to the local unit Fire Management Officer for approval.
- Upon approval, the local unit Fire Management Officer will submit the signed Appendix C to the State/Regional Fire Management Officer.
- Upon approval, the State/Regional Fire Management Officer will notify the Geographical Coordinating Committee and NICC of the crew's status.

IHC Organization

Individual crew structure will be based on local needs using the following standard positions: Superintendent, Assistant Superintendent, Squad Leader, Skilled Firefighter, and Crewmember.

Availability Periods

All IHCs must be certified annually prior to initial assignment. Submit a completed "Appendix C" from the *NIHCOG* prior to the crew being made available for any incident assignment as an IHC. Any IHC not meeting all of the requirements in "Appendix C" before, or during, the crew's availability period will be available as an IHC(t). The Crew Superintendent is responsible to inform local supervisor and the local GACC of any required changes in the crew's typing. IHCs will be available to meet or exceed availability periods specified in *NIHCOG* 2001 (Revised 2004).

- ***BLM -*** *IHC crewmembers will receive 40 hours of basic or refresher training before their first fire assignment in a fire season. Refresher training will include, but is not limited to, crew safety, risk management, firefighter safety, fire behavior, communications, and organization. The final responsibility for crew availability will rest with the Superintendent's certification to local unit management that all training is complete. The minimum tour of availability excluding required training periods for BLM IHCs will be 130 calendar days for crews in the lower 48 states and 90 calendar days for crews in Alaska.*
- ***NPS/FS -*** *IHCs follow the NIHCOG, including minimum tours. In some regions, tours may exceed the minimum based on preparedness and fuels funding levels, or non-fire funding for these resources.*

Communications

IHCs will provide a minimum of five programmable multi-channel radios per crew as stated in the *NIHCOG*.

Transportation

Crews will be provided adequate transportation. The number of vehicles used to transport a crew should not exceed five. All vehicles must adhere to the certified maximum Gross Vehicle Weight (GVW) limitations.

Other Hand Crews

Policy

All crews must meet minimum crew standards as defined in Appendix T as well as any additional agency, state, or contractual requirements. Typing will be identified at the local level with notification made to the local GACC.

Crew Types

- **Agency Crews**
  Agency hand crews consist of qualified agency personnel and are organized on a local basis. These crews are designated as Type 2 or Type 2 IA.
- **State Crews**
  State crews are organized under the auspices of individual states. These crews may be designated as Type 1, Type 2, or Type 2 IA. These crews include organized state inmate crews.
- **Emergency Firefighter Crews (EFF)**
  These crews are usually Type 2 crews consisting of agency sponsored on call personnel who meet the requirements for Type 2 IA or Type 2 as defined in Appendix T.
- **Contract Crews**
  These organized crews consist of personnel trained, equipped, and certified by a private contractor and must meet the contractual specifications as stated in their state or national crew contracts.
- ***FS -*** *The FS endorses the National Minimum Standards for crews and applies FSH 5109.17 for training requirements.*

Fire Use Modules

- ***NPS -*** *The National Park Service has Fire Use Modules. The primary mission and priority of the modules is to provide skilled and mobile personnel to assist with Wildland Fire Use (WFU) in the areas of planning, fire behavior monitoring, ignition, and holding. Secondary priorities follow in the order below:*
  - *Support burn unit preparation.*
  - *Assist with fire effect plot work.*
  - *Support mechanical hazardous fuel reduction projects.*
- ***NPS -*** *As an interagency resource, the modules are available nationally throughout the fire season. Each module is comprised of a module leader, assistant leader and three to eight module members. See the Fire Use Module Operation Guide for specifics. Modules are mobilized and demobilized through established ordering channels through the GACCs.*

Agency Certified Positions

As a supplement to the qualifications system, certain agencies have identified the additional positions of Prescribed Fire Burn Boss 3 (RXB3) - see Chapter

18; Engine Operator (ENOP) - see Chapter 15; and Chainsaw Operators and Fallers listed below.

Chainsaw Operators and Fallers

The agencies have established the following minimum qualification and certification process for Chainsaw Operators (Red Card certified as Faller A):

- Successful completion of S-212, including the field exercise, or those portions of S-212 appropriate for Faller A duties.
- Agency administrator (or delegate) certification of qualifications after verification that training is successfully completed.
- Documentation must be maintained for individuals.
- The individual tasks required for completion of the "A" Task Book and the final evaluation for the "A" level saw operators must be verified or signed by a qualified "B or C" level saw operator.
- The individual tasks required for completion of the "B" Task Book must be evaluated by a qualified "B" or "C" level operator. The Final Evaluator Verification for "B" level operators must be signed by a "C" level saw operator.
- The individual tasks required for completion of the "C" Task Book must be evaluated by a qualified "C" level operator. The Final Evaluator Verification for "C" level operators must be signed by a state approved "C" level certifier.
- Each of the states/regions will certify and maintain a list of their current "C" class saw operators who they approve to be "C" class certifiers.
- The certification of "C" class certifiers will remain the responsibility of the agency administrator or delegate.
- All fire related (red carded) saw operation qualifications are maintained through the IQCS system and will have a currency of five years.
- ***FS -*** *FS direction can be found in FSH 5109.17 and FSH 6709.11.*
- ***FWS/NPS -*** *Reference the BLM/FWS/NPS position task book. Found at: http://www.fire.blm.gov/training/blmtrng/PDFs/Faller/PTBFallerABC.pdf*
- ***FWS/NPS -*** *Exceptions to the above policy are:*
  - *The individual tasks required for completion of the "B" Task Book and the final evaluation for the Class "B" saw operations must be verified by a qualified Class "B" or "C" saw operator.*
  - *The individual tasks required for completion of the "C" Task Book and the final evaluation for the Class "C" saw operators must be verified by a region approved Class "C" Final Evaluator.*
  - *Each of the regions will certify and maintain a list of current, qualified Class "B" and "C" saw operators, approved as Class "B" or "C" Final Evaluators.*
  - *The certification of "C" class evaluators will remain the responsibility of the regional agency administrator or delegate.*

Chapter 15
Firefighting Equipment

Introduction
The agency wildland fire program equipment resources include engines, dozers, water tenders, and other motorized equipment for fire operations.

Policy
Each state/region will comply with established standards for training, equipment, communications, organization, and operating procedures required to effectively perform arduous duties in multi-agency environments and various geographic areas.

Approved foam concentrate may be used to improve the efficiency of water, except near waterways where accidental spillage or over spray of the chemical could be harmful to the aquatic ecosystem, or other identified resource concerns.

Driving Standard
Refer to the current driving standards for each individual agency in Chapter 06.

Firefighting Engines

Operational Procedures
All engines will be equipped, operated, and maintained within guidelines established by the Department of Transportation (DOT), regional/state/local operating plans, and procedures outlined in *BLM Manual H-9216, Fire Equipment and Supply Management,* or agency equivalent. All personnel assigned to agency fire engines will meet all gear weight, cube, and manifest requirements specified in the *National Mobilization Guide*.

Fire Engine Staffing
An ENGB will be with every engine, and the minimum staffing is two individuals for Type 6 and Type 7 engines.

For Type 3, 4, and 5 engines, minimum staffing is three individuals, including a Single Resource Boss for each engine.

- ***BLM Fire Engine Staffing***
  - *Minimum staffing for Type 3, 4, and 5 engines is one ENGB and two FFT2s.*
  - *Minimum staffing for Type 6 and 7 engines is one ENGB and one FFT2.*
- ***FWS Fire Engine Staffing***
  - *Minimum staffing for Type 3 engine is one ENGB and two FFT2s.*
  - *Minimum staffing for Type 4, 5, 6 and 7 engines is one ENGB and one FFT2 (off Refuge).*

- *Target staffing for Type 4, 5 and 6 engines is one ENGB, one ENOP and one FFT2.*
- *Minimum staffing for Type 4, 5, 6 and 7 engines (on Refuge lands) is one ENOP and one FFT2.*

- ***NPS - Staffing levels -*** *Engines of any type when responding to off-park assignments, will be staffed by an ENGB and the appropriate number of Module Members. Type 6 or 7 engines may be supervised by an ENOP on in-park fires only. For an engine supervised by an ENOP when used for initial attack (on in-park fires only), the ENOP must also be minimally ICT5 qualified. Type 3, 4, or 5 engines, regardless of assignment location, will be minimally supervised by an ENGB.*
- ***NPS -*** *Type 6 and 7 engines will have a minimum crew of two – an ENGB or ENOP (in-park only), and an Engine Module Member.*
- ***NPS -*** *Type 3, 4, or 5 engines will have a minimum crew size of three, an ENGB, an ENOP and one Engine Module Member; or an ENGB and two Engine Module Members.*
- ***NPS - Working Capital Fund (WCF)/Non-WCF, Additional requirements***
- ***NPS -*** *WCF engines are identified below.*
- ***NPS -*** *All engines will be typed in accordance with the specifications identified in the 410-1. Minimum engine staffing requirements:*
  - *Approved WCF Type 6 or 7 engines during the defined fire season is 3 personnel effective 7 days per week.*
  - *Approved Working Capital Fund (WCF) Type 3, 4, or 5 engines during the defined fire season is 5 personnel effective 7 days per week.*
  - *Non-WCF engines (or WCF engines outside defined fire season), Type 6 or 7 engines is a minimum of 2.*
  - *Non-WCF engines (or WCF engines outside defined fire season), Type 3, 4, or 5 engines is a minimum of 3.*
- ***FS -*** *A single Resource Boss may supervise a type 6 or 7 engine.*

Supplemental Performance Standards for Fire Engine Operators

The Engine Module Member (EMM) and Engine Operator (ENOP) supplemental standards were created to provide managers and firefighters consistent training and performance standards for firefighters moving from Firefighter Type 1 (FFT1) to Engine Boss (ENGB). The supplemental standards are intended to develop firefighter skills and to improve overall performance. These standards are not part of the NWCG *Wildland Fire Qualifications Subsystem Guide (NWCG 310-1).*

Engine Module Member (EMM) Supplemental Performance Standards

- Minimum FFT2 qualification.
- Ability to maintain inventory in a constant state of fire readiness.

- Ability to use, check condition of, and identify repair/replacement needs as identified in *Firefighters Guide NFES 1571*. All tools and equipment must meet refurbishment standards specified in *Fire Equipment Storage and Refurbishment NFES 2249.*
- Working knowledge of hose pack types and how to safely and efficiently deliver water to the fire.
- Working knowledge of hose identification and use. See *Wildland Fire Hose Guide NFES 1308.*
- Ability to identify fittings and nozzles, understand use, capabilities, limitations, and perform maintenance.
- *FS - The FS recommends the performance requirements for each FFT2.*

Engine Operator (ENOP) Supplemental Performance Standards

- All EMM standards stated above, plus
- Minimum FFT1 qualification.
- Successful completion of L-280- Followership to Leadership.
- Successful completion of PMS 419 Engine Operator Course, or Geographic Area Engine Academies
- Ability to perform safe and effective stationary pumping operations.
- Ability to perform multi-engine mobile attack safely and efficiently.
- Demonstrated knowledge of policy, strategies, tactics, and hazards of urban interface firefighting.
- Understand capabilities, limitations, and joint operations with municipal fire apparatus, including pressures, flow rates, and potential effects on wildland fire equipment.
- Ability to use engine protection lines and to protect engine through effective positioning.
- Knowledge of pump theory and operation. Ability to effectively apply this knowledge to fire situations. Ability to troubleshoot pump/valve problems in various fire and drill situations.
- Ability to perform pump package maintenance to manufacturer/agency standards and keep pump package in a constant state of fire readiness. Ability to troubleshoot equipment problems and develop solutions/repair needs. Ability to perform required pump test to ensure pump/plumbing are operating to specifications. Ability to keep accurate maintenance log.
- Ability to effectively apply calculations and formulas relating to fire hydraulics, including friction loss. Knowledge of pump capabilities and limitations (GPM, PSI, elevation gain and loss, etc).
- Ability to perform simple hoselay, including initial layout and effective delivery of water to fire.
- Ability to perform progressive hoselay, including initial layout and effective delivery of water to fire.
- Ability to perform effective hoselay troubleshooting and develop effective solutions to problems.

- Ability to perform foam equipment maintenance, including flushing engine foam proportioner according to the manufacturer's recommended procedures.
- Ability to efficiently produce different types of foam from nozzle(s).
- Ability to apply drafting theory. Ability to draft from external source and fill engine tank, and draft from external source and deliver water through a hoselay.
- Application of safe and effective hydrant use. Ability to set up engine for hydrant water delivery.
- Vehicle maintenance capability adequate to maintain vehicle per manufacturer's/agency standards and keep vehicle in a constant state of fire readiness. Ability to troubleshoot equipment problems, develop solutions, and make repairs.
- Ability to perform effective winterization of apparatus and pump package to protect from potential freeze damage.
- ***FS -*** *The FS recommends the performance requirements for each ENOP.*

- ***BLM - Engine Module Leader (EML)-Agency Specific Position Minimum Qualifications***
  - *ICT4, ENOP, ENGB.*
  - ***BLM - Additional Required Training***
    I-200, S-200, S-231, S-234, S-260, S-270.
  - ***BLM - Additional Performance Requirements***
  - ***BLM - Same as for ENOP, plus the following:***
  - ***BLM - Supervision***
    The Engine Module Leader is responsible for the overall operation of the module's activities. Directs module personnel during fire preparedness review, suppression activities, fuels management, and project work. Provides direction to the module commensurate with members' qualifications and experience.
  - ***BLM - Equipment Capability***
    Has a thorough knowledge of tactical equipment capabilities and limitations, and their relationship to fuels, topography, and fire behavior.
  - ***BLM - Training***
    Provides and facilitates training of personnel through mentoring, formal and informal instruction. Identifies training needs in the Individual Development Plan (IDP) and performs Task Book management for module members.
  - ***BLM - Administration***
    Performs administrative duties relating to the operation of the module, including (but not limited to time and attendance, procurement activities (credit card), personnel management (recruitment and hiring), IDP development, and property management.

- ***BLM - Coordination***
  Develops and maintains working relationships with BLM counterparts, cooperators, other agencies, general public, and media.
- ***BLM - Safety***
  Ensures compliance with safety procedures and policies and mitigates potentially hazardous situations.
- ***BLM - Physical Fitness***
  Train, test, and evaluate module members to ensure that required physical fitness standards are met.
- ***BLM - Communication***
  Ensures that Module Members receive situational briefings. Provides briefings during daily work activities, fireline duties, and fireline transitions. Solicits and provides feedback.
- ***BLM - Equipment Development & Evaluation***
  Identifies problems with BLM equipment and suggests possible solutions. Provides feedback to equipment development groups. Tests and evaluates prototype equipment through the use of deficiency reporting.

- ***NPS/FS -*** *The NPS/FS recommends the performance requirements for the Engine Module Leader as outlined in the Interagency Fire Program Management Qualifications Standard and Guide.*

Engine Typing
Engine Typing and respective standards are identified in the NWCG *Fireline Handbook,* 410-1.

Engine Water Reserve
Engine Operators will maintain at least 10 percent of the pumpable capacity of the water tank for emergency engine protection and drafting.

Chocks
At least one chock will be carried on each engine and will be properly utilized whenever the engine is parked or left unattended. This includes engine operation in a stationary mode without a driver "in place."

Fire Extinguisher
All engines will have at least one 5 lb. ABC-rated (minimum) fire extinguisher, either in full view or in a clearly marked compartment.

Nonskid Surfaces
All surfaces will comply with National Fire Protection Association *(NFPA) 1906 Standards for Wildland Fire Apparatus* (6.4.3.) guidelines.

First Aid Kit
Each engine shall carry, in a clearly marked compartment, a fully equipped 10-person first aid kit.

Gross Vehicle Weight (GVW)
Supervisors must ensure that the maximum allowable weight of the vehicle is not exceeded. For commercially designed highway vehicles used in off-highway applications the Gross Vehicle Weight (GVW) shall not exceed 90% of the Gross Vehicle Weight Rating (GVWR) and shall not exceed 90% of the Gross Axle Weight Rating (GAWR) on any axle.

For commercially designed off-highway vehicles, the Gross Axle Weight Ratings (GAWR) do not need to be reduced but must not be exceeded for off-highway travel.

Speed Limits
Posted speed limits will not be exceeded.

XXX Lighting
All new orders for fire engine apparatus will include an overhead lighting package in accordance with statewide standards. It is recommended that the lighting package meet NFPA 1906 standards. Engines currently in service may be equipped with overhead lighting packages.

Colors
Lighting packages containing blue lights are not allowed and must be replaced. Blue lights have been reserved for law enforcement and must not be used on fire vehicles. A red, white, and amber combination is the accepted color scheme for fire.

Light Use
While off-road and/or during suppression, prescribed fire or other emergency activities, headlights and taillights shall remain illuminated at all times while the vehicle is in operation. Overhead lighting (or other appropriate emergency lights) shall be illuminated whenever visibility is reduced to less than 300 feet.

- ***NPS -*** *Vehicle Color and Marking. Vehicles dedicated to wildland fire activities shall be white in color and have a single four-inch wide red reflective stripe placed according to NFPA 1906 (NFPA 1906 7-6.2 1995 edition). The word "FIRE" red with white background color will be centered on the front fenders. "FIRE" may also be placed on the front and rear of the vehicle. The NPS Arrowhead will be placed on the front doors. The size and placement of the arrowhead will be as specified in RM-9. An identifier will be placed on the vehicle according to local zone or GACC directions. Roof numbers will be placed according to local zone procedures.*

On-Board Flammable Liquid Storage
Occupational Safety and Health Administration (OSHA) regulations state, "*only approved metal containers, of not more than 5 gallons capacity, having a spring-closing lid and spout cover and so designed that it will safely relieve*

internal pressure when subjected to fire exposure, be used for storing or transporting flammable liquids" (29 CFR 1910.106). To comply with OSHA requirements and agency directives, only OSHA approved, type II metal safety cans should be used. Approved are the 2-in-1 polyethylene containers (Dolmars) used to fill chainsaws and steel Jerry cans that are used as a fuel tank for Mark III pumps. Cans must be clearly marked as to their content (e.g., gasoline, diesel, drip torch fuel). Dolmars must also be marked with the fuel oil ratio and the date of the saw gas mix so its suitability for use can be easily determined.

- ***BLM - Drip Torch Fuel Transportation and Dispensing***
  Reference Instruction Memorandum FA IM. 2005-030. This IM provides direction for drip torch fuel transportation and dispensing to bring BLM equipment and practices into compliance with applicable regulations and nationally recognized standards. It also provides direction on procurement of new equipment.

Fire Engine Maintenance Procedure and Record

Apparatus safety and operational inspections will be accomplished either on a post-fire or daily basis. Offices are required to document these inspections. Periodic maintenance (as required by the manufacturer) shall be performed at the intervals recommended and properly documented. All annual inspections will include a pump gallons per minute (GPM) test to ensure the pump/plumbing system is operating at desired specifications.

Engine Inventories

An inventory of supplies and equipment carried on each vehicle is required to maintain accountability and to obtain replacement items lost or damaged on incidents. The standard inventory for engines is found in Appendix R

Water Tenders

Water Tender Operators Performance Standards

Water Tender Operator (Support)

- **Qualifications:** CDL (tank endorsement).
- **Staffing:** A water tender (Support) may be staffed with a crew of one (a driver/operator) when it is used in a support role as a fire engine refill unit or for dust abatement. These operators do not have to pass the Work Capacity Test (WCT) but are required to take annual refresher training.

Water Tender Operator (Tactical)

Tactical use is defined as "direct fire suppression missions such as pumping hoselays, live reel use, running attack, and use of spray bars and monitors to suppress fires."

- **Qualifications:** ENOP, CDL (tank endorsement)
- **Staffing:** Tactical water tenders will carry a minimum crew of two:
  - One ENOP

- One Engine Module Member

Dozers/Tractor Plows

Policy

Agency personnel assigned as dozer/tractor plow operators will meet the training standards for a Firefighter 2 (FFT2). This includes all safety and annual refresher training. While on fire assignments, all operators and support crew will meet PPE requirements including the use of aramid fiber clothing, hard hats, fire shelters, boots, etc.

- ***FWS -*** *Dozer/tractor plow Operators must complete Intermediate Fire Behavior (S-290) and the FWS Heavy Equipment Safety Training course SAF2002 for dozer and/ or SAF2000 for Agriculture Tractor. Additional training which supports development of knowledge and skills includes S-232 and S-233 respectively, other positions that meet currency requirements is none.*

Physical Fitness Standards

- ***BLM/FWS -*** *All employee* dozer/tractor plow *operators will meet the WCT requirements at the Moderate level before accepting fire assignments.*
- ***FS -*** *FS dozer operators refer to 5134.32.*

Operational Procedures

- Agency owned and operated dozer/tractor plows will be equipped with programmable two-way radios, configured to allow the operator to monitor radio traffic.
- Agency dozer/tractor plows with non-red carded operators and all contract dozer/tractor plows will have agency supplied supervision when assigned to any suppression operations.
- Contract or offer-for-hire dozers must also be provided with radio communications, either through a qualified dozer/tractor plow boss or an agency-supplied radio. Contract dozer/tractor plows will meet the specifications identified in their agreement/contract.
- Operators of dozer/tractor plows and transport equipment will meet DOT certifications and requirements regarding the use and movement of heavy equipment, including driving limitations, CDL requirements, and pilot car use.

All Terrain Vehicles (ATV)/Utility Vehicles (UV)

Policy

The operation of ATV/UV is high risk and should be utilized only when their use is essential to accomplishment of the mission and not as a matter of convenience. Because of the high risk nature, agencies have developed specific operational policy as highlighted below:

- Specific authorization for ATV/UV use is required. Refer to current agency policy.
- All personnel authorized to operate an ATV must first complete agency specific or manufacturer training in safe operating procedures and appropriate PPE.
- Refer to agency specific guidelines on required frequency of ATV refresher training.
- Required PPE includes helmet (DOT, ANSI-90, or SNELL M-95 approved), eye protection (goggles, face shield, or safety glasses), gloves, long sleeves, long pants, and leather boots (minimum 8" height).
- The standard wildland hardhat will not be worn while operating an ATV.
- Except in emergency situations, no passengers will be carried unless vehicle is designed by the manufacturer to carry operator and passengers.
- Operating speed will be appropriate for the conditions and terrain.
- ATV training shall include safe operation while carrying loads.
- Loads shall be mounted and secured as to not affect the vehicle's center of gravity.
- Load weights shall not exceed manufacturer's recommendations.
- A risk assessment must be completed and approved by the supervisor prior to vehicle operation.
- ***BLM*** *-Refer to BLM Interim Policy - Utilization of Off-Road Vehicles (ORVs) IM 2005-148.*
- ***BLM -*** *Refresher training is required every 3 years for all off-road vehicles (ORVs). Refresher training consists of a field "check-ride," at minimum. The ATV refresher will be conducted by an ASI Certified Instructor.*
- ***FWS/NPS -*** *Exceptions to the above policy are:*
  - *SPH-4, SPH-5, or other comparable flight helmets meet the DOT requirements for a motorcycle helmet and may be used in lieu of.*
  - *Standard fire hardhats or flight helmets are required for ATV use when on the fireline under low operating speeds. (Motorcycle helmets have not yet been tested and approved for fireline use).*
  - *Chinstraps must be used.*
  - *A motorcycle helmet or flight helmet will be required when operating to and from fire management activities and while loading and unloading the ATV.*
- ***NPS -*** *All personnel authorized to operate an ATV must first complete training in safe operating procedures from a nationally recognized source such as the ATV Safety Institute ATV Rider Course (http:/www.atvsafety.org) or as required by state statute. Safe operating procedures information is also available from the National Off-Highway Vehicle Conservation Council (http://wwwnohvcc.org/html/ohv_safety.htm)*

- ***NPS -*** *Annual refresher training must be conducted in accordance with an approved JHA.*
- ***FS -*** *Refer to Health and Safety Code Handbook 6709-11.*
- ***FWS -*** *Refer to Service Manual 243 FW 6 Off Road Utility Vehicle Safety.*

Vehicle Cleaning/Noxious Weed Prevention

To reduce the transport, introduction, and establishment of noxious weeds or other biological contaminants on the landscape due to fire suppression activities, fire suppression and support vehicles should be cleaned at a predestinated area prior to leaving the incident. Onsite fire equipment should be used to thoroughly clean the undercarriage, fender wells, tires, radiator, and exterior of the vehicle. The cleaning area should also be clearly marked to identify the area for post fire control treatments, as needed.

Fire Remote Automated Weather Stations

Fire Remote Automated Weather Stations (FRAWS) are portable weather stations that pack up into a single container and may be utilized in any location to monitor local weather conditions. FRAWS are intended for use on or near the fireline and are rapidly relocated to points desired by Fire Behavior Analysts (FBAs) for real time weather data. Fire Managers and FBAs use RAWS weather data to predict fire behavior, prescription times, fire weather forecasting, canyon, and ridgetop winds.

National resource FRAWS systems are cached at National Interagency Fire Center (NIFC) and may be ordered through standard equipment resource ordering systems. Maintenance and recalibration of these stations must be coordinated with the NIFC Remote Sensing/Fire Weather Support Unit (RSFWSU).

Ignition Devices

Aerial Ignition Devices

Information on types of aerial ignition devices, operational guidelines and personnel qualifications may be found in the *Interagency Aerial Ignition Guide.*

Ground Ignition Devices

- ***BLM -*** *Guidance and direction for use and procurement of approved ground ignition equipment and the transportation and dispensing of drip torch fuel can be found in: Instruction Memorandum No. OF&A 2005-030, 7/20/05, Drip Torch Fuel Transportation and Dispensing Direction.*
- ***NPS -*** *Agency direction may be found in the 04/04/03 Memorandum Y14 (9560) Aerial and Ground Ignition Equipment.*
- ***FWS -*** *specific information on ignition devices may be found in the January 28, 2003 Memorandum: "Direction for Use and Purchase of Aerial and Ground Ignition Equipment."*
- ***FS -*** *direction is found in FSH5109.32a and 6709.11.*

Chapter 16
Communications

Radio Communications

Radio communications provide for the flow of tactical information needed for the command/control of personnel and resources.

Policy

Agency specific policies for radio communications may be found in:

- *Department of Interior, Department Manual, Radio Communications Handbook (377 DM).*
- *USDA Forest Service Handbook (FSH 6609.14 chapters 10-40 and Forest Service Manual (FSM) 6600 Systems Management Chapter 6640 - Telecommunications.*

Radio Contracts

Contracts specifying the requirements for radios have been let and may be found for the:

- Department of Interior Project 25 Digital Radio contract at http://www.blm.gov/natacq/IDIQ/index.html
- USDA Forest Service National Radio Contract at http://www.fs.fed.us/business/2002%20awards/.
- ***BLM -*** *Currently the Thales Racal P25 handheld, the EF Johnson 5100 P25 handheld, and the Relm/Bendix King DPHX handheld have been approved for fire use by the BLM. Approved radios have software version requirements and hardware upgrades that must be completed prior to use on fire assignments.*
- ***FS/FWS/NPS -*** *The Thales Racal, EF Johnson 5100, Motorola XTS5000, Relm/Bendix King DPH, and Datron Guardian handhelds have all been approved for fire use by the National Interagency Incident Communications Division (NIICD).*

For information on software and hardware requirements and approved radios, contact the NWTSU at (208) 672-7880 ext. 103.

Dispatch Recording Devices

- ***BLM -*** *Recording devices will be used by each BLM dispatch office or an interagency office dispatching BLM resources. The purpose is to record radio communications during emergency operations. This will ensure that in the event of an accident, investigators will be provided with an accurate record of events during reviews of those incidents.*

Radio Frequency Management

- FM frequency assignments for normal operations or initial attack ground operations are made on a permanent basis and are requested through the state office ISO frequency manager to the Washington Office frequency manager.
- The NIFC Communications Duty Officer (CDO) coordinates and assigns incident frequencies at the national level. They will also assign Communications Coordinators (COMC) when necessary to support a specific Geographic Area(s). See the National Mobilization Guide for additional information.
- Mutual-aid agreements for frequency sharing can be made at the local level.
- A mutual-aid frequency sharing agreement is valid only in the specific locale it originates in. These agreements do not authorize the use of a shared frequency in any other area. NIFC national fire frequencies are not to be used for these agreements.
- Do not use a frequency unless authorized to do so by communications personnel at the local, state, regional or national level.
- Initial attack AM air operations frequencies will be assigned by the NIFC CDO and FM air operations frequencies will be facilitated/assigned by the NIFC CDO. These assignments will be on an interagency basis and coordinated with the GACCs.
- On Type 1 or 2 incidents, the Communications Unit Leader (COML) will request, assign, and report to the NIFC CDO/COMC, all frequencies used on the incident. This would include the request and assignment of aircraft frequencies. The ICS-205 and ICS-220 are always a part of the Incident Action Plan (IAP) and distributed at every operational period briefing.
- The COML will contact the NIFC CDO, or the COMC if assigned, for additional FM and AM frequencies. Requests for aviation frequencies will be placed through established ordering channels through NICC and will be filled by the NIFC CDO or COMC. COML's will ensure that the host agency Aviation Dispatcher and the NIFC CDO or COMC has the current ICS-220 for their incident.
- Radios being used in wildland firefighting operations must be able to function in both wideband (25.0 Khz) mode and narrowband (12.5 Khz) mode. Remove radios from the system that cannot be programmed to operate in the narrowband mode.
- When incident management teams are pre-positioned in a geographic area, consideration will be given to pre-positioning a communication system for immediate deployment by the team(s) when assigned to an incident. Pre-positioning will be based on equipment availability and/or priorities established by NMAC at NIFC.

- When prepositioned in a field unit or geographical area, consideration will be given to also repositioning a radio kit for immediate use by the team when assigned.
- Frequencies for Type 1 and Type 2 incidents are assigned through the National Interagency Incident Communications Division (NIICD) located at NIFC. The CDO is responsible for this function.
- During severe situations and/or when there are significant numbers of large incidents, additional frequencies can be assigned. These are temporary assignments, and are requested by the NIFC CDO from the Washington Office (Spectrum) managers and given by the CDO to the incident. This applies to frequencies for command, ground tactical, and aviation operations.
- Additional frequencies are provided in the following circumstances:
  - The NIICD national frequencies are all committed within a specific geographic area.
  - The requests continue for frequencies to support new incidents within a specific complex.
  - The fire danger rating is extreme and the potential for additional new incidents is high.

Pre-assigned National Frequencies

National Air Guard - 168.625 MHz - A National Interagency Air Guard frequency for government aircraft will be used for emergency aviation communications. Continuous monitoring of this frequency in narrowband mode is mandatory by agency dispatch centers. Transmitters on this frequency must be equipped with an encoder on 110.9 Hz. 168.625 is restricted to the following use:

- Air-to-air emergency contact and coordination.
- Ground-to-air emergency contact.
- Initial call, recall, and re-direction of aircraft when no other contact frequency is available.

National Flight Following - 168.650 MHz

The National Interagency Air Net frequency is used for flight following of official aircraft. The intent is not to use this frequency for incident operations. All dispatch centers/offices will monitor the national fight following frequency at all times. 168.650 is restricted to the following use:

- Flight following, dispatch, and/or re-direction of aircraft.
- Air-to-ground and ground-to-air administrative traffic.
- Not authorized for ground-to-ground traffic.

National Interagency Air Tactics - 166.675 MHz, 167.950 MHz, 169.150 MHz, 169.200 MHz, 170.000 MHz

- Frequencies used to support air-to-air or ground-to-air communications on incidents west of the 95th meridian. These frequencies shall be used for air-to-air and ground-to-air communications only.
  - Exception: Pacific Southwest Geographic Area: 166.675 MHz, 169.150 MHz, and 169.200 MHz will be used for air-to-air only; 170.000 MHz will be used for ground-to-air only.
- Interagency geographic area coordination centers assign these frequencies. Assignment must be coordinated through the NIFC CDO.
- Transmitter power output of radios installed in aircraft operating on these frequencies shall be limited to 10 watts.

Base stations and repeaters are prohibited on these frequencies.

National Interagency Airtanker Initial Call - 123.975 MHz

The national interagency frequency assigned to all airtanker bases for their exclusive use. No other use outside of airtanker bases is authorized.

National Government All-Call Frequencies - 163.100 MHz and 168.350 MHz

For use anywhere, any time. They are good choices as travel frequencies for strike teams moving between assignments. They are available for ground tactical frequencies during initial attack or incident operations. They are not to be used for air-to-ground operations.

- **NOTE:** When you are traveling between incidents, be sure to monitor for incident radio traffic in the area before using these frequencies.

Incident Radio Support

All NIRS cache communications equipment shall be returned to NIICD at NIFC immediately after the incident is turned over to the jurisdictional agency.

No cache communication equipment shall be moved from one incident to another without being first returned to NIFC for refurbishment. However, equipment unused and red-sealed may be moved, if approval is given by the NIFC CDO or COMC.

Military Communications on an Incident

Military units assigned to an incident already have radios. Each battalion is assigned 80 handheld radios. Sixteen of these radios are used by military crew liaisons. Intercrew communications within a military unit is provided by the military on its radios using its frequencies. All frequency assignments at the incident will be made by the COML in accordance with the ICS-205.

Some active military and guard units have aviation VHF-FM radios compatible with civilian systems. Other units are adapting their aircraft for the civilian radios and can be easily outfitted prior to dispatch to an incident. A limited number of wiring harnesses are available at NIFC for those military aircraft that do not have civilian VHF-FM capability. The wiring harnesses and radios will be resource ordered by the incident. The resource order will include a request for trained personnel from NIICD to perform the installation of the equipment. Equipment will not be sent without trained and qualified personnel to install it.

Cellular Communications/Satellite Phone Communication

Cellular/satellite telephones will not be used to communicate tactical operations unless they are the only means possible. Cellular/satellite telephones are not to be used for flight following in lieu of normal flight-following protocols.

Phone communication can be used for logistical purposes.

Effective Radio Use

- If personnel do not follow basic guidelines and use the system properly, the best system, even with full coverage, will not meet the requirements of the situation or incident.
- All emergency communications equipment should be kept away from sources of possible interference. Existing radio communications sites are the best example of where not to place this equipment.
- Keep the antenna as high as possible and in a vertical position.
- Canting or tilting the radio 45 degrees lowers the effective transmitting power by half, so that a two-watt radio performs as a one-watt radio. Use of a chest harness reduces the effectiveness of the radio since most harnesses hold the radio at a 45 degree angle. A decrease in transmitting and receiving capability also occurs due to shielding from your body.
- Frequencies are a finite resource. There are a limited number available for initial attack and/or incident communications. Care must be taken as to how and where they are assigned to minimize the possibility of interference.
- The more channels that are scanned, the busier the radio receiver becomes. In the case of inexperienced radio users, the communication system will appear to be overloaded because the radio is never quiet.
- Use clear text language: use of codes potentially confuses interagency communications.
- Assistance with radio operations, troubleshooting and deficiency reports can be found at http://radios.nifc.gov/.

Chapter 17
Aviation Operations/Resources

Purpose and Scope

Aviation resources are one of a number of tools available to accomplish fire related land management objectives. Their use has value only if that use serves to accomplish the mission.

Aviation use must be prioritized based on management objectives and probability of success.

The effect of aviation resources on a fire is directly proportional to the speed at which the resource(s) can initially engage the fire, and the effective capacity of the aircraft. These factors are magnified by flexibility in prioritization, mobility, positioning, and utilization of the versatility of many types of aircraft.

Risk management is a necessary requirement for the use of any aviation resource. That risk management process must include the risk to ground resources, and the risk of not performing the mission, as well as the risk to the aircrew.

Organizational Responsibilities

National Office

Aviation Management Directorate

The Aviation Management Directorate (AMD), of the National Business Center, is responsible for aviation policy development, aircraft acquisition, financial services, and maintenance management within the agencies of the Department of the Interior (DOI). AMD has no operational responsibility. AMD provides aviation safety program oversight, accident investigation, and aircraft and pilot inspection and approval for DOI use.

- ***BLM -*** *National Aviation Office (NAO) - NAO develops BLM policy, procedures, standards, and maintains functional oversight and facilitates interagency coordination for all aviation activities. The principal goals are safety and cost-effectiveness. The NAO supports BLM aviation activities and missions, including fire suppression, through strategic program guidance, managing aviation programs of national scope, coordination with AMD and interagency partners. National Office of Fire and Aviation Management (OF&A) has the responsibility and authority, after consultation with State FMOs, for funding and acquisition of all fire aircraft, prioritizing the allocation of BLM aircraft on a national basis, and approving State Office requests to acquire supplemental aircraft resources. Refer to BLM Manual 9400 for aviation policy and guides. (Refer to 112 DM 12 for a list of responsibilities.)*

- ***FS -*** *The US Forest Service has responsibility for all aspects of its aviation program, including aviation policy development, aircraft acquisition, and maintenance management. In addition, the USFS has operational responsibility including development of aviation procedures and standards, as well as functional oversight of aviation assets and facilities, accident investigation, and aircraft and pilot inspection.*
- ***FS -*** *The National Aviation Officer (NAO) is responsible to the Director of Fire and Aviation Management (Aviation) for the management and supervision of the National Headquarters Office in Washington DC, and the detached Boise Aviation Unit. The NAO provides leadership, support and coordination for national and regional aviation programs and operations. (Refer to FSM 5704.22 for list of responsibilities.) The National Aviation Operations Officer (NAOO) reports to the NAO, and oversees the detached Boise Aviation Unit, and is responsible for all operational aspects of the aviation program.*

State/Regional Office

- ***BLM/FWS/NPS -*** *A State/Regional Aviation Manager (S/RAM) is located in each state/regional office. S/RAMs implement aviation program objectives and directives to support the agency mission and state/region objectives. Several states/region's have additional support staff, and/or pilots assigned to support aircraft operations and to provide technical expertise. A state/regional aviation operations and management plan is required to outline the state/region's aviation program objectives and to identify state/region-specific policy and procedures.*
- ***FS -*** *Regional Aviation Officers (RAOs) are responsible for directing and managing Regional aviation programs in accordance with the National and Regional Aviation Management Plans, and applicable agency policy direction. (Refer to FSM 5720.47c for list of responsibilities.). RAOs report to Director of Fire and Aviation for their specific Region. Regional Aviation Safety Managers (RASMs) are responsible for aviation safety in their respective Regions, and work closely with the RAO to ensure aviation safety is an organizational priority. Most Regions have additional aviation technical experts and pilots who help manage and oversee the Regional aviation programs. Most Regions also have Aviation Maintenance Inspectors, Airtanker Program Managers, Helicopter Program Managers, Helicopter Operations Specialists, Inspector Pilots, etc.*
- ***BLM -*** *State FMOs are responsible for providing contract oversight Contracting Officers Representative (COR) for aircraft hosted in their state, this duty is delegated to the State Aviation Manager. State FMOs have the authority and responsibility to approve, with National Office concurrence, acquisition of supplemental aircraft resources within their state. State FMOs have the authority to prioritize the allocation, pre-positioning and movement of all aircraft assigned to the BLM within their state. State Offices will coordinate with the National Office on movement of their aircraft outside of their State.*

Local Office

Some areas have interagency aviation programs that utilize an Aviation Manager for multiple units. Duties are similar as other local level managers.

- ***BLM -*** *Unit Aviation Managers (UAMs) serve as the focal point for the Unit Aviation Program by providing technical expertise and management of aviation resources to support Field Office/District programs. Field/District Offices are responsible for hosting, supporting, providing daily management, and dispatching all aircraft assigned to their unit. Field/District Offices have the authority to request additional resources; and to establish priorities, and make assignments for all aircraft assigned to the BLM within their unit or zone.*
- ***NPS -*** *Organizational responsibility refer to DO-60, RM-60.*
- ***FS -*** *Unit Aviation Officers (UAOs)/Forest Aviation Officers (FAOs) have the responsibility for aviation activities at the local level, including aviation mission planning, safety measures, supervision, and evaluation. UAOs/FAOs assist Line Officers with risk assessment/management and cost analysis. (Refer to FSH 5709.16_10.42)*

Aviation Information Resources

Aviation reference guides and aids for agency aviation management are listed for policy, guidance, and specific procedural requirements.

- ***BLM -*** *9400 Manual Appendix 1, BLM Fixed Wing Standard Operations Procedures, National Aviation Plan. State and Unit Aviation Plans (In all cases DOI policy Department Manuals [DMs], Operational Procedural Memoranda [OPMs], and BLM policy will take precedence.)*
- ***FWS -*** *Service Manual 330-339, Aviation Management and IHOG.*
- ***NPS -*** *RM-60 Aviation Management Reference Manual and IHOG.*
- ***FS -*** *FSM 5700,ISMOG, FSH 5709.16 and IHOG.*

Safety alerts, operational alerts, instruction memoranda, information bulletins, incident reports, and other guidance or information are issued as needed.

An up-to-date library with aviation policy and procedural references will be maintained at all permanent aviation bases, dispatch, and aviation management offices.

Aviation Safety

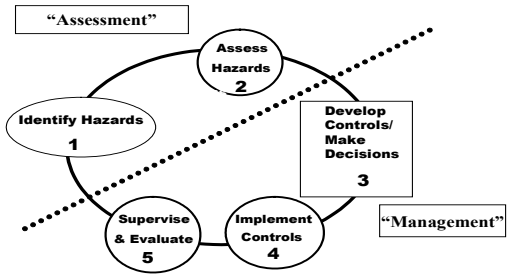
Risk Assessment and Risk Management

The use of Risk Management will help to ensure a safe and successful operation. Risk is the probability that an event will occur. Assessing risk identifies the hazard, the associated risk, and places the hazard in relationship to the mission. A decision to conduct a mission requires weighing the risk against the benefit of the mission and deciding whether the risks are acceptable.

Aviation missions always have some degree of risk. The four sources of hazards are methods, medium, man, and machine. Managing risk is a 5-step process:

- Identify hazards associated with all specified and implied tasks for the mission.
- Assess hazards to determine potential of occurrence and severity of consequences.
- Develop controls to mitigate or remove risk, and make decisions based on accepting the least risk for the best benefit.
- Implement controls - (1) education controls, (2) physical controls, and (3) avoidance controls.
- Supervise and evaluate - enforce standards and continuously re-evaluate their effectiveness in reducing or removing risk. Ensure that controls are communicated, implemented, and enforced.

THE RISK MANAGEMENT PROCESS



Aviation Safety Support

During high levels of aviation activity it is advisable to request an Aviation Safety Assistance Team (ASAT). An ASAT's purpose is to assist and review helicopter and/or fixed wing operations on ongoing wildland fires. They should be requested through the agency chain of command and operate under a Delegation of Authority from the appropriate State/Regional Aviation Manager(s) or Multi Agency Coordinating Group. Formal written reports will be provided to the appropriate manager(s). A team should consist of the following:

- Aviation Safety Manager
- Operations Specialist (helicopter and/or fixed wing)
- Pilot Inspector
- Maintenance Inspector (optional)
- Avionics Inspector (optional)

Military or National Guard Aircraft and Pilots

The *Military Use Handbook* (NFES 2175) will be used when planning or conducting aviation operations involving regular military aircraft. Ordering military resources is done through National Interagency Coordination Center (NICC); National Guard resources are utilized through local or state Memorandum of Understanding (MOU).

Aviation Safety Briefing

Every passenger must receive a briefing prior to each flight. The briefing is the responsibility of the Pilot in Command (PIC) but may be conducted by the pilot, flight manager, helicopter manager, fixed-wing base manager, or an individual with the required training and experience to conduct an aviation safety briefing. Refer to the *Incident Response Pocket Guide* (IRPG) and IHOG Chapter 10.

Aviation Hazard

An aviation hazard is any condition, act, or circumstance that compromises the safety of personnel engaged in aviation operations. All personnel are responsible for hazard identification and mitigation. This includes pilots, flight crew personnel, aviation managers, incident air operations personnel, and passengers. Aviation hazards include the following:

- Deviations from policy, procedures, regulations, and instructions.
- Improper hazardous materials handling and/or transport.
- Airspace conflicts/flight following deviation.
- Deviation from planned operations.
- Failure to utilize PPE or Aviation Life Support Equipment (ALSE).
- Failure to meet qualification standards or training requirements.
- Extreme environmental conditions.
- Improper ground operations.
- Improper pilot procedures.
- Fuel contamination.
- Unsafe actions by pilot, air crew, passengers, or support personnel.

Aviation hazards also exist in the form of wires, low-flying aircraft, and obstacles protruding beyond normal surface features. Each office will post, maintain, and annually update a “known aerial hazard map” for the local geographic area where aircraft are operated, regardless of agency jurisdiction. This map will be posted and used to brief flight crews. Unit Aviation Managers are responsible for ensuring the development and updating of Known Aerial; Hazard Maps (IHOG Ch 3.V.J.1.c page 3-20)

SAFECOM

The Department of the Interior (DOI) and the US Forest Service (FS) have an incident/hazard reporting form called The Aviation Safety Communiqué (SAFECOM). The database, available at www.safecom.gov, fulfills the Aviation Mishap Information System (AMIS) requirements for aviation mishap reporting

for the DOI agencies and the US Forest Service. Categories of reports include incidents, hazards, maintenance, and airspace. The system uses the SAFECOM Form OAS-34 or FS-5700-14 to report any condition, observation, act, maintenance problem, or circumstance with personnel or aircraft that has the potential to cause an aviation-related mishap. The SAFECOM system is not intended for initiating punitive actions. Submitting a SAFECOM is not a substitute for "on-the-spot" correction(s) to a safety concern. It is a tool used to identify, document, track and correct safety related issues. A SAFECOM does not replace the requirement for initiating an accident or incident report.

Any individual (including cooperators) with knowledge of an incident/hazard should complete a SAFECOM. The SAFECOM form should be entered directly on the internet at www.safecom.gov or can be faxed to the Department of the Interiors Aviation Management Directorate, Aviation Safety (208)433-5069 or to the Forest Service at (208) 387-5735 ATTN: SAFETY. Electronic cc copies are automatically forwarded to the National, Regional, and State and Unit Aviation Managers.

The agency with operational control of the aircraft at the time of the hazard/incident/accident is responsible for completing the SAFECOM and submitting it through agency channels.

Aircraft Incidents/Accidents

Notify FS or AMD and DOI agency Aviation Safety Managers of any aircraft mishap involving damage or injury. Use the hotline (888) 464-7427 or the most expeditious means possible. Initiate the appropriate unit Aviation Mishap Response Plan.

Aviation Assets

Typical aviation assets that DOI and USFS utilize are: Helitack and Rappel crews, Smokejumpers, Large Airtankers, Single Engine Air Tankers, Helitankers, Air Attack, Aerial Supervision Modules, Lead Planes, Airtanker Bases, SEAT Bases, Helibases, Smokejumper Bases, Air Attack Bases.

- ***BLM -*** *All BLM acquired aircraft, exclusive use and CWN, are available to move to areas of greatest national need, thereby maximizing efficiency and effectiveness. Specific authorities and responsibilities for Field/State and National Offices are outlined earlier in this chapter. Offices are expected to adhere to procedures established in the National Aviation Plan for both acquisition, and use reporting.*

Helitack

Helitack crews perform suppression and support operations to accomplish fire and resource management objectives.

Organization - Crew Size

- ***BLM -*** *The standard BLM exclusive-use helitack crew is a minimum of seven personnel (PFT supervisor, long-term assistant, long-term lead, and four temporaries). BLM helicopters operated in Alaska need only be staffed with a qualified Helicopter Manager (HELM).*
- ***NPS -*** *NPS exclusive use modules will consist of a minimum of 8 personnel.*
- ***FS -*** *Regions may establish minimum crew size and standards for their exclusive use helitack crews. Experience requirements for exclusive-use helicopter positions are listed in FSH 5109.17, Chapter 40.*

Operational Procedures

The *Interagency Helicopter Operations Guide* (IHOG) is policy for helicopter operations whether in support of wildland fire or natural resource missions, and provides guidance for helitack and helicopter operations.

- ***FWS -*** *IHOG does not serve as policy for natural resource missions.*

Communication

The helitack crew standard is one handheld programmable multi-channel FM radio per every 2 crew persons, and one multi-channel VHF-AM programmable radio in the primary helitack crew (chase) truck. Each helitack crew (chase) vehicle will have a programmable VHF-FM mobile radio. Each permanent helibase will have a permanent programmable FM radio base station.

Transportation

Dedicated vehicles with adequate storage and security will be provided for helitack crews. The required Gross Vehicle Weight (GVW) of the vehicle will be dependent upon the volume of equipment carried on the truck and the number of helitack crewmembers assigned to the crew.

Safety

For information on the risk assessment and management, see the *IHOG*, Chapter 3.

Training and Experience Requirements

All helitack members will meet fire qualifications as prescribed by the National Wildfire Coordinating Group (NWCG) *310-1* and their agency manual requirements. The following chart establishes experience and training requirements for FS, BLM, NPS, and FWS Exclusive Use, Fire Helicopter Crew Positions.

Exclusive Use Fire Helicopter Position Requisites			
POSITION [1]	MINIMUM PREREQUISITE EXPERIENCE [2]	MINIMUM REQUIRED TRAINING [3]	CURRENCY REQUIREMENTS
Fire Helicopter Crew Supervisor	One season [4]as an Assistant Fire Helicopter Crew Supervisor, ICT4, HELM, HEB2		RT-372 [5]
Assistant Fire Helicopter Crew Supervisor	One season as a Fire Helicopter Squad Leader, ICT4, HELB or HELM, HEB2 (T)	I-200, S-200, S-215, S-230, S-234, S-260, S-270, S-290, S-371, S-372	RT-372
Fire Helicopter Squad Leader	One season as a Fire Helicopter Crewmember, FFT1, ICT5	S-131, S-133, S-211, S-212	S-271
Fire Helicopter Crewmember	One season as a FFT2, HECM Taskbook	I-100, S-130, S-190, S-271	S-271

[1] All Exclusive use Fire Helicopter positions require an arduous fitness rating.
[2] Minimum experience and qualifications required prior to performing in the Exclusive use position. Each level must have met the experience requirements of the previous level(s).
[3] Minimum training required to perform in the position. Each level must have met the training requirements of the previous level(s).
[4] A "season" is continuous employment on a full-time wildland fire helicopter crew for a period of 90 days or more.
[5] After completing S-372, must attend Interagency Helicopter Manager Workshop (RT-372) every three years.
[6] Must receive S-271 or serve as S-271 instructor, once every three years.
Note: Exceptions to the above position standards may be granted, on a case-by-case basis by the BLM National Aviation Office, NPS Regional Office FWS Regional Office, or FS Regional Office as appropriate.

- Some positions may be designated as COR/Alternate-COR. If so, see individual Agency COR training & currency requirements.
- Fire Helicopter Managers (HELM) are fully qualified to perform all the duties associated with Resource Helicopter Manager.

Helicopter Rappel & Cargo Let-Down

Any rappel or cargo let-down programs must be approved by the Directors, Fire and Aviation Management.

- ***FS -*** *Approval is required by the Regional Office.*

All rappel and cargo let-down operations will follow the *Interagency Helicopter Rappel Guide* (IHRG), as policy. Any exemption to the guide must be requested

by the program through the state/region for approval by the National Aviation Office.

Aerial Ignition

The *Interagency Aerial Ignition Guide (IAIG)* is policy for all aerial ignition activities. Any exemption to the *IAIG* must be requested through the state/region for approval by the National Aviation Office.

Airtankers

Airtankers are a national resource. Geographic areas administering these aircraft will make them available for initial attack and extended attack fires on a priority basis. All airtanker services are obtained through the contracting process (except the MAFFS, which are military aviation assets and used to supplement the contract fleet when needed).

The management of these resources is governed by the requirements of the *DM, BLM Manual 9400*, and the *Interagency Airtanker Base Operations Guide (IATBOG).* Airtankers are operated by commercial vendors in accordance with *FAR Part 137*.

- ***FS -*** *Forest Service operates under FSM 5703 and Grant of Exemption 392 as referenced in FSM 5714.*

Operational Principles

- Use retardant drops before an immediate need is recognized; pretreat according to expected fire behavior.
- Retardant dropped in the morning may still be effective in the afternoon.
- Build progressive retardant line.
- Use retardant drops to cool areas (reduce flame length), as necessary in support of ground forces.
- Be sure the line is clear of personnel prior to dropping retardant.
- Be alert for gaps in retardant lines.
- Expect fixed-wing vortices and rotor-wing down wash.
- Wildland fire can burn around, under, spot over, and with enough intensity, through retardant lines.
- Retardant drops should not be made within 300 feet of a waterway. Refer to *Interagency Leadplane Operations Guide (ILOG)*.

Categories

Airtanker types are distinguished by their retardant load:

- Type 1 - 3,000 gallons
- Type 2 - 1,800 to 2,999 gallons
- Type 3 - 800 to 1,799 gallons
- Type 4 - 799 gallons (single engine airtankers)

Airtanker Base Operations

Certain parameters for the operation of airtankers are agency-specific. For dispatch procedures, limitations, and times, refer to geographic area mobilization guides and the *Interagency Airtanker Base Operations Guide (IATBOG).*

Airtanker Base Personnel

There is no identified training for the positions at airtanker bases; the *IATBOG* contains a chart of recommended training for each position. It is critical that reload bases staff up commensurate with the need during periods of moderate or high fire activity at the base. All personnel conducting airtanker base operations should review the *IATBOG* and have it available.

Startup/Cutoff Time for Multi Engine Airtankers

These limitations apply to the time the aircraft arrives over the fire.

- Normally airtankers shall be dispatched to arrive over the fire not earlier than 30 minutes after official sunrise and not later than 30 minutes before official sunset.
- Airtankers may be dispatched to arrive over a fire as early as 30 minutes prior to official sunrise, or 30 minutes after official sunset, provided:
  - A qualified ATGS, ASM1, or ATCO is on the scene; and
  - Has determined visibility and other safety factors are suitable for dropping retardant; and
  - Notifies the appropriate dispatcher of this determination.
- An airtanker, crewed by an initial attack-rated captain, may be dispatched to arrive over a fire without aerial supervision by an ATGS, ASM1, or ATCO provided the airtanker's arrival and drop activities are conducted between 30 minutes after official sunrise and 30 minutes before official sunset in the lower 48 states. In Alaska, an airtanker pilot will not drop retardant during periods outside civil twilight.

Single Engine Airtankers

Single Engine Airtanker (SEAT) Operations

The *Interagency SEAT Operating Guide (ISOG) (NFES #1844)* defines operating standards and is policy for both the DOI and FS.

SEAT Manager Position

In order to ensure adherence to contract regulations, safety requirements, and fiscal accountability, a qualified SEAT Manager (SEMG) will be assigned to each operating location. The SEMG's duties and responsibilities are outlined in the *ISOG*.

Safety
All SEAT operators and users will adhere to AMD/Forest Service safety standards. Flight operations, pilot requirements, flight crew duty and flight limitations, and the use of PPE are addressed in the above referenced standards.

Operational Procedures
Using SEATs in conjunction with other aircraft over an incident is standard practice. Agency or geographical area mobilization guides may specify additional procedures and limitations.

Depending on location, operator, and availability, SEATs are capable of dropping suppressants, water, or approved chemical retardants. Because of the load capacities of the SEATs (400 to 800 gallons), quick turn-around times should be a prime consideration. SEATs are capable of taking off and landing on dirt, gravel, or grass strips (pilot must be involved in selection of the site); a support vehicle reduces turn-around times.

Reloading at established airtanker bases or reload bases is authorized. (SEAT operators carry the required couplings). All base operating plans must include SEAT loading criteria.

Communication
All SEATs must have two VHF-AM and one VHF-FM (programmable) multi-channel radios. (See contract specifications.)

Aerial Supervision
Aerial supervision resources will be dispatched, when available, for initial and extended attack to enhance efficiency and safety of ground and aerial operations. During initial response operations the recommended aerial supervision in priority order with regard to safety and efficiency is as follows:

- ASM
- ATGS
- ATCO (Leadplane)
- HLCO Helicopter Coordinator
- Smokejumper Spotter
- HELM (Helicopter Manager)

If aerial operations continue beyond initial response, an ASM, ATGS, or ATCO will be ordered. Aerial supervision response will be commensurate with expected complexity.

Reconnaissance or Patrol flights
The purpose of aerial reconnaissance or detection flights is to locate and relay fire information to fire management. Only qualified ATGS (ATS-ASM) and Lead Plane Pilots are authorized to coordinate incident airspace operations. Flights with a “Recon” or “Patrol” designation should communicate with tactical

aircraft only to announce location, altitude and to relay their departure direction and altitude from the incident.

Low-level Flight Operations

The only fixed-wing aircraft missions authorized for low-level fire operations are:

- Para-cargo.
- Aerial Supervision Module (ASM) and leadplane operations.
- Retardant, water and foam application.

Operational Procedures:

- A high-level recon will be made prior to low-level flight operations.
- All flights below 500 feet will be contained to the area of operation.
- All resource flights below 500 feet must have an approved plan.
- PPE is required for all fixed-wing, low-level flights. Helmets are not required for multi-engine airtanker crews, smokejumper pilots and ASM flight/aircrew members.

Congested Area Flight Operations

Airtankers can drop retardant in congested areas under DOI authority given in *FAR Part 137*. FS authority is granted under exemption 392, from *FAR 91.119* as referenced in FSM 5714. When such operations are necessary, they may be authorized subject to these limitations:

- Airtanker operations in congested areas may be conducted at the request of the city, rural fire department, county, state, or federal fire suppression agency.
- An ASM/leadplane is ordered to coordinate aerial operations.
- The air traffic control facility responsible for the airspace is notified prior to or as soon as possible after the beginning of the operation.
- A positive communication link must be established between the airtanker coordinator or aerial supervision module (ASM), airtanker pilot(s), and the responsible fire suppression agency official.
- The Incident Commander (IC) for the responsible fire agency or designee will advise the ASM/leadplane/airtanker that all non-essential people and movable property have been cleared prior to commencing retardant drops.

Aerial Supervision Module (ASM)

The Aerial Supervision Module is crewed with both a “lead” qualified pilot (ATP) and an Air Tactical Supervisor (ATS). These individuals are specifically trained to operate together as a team. The resource is primarily designed for providing both functions (lead and Air Attack) simultaneously from the same aircraft, but can also provide single role service, as well.

The Air Tactical Pilot is primarily responsible for aircraft coordination over the incident. The Air Tactical Supervisor develops strategy in conjunction with the Operations Section Chief.

- ***BLM -*** *The Aerial Supervision Module Operations Guide (ASMOG) and Interagency Leadplane Operations Guide (ILOG) are policy for BLM.*

Operational Considerations

The ASM is a shared national resource. Any operation that limits the national resource status must be approved by the agency program manager. Aerial or incident complexity and environmental considerations will dictate when the ASM ceases low level operations. The ASM flight crew has the responsibility to determine when the complexity level of the incident exceeds the capability to perform both ATGS and leadplane functions from one aircraft. The crew will request additional supervision resources, or modify the operation to maintain mission safety and efficiency.

Policy

Only those individuals certified and authorized by the BLM - National Aviation Office, or the FS - National Aviation Operations Officer, will function as an Air Tactical Supervisor (ATS) in an ASM mission profile.

Aerial Supervision Module Program Training and Qualifications

Training and qualification requirements for ASM crewmembers are defined in the *Interagency Aerial Supervision Guide Appendix A.*

Air Tactical Group Supervisor (ATGS)

The ATGS is primarily responsible for coordination of aircraft operations and firefighter safety on an incident. Specific duties and responsibilities are outlined in the *Fireline Handbook (PMS 410-1) and the Interagency Air Tactical Group Supervisor's Guide (NFES 1393).* The ATGS reports to the Air Operations Branch Director (AOBD), or in the absence of the AOBD, to the Operations Section Chief (OSC), or in the absence of the OSC, to the IC.

The following PPE is required for all interagency ATGS operations:

- Leather shoes or boots
- Full length cotton or nomex pants or flight suit.

Operational Considerations

A relief ATGS and aircraft or ASM should be ordered for sustained operations to ensure continuous coverage over an incident. Personnel who are performing aerial reconnaissance and detection will not perform air tactical duties unless they are fully qualified as an ATGS. Air tactical aircraft must meet the avionics typing requirements listed in the *Air Tactical Group Supervisor's Guide* and the pilot must be carded to perform the air tactical mission.

Leadplane

A leadplane is a national resource. The *Interagency Leadplane Operations Guide (ILOG)* is agency policy. Agency policy requires an ASM/leadplane to be on order prior to retardant drops over a congested area. Operations may proceed before the SM1/leadplane arrives, if communications are established, authorization is granted from the IC, and the line is cleared prior to commencing retardant operations.

Smokejumper Pilots

The *Interagency Smokejumper Pilot Operations Guide* (ISPOG) serves as policy for smokejumper pilots' qualifications, training and operations.

Airspace Coordination

The Interagency Airspace Program is an aviation safety program designed to enhance aviation safety and reduce the risk of a mid-air collision. Guidance for this program is found in the *Interagency Airspace Coordination Guide (IACG)*, which has been adopted as policy by the DOI and USDA Forest Service. Additional guidance may be found in the *National Interagency Mobilization Guide* and supplemented by local Mobilization Guides.

All firefighting aircraft are required to have operative transponders and will use a setting of 1255 when engaged in, or traveling to, firefighting operations (excluding ferry flights), unless given a discrete code by Air Traffic Control (ATC).

Flight planning and Temporary Flight Restriction (TFR) information on World Aeronautical (WAC) Sectional and Global Navigational Charts (GNC) has been made available at the National Interagency Airspace System website http://airspace.nifc.gov. TFRs are updated every 30 minutes during normal business hours 7 days a week. A tactical chart with TFR specific information with incident names, frequencies and altitudes are available. These charts can be found at http://airspace.nifc.gov/mapping/nifc/index.cfm
Additional references can be found by contacting:

- ***BLM -*** *State Aviation Managers, Regional Airspace Coordinator and the BLM National Aviation Office Airspace Coordinator.*
- ***FS -*** *Regional Aviation Safety Officers, Regional Airspace Coordinators and the FS Airspace Program Manager.*
- ***FWS -*** *National Aviation Safety and Operations*
- ***NPS -*** *Regional Aviation Officers.*

Flight Request and Approval

- ***BLM -*** *The 9400-1a, Aircraft Flight Request/Schedule Form, will be used for approval and flight planning. This form will be completed between the aircraft dispatcher and flight manager for missions not requested on a Fire Resource Order. The fixed-wing or helicopter manager will use this form to brief the pilot on the mission.*

- ***NPS -*** *Reference RM 60, Appendix 3 & 4.*
- ***FS -*** *Refer to FSM 5700 for administrative use, FSM 5705 for point-to-point and mission use for types of Forest Service flights. All non tactical flights require a flight schedule to be completed with a flight following method identified prior to departure; with information passed to all responsible dispatch centers.*

Point-to-point flights typically originate at one developed airport or permanent helibase, with the direct flight to another developed airport or permanent helibase. These flights require approved pilots, aircrew, and aircraft.

- A point-to point flight is conducted higher than 500 feet above ground level (AGL).

Agency policy requires designating a Flight Manager/Chief of Party for point-to-point flights transporting personnel. The Flight Manager/Chief of Party ensures compliance with contract requirements and is responsible for coordinating the given flight. They must have received approved Agency Specified training within the last three years. Duties include:

- Briefs pilots on missions, frequencies, flight routes, hazards, flight following, passenger briefing requirements, and any other related information required.
- Checks the pilots' qualification cards and aircraft data cards for approval and currency.
- Ensures that flights are safely conducted and do not deviate from filed Flight Plans or mission profiles without prior authorization.
- Initials the flight invoices and routes them according to procedures specified in the contract.
- ***BLM -*** *All agency flights shall be approved using an aircraft request/flight schedule, USDI form 9400-1a. This form is used to authorize, plan and brief the pilot on non-fire flights.*
- ***FS -*** *Refer to FSM 5710.5 for administrative use, FSM 5705 for point-to-point and mission use for types of Forest Service flights.*
- ***NPS -*** *Reference RM-60, Appendix 3 for agency specific policy.*

Mission Flights

Mission flights are defined as flights not meeting the definition of point-to-point flight. A mission flight requires work to be performed in the air (retardant or water delivery, fire reconnaissance, smokejumper delivery), or through a combination of ground and aerial work (delivery of personnel and/or cargo from helibases to helispots or unimproved landing sites, rappelling or cargo let-down, horse herding).

- PPE is required for any fixed wing mission flight conducted within 500'AGL.
- The use of PPE is required for all helicopter flight (point to point and mission) and associated ground operations. The specific items to be worn

are dependent on the type of flight, the function an individual is performing, or the ground operation being conducted. Refer to the tables in Chapter 9 of the *IHOG* for specific requirements.

- All personnel will meet training and qualification standards required for the mission.
- Mission flights for fixed-wing aircraft include but are not limited to the following:
  - Water or retardant application
  - Parachute delivery of personnel or cargo
  - Airtanker coordinator operations
  - Takeoff or landing requiring special techniques due to hazardous terrain, obstacles, pinnacles, or surface conditions
  - Fire reconnaissance (PPE recommended but not required)
  - Precision reconnaissance

Mission helicopter flights include but are not limited to the following:

- Flights conducted within 500 feet AGL
- Water or retardant application
- Helicopter coordinator and ATGS operations
- Aerial ignition activities
- External load operations
- Rappelling
- Takeoff or landing requiring special techniques due to hazardous terrain, obstacles, pinnacles, or surface conditions
- Free-fall cargo
- Fire reconnaissance
- Precision reconnaissance

Flight-Following All Aircraft

Aircraft Managers, Pilots and Dispatchers are responsible for coordinating and confirming the method of flight following to be utilized. The default standard for interagency fire operations is for all aircraft to maintain positive radio contact with 15 minute check-ins. When agency flight following (radio or automated) is being used, the scheduling dispatch office shall have flight following responsibility until transferred through a documented, positive hand-off. All dispatch centers designated for fire support shall have the capability to transmit and receive "National Flight Following" and Air Guard". Flight-following reports from the aircraft are the responsibility of the pilot-in-command (PIC) in accordance with 14 CFR. Violation of flight-following standards requires submission of a SAFECOM.

Aircraft operating under certain contracts may not be required to be equipped with AFF and/or FM radios. Consult the appropriate procurement document for the aircraft in question to determine applicability.

If AFF becomes inoperable the aircraft will normally remain available for service, utilizing radio/voice system for flight following. Each occurrence must be evaluated individually and decided by the COR/CO.

For tactical aircraft that cross dispatch area geographic boundaries, the receiving unit is responsible to confirm arrival of the aircraft via landline to the sending Geographic Area Coordination Center.

- ***BLM/FWS/NPS -*** *Refer 351 Departmental Manual - Flight Operations Standards and Procedures, IHOG Chapter 4, and National and Geographic Area Mobilization Guides for specific direction.*
- ***FS -*** *Refer FSM 5700, FSH 5709 handbooks, IHOG Chapter 4, and National and Geographic Area Mobilization Guides for specific direction.*

Flight-Following Point to Point, Non-Mission Flights

Agency radio communication is not mandatory. Flight following for point to point, non-mission flights shall be accomplished using one of the following methods:

- **FAA IFR or VFR flight plan**
  Pilot/chief of party shall notify sending/receiving dispatch office of ETD, ETA and ATA. Radio communication with agency dispatch office is not required.
- **Agency check-in via radio**
  Pilot checks in via radio with agency dispatch office on set intervals during duration of flight (usually every 15 minutes).
- **Automated Flight Following (AFF)**
  AFF shall be conducted according to the provisions outlined in the *National Interagency Mobilization Guide, section 24.3.1*

Flight-Following Mission Flights

Agency FM radio capability is required for all mission flights. Flight following for mission flights shall be accomplished using one of the following methods:

- **Agency check-ins via radio**
  Pilot checks in via radio with agency dispatch office on set intervals during duration of flight (usually every 15 minutes).
- **Automated Flight Following (AFF)**
  AFF shall be conducted according to the provisions outlined in the *National Interagency Mobilization Guide, section 24.3.1*.

Chapter 18
Prescribed Fire

Introduction

The *Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide (IA RX Fire Guide)* was signed by the National Fire and Aviation Executive Board (NFAEB) on September 1, 2006. The IA RX Fire guide provides consistent interagency policy, establishes common terms and definitions, and identifies planning and implementation processes for prescribed fire. These procedures meet all policy requirements described in the *2003 Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy*. The 2006 guide provides unified direction and guidance for prescribed fire planning and implementation for the Department of the Interior's Bureau of Indian Affairs (BIA), Bureau of Land Management (BLM), the National Park Service (NPS), the United States Fish and Wildlife Service (USFWS) and the United States Department of Agriculture Forest Service (USDA FS).

The guide can be obtained electronically at the National Fire and Aviation Executive Boards (NFAEB) website: http://www.nifc.gov/fire_policy/ and at the National Interagency Fuels Management Website: http://www.nifc.gov/fuels/index.html. Access the 'Direction and Guidance' link.

The IA RX Fire Guide describes what is minimally acceptable for prescribed fire planning and implementation. All personnel involved in the prescribed fire planning and implementation process must ensure that specific agency additional standards and or supplemental guidance are followed.

Purpose

The purpose of this guide is to provide consistent interagency policy, establish common terms and definitions, and identify planning and implementation processes for prescribed fire.

The guide describes what is minimally acceptable for prescribed fire planning and implementation. Agencies may choose to provide more restrictive standards and policy direction, but must adhere to these minimums.

Scope

This guide provides policy and direction to implement existing federal policy and has been developed with tribal, state, county, and local cooperators in mind. While some of these guidelines will not fit all non-federal cooperators, the intent is to include everyone by establishing a planning and implementation guide that might result in that outcome.

Prescribed Fire Program Goals

Interagency Prescribed Fire Program goals are to:

- Provide for firefighter and public safety as the first priority.
- Ensure that risk management is incorporated into all prescribed fire planning and implementation.
- Use prescribed fire in a safe, carefully planned, and cost-efficient manner.
- Reduce wildfire risk to communities, municipal watersheds and other values and to benefit, protect, maintain, sustain, and enhance natural and cultural resources.
- Utilize prescribed fire to restore natural ecological processes and functions, and to achieve land management objectives.

Authorities

All use of prescribed fire will be supported by a Land/Resource Management Plan (L/RMP) and/or Fire Management Plan (FMP). Prescribed fire projects can only be implemented through an approved Prescribed Fire Plan. Specific authorities exist for each agency to utilize prescribed fire (See Appendix A of the *Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide)*. All project decisions to use prescribed fire are subject to the agency's analysis, documentation, and disclosure requirements for complying with the National Environmental Policy Act (NEPA).

During prescribed fire planning and operations, all federal agencies will accept each other's standards for qualifications. The minimum qualifications standard is theNational Wildland Fire Coordinating Group (NWCG) *Wildland and Prescribed Fire Qualifications System Guide, 2000* (PMS 310-1). State, local cooperators and contractors working on federal agency prescribed fires must meet the NWCG PMS 310-1 standards unless local agreements specify otherwise.

The main reference glossary for this guide is the NWCG glossary, which is updated periodically: http://www.nwcg.gov/.

This guide is not intended to address interagency business rules. Reference individual agency's business rules for direction.

Prescribed Fire Planning Process

Common planning documents to ensure quality prescribed fire plans include:

- Land/Resource Management Plan (L/RMP)
- Overall direction is provided to the Wildland Fire Management Program by L/RMP. These plans serve as the document to initiate, analyze, and provide the basis for using prescribed fire to meet resource management objectives.

Fire Management Plan (FMP)

All burnable acres will be covered by a Fire Management Plan (FMP). The FMP is the cornerstone plan for managing a Wildland Fire Management Program and should flow directly from the L/RMP. FMPs may be developed for a Fire Planning Unit (FPU) that crosses jurisdictional boundaries. Where the Wildland Fire Management Program crosses jurisdictional boundaries, or where program coordination is essential, the FMP will require interagency coordination. Most FMPs are anticipated to fall into this category.

National Environmental Policy Act (NEPA)

Resource and prescribed fire objectives for specific prescribed fire projects are derived from the NEPA analysis. The entire prescribed fire project area must be analyzed under NEPA. NEPA documents that identify and analyze the effects of using or not using prescribed fire treatment projects may include Environmental Impact Statements (EIS), Environmental Assessments (EA), and Categorical Exclusion (CE).

Other authorities that may be utilized to guide analysis and determination of NEPA compliance are the Healthy Forest Restoration Act (HFRA), the Healthy Forest Initiative (HFI), and the Tribal Forest Protection Act (TFPA).

Prescribed fire planning and related NEPA analysis should always occur at the largest possible spatial and temporal scales.

Implementation Organization and Qualifications

During prescribed fire planning and operations, all federal agencies will accept each other's standards for qualifications. The minimum qualifications standard is the National Wildland Fire Coordinating Group (NWCG) *Wildland and Prescribed Fire Qualifications System Guide, 2000 (PMS 310-1)*. State, local cooperators, and contractors working on federal agency prescribed fires must meet the NWCG PMS 310-1 standards unless local agreements specify otherwise. No less than the organization described in the approved Prescribed Fire Plan may be used for implementation. The complexity of each prescribed fire or phase of fire(s) determines the organization(s) needed to safely achieve the objectives specified in the Prescribed Fire Plan.

Minimum Supervisory Qualifications Determined By Prescribed Fire Complexity:

	Complexity		
Position	**High**	**Moderate-low**	**Low**
RXM1	Optional	Optional	Optional
RXM2	Not Allowed	Optional	Optional
RXB1	Required	Optional	Optional
RXB2	Not Allowed	Required	Optional
RXB3	Not Allowed	Not Allowed	Required
FIRB	Optional	Optional	Optional

Holding Specialist

Holding functions will be managed by personnel qualified at the appropriate ICS wildland fire operations position as required by complexity, assigned resources and operational span of control. For some projects, there may be no holding requirements or the holding duties are assumed by the Burn Boss.

High, Moderate, and Low complexity prescribed fires are determined through the required NWCG *Prescribed Fire Complexity Rating System Guide*.

Prescribed Fire Burn Boss Type 3 (RXB3)

Adoption of the RXB3 position is up to each agency. Non-federal RXB3s must meet the qualifications as listed in the table below unless local agreements specify otherwise.

An RXB3 will only be allowed to implement low complexity prescribed fires where the possibility of spread or spotting outside the project area is negligible to non-existent; multiple fuel models are not involved; and aerial operations are not involved.

Requirements for Prescribed Fire Burn Boss Type 3

Training	Required: S-290 Intermediate Wildland Fire Behavior Suggested: S-234 Ignition Operations
Prerequisite Experience	Incident Commander, Type 5 OR Advanced Firefighter/Squad Boss AND Satisfactory position performance as a Prescribed Fire Burn Boss Type 3
Physical Fitness	Moderate
Other Position Assignments that will Maintain Currency	Prescribed Fire Burn Boss Type 2 Prescribed Fire Burn Boss Type 1 Fire Use Manager Prescribed Fire Manager Type 1 Prescribed Fire Manager Type 2

Responsibilities

Prior to prescribed fire implementation, thorough planning and review processes must be conducted. All prescribed fire actions must be developed from resource/fire management objectives carried forward from FMP's and L/RMP's. A specific implementation plan for each prescribed fire must be completed, reviewed, and approved before ignition can begin.

The agency administrator has final approval authority for all Prescribed Fire Plans, unless special circumstances warrant higher review and concurrence (such as may occur during higher Preparedness Levels or for extremely large,

complex projects). Although the agency administrator has final approval authority for the Prescribed Fire Plan and the agency administrator Pre-Ignition Approval Checklist, the Prescribed Fire Burn Boss has the responsibility to make the on-site tactical "GO/NO-GO" decision. The Prescribed Fire Burn Boss ensures that all prescription, staffing, equipment, and other plan specifications are met before, during, and after the prescribed fire.

Every Prescribed Fire Plan must receive a technical review. The Technical Reviewer and Prescribed Fire Plan Preparer must be qualified or have been previously qualified as a Prescribed Fire Burn Boss at an experience level equal to or higher than the complexity being reviewed. Either the Prescribed Fire Plan Preparer or Technical Reviewer must be currently qualified.

Only a RXB1 can review plans at high complexity. An RXB2 can review plans of moderate to low complexity. An RXB3 is not allowed to function as a Prescribed Fire Plan Preparer (see Chapter 3, section C of the *Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide*) or Technical Reviewer.

Agency or individual unit policy may dictate additional reviews. Interagency Prescribed Fire Plans require approval from all appropriate agency administrators and a technical review. Listed below are the prescribed fire and implementation position roles and responsibilities.

Agency Administrator

For the purposes of this document, the agency administrator is defined as the Line Officer (or designee) of the agency or jurisdiction that has responsibility for the prescribed fire. These usually include the: NPS Park Superintendent, BIA Agency Superintendent, USFS Forest Supervisor, BLM District/Field Office Manager, FWS Project Leader, State Forest Officer, and/or Fire Chief.

The agency administrator is responsible to:

- Approve Prescribed Fire Plans. When approving a plan, understand the risks associated with it. Ensure that the plan has been reviewed and recommended for approval by the Technical Reviewer who was not the primary preparer of the plan.
- Ensure that only trained and qualified personnel participate in the implementation portion of the prescribed fire.
- Ensure that projects are monitored, evaluated, and documented in the project file.
- Sign, date, and provide an expiration date for the approval to burn on the agency administrator Pre-Ignition Approval Checklist (Reference Burn Plan Template, Appendix B of the *Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide*).
- Understand and approve the Complexity Analysis (PMS 424 January 2004).

- Ensure that all prescribed fires are conducted in accordance with the approved implementation plan and established standards and guidelines.
- Ensure that periodic reviews and inspections of the Prescribed Fire Program are completed.
- Determine if and when the agency administrator is to be notified that contingency actions are being taken.
- Report all wildfires resulting from prescribed fires through the chain of command.
- Declare an escaped prescribed fire a wildfire (if responsibility is assigned in the plan).
- Ensure that escaped prescribed fires are reviewed according to established guidelines.

Technical Reviewer

The Technical Reviewer is responsible for reviewing each Prescribed Fire Plan element for content as well as evaluating the risk and Complexity Analysis to ensure that the stated goals and objectives can be safely and successfully achieved when properly implemented. The Technical Reviewer shall be qualified or previously qualified as a Burn Boss at or above the level of project complexity. At a minimum, NWCG qualifications will be accepted. The Technical Reviewer should have local knowledge of the area, experience burning in similar fuel types, and/or conduct an on-site review. The Technical Reviewer must be someone other than the primary preparer of the plan. An off-unit technical review is encouraged to provide an additional independent perspective. It is acceptable for other specialists to review certain portions of the plan however; a primary Technical Reviewer must be designated as technical review signatory. For example, a fire behavior analyst may review the fire behavior calculations; the aviation manager may review the air operations plan; and/or a resource specialist may review impacts to their resource of interests. It is recommended that at least once every year, each unit should send a moderate or high complexity Prescribed Fire Plan off-unit for technical review. The Technical Reviewer is responsible to:

- Ensure that Prescribed Fire Plans meet agency policy and direction.
- Ensure that the Complexity Analysis accurately represents the project, so the agency administrator understands the identified risks and the mitigating measures enacted. This may require on-site review in Wildland Urban Interface (WUI) or high complexity situations by the Technical Reviewer.
- Check the prescription parameters against the fuel types to ensure that the project as planned has a reasonable chance of meeting the resource management objectives.
- Ensure that the fire behavior calculations and/or prescription parameters are appropriate and within the acceptable range.
- Ensure that the ignition, holding and contingency plans are consistent with the predicted fire behavior.

- Complete and sign the Technical Review Checklist (See Burn Plan Template, Appendix B of the *Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide*) and the Prescribed Fire Plan signature page.

Prescribed Fire Plan Preparer

For the purpose of this document, the Prescribed Fire Plan Preparer is defined as the individual responsible for the preparation of the Prescribed Fire Plan. Several people may be involved in the preparation of the Prescribed Fire Plan, but the Prescribed Fire Plan Preparer is responsible for the final plan content. The primary preparer of the Prescribed Fire Plan will sign the signature page. The preparer is responsible to:

- Prepare the Prescribed Fire Plan in accordance with this guide's policy and direction.
- Coordinate with the resource management and/or technical specialists to ensure that the plan meets management and operational objectives.
- Interact with the Technical Reviewer to ensure that all plan elements are adequately addressed.
- Complete and sign the Complexity Analysis.

Prescribed Fire Burn Boss (RXB1/RXB2/RXB3)

The Prescribed Fire Burn Boss is responsible to the agency administrator, Prescribed Fire Manager, or FMO/local fire management organization for implementing the Prescribed Fire Plan. The Prescribed Fire Burn Boss is responsible to:

- Review the Prescribed Fire Plan prior to implementation and ensure all required elements and objectives are addressed.
- Inspect the burn unit to validate Prescribed Fire Plan elements including areas of special concern as well ensuring that holding/contingency plans adequately address expected fire behavior outside the unit(s).
- Obtain current weather and smoke management forecasts, updates, and special advisories from a meteorologist.
- Maintain communication with the agency administrator, Prescribed Fire Manager, or FMO/local fire management organization.
- Ensure that the agency administrator Pre-Ignition Approval Checklist is valid (See Burn Plan Template, Appendix B of the *Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide*)
- Take to the field those portions of the Prescribed Fire Plan necessary for completing the briefing and safe project implementation.
- Complete and sign the Prescribed Fire GO/NO-GO Checklist (See Burn Plan Template, Appendix B of the *Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide*).
- Ensure availability of any contingency resources and management of those resources if deployed.

- Ensure that all operations are conducted in a safe manner and in accordance with the approved plan and established standards and guidelines.
- Verify qualifications of all assigned personnel. Conduct the personnel /safety briefing to ensure a safe operation.
- Conduct the test fire and document the results.
- Supervise assigned personnel and direct the ignition, holding and monitoring operations. The Prescribed Fire Burn Boss will be responsible for implementation including mop-up and patrol unless otherwise assigned to other qualified personnel.
- Declare the prescribed fire out unless the responsibility for it is formally passed to another Prescribed Fire Burn Boss, Prescribed Fire Manager or the local fire management organization.
- Determine when the prescribed fire is not within prescription parameters (both short and long term) or is not meeting objectives.
- Declare an escaped prescribed fire a wildfire (if responsibility is assigned in the plan).
- Manage the incident or oversee the transition to another Incident Commander if an escape occurs.
- Ensure that reports are completed.
- Coordinate with adjacent landowners, cooperators and permittees as designated in the Prescribed Fire Plan.

Fire Management Officer (FMO)/ Fire Program Manager

The Fire Management Officer (FMO)/Fire Program Manager is responsible to the agency administrator for planning, implementing and monitoring of the Prescribed Fire Program in accordance with policy and direction. The FMO/Fire Program Manager is responsible to:

- Ensure compliance with national, regional, tribal and local fire policy and direction, as well as applicable state and local laws.
- Ensure that Preparedness Level Restrictions are adhered to. At National Preparedness Levels Four and Five, prescribed fire implementation is restricted. See the *National Interagency Mobilization Guide* for details.
- Ensure that both the Prescribed Fire Plan Preparer and the Technical Reviewer are qualified or qualified less currency at the level of complexity or higher.
- Ensure that trained and qualified personnel are available to participate in the Prescribed Fire Program.
- Assign the Prescribed Fire Burn Boss.
- Ensure a Prescribed Fire Plan with written approval exists for each prescribed fire project.
- Review the Prescribed Fire Plan to assess the impact of the project on the unit's workload; include the project in the unit's Annual Work Plan; assess the unit's ability to implement the project; and assess the need for additional implementation resources.

- Ensure that all prescribed fires are conducted in accordance with the approved Prescribed Fire Plan and established standards and guidelines.
- Declare an escaped prescribed fire a wildfire (if responsibility is assigned in the plan).
- Act as liaison/coordinator to the agency administrator, Prescribed Fire Manager and/or Prescribed Fire Burn Boss, local dispatch office, other units, other agencies, air quality authorities, news media, transportation agencies, and safety officials.
- Ensure that projects are reported through the local office and comply with national reporting guidelines.
- Ensure that fuels management projects and interagency support actions are reported through the proper reporting systems.
- Ensure that periodic reviews and inspections of the Prescribed Fire Program are completed.
- Update agency administrator on the progress of the prescribed fire (as necessary).
- Ensure that projects are monitored, evaluated and documented as a part of the project file.

Prescribed Fire Manager (RXM1/RXM2)

The Prescribed Fire Manager is responsible for implementing and coordinating assigned prescribed fire activities. A Prescribed Fire Manager may be assigned during periods when multiple simultaneous prescribed fires are being conducted; when multiple prescribed fires will be conducted within a short time frame; or where there is complex interagency involvement. The Prescribed Fire Manager is responsible to:

- Review Prescribed Fire Plans prior to implementation.
- Monitor all prescribed fire operations.
- Ensure that all operations are conducted in a safe manner and in accordance with the approved plan(s) and established standards and guidelines.
- Act as coordinator/liaison between the burn organization(s) and other offices, agencies, air quality authorities, news media, transportation agencies, safety officials, and interested public.
- Declare an escaped prescribed fire a wildfire (if responsibility is assigned in the plan).
- Obtain and interpret long-term weather information.
- Brief the Burn Bosses and direct operational assignments according to policies, priorities, and standards.
- Set priorities for allocation of resources.
- Ensure the completion of all required documentation including the evaluation and documentation of accomplishments, fire behavior and fire effects, operation procedures, and cost summaries.

Firing Boss (FIRB)

The Firing Boss reports to the Prescribed Fire Burn Boss and is responsible for supervising and directing ground and/or aerial ignition operations according to established standards in the Prescribed Fire Plan. The Firing Boss is responsible to:

- Review the Prescribed Fire Plan and the burn unit prior to implementation.
- Brief personnel on project objectives and ignition operations.
- Complete the test fire according to the ignition plan at the direction of the Prescribed Fire Burn Boss.
- Conduct ignition operations in a safe manner according to the ignition plan.
- Identify the impacts of ignition on the control and desired fire effects.
- Coordinate ignition operations with the Holding Specialist.

Holding Specialist

The supervisory position in charge of the holding forces reports to the Prescribed Fire Burn Boss. There is no specific NWCG approved prescribed fire position for this function. This position is assigned by name and title using PMS 310-1 mnemonics. Holding functions will be managed by personnel qualified at the appropriate Incident Command System (ICS) wildland fire operations standard and as required by the prescribed fire complexity, assigned resources, and operational span of control. The Holding Specialist is responsible to:

- Review the Prescribed Fire Plan and the burn unit prior to implementation.
- Brief holding personnel on project objectives and holding operations.
- Conduct holding operations in a safe manner according to the holding plan.
- Coordinate holding operations with the Firing Boss.
- Confine the fire to a predetermined area, mop up, and patrol.
- Maintain communication with Burn Boss on holding progress and/or problems.
- For some prescribed fires, there may be no holding requirements or the holding duties are assumed by the Prescribed Fire Burn Boss.

Fire Effects Monitor (FEMO)

The Fire Effects Monitor (FEMO) is responsible for collecting the onsite weather, fire behavior, and fire effects information needed to assess whether the fire is achieving established resource management objectives. The FEMO is responsible to:

- Review the monitoring plan prior to implementation.
- Monitor, obtain, and record weather data.
- Monitor and record fire behavior data throughout the burn operations.
- Recon the burn unit/area assigned.
- Plot the burn area and perimeter on a map.
- Monitor and record smoke management information.
- Monitor first order fire effects.

- Provide monitoring summary of the fire.
- Provide fire behavior and weather information to burn personnel as appropriate.

Helitorch Manager (HTMG)

The Helitorch Manager is responsible to manage the helitorch operation, supervise the mixing operation, and provide technical assistance to the Prescribed Fire Burn Boss/Ignition Specialist. The HTMG may also serve as Helicopter Manager and Helitorch Manager or Helicopter Parking Tender (but not both).

Plastic Sphere Dispenser Operator (PLDO)

The Plastic Sphere Dispenser Operator (PLDO) is responsible for the preparation, operation, maintenance, and care of the dispenser. The PLDO reports to the Ignition Specialist.

Helitorch Mixmaster (HTMM)

The Helitorch Mixmaster (HTMM) is responsible for supervising the mixing/filling operations. The HTMM may also serve as Helitorch Manager or Helicopter Manager.

Resource Specialist or Resource Advisor (READ)

The Resource Specialist/READ is responsible for ensuring the prescribed fire project is planned and implemented in a manner supporting the unit's resource management goals and objectives. The Resource Specialist/READ is responsible to the agency administrator. The Resource Specialist/READ is responsible to:

- Ensure resource management representation in the preparation of the Prescribed Fire Plan.
- Ensure a review of Prescribed Fire Plans is conducted before each plan is submitted for approval.
- Evaluate the prescribed fire project in terms of meeting objectives.
- Provide resource information and direction to the Prescribed Fire Burn Boss.
- Present information at briefings on resources, priorities, and issues of concern.
- Coordinate with adjacent landowners, cooperators and permittees as designated in the Prescribed Fire plan or by the Burn Boss.

Amendments

There may be a need to make amendments to the Prescribed Fire Plan. These are changes to the Prescribed Fire Plan that require an agency administrator signature. When changes are necessary, plans must be amended to identify the affected sections; the reason for the change(s); and have the changes clearly

identified. For amendments, the same standards for Prescribed Fire Plan preparation, review, and approval apply.

Common reasons for amending the Prescribed Fire Plan may include:

- Changes to objectives.
- Changes to complexity.
- Changes to fire behavior prescription parameters.
- Changes to project area boundaries resulting in either an increase or decrease in area.
- Reduction in resource capabilities identified as required in the plan.
- Major changes to ignition methods including ground ignition to aerial ignition; aerial ignition to hand ignition; hand drip torch ignition to use of terra torch ignition (includes ATV mounted ignition devices); and/or hand ignition from roadways to hand ignition from boats or other watercraft.

To avoid having to amend the Prescribed Fire Plan, flexibility should be built into the plan that will allow for a range of adjustments during the prescribed fire. When building flexibility, the range of identified options must remain within the scope of the Complexity Analysis. Examples of flexibility that can be built into a prescribed fire plan:

- The Prescribed Fire Plan may state that on burn day and subsequent days of the prescribed fire, a mix of the number and kinds of hand crews and engines may be modified as long as stated production capabilities are not compromised.
- As the prescribed fire progresses from ignition to holding to mop up and patrol, specified capabilities and/or types of resources may be adjusted. If these flexibilities are built into the Prescribed Fire Plan, there must be a clear statement as to the work capability requirements of the resources at the various stages of the prescribed fire.
- Minor changes in burn unit boundaries to facilitate holding and/or ignition, as long as the area in question has been in the NEPA document, requires no change in holding or ignition resources and is within the project boundaries.
- Additional resources may be assigned to the project without amending the burn plan if the addition of these resources does not change the complexity of the burn or require additional supervisory positions. These changes must be documented in the daily briefing.

Safety

The Federal Wildland Fire Policy states that firefighter and public safety is first priority. Prescribed Fire Plans and activities must reflect this commitment. Every person involved in a prescribed fire is responsible for identifying safety issues and concerns. It is the responsibility of each individual participating in prescribed fire activities to notify immediate supervisor of any possible misunderstanding of assigned tasks or safety concerns related to the assignment.

NWCG established Work/Rest Guidelines and span of control apply equally to wildland and prescribed fire operations. The management of crew, overhead, and support personnel rest to assure safe, productive fire operations is the responsibility of all supervisory fire management personnel (refer to *NWCG Interagency Incident Business Management Handbook, PMS 902, NFES 3139*).

Exposure to smoke during prescribed fire operations can be a significant safety concern. Research has shown that exposure to smoke on prescribed fires, especially in holding and ignition positions, often exceeds that on wildfire. At a minimum, smoke exposure must be addressed in the Job Hazard Analysis (JHA) and smoke management element. Public safety impacts from smoke should be addressed in the Smoke Management and Air Quality Element as well as the Public, Personnel Safety, and Medical Element.

Transportation and use of any product containing chemicals (drip torch fuel, aviation gas, sphere dispensers, fusees, fuel thickener, etc.) must be in compliance with the *Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard (29 CFR 1910.1200)* and *Department of Transportation Regulations (49 CFR Part 171)*, and agency specific guidance. Material Safety Data Sheets (MSDS) for hazardous materials used on projects should be consulted in developing the JHA.

The SAFENET form and process is designed for reporting and correcting unsafe situations and is applicable to prescribed fire applications.

The risk management process identified in the *NWCG Incident Response Pocket Guide (IRPG, PMS 410-1)* helps ensure that critical factors and risks associated with prescribed fire operations are considered during decision making. This process should be applied to all prescribed fire planning and operations.

Consider using a Safety Officer on high complexity prescribed fires and others where the complexity analysis shows the need or indicates a higher than normal hazard.

A qualified Safety Officer is defined as a currently qualified Safety Officer, at any Type level (Types 1, 2 or 3), as defined by the NWCG, *Wildland and Prescribed Fire Qualification System Guide (PMS 310-1)*.

Prescribed Fire Plan

The Prescribed Fire Plan is the site-specific implementation document. It is a legal document that provides the agency administrator the information needed to approve the plan and the Prescribed Fire Burn Boss with all the information needed to implement the prescribed fire. Prescribed fire projects must be implemented in compliance with the written plan.

Prescribed Fire Plans will vary in their degree of detail. The size and complexity of the prescribed fire project will determine the level of detail required. The Prescribed Fire Plan Template (Appendix B of the *Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide*) must be utilized. Each element must be addressed and then assembled in the sequence identified in the template. Should an element not apply to a specific prescribed fire plan, not applicable (N/A) may be utilized. Programmatic plans for multiple units under like conditions may be appropriate. Additional information may be added as appendices.

If an interagency mixed ownership Prescribed Fire Plan is being prepared, the development of all appropriate elements within the plan will be conducted in an interagency setting. Interagency agreements and Memorandums of Understanding (MOU) and/or private land owner agreements are required to implement prescribed fire on multiple ownerships.

Listed below are the planning explanations of each individual element required as part of a complete Prescribed Fire Plan and implementation policy related to the element.

Prescribed Fire Plan Elements

1. Signature Page

The following information must be included on the signature page:

- Administrative unit name.
- Prescribed Fire Unit (burn unit)/Project name.
- At a minimum, three dated signatures are required: a Prescribed Fire Plan Preparer, a Technical Reviewer, and an agency administrator. Additional signatures may be included as required by the individual unit.
- Final determined complexity rating(s).
- If the plan needs to be amended, the signed and dated amendments must be attached to the Prescribed Fire Plan (see Chapter 4 of the *Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide*).

2. GO/NO-GO Checklists

- **Agency Administrator Pre-Ignition Approval Checklist**
  The Agency Administrator's Pre-Ignition Approval Checklist (Burn Plan Template, Appendix B of the *Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide*) is required to be completed. The Agency Administrator's Pre-Ignition Approval Checklist evaluates whether compliance requirements, Prescribed Fire Plan's elements, and internal and external notification(s) have been completed and expresses the agency administrator's intent to implement the Prescribed Fire Plan. The checklist establishes the expiration date for the implementation of the Prescribed Fire Plan. If ignition of the prescribed fire is not initiated prior

to expiration date determined by the agency administrator, a new approval is required. An 'acting' agency administrator may sign the Agency Administrator Pre-Ignition Approval Checklist if authority to do so has been delegated. If the Prescribed Fire Plan is amended, a review and re-validation of the Agency Administrator Pre-Ignition Approval Checklist would be required and included in the Project File.

- **Prescribed Fire GO/NO-GO Checklist**
  Prior to all ignition operations, the assigned Prescribed Fire Burn Boss will complete and sign the Prescribed Fire GO/NO-GO Checklist (Burn Plan Template, Appendix B of the *Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide*). This checklist is a minimum standard and agencies may elect to add questions and/or approval signatures. For each day of active ignition on a prescribed fire, a separate daily GO/NO-GO Checklist is required.

3. Complexity Analysis

Risk management is a foundation for all prescribed fire activities. Risks and uncertainties relating to prescribed fire activities must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing an activity. At a minimum, those risks from the Complexity Analysis that are rated high and can not be mitigated will be identified with a discussion of the risks associated in the Summary Complexity Rating Rationale. This discussion will also be included in the Complexity Analysis Summary page (Burn Plan Template, Appendix B of the *Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide*).

The Prescribed Fire Complexity Rating must be completed utilizing the *Prescribed Fire Complexity Rating System Guide, NWCG, January, 2004* (or current version). The purpose of the complexity rating process is to provide:

- Assignment of a complexity rating of high, moderate, or low to the prescribed fire.
- Management and implementation personnel a relative ranking as to the overall complexity of a specific prescribed fire project.
- A process that can be used to identify Prescribed Fire Plan elements or characteristics that may pose special problems or concerns.
- A process that identifies mitigation activities needed to reduce the risk/hazard to the implementation personnel and public as well as mitigating potential resource damage.
- A preliminary rating will be completed early in the Prescribed Fire Plan development stage. This will identify potential concerns that may be mitigated during the plan preparation process. Once the Prescribed Fire Plan is near completion, the final complexity rating is made. The final complexity rating will be used as a basis for determining prescribed fire organization, Prescribed Fire Burn Boss level, and mitigation measures.

The Summary Complexity Rating Rationale will clearly justify the summary rating for prescribed fire organization and Prescribed Fire Burn Boss level. It must also identify those risks from the Complexity Analysis that are rated high and can not be mitigated and will provide a discussion of the risks associated. The Complexity Analysis must be signed by the Prescribed Fire Plan Preparer and the agency administrator and attached as an appendix to the Prescribed Fire Plan. The Complexity Analysis Summary will be attached to the Prescribed Fire Plan following the GO/NO-GO Checklists.

Separate prescriptions and/or burn organizations for different stages of implementation may result in multiple Complexity Analyses and ratings. For example, a plan may have separate prescriptions for spring and fall burning which may require different organizations and constitute the need for additional complexity analyses.

If a prescribed fire complexity changes which results in different Prescribed Fire Burn Boss qualifications, a separate complexity analysis is required. For example, for certain prescribed fires conducted over time, progressive or sequential actions may reduce complexity, organization, and Prescribed Fire Burn Boss qualifications (e.g. a large scale, high complexity prescribed fire has been black-lined, portions burned and operations suspended for a period of time then resumed to continue or finish the prescribed fire). In this case, a separate Complexity Analysis will be developed to reflect the reduced complexity rating and will be included in the appendix of the Prescribed Fire Plan.

4. Description of the Prescribed Fire Area

Physical Description

This section of the plan will describe the physical features of the prescribed fire area.

- Location - Narrative description of the location of the prescribed fire project including a legal description, UTM and/or latitude/longitude (decimal degrees; NAD83 preferred), county, and state.
- Size - Area, in acres, of the prescribed fire project with a breakdown by prescribed fire unit and/or ownership if applicable.
- Topography - Identify the upper and lower range of elevation, slope(s) – maximum/minimum and average, and aspect(s) of the prescribed fire project.
- Project Boundary - The project boundary defines that area where fire will be ignited and may be allowed to burn (some agencies previously called this Maximum Management Area or Allowable Area). Describe the physical, natural and/or human made boundaries (including multiple units) of the prescribed fire project. This will be done through maps and may include narratives. The entire prescribed fire project area must be analyzed under NEPA.

Vegetation/Fuels Description

This is a description of current vegetation and fuels in the project area and should discuss history including past environmental effects or land management practices and how they have impacted the fuel characteristics. Identify any reference material used.

- Describe the structure and composition of the vegetation type(s) and fuel characteristics. This description may include natural or activity fuels, total fuel load (both live and dead) in tons/acre, dead fuel load by time-lag size classes, live fuel load (woody/herbaceous), fuel bed depth, and vertical and horizontal arrangement within the project boundary.
- Describe the percent of the unit composed of each vegetative type and the corresponding fuel model(s).
- Identify conditions (fuels, slope, and aspect) in and adjacent to boundaries that may be a potential threat for escaped fire.
- Identify any abiotic conditions like airshed, climate, soils, etc. as appropriate.

Description of Unique Features and Resources

List and discuss special features, hazards, regulations, issues, constraints, etc. Examples may include: fences to protect, power poles, historical/cultural sites, threatened and endangered species or habitat, etc.

Maps

Maps will be developed and included in the Prescribed Fire Plan. At a minimum, the plan will include a vicinity and project map. The number of maps, map size and scale, legend and level of detail should be appropriate for the complexity of the project. All maps will include the standard mapping elements: title, name of preparer(s), date, north arrow, scale, and legend.

- Vicinity Map - Shows prominent features including roads, streams, water sources, towns, structures, and the proximity of the burn unit(s) to these features. Transportation route(s) will be identified. Map scale will be such that the burn units can be located on the ground and in sufficient detail to guide implementation.
- Project Map(s) - The project map(s) identify features in sufficient detail to guide and assist in operational implementation of the prescribed fire. Topographic, vegetative, or aerial photo maps should be used as the base map. ICS map display symbols, identified in the *Fireline Handbook PMS 410-1* will be used as appropriate. Examples of features that should be included on the project map(s) are: project boundary, individual unit boundaries, ownership, fireline locations, natural barriers, fuel model locations, proposed ignition patterns and sequence, critical holding points, hazards, safety zones, escape routes, helispots, areas of special concern, smoke management issues (predicted plume dispersion, sensitive receptors, etc), escaped fire contingency actions (primary and secondary control lines, trigger points, etc), water sources, location of treatment monitoring plots, etc., if these are significant in communicating project implementation.

5. Goals and Objectives

A short summary description will be developed that identifies the purpose of the prescribed fire and the resource management goals from the supporting L/RMPs and/or NEPA documents. The summary will identify desired future conditions of the prescribed fire project. This should be consistent with the appropriate land management goals. Include a discussion of future Fire Regime Condition Class (FRCC) post-treatment conditions if applicable.

Describe in clear, concise statements the specific measurable resource and fire objectives for this prescribed fire. Objectives will be measurable and quantifiable so prescription elements can be developed to meet those objectives and the success of the project can be determined following implementation.

6. Funding

Identify the funding source(s) and estimated cost(s) of the prescribed fire. Itemize by phase if desired.

7. Prescription

Prescription is defined as the measurable criteria that define a range of conditions during which a prescribed fire may be ignited and held as a prescribed fire.

The plan prescription will describe a range of low to high limits for the environmental (weather, topography, fuels, etc.) and fire behavior (flame lengths, rate of spread, spotting distance, etc.) parameters required to meet Prescribed Fire Plan objectives while meeting smoke management and control objectives. Parameters are quantitative variables expressed as a range that result in acceptable fire behavior and smoke management.

The range of prescribed fire behavior characteristics (outputs such as: flame lengths, rates of spread, scorch heights, mortality, spotting, etc.) identified in the plan will help determine the acceptable combination of environmental parameters (inputs such as: weather, topography and fuels) under which the prescribed fire can be conducted. In many cases, burning under the extremes of all prescriptive parameters would not meet or possibly exceed the desired prescribed fire behavior characteristics and are therefore out of prescription. The Prescribed Fire Burn Boss must ensure that the prescriptive parameters and fire behavior characteristics as identified in the Prescribed Fire Plan are not exceeded. Empirical evidence (historical evidence or researched data) and judgment may be utilized to identify or calibrate prescriptions. Weaknesses in modeling can be overridden, but must be justified with empirical evidence and/or verified actual fire behavior.

Separate prescriptions may be needed for multiple fuel model conditions to address seasonal differences and/or types of ignition (black lining, aerial ignition, etc). Separate prescriptions may result in multiple complexity ratings

and burn organizations. For example, a separate prescription is needed for black-lining operations if conditions will be significantly different from the primary prescription or if the holding resources differ from those identified for ignition and holding phases. Separate prescriptions may result in the need to identify multiple levels of management, organizational structures, implementation measures, and pre-burn considerations.

Holding and contingency plans must be developed with the consideration of the predicted fire behavior outside the project boundary(s). Fire behavior characteristics for fuel models within the maximum spotting distance and/or adjacent to the project boundaries must be considered and modeled using worst-case fire behavior predictions. These predictions will be identified from fire behavior model runs or empirical evidence of the hottest, driest, and windiest prescription limits identified in the Prescribed Fire Plan, along with the most extreme environmental conditions (slope, aspect) identified.

A short fire behavior narrative that summarizes the fire behavior identified in the prescription and discusses how it will achieve the desired treatment objectives may be included.

When used, fire behavior calculations must be developed using an appropriate fire behavior modeling program. Include modeling and/or empirical evidence documentation as an appendix or in the fire behavior narrative.

8. Scheduling

Identify the general ignition time frame(s) (i.e. time of day, duration of ignition) or season(s) and note any dates when the project may not be conducted. For prescribed fires with multiple ignitions or burn days, list projected duration.

At National Preparedness Levels Four and Five, prescribed fire implementation is restricted. See *National Interagency Mobilization Guide* for details.

9. Pre-burn Considerations

Describe on and off-site actions and considerations that need to be conducted prior to implementation. Examples include clearances; line to be built; preparation of critical holding points; snags to be felled or protected; equipment to be pre-positioned; special features to be protected; warning signs to be placed; weather recording; fuels condition sampling; monitoring needs; responsibility; and timeframes.

Describe any fuel sampling and weather data that may need to be obtained (See Element 14: Test Fire). This data should be taken at the project site. If this is not possible, use the closest representative site.

The plan will include a list of organizations (including media) and individuals that are to be notified prior to ignition, with information necessary to make the

contacts. Reasonable efforts will be made to notify adjacent land owners (or their agents) and other potentially impacted publics. Attempts and/or actual notifications will be documented with date and method and placed in the Project File.

Identify in the burn plan the method and frequency for obtaining weather and smoke management forecast(s).

Spot weather or local area forecasts are required prior to ignition, on all ignition days and any days the fire is actively spreading. A copy of the forecast will be included in the Project File. The Prescribed Fire Burn Boss or other person in charge of mop-up and patrol will also obtain and review the spot weather or area forecast to determine if mop up and patrol resources are adequate.

10. Briefing

All assigned personnel must be briefed at the beginning of each operational period to ensure personnel safety considerations (including the JHA) and prescribed fire objectives and operations are clearly defined and understood. Briefing checklists are required to be included in the Prescribed Fire Plan and will include the following elements:

- Burn Organization and Assignments
- Burn Objectives and Prescription
- Description of the Prescribed Fire Area
- Expected Weather & Fire Behavior
- Communications
- Ignition Plan
- Holding Plan
- Contingency Plan and Assignments
- Wildfire Conversion
- Safety and Medical Plan

The briefing checklist should list briefing topics only, not re-state what is listed in the Prescribed Fire Plan for that element.

The Prescribed Fire Burn Boss will ensure that any new personnel arriving to the prescribed fire receives a briefing prior to assignment.

An Incident Action Plan (IAP) is optional, it is recommended for large multi-day or high complexity prescribed fires.

If aerial ignition devices will be used, include an Aerial Ignition Briefing.

11. Organization & Equipment

The complexity of each prescribed fire determines the organization capabilities needed to safely achieve the objectives specified in the Prescribed Fire Plan. Specify the minimum required implementation organization to meet the

capabilities (line production rates, etc.) by position, equipment, and the supplies needed for all phases of the prescribed fire until declared out. At a minimum, a Prescribed Fire Burn Boss will be assigned to every prescribed fire. Positions that may not be filled as collateral duty will be identified in the organization chart of the Prescribed Fire Plan.

Standard ICS fire management principles for span of control and length of assignments will be adhered to when developing burn implementation organization(s) and used in managing prescribed fires. On prescribed fires with large organizations, use the ICS organization and staffing commensurate with the level of complexity. Consider the use of a Prescribed Fire Manager in conducting multiple prescribed fires.

Before implementation (all phases) of the prescribed fire, documentation in the form of an organization chart must be completed. Any changes to the organization during implementation must be documented. Any changes that reflect modification of the capabilities, equipment or supplies will require an amendment. Different organizations may be identified for different phases of implementation (i.e. holding v. mop-up and patrol, different ignition operations, different prescriptions).

Multiple prescriptions for one Prescribed Fire Plan are permissible and in some cases required (Element 7). Multiple prescriptions may require identifying and developing multiple organizations.

The Prescribed Fire Burn Boss is responsible for implementation including mop-up and patrol until the responsibility is formally passed to a Prescribed Fire Burn Boss, Prescribed Fire Manager or the local fire management organization.

12. Communication

Develop communications plan specific to the project's implementation to address safety and tactical resource management needs. Identify and assign command, tactical, and air operations frequencies as needed. Also include any required telephone numbers. Cover under an Incident Action Plan, if utilized.

13. Public & Personnel Safety, Medical

Describe provisions to be made for public and personnel safety. All personnel who are within the active burn area are required to wear personal protective equipment. Identify and analyze the safety hazards unique to the individual prescribed fire project and specify personnel safety and emergency procedures. Include safety hazards (including smoke exposure and impacts) and measures taken to reduce those hazards. Specify emergency medical procedures, evacuation methods, and emergency facilities to be used. A Job Hazard Analysis (JHA) is required for each prescribed fire project and will be attached to the Prescribed Fire Plan as an appendix.

14. Test Fire

Provisions for a test fire are required and results must be recorded. The test fire must be ignited in a representative location and in an area that can be easily controlled. The purpose of the test fire is to verify that the prescribed fire behavior characteristics will meet management objectives and to verify predicted smoke dispersion. In many applications, analysis of the initial ignitions may provide adequate test fire results. On multiple-day projects, evaluation of current active fire behavior, in lieu of a test fire, may provide a comparative basis for continuing and must be documented. If in doubt however, initiate a separate test fire and evaluate results.

Prior to ignition of both the test fire and ignition operations, compare the Prescribed Fire Plan prescription elements, both individually and collectively, against local area or spot weather forecasts, other predicted conditions, and the actual conditions onsite (See element 9: Pre-Burn Considerations) to ensure that predicted fire behavior will take place and/or weather parameters will not change to the point of the burn going out of prescription.

15. Ignition Plan

Describe planned ignition operations including firing methods, devices, techniques, sequences, patterns, and ignition staffing for single or multiple unit operations. Maps showing proposed firing patterns may be included. If aerial ignition (or other aerial operations) is planned, cover aviation operations, organization, and safety within the Prescribed Fire Plan, Aerial Ignition Plan, or in an agency specific Aviation Operating Plan (Refer to the *Interagency Helicopter Operations Guide, {NFES #1885}* and the *Interagency Aerial Ignition Guide {NFES #1080}*for more detailed information on this topic). Multiple prescriptions and ignition operations (blackline, primary, aerial, etc.) may require identifying and developing multiple ignition organizations.

16. Holding Plan

Describe general procedures to be used for operations to maintain the fire within the project area and meet project objectives until the fire is declared out. This may include mop-up and/or patrol procedures. Describe critical holding points (if any) and mitigation actions. Critical holding points will be identified on the project map. Describe minimum capabilities needed for all phases of implementation (see Element 11: Organization and Equipment). If used, attach or reference modeling outputs or worksheets (i.e. Fireline Handbook production rates, BEHAVE, etc.) and/or documented empirical evidence to justify minimum holding resources required.

Different organizations may be identified for different phases of implementation (i.e. holding, mop-up and patrol, different ignition operations, different prescriptions). Multiple prescriptions may require identifying multiple complexity ratings and developing multiple holding organizations.

If onsite resources are insufficient to meet the prescribed fire plan objectives, then the Burn Boss should implement the Contingency Plan or Wildfire Conversion.

17. Contingency Plan

"…If the objectives are not being met the Contingency Plan, a required component of the Prescribed Fire Burn Plan, is implemented. If the Contingency Plan is successful at bringing the project back within the scope of the Prescribed Fire Burn Plan the project continues. If contingency objectives are not met the prescribed fire is converted to a wildfire and Extended Attack is undertaken."

Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy, June 20, 2003, page 12.

Contingency planning is intended for more than just a response to an escaped fire. The contingency plan is the portion of the Prescribed Fire Plan that considers possible but unlikely events and the contingency resources and actions needed to mitigate those events.

Contingency planning is the determination of initial actions and additional resources needed if the prescribed fire is not meeting, exceeds, or threatens to exceed:

- Project or unit boundary
- Objectives
- Prescription parameters
- Minimum implementation organization
- Smoke impacts
- Other Prescribed Fire Plan elements

The contingency plan will establish trigger points or limits that indicate when additional holding resources and actions are needed.

Contingency planning includes the additional resources required, and the maximum acceptable response time for those resources. Resource needs should be based on fire behavior outputs tied to the worst case fire behavior scenario (as modeled in Element 7: Prescription). Separate contingency plans may be necessary and appropriate to address seasonal differences, types of ignitions or phases of the burn implementation as described in the prescriptions and ignition and holding plans developed for the burn.

Verify and document availability of identified contingency resources and response time on day of implementation. If contingency resources availability falls below plan levels, actions must be taken to secure operations until identified contingency resources are replaced.

The same contingency resource can be identified for multiple prescribed fire projects. When specific contingency resources are identified for more than one prescribed fire, the local fire management organization(s) must evaluate and document adequacy of all contingency resources within the area. This evaluation must consider:

- Local, current, and predicted fire danger
- Local and regional wildland fire activities.

Once a contingency resource is committed to a specific wildland fire action (wildfire, wildland fire use or prescribed fire), it can no longer be considered a contingency resource for another prescribed fire project and a suitable replacement contingency resource must be identified or the ignition halted.

The agency administrator will determine if and when they are to be notified that contingency actions are being taken.

If the contingency actions are successful at bringing the project back within the scope of the Prescribed Fire Plan, the project may continue. If contingency actions are not successful by the end of the next burning period, then the prescribed fire will be converted to a wildfire.

18. Wildfire Conversion

The Prescribed Fire Plan will specify who has the authority to declare a wildfire. A prescribed fire must be declared a wildfire by those identified in the plan when that person(s) determines that the contingency actions have failed or are likely to fail and cannot be mitigated by the end of the next burning period by on-site holding forces and any listed contingency resources. In addition, an escaped prescribed fire must be declared a wildfire when the fire has spread outside the project boundary, or is likely to do so, and cannot be contained by the end of the next burning period. A prescribed fire can be converted to a wildfire for reasons other than an escape.

Describe the actions to be taken when a prescribed fire is declared a wildfire *(refer to Wildland Fire and Aviation Program Management and Operations Guide {BIA--Blue Book} and Interagency Standards for Fire and Aviation {Red Book})*. Description will include:

- Wildfire declaration (by whom)
- IC assignment
- Notifications: dispatch, agency administrator, adjacent land owners, etc.
- Extended attack actions and opportunities to aid in suppression efforts.
- After a wildfire declaration, an escaped prescribed fire cannot be returned to prescribed fire status. A WFSA will define appropriate future management actions.

19. Smoke Management & Air Quality

Describe how the project will comply with local community, county, state, tribal, and federal air quality regulations. Identify what permits, if any, need to be obtained. Identify smoke sensitive areas including population centers, recreation areas, hospitals, airports, transportation corridors, schools, non-attainment areas, Class I air sheds, and restricted areas that may be impacted. Include modeling outputs and mitigation strategies and techniques to reduce the impacts of smoke production, if required by State Implementation Plans (SIPs) and/or State or local regulations. Reference the *Smoke Management Guide for Prescribed and Wildland Fire 2001 Edition* for other smoke management planning suggestions and smoke management techniques for reducing or redistributing emissions.

Special considerations must be taken to address smoke when the project is in a non-attainment area for a National Ambient Air Quality Standards including insuring compliance with SIP/TIP provisions and addressing Conformity. Projects which will potentially impact Class I areas should address any efforts to minimize smoke impacts on visibility. Comply with all local, state, tribal and federal pre-burn and post-burn data reporting requirements.

20. Monitoring

Prescribed fire monitoring is defined as the collection and analysis of repeated observations or measurements to evaluate changes in condition and progress toward meeting a management objective. Describe the monitoring that will be required to ensure that Prescribed Fire Plan objectives are met. For the prescribed fire, at a minimum specify the weather, fire behavior and fuels information (forecast and observed) and smoke dispersal monitoring required during all phases of the project and the procedures for acquiring it, including who and when.

21. Post-burn Activities

Describe the post-burn activities that must be completed. This may include post-burn report, safety mitigation measures, and rehabilitation needs including those as a result of pre-burn activities undertaken.

Appendices

Include all the required appendices.

- Maps
- Technical Review Checklist
- Complexity Analysis
- Job Hazard Analysis
- Fire Behavior Modeling Documentation or Empirical Documentation

Project file

All prescribed fire Project Files will contain the following information. Agencies and/or administrative units may require additional information.

- Prescribed Fire Plan
- Monitoring data including weather, fire behavior, fire effects and smoke dispersal observations
- Weather forecasts
- Notifications
- Documented prescribed fire organization(s)
- Any agreements related to implementation
- Multiple day GO/NO-GO checklist(s), if applicable
- Re-validation of the Agency Administrator Pre-Ignition Approval Checklist

Depending on the scope and complexity of the prescribed fire, optional information and/or further documentation that may be included in the Project File include:

- After Action Review (see Chapter 8 of the *Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide*)
- Incident Action Plans, Unit Logs
- Press releases, etc
- Implementation costs
- Actual ignition patterns and sequences used
- Smoke management information
- Agency individual fire occurrence form
- Detailed Post Burn Report
- NEPA documentation
- Permits

After Action Review (AAR)

Each operational shift on a prescribed fire should have an informal After Action Review (AAR). Certain events or a culmination of events that may affect future prescribed fire implementation and/or policy should be submitted via the Roll-up documentation (Found at http://www.wildfirelessons.net). The questions to answer in conducting an AAR are:

- What did we set out to do (what was planned)?
- What actually happened?
- Why did it happen that way?
- What should be sustained? What can be improved?

Escaped Fire Reviews

The agency administrator will be notified of an escaped fire. The agency administrator is required to make the proper notifications. All prescribed fires declared a wildfire will have an investigative review initiated by the agency administrator. The level and scope of the review will be determined by policy

and procedures in *Wildland Fire and Aviation Program Management and Operations Guide (BIA--Blue Book) or Interagency Standards for Fire and Aviation (Red Book)*.

The goal of the escaped prescribed fire review process is to guide future program actions by minimizing future resource damage and/or preventing future escapes from occurring by gathering knowledge and insight for incorporation into future resource management and prescribed fire planning. The objectives of the review are to:

- Determine if the Prescribed Fire Plan was adequate for the project and complied with policy and guidance related to prescribe fire planning and implementation.
- Determine if the prescription, actions, and procedures set forth in the Prescribed Fire Plan were followed.
- Describe and document factual information pertaining to the review.
- Determine if overall policy, guidance, and procedures relating to prescribed fire operations are adequate.
- Determine the level of awareness and the understanding of the personnel involved, in regard to procedures and guidance.

At a minimum, the escaped fire review report will include the following elements:

- An analysis of seasonal severity, weather events, and on-site conditions leading up to the wildfire declaration.
- An analysis of the actions taken leading up to the wildfire declaration for consistency with the Prescribed Fire Plan.
- An analysis of the Prescribed Fire Plan for consistency with policy.
- An analysis of the prescribed fire prescription and associated environmental parameters.
- A review of the approving line officer's qualifications, experience, and involvement.
- A review of the qualifications and experience of key personnel involved.
- A summary of causal agents contributing to the wildfire declaration.

Document the incident, including all actions prior to and after the escape. Set up a file that includes all pertinent information, i.e., the Prescribed Fire Plan; a chronology of events including the prescribed fire report; unit logs and individual statements; weather forecasts including any spot forecasts; weather information taken on site and Remote Automated Weather Station (RAWS) and National Fire Danger Rating System (NFDRS) data for the day of the escape from the nearest station(s); photos; and all other pertinent information. Since all prescribed fires are planned management actions, an escape may lead to a Tort Claim and liability issues. Special attention to documentation is critical.

An independent review team is recommended for conducting escaped fire reviews. The number of individuals assigned to the team and their functional

expertise should be commensurate with the scope and focus of the review.
Interagency participation is highly recommended for all prescribed fire reviews.

Chapter 19
Reviews & Investigations

Introduction

Reviews and investigations are two methods used by wildland fire and aviation managers to assess and improve the effectiveness and safety of organizational operations.

Reviews

Reviews are critical evaluations of operational preparedness, policies, or practices prior to, during, or after actual operations. The purpose of a review is to identify deficiencies in operational preparedness, policies or practices and recommend specific corrective action. Types of reviews include preparedness reviews, fire and aviation safety team reviews, National Cost Oversight Team, individual fire reviews, escaped prescribed fire reviews, and after action reviews.

Investigations

Investigations are critical examinations and systematic inquiries into incidents or accidents. The purpose of an investigation is to determine the organizational deficiencies that are the source of the incident or accident and recommend specific corrective actions. Types of investigations include non-serious wildland fire accident investigations, serious wildland fire accident investigations, entrapment investigations, shelter deployment investigations, and fire trespass investigations.

Incident

An incident is an unexpected occurrence in a sequence of events that produces no injury, death, or property damage, but has the potential to do so.

Accident

An accident is an unexpected occurrence in a sequence of events that produces an injury, death, or property damage.

Policy

The complexity and severity of the event will determine the type of review or investigation required, the level of investigation (local, state/regional, or national), and notification requirements. Fires, incidents, or accidents will be reviewed or investigated as follows:

Nature of Event	Type of Review or Investigation Required	Investigation Level
Fire in which entrapments/burnovers and/or fire shelter deployments have occurred	Serious Accident Investigation	Determined at National Level
Fire in which multiple serious injuries or fatalities have occurred	Serious Accident Investigation	National Level
Fire in which property damage exceeds $250,000	Serious Accident Investigation	Determined at National Level
Fire in which a non-serious accident occurs	Non-Serious Accident Investigation	Determined at Local/State/ /National Level (based upon severity)
Fire that has escaped area defined in prescribed fire plan	Escaped Prescribed Fire Review	Determined at Local Level
* Immediate Notification of National Office Required		

Agency specific policy guides

	Safety	***Prescribed Fire***
BLM	*Manual 1112-2, 1112-1*	*Prescribed Fire Handbook*
FWS	*Service Manual 095*	*Fire Management Handbook*
NPS	*DO/RM-50*	*RM-18, Chapter 10*
FS	*FSH-6709.11*	*FSM-5140*

Reviews

Reviews address all or any aspects of wildland fire and aviation management. Reviews may focus on program oversight, safety, leadership, operations, specific incidents, preparedness, training, staffing, business practices, budget, cost containment, planning, interagency cooperation, and coordination between fire and other agency programs. Review teams will develop findings and recommendations and establish priorities for action.

Reviews may be conducted in the form of Escaped Prescribed Fire Reviews, Preparedness Reviews, Fire and Aviation Safety Team (FAST) Reviews, Individual Fire Reviews, or program specific reviews.

Types of Reviews

Preparedness Reviews

Wildland fire and aviation preparedness reviews are conducted annually prior to the fire season to help the field unit prepare for the fire season, identify operational, procedural, personnel, or equipment deficiencies, and recommend corrective actions. Standards for preparedness reviews are based and conducted

according to established agency procedures. *Interagency Preparedness Review Checklists* can be found at: http://www.nifc.gov/references/prep_review.htm

- ***BLM/FS -*** *Preparedness reviews utilize several functional checklists that can be found at: http://www.fire.blm.gov/Standards/FIRE_AVIATION_PREPAREDNESS_REVIEW_GUIDE.htm*

Review teams should include line and fire managers, fire and aviation operations specialists, dispatch and logistics specialists, fire business management specialists, and other technical experts as needed (safety & occupational health specialists, contracting officers). This expertise may be internal, interagency, or contract, and include members from other states/regions, geographic areas. Reviews will benefit greatly if interagency in composition. The agency administrator determines local level review team membership; state/regional level review team membership is identified by the State/Regional Director; and national review teams are identified by the National Fire Directors.

Preparedness Review Frequency/Reviewing Level

	Local	***State/Regional***	***National***
BLM	*Annual/Any Level*	*2 yrs/National*	*4 yrs*
FWS	*Annual/Any Level*	*3-5 yrs/National*	*N/A*
NPS	*Annual*	*3-5 yrs/Regional*	*N/A*
FS	*Annual*	*N/A*	*N/A*

- ***BLM -*** *Copies of preparedness review reports will be distributed to the Director, Office of Fire and Aviation, and to the reviewed field office through the State Director. A copy of the written action plan addressing the executive summary findings will be submitted to the Director, National Office of Fire and Aviation, within (30) calendar days upon receipt of the review.*
- ***BLM -*** *Field office preparedness reviews will be conducted annually. Field Office will be reviewed every other year by the state office. National-level reviews of each state are conducted every four years.*
- ***FS -*** *FS preparedness reviews are guided by FSM 5100 /5190 on frequency of reviews and reporting requirements.*

Fire and Aviation Safety Team (FAST) Reviews

Fire and Aviation Safety Teams assist agency administrators during periods of high fire activity by assessing policy, rules, regulations, and management oversight relating to operational issues. They can also do the following:

- Provide guidance to ensure fire and aviation programs are conducted safely.
- Review compliance with OSHA abatement plan(s), reports, reviews and evaluations.
- Review compliance with *Interagency Standards for Fire and Fire Aviation Operations.*

FAST reviews can be requested through geographic area coordination centers to conduct reviews at the state/regional and local level. If a more comprehensive review is required, a national FAST can be ordered through the National Interagency Coordination Center.

FASTs include a team leader, who is either an agency administrator or fire program lead with previous experience as a FAST member, a safety and health manager, and other individuals with a mix of skills from fire and aviation management.

FASTs will be chartered by their respective Geographic Area Coordinating Group (GACG) with a delegation of authority, and report back to the GACG.

The team's report includes an executive summary, purpose, objectives, methods/procedures, findings, recommendations, follow-up actions (immediate, long-term, national issues), and a letter delegating authority for the review. As follow-up, the team will gather and review all reports prior to the end of the calendar year to ensure identified corrective actions have been taken. FAST reports should be submitted to the geographic area with a copy to the Federal Fire and Aviation Safety Team (FFAST) within 30 days. See Appendix O for sample FAST Delegation of Authority.

National Cost Oversight Team

A National Cost Oversight Team will be assigned to a fire with suppression costs of more than 5 million dollars. This team will include a Line Officer (team lead), Incident Business Specialist, Incident Management Team Specialist, and a Financial Specialist. The team lead and the receiving agency administrator can agree to add team members as needed to address issues specific to the incident, i.e., aviation, personnel, or contracting specialists.

Individual Fire Reviews

Fire reviews examine all or part of the operations on an individual fire. The fire may be ongoing or controlled. These evaluations may be a local, state/regional, or national review. These reviews examine a fire to evaluate decisions, strategies, or correct deficiencies; identify new or improved procedures, techniques or tactics; determine cost-effectiveness of an operation; compile consistent and complete information to improve local, state/regional or national fire management programs.

Reviewing Levels

Local Level Review

Should be conducted by the local manager (or designated representative) to provide the agency administrator with recommendations or commendations pertaining to the fire program or operations.

Examples of local reviews may include a daily review of WFSAs and fire incident objectives, or closeouts with Incident Management Team (IMT) prior to a team's release from the incident. IMT closeouts ensure effective transfer of command of the incident to the local unit, or to another team, evaluates the status of fire business, and addresses issues or suggested improvements. See Appendix B.

State/Regional Level Review

Convened by the state/regional Fire Management Officer (FMO) (or designated representative). This review is generally conducted for any fire that results in controversy involving another agency, adverse media attention, or in large expenditures of funds or involves serious injury to less than 3 personnel, significant property damage, or is an incident with potential.

National Level Review

Convened by National Fire Director (or designate). This review is generally conducted for any fire that involves agency wide or national issues, significant adverse media or political interest, multi-regional resource response, a substantial loss of equipment or property.

Escaped Prescribed Fire Review

For escaped prescribed fire review requirements see "Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide" or Chapter 18 of the book.

Escaped prescribed fire review direction is found in the following agency manuals/direction.

- ***BLM -*** *BLM 9214 Prescribe Fire Handbook and the 9215 BLM Fire Training Handbook.*
- ***FWS -*** *Fire Management Handbook*
- ***NPS -*** *RM-18, Chapter 10 & 13*
- ***FS -*** *5140-1*

After Action Review (AAR)

An AAR is a learning tool intended for the evaluation of an incident or project in order to improve performance by sustaining strengths and correcting weaknesses. An AAR is performed as immediately after the event as possible by the personnel involved. An AAR should encourage input from participants that is focused on:

- what was planned
- what actually happened
- why it happened
- what can be done the next time

It is a tool that leaders and units can use to get maximum benefit from the experience gained on any incident or project. When possible, the leader of the incident or project should facilitate the AAR process. However, the leader may choose to have another person facilitate the AAR as needed and appropriate. AARs may be conducted at any organizational level. However, all AARs follow the same format, involve the exchange of ideas and observations, and focus on improving proficiency. The AAR should not be utilized as an investigational review. The format can be found in the *Interagency Response Pocket Guide* (*IRPG), PMS #461, NFES #1007*

Investigations

Guidance

The following provides guidance and establishes procedures for accident investigations (as defined below). The following information may be used as a guide for this procedure as well as referencing the following applicable agency guidance.

- ***BLM -*** *Handbook 1112-1, Safety and Health Management*
- ***FWS -*** *Fire Management Handbook*
- ***NPS -*** *RM-18, Chapter 3, and RM-50b*
- ***FS -*** *FSM-5100 and FSH-6709.11 FSM 5720 (Aviation), FSM 5130 (Ground Operations), FSM 6730 (Specific policy), FSH 6709.12, Chapter 30 (General guidance), and most recent Accident Investigation Guide, for specific guidance."*

Per the 1995 Memorandum of Understanding between the U.S. Department of the Interior and the U.S. Department of Agriculture *"Investigation of Serious Wildland Fire-Related Accidents,"* serious wildland fire-related accidents will be investigated through the use of interagency investigation teams.

Investigation Categories

Non-Serious Wildland Fire Accidents

A non-serious wildland fire accident is an accident occurring to personnel and/or property that may or may not result in serious injuries or substantial loss/damage of property but given similar environment and a set of circumstances could have resulted in serious injury or fatality or total property loss (example: engine rollover with minor injuries). An accident is an unplanned, unwanted event that results in injury and/or property damage.

Investigations are required and normally conducted at the state/region or local level. However, a national level investigation may be conducted at the discretion of the National Office. Notification to the National Fire Safety Office is required.

Non-Serious Wildland Fire Accident Investigation Process

Notification

Agency specific reporting requirements shall be followed. In most instances, supervisors will notify unit fire management officer, who will then make notification through chain of command.

Personnel Involved

Treatment, transport, and follow-up care should be immediately arranged for injured and involved personnel. Develop a roster of involved personnel and supervisors and ensure they are available for interviews by the investigation team. Attempt to collect initial statements from the involved individuals prior to a Critical Incident Stress Management (CISM) session.

Site Protection

The site of the incident should be secured immediately and nothing moved or disturbed until the area is photographed and visually reviewed. Exact locations of injured personnel, and the condition and location of personal protective equipment, and any damaged property or equipment must be documented.

Investigation

Investigation Team

Investigation team membership will depend upon the severity of the accident. At a minimum, the team should consist of a chief investigator, a safety advisor, and one technical specialist. Team members may have dual roles (e.g., chief investigator/safety advisor). More complex accidents may require the need for a Team Leader and multiple technical specialists.

Reports

24 Hour Preliminary Brief Report

This report contains only the most obvious and basic facts about the accident. It will be completed and forwarded to the unit FMO who will then distribute through chain of command. Names of injured personnel are not to be included in this report (reference them by position).

72 Hour Expanded Report

This report provides more detail about the accident and may contain the number of victims, severity of injuries, and information focused on accident prevention.

Names of injured personnel are not to be included in this report (reference them by position).

Final Report

Within 45 days of the accident, a final report detailing the accident to include facts, findings, and recommendations shall be submitted to the senior manager dependent upon the level of investigation (e.g., Local agency administrator, State/Regional Director, and Bureau Fire Director).

The Final Report (minus recommendations, conclusions and observations) will be submitted to Wildland Fire Lessons Learned Center (WFLLC) by the respective agency's National Fire Safety Leads. Website: http://www.wildfirelessons.net/Reviews.aspx

Final Report Format

Executive Summary

A brief narrative of the facts involving the accident including dates, locations, times, name of incident, jurisdiction(s), number of individuals involved, etc.

Narrative

A detailed chronological narrative of events leading up to and including the accident, as well as rescue and medical actions taken after the accident. This section should spell out in detail who, what, and where.

Investigation Process

A brief narrative stating the team was assigned to investigate the accident. It should include a standard statement that human, material, and environmental factors were considered. If one of these factors is determined to be noncontributing to the accident, it should be addressed first and discounted. For example, if the investigation revealed that there were no environmental findings that contributed to the accident. Then simply the fact and move on to the next factor. Human factors or material factors paragraphs should not be formulated so as to draw conclusions, nor should they contain adjectives or to adverbs describe and thus render an opinion into pertinent facts.

Findings

Findings are developed from the factual information and are listed in the following order:

- Direct cause of the accident.
- Indirect causes which contributed to the accident.
- Other findings which, if left uncorrected, could lead to future accidents.

Opinions or recommendations are not findings.
Findings must be substantiated by the factual data within the report.

Discussion
Provide a brief explanation of factual and other pertinent information that lead to the finding(s).

Recommendation
Provide a recommendation that is consistent with the finding(s) and identify at which level the action(s) needs to occur.

Conclusions and Observations
Investigation team's opinions and inferences may be captured in the section.

Maps/Photographs/Illustrations
Graphic information used to document and visually portray facts.

Appendices
Reference materials (e.g., fire behavior analysis)

For additional information on accident investigations, refer to:
http://www.nifc.gov/safety_study/accident_invest/index.htm

Serious Wildland Fire Accident
A Serious Wildland Fire Accident is one that involves:

- Wildland fire shelter deployments or entrapments
- Any fatalities
- Three or more personnel who are inpatient hospitalized as a direct result, or in support of, wildland fire operations,
- Substantial property or equipment damage of $250,000 or more.

Notification to the National Fire and Aviation Safety Office is required. National Office will determine the level of investigation. Agency contacts are listed below:

- ***BLM -*** *Michelle Ryerson*
- ***FWS -*** *Rod Bloms*
- ***NPS -*** *Al King*
- ***FS -*** *Larry Sutton*
- ***FS -*** *Forest Service protocol for multiple fatalities or 3 or more serious injuries requiring hospitalization investigation teams are assigned by the Safety and Health Branch in the WO and are Chief's Office Investigation.*

Entrapment
Defined by National Wildfire Coordinating Group (NWCG) as situations where personnel are unexpectedly caught in a fire behavior-related, life-threatening position where planned escape routes and safety zones are absent, inadequate, or have been compromised. Entrapments may or may not include deployment of a fire shelter for its intended purpose, and they may or may not result in injury.

They include "near misses." Notification to the National Fire and Aviation Safety Office of the jurisdictional agency is required. Level of investigation will be determined at the national level.

Shelter Deployment

Shelter deployment may occur in situations where individuals are not entrapped. Any time a shelter is deployed (other than for training purposes), regardless of circumstances, notification to the National Fire and Aviation Safety Office of the jurisdictional agency is required. Level of investigation will be determined at the national level.

For more information on conducting investigations, refer to USDI, Interior 485 Departmental Manual 7, Serious Accident Investigation; USDA Forest Service Manual 6730, Accident Reporting and Investigation; the Interdepartmental Memorandum of Understanding between the U.S. Department of the Interior and the U.S. Department of Agriculture dated October 26, 1995; *Executive Order 12196, Occupational Safety and Health Programs for Federal Employees; 29 CFR 1960.29,Accident Investigation; 29 CFR 1960.70, Reporting of Serious Accidents; Investigating Wildland Fire Entrapments; Interagency Standards for Fire and Fire Aviation Operations;* and the *Fireline Handbook*.

Serious Wildland Fire Accident Investigation Process

Notification

Interagency investigations will be co-led and/or have interagency team members. Agency reporting requirements shall be followed. As soon as a serious accident is verified, the following groups or individuals should be notified: Agency administrator, public affairs, agency law enforcement, safety personnel, county sheriff or local law enforcement as appropriate to jurisdiction, National Interagency Coordination Center (NICC), agency headquarters, and OSHA (within 8 hours only if resulting in a fatality[ies] or three or more personnel are inpatient hospitalized).

- After initial notification, NICC will advise the national fire director(s) or designee(s).
- The fire director(s) or designee(s) will ensure notification to the agency safety manager and Designated Agency Safety and Health Official (DASHO).

Personnel Involved

Treatment, transport, and follow-up care should be immediately arranged for injured and involved personnel. Develop a roster of involved personnel and supervisors and ensure they are available for interviews by the investigation team. Consider relieving involved supervisors from fireline duty until the preliminary investigation has been completed. Attempt to collect initial

statements from the involved individuals prior to a Critical Incident Stress Management (CISM) session.

Critical Incident Stress Management (CISM)

Critical Incident Stress Management is the responsibility of local agency administrators, who should have individuals pre-identified for critical incident stress debriefings. The process for ordering CISM support can be found in Appendix Q.

Also refer to The *Agency Administrator's Guide to Critical Incident Management (PMS 926)*, available at:
http://www.nwcg.gov/pms/pubs/PMS926-DRAFT.pdf

Individuals or teams may be available through Employee Assistance Programs (EAP's) or Geographic Area Coordination Centers (GACC's).

- A Critical Incident Stress Defusing should be provided no more than 8 hours after an incident, or if possible, it should be provided immediately (one to two hours) after the incident, and usually takes 30 minutes to 1 hour.
- A Critical Incident Stress Debriefing should occur between 24 to 72 hours after the incident, and usually takes 1-3 hours.

Site Protection

The site of the incident should be secured immediately and nothing moved or disturbed until the area is photographed and visually reviewed. Exact locations of entrapment(s), injury(ies), and fatality(ies), and the condition and location of personal protective equipment, and any damaged property or equipment must be documented.

Investigation

Order Investigation Team

Following initial notification of a serious accident, the National Fire Director(s) will immediately dispatch an investigation team.

Roles and Responsibilities

Director

The Fire Director(s) or designee(s) of the lead agency, or agency responsible for the land upon which the accident occurred, will:

- Immediately appoint, authorize, and dispatch an accident investigation team.
- Ensure that resources and procedures are adequate to meet the team's needs.
- Receive the factual and management evaluation reports and take action to accept or reject recommendations.

- Forward investigation findings, recommendations, and corrective action plan to the DASHO (the agency safety office is the "office or record" for reports).
- Convene a board of review (if deemed necessary) to evaluate the adequacy of the factual and management reports and suggest corrective actions.
- Ensure a corrective action plan is developed, incorporating management initiatives established to address accident causal factors.

Agency Administrator

- Identify agencies with statutory/accident jurisdictional responsibilities for the incident; develop local preparedness plans to guide emergency response.
- Provide for and emphasize treatment and care of survivors.
- Ensure the Incident Commander secures the accident site to protect physical evidence.
- Conduct an in-briefing to the investigation team.
- Facilitate and support the investigation as requested.
- Implement CISM.
- Notify home tribe leadership in the case of a Native American fatality.
- Receive an in-briefing from the local agency administrator to include the 24-hour Preliminary Brief (if not already completed by local unit), as well as other general information about the accident.
- Produce a 72-hour Expanded Report - see reports section below.

Team Composition

Team Leader

A senior agency management official, at the equivalent associate/assistant regional/state/area/division director level. The team leader will direct the investigation and serve as the point of contact with the agency DASHO.

Chief Investigator

A qualified accident investigation specialist is responsible for the direct management of all investigation activities. The chief investigator reports to the team leader.

Accident Investigation Advisor

An experienced safety and occupational health specialist or manager who acts as an advisor to the team leader to ensure that the investigation focus remains on safety and health issues. The accident investigation advisor also works to ensure strategic management issues are examined.

Interagency Representative
An interagency representative will be assigned to every fire-related Serious Accident Investigation Team. They will assist as designated by the team leader and will provide outside agency perspective.

Technical Specialists
Personnel who are qualified and experienced in specialized occupations, activities, skills, and equipment, addressing specific technical issues such as arson, third-party liability, weather, and terrain.

- ***BLM -*** *Has established Serious Accident Investigation Teams (SAIT) that are managed on a rotational basis. Dispatching is done from the National Office of Fire and Aviation Safety Manager and teams are ordered through NICC.*

Reports

The 24-Hour-Preliminary Report
This report contains only the most obvious and basic facts about the accident. It will be completed and forwarded by the agency administrator responsible for the jurisdiction where the accident occurred. Names of injured personnel are not to be included in this report (reference them by position). In the case of an entrapment and/or fire fatality, use NWCG *Wildland Fire Entrapment/Fatality Initial Report, NFES 0869*.

The 72-Hour Expanded Report
This report provides more detail about the accident and may contain the number of victims, severity of injuries, and information focused on accident prevention. Names of injured personnel are not to be included in this report (reference them by position).

The Final Report
Within 45 days of the incident, a Factual Report (FR) and a Management Evaluation Report (MER) will be produced by the investigation team to document facts, findings, and recommendations and forwarded to the DASHO through the agency Fire Director(s).

Factual Report
This report contains a brief summary or background of the event, and facts based only on examination of technical and procedural issues related to equipment and tactical fire operations. It does not contain opinions, conclusions, or recommendations. Names of injured personnel are not to be included in this report (reference them by position). Post-accident actions should be included in this report (emergency response attribute to survival of a victim, etc). This report contains the following sections.

- **Executive Summary:** A brief narrative of the facts involving the accident including dates, locations, times, name of incident, jurisdiction(s), number of individuals involved, etc.
- **Narrative:** A detailed chronological narrative of events leading up to and including the accident, as well as rescue and medical actions taken after the accident. This section should spell out in detail who, what, and where.
- **Investigative Process:** A brief narrative stating the team was assigned to investigate the accident. It should include a standard statement that human, material, and environmental factors were considered. If one of these factors is determined to be noncontributing to the accident, it should be addressed first and discounted. For example, if the investigation revealed that there were no environmental findings that contributed to the accident. Then simply state that fact and move on to the next factor. Human factors or material factors paragraphs should not be formulated so as to draw conclusions, nor should they contain adjectives or adverbs to describe and thus render an opinion into pertinent facts.
- **Findings:** Findings are developed from the factual information and are listed in the following order:
  - Direct cause of the accident.
  - Indirect causes which contributed to the accident.
  - Other findings which, if left uncorrected, could lead to future accidents.
  - Opinions or recommendations are not findings.
  - Findings must be substantiated by the factual data within the report.
  - Maps, Illustrations, and Photographs: graphic information used to document and visually portray facts.
  - Records: factual data and documents used to substantiate facts involving the accident. Appendices: excerpts, tests results, and similar items used as reference information for documented facts involving the accident.

Factual Reports will be submitted to Wildland Fire Lessons Learned Center (WFLLC) by the respective agency's National Wildland Fire Safety Leads. Website: http://www.wildfirelessons.net/Reviews.aspx

Management Evaluation Report (MER)

The MER is intended for internal use only and explores management policies, practices, procedures, and personal performance related to the accident. It takes the abnormalities/and findings identified in the factual report and categorizes them for management. This report may contain:

- Opinions by the investigators as to the cause of the accident.
- Conclusions and observations.
- Confidential information.
- Recommendations for corrective measures.

This report includes the following sections:

- **Executive Summary:** A brief narrative of the facts involving the accident. Keep this section short. Readers can refer to the factual report if they want more detail.
- **Other Findings:** Other findings not contributing to the accident but, if left uncorrected, could lead to other accidents.
- **Other Information:** This paragraph can contain opinions by the investigators, conclusions and observations, and confidential information which the team feels is relevant for management consideration. (This paragraph is not required).
- **Recommendations:** Recommendations are prevention measures management may take to prevent similar accidents. Although this is not an requirement, there should be a recommendation for each cause. The recommendations must be reasonable, feasible, relate to the cause(s) of the accident, and allow for definitive closure. Depending upon the scope of impact the recommendations can be implemented by a local unit, the state office or the national office. The team should specify who should implement the recommendations.
- **Enclosures:** Information not contained in the Factual Report, but which the team feels necessary to support their recommendations. Since this report can be obtained by the public under certain circumstances, do not include anything that is not needed to substantiate recommendations.

Board of Review

- A Board of Review is used to evaluate recommendations, determine responsibility, and follow up on serious accident investigations. After determining responsibility for an incident, the Board of Review can make recommendations ranging from no action taken to termination of employment.
- Only the Agency Director or Deputy Director may appoint a Board of Review.

For additional information on accident investigations, refer to:
http://www.nifc.gov/safety_study/accident_invest/index.htm

Fire Investigation & Trespass

Introduction

Agency policy requires any wildfire to be investigated to determine cause, origin, and responsibility. Accurate fire cause determination is a necessary first step in a successful fire investigation. Proper investigative procedures, which occur concurrent with initial attack, more accurately pinpoint fire causes and can preserve valuable evidence that would otherwise be destroyed by suppression activities.

The agency or its employees must pursue cost recovery or document why cost recovery is not initiated for all human caused fires on public and/or other lands under protection agreement.

Fire trespass refers to the occurrence of unauthorized fire on agency-protected lands where the source of ignition is tied to some type of human activity.

Policy

The agency must pursue cost recovery, or document why cost recovery is not required, for all human-caused fires on public lands. The agency will also pursue cost recovery for other lands under fire protection agreement where the agency is not reimbursed for suppression actions, if so stipulated in the agreement.

For all human-caused fires where negligence can be determined, trespass actions are to be taken to recover cost of suppression activities, land rehabilitation, and damages to the resource and improvements. Only fires started by natural causes will not be considered for trespass and related cost recovery.

The determination whether to proceed with trespass action must be made on "incident facts," not on "cost or ability to pay." Trespass collection is both a cost recovery and a deterrent to prevent future damage to public land. It is prudent to pursue collection of costs, no matter how small. This determination must be documented and filed in the unit office's official fire report file. The agency administrator has the responsibility to bill for the total cost of the fire and authority to accept only full payment. On the recommendation of the State/Regional Director, the Solicitor/Office of General Counsel may compromise claims of the United States, up to the monetary limits ($100,000) established by law 31 U.S.C. 3711[a], 4 CFR 103-104, and 205 DM 7.1 and 7.2. The Solicitor/Office of General Counsel will refer suspension or termination of the amount, in excess of $100,000, exclusive of interest, penalties, or administrative charges, to the Department of Justice.

Unless specified otherwise in an approved protection agreement, the agency that has the land management jurisdiction/administration role is accountable for determining the cause of ignition, responsible party, and for obtaining all billable costs, performing the billing, collection, and distribution of the collected funds. The agency with the fire protection responsibility role must provide the initial determination of cause to the agency with the land management jurisdiction/administration role. The agency providing fire protection shall provide a detailed report of suppression costs that will allow the jurisdictional agency to proceed with trespass procedures in a timely manner.

Each agency's role in fire trespass billing and collection must be specifically defined in the relevant Cooperative Fire Protection Agreement. The billing and collection process for federal agencies is:

- For example, a federal agency fire occurs on another federal agency's land and is determined to be a trespass fire. BLM provides assistance, and supplies costs of that assistance to the federal agency with jurisdictional responsibility for trespass billing. The responsible federal agency bills and collects trespass, and BLM then bills the federal agency and is reimbursed for its share of the collection.
- For example, where BLM administered land is protected by a state agency, the billing and collection process is:
  - The state bills BLM for their suppression costs. The BLM will pursue trespass action for all costs, suppression, rehabilitation, and damages, and deposits the collection per BLM's trespass guidance.

All fires must be thoroughly investigated to determine cause. Initiation of cause determination must be started with notification of an incident. The initial attack incident commander and the initial attack forces are responsible for initiating fire cause determination and documenting observations starting with their travel to the fire. If probable cause indicates human involvement, an individual trained in fire cause determination should be dispatched to the fire. Agency References:

- ***BLM -*** *9238-1*
- ***FWS -*** *Fire Management Handbook Chapter 4 or www.fws.gov/fire/redbook/trespass.pd*
- ***NPS -*** *RM-18, Chapter 8 and RM-9*
- ***FS -*** *FSM-5130 and FSM-5300*

Sample Questions
For Fire Site Visits
By Agency Administrators

Management Direction

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

Safety

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

Fire Suppression Operations

____What is the fire weather forecast (present and extended)?
____What is the fire behavior potential?
____Are fire personnel briefed on incident objectives, strategies, tactics, organization, communications, hazards, and safety principles?
____Are the strategy and tactics based on current and forecasted weather?
____Are strategy and tactics safe, effective, and consistent with management's objectives and accepted fire policies and procedures?
____Do you have effective communication on the incident and with dispatch?
____Are you monitoring weather and fire behavior to make needed adjustments to strategy and tactics?

____Are you using tactical aircraft? Do you have an assigned air tactical group supervisor?
____Is aircraft use safe, effective, and efficient?
____If the fire escapes initial attack, what will your role be in developing the Wildland Fire Situation Analysis?

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

Dispatch Office
____Is the incident receiving fire weather and fire behavior information?
____Is the incident getting the resources ordered in a timely manner?
____Is dispatch adequately staffed?
____What are the local, area, and National Preparedness Levels? How do they affect this fire?
____Are the elements identified at the various Preparedness Levels being considered?
____What are the current local, area and national fire situations?
____What is the priority of existing fires and how are the priorities being determined.

Manager's Supplement for Post Incident Review

Incident Commander_____
Fire Name and No._____
Start Date and Duration of Incident _____
Date of Incident Debriefing_____

List of Debriefing Attendees:

Brief synopsis of fire behavior and narrative of the incident:

Fire Size-up:
- Gave an accurate sizeup of the fire to dispatch upon arrival? (Appendix I)
- Managed fire suppression resources in accordance with the management objectives for the area and availability of resources?
- Did the unit support organization provide timely response and feedback to your needs? (Appendix A)
- Were there any radio communication issues?

Provide for the Safety and Welfare of Assigned Personnel:
- Gave operation briefing prior to firefighters being assigned to incident operations. (Appendix F)
- How were incoming resources debriefed; via radio, personal contact?
- Were agency work/rest guidelines followed? Was adequate food and water provided to firefighters?

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

Administrative Responsibilities:

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

Delegation for Field Office Fire Management Officers

_____, Fire Management Officer for the _____ Field Office is delegated authority to act on my behalf for the following duties and actions:

1. Represent the _____BLM in the _____ Multi-Agency Coordinating Group in setting priorities and allocating resources for fire emergencies.

2. Coordinate all prescribed fire activities in the _____ and suspending all prescribed fire and issuance of burning permits when conditions warrant.

3. Ensure that only fully qualified personnel are used in wildland fire operations.

4. Coordinate, preposition, send, and order fire and aviation resources in response to current and anticipated zone fire conditions.

5. Oversee and coordinate the _____ Interagency Dispatch Center on behalf of the BLM.

6. Request and oversee distribution of severity funding for Field Office Fire and Aviation.

7. Approve Fire Program requests of overtime, hazard pay, and other premium pay.

8. Ensure all incidents are managed in a safe and cost-effective manner.

9. Coordinate and provide all fire and prevention information needs to inform internal and external costumers with necessary information.

10. Coordinate all fire funding accounts with the Budget Officer to assure Field Office fiscal guidelines are adhered to and targets are met.

11. Approve and sign aviation request forms.

12. Approve Red Cards in accordance with State Office guidance.

13. Authorized to hire Emergency Firefighters in accordance with the Department of Interior Pay Plan for Emergency Workers.

_____ _____

Field Manager Date

Agency Administrator's Briefing to Incident Management Team

General Information
Incident Name
Approx. Size @ Date Time
Location
Date of Start
Overhead and Suppression Resources Currently on Incident And Present IC
General Fire Situation in Area
Resources Ordered
Other Organizations Requiring Coordination (Area Command, Expanded Dispatch, MAC, Buying Team, Payment Team, Tribal Government, Other Agency Jurisdictions)
Law Enforcement/Ongoing Investigations
Financial Considerations/Limitations
Fire Behavior Considerations
Weather Situation
Fuel Types
Topography
Fire Behavior
Appropriate Management Response Considerations Established Through and for the WFSA Development Priorities
Environmental Constraints
Utility Corridors

Air Operations
Effectiveness
Hazards
Air Space Restrictions
Airports, Heliports, Helispots
Suppression Policies
Other
Environmental, Social, Political, Economic, and Cultural Resource Considerations
Environmental
Social
Political
Economic
Cultural Resource
Communications
Radio
Telephone
Electronic (Computers)
Expanded Dispatch
Procurement Arrangements
Agreements
Tribal Government
Infrared Status

Security Considerations
Incident Management Direction and Considerations
Wildland Fire Situation Analysis
Delegation of Authority
Agency Administrator's Representative
Incident Business Advisor
Resource Advisor
Suppression Priorities
Forest Supervisor/Incident Commander Contact
Time
Process
News Media and Incident Information Management
Training Considerations
Interagency/Private Property Considerations (costs, etc.)
Mop Up Standards
Rehabilitation Considerations
Initial Attack Responsibility
Support to Other Incidents
Disposition of Unit Resources on the Incident
Close Out and Debriefing

Human Welfare
Safety
Health
Civil Rights
Distribute Support Documents
WFSA (Common WFSA if Unified Command?)
Delegation of Authority Letter
Map & Photos
Fire Management, Pre-Attack, Land Management Plans
Weather Forecast
Special Management Area Documents
Phone Directory, Fax Number
Agreements
Incident Status Summary (ICS - 209)
Business Management Documents
Payments (Vendors and Casuals)
Claims
Injury Compensation
Incident Business Guidelines (ISOPS)

Spot Weather Observation and Forecast Request
Instruction & Notes

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

Instructions

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

Notes

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

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

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

Spot Weather Observation and Forecast Request
(See reverse for instructions)

Requesting Agency will Furnish Information for Blocks 1-12

1. Name of Incident or Project	2. Control Agency	3. Request Made	
		Time:	Date:

4. Location (Designate Township, Range, and Section (include ¼ section):	5. Drainage Name	6. Exposure/Aspect:

7. Size of Incident or Project (acres):	8. Elevation		9. Fuel Type:	10. Project On:
	Top	Bottom		☐ Ground ☐ Crowning

11. Weather Conditions at Incident or Project or from RAWS:

Place	Elevation	Observation Time	Wind Direction/Velocity		Temperature		No entry necessary. To be completed by the Fire Weather Forecaster.		Remarks (Indicate precipitation, cloud type and % cover, wind and frontal conditions, etc.)
			20-Foot:	Eye Level:	Dry Bulb:	Wet Bulb:	Rh	Dp	

12. Send Forecast To (Person):	Send Forecast To (Location):	Send Forecast Via:	Send Copy To:

The Fire Weather Forecaster will Furnish the Information for Block 13:

13. Discussion and Outlook: Date and Time:

Burn Period	Sky Cover	Temperature	Humidity	Wind		Indices
				Eye Level	20-Foot	
☐ Today (sunrise to dusk) ☐ This Afternoon (noon until dusk) ☐ This Evening (1600 until dusk) ☐ Tonight (sunset until sunset)	☐ Mostly Sunny/Clear ☐ Fair ☐ Partly Cloudy ☐ Mostly Cloudy ☐ Cloudy ☐ Variable	ºF _____ ☐ High ☐ Low ☐ Range	_____% ☐ Maximum ☐ Minimum ☐ Range	☐ Upslope ☐ Downslope Direction_____ Velocity____mph Gusts_____mph	☐ Upslope ☐ Downslope Direction_____ Velocity____mph Gusts_____mph	Haines: LAL: BI: CI:
☐ Today (sunrise to dusk) ☐ This Afternoon (noon until dusk) ☐ This Evening (1600 until dusk) ☐ Tonight (sunset until sunset)	☐ Mostly Sunny/Clear ☐ Fair ☐ Partly Cloudy ☐ Mostly Cloudy ☐ Cloudy ☐ Variable	ºF _____ ☐ High ☐ Low ☐ Range	_____% ☐ Maximum ☐ Minimum ☐ Range	☐ Upslope ☐ Downslope Direction_____ Velocity____mph Gusts_____mph	☐ Upslope ☐ Downslope Direction_____ Velocity____mph Gusts_____mph	Haines: LAL: BI: CI:
Outlook for (Date): _____	☐ Mostly Sunny/Clear ☐ Fair ☐ Partly Cloudy ☐ Mostly Cloudy ☐ Cloudy ☐ Variable	ºF _____ ☐ High ☐ Low ☐ Range	_____% ☐ Maximum ☐ Minimum ☐ Range	☐ Upslope ☐ Downslope Direction_____ Velocity____mph Gusts_____mph	☐ Upslope ☐ Downslope Direction_____ Velocity____mph Gusts_____mph	Haines: LAL: BI: CI:

Name of Fire Weather Forecaster:	Fire Weather Office Issuing Forecast:

14. Forecast Received by (Name):	Date:	Time:	Forecast Received at (Location) Via:

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

1) If positive responses exceed, or are equal to, negative responses within any primary factor (A through G), the primary factor should be considered as a positive response.

2) If any three of the primary factors (A through G) are positive responses, this indicates the fire situation is or is predicted to be of Type 1 complexity.

3) Factor H should be considered after numbers 1–3 are completed. If more than two of the items in factor H are answered yes, and three or more of the other primary factors are positive responses, a Type 1 team should be considered. If the composites of H are negative, and there are fewer than three positive responses in the primary factors (A-G), a Type 2 team should be considered. If the answers to all questions in H are negative, it may be advisable to allow the existing overhead to continue action on the fire.

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

5. Unique natural resources, special-designation areas, wilderness.		
6. Other special resources.		
Total		
D. Safety		
1. Unusually hazardous fireline construction.		
2. Serious accidents or fatalities.		
3. Threat to safety of visitors from fire and related operations.		
4. Restrictions and/or closures in effect or being considered.		
5. No night operations in place for safety reasons.		
Total		
E. Ownership		
1. Fire burning or threatening more than one jurisdiction.		
2. Potential for claims (damages).		
3. Different or conflicting management objectives.		
4. Disputes over suppression responsibility.		
5. Potential for unified command.		
Total		
F. External Influences		
1. Controversial fire policy.		
2. Pre-existing controversies/relationships.		
3. Sensitive media relationships.		
4. Smoke management problems.		
5. Sensitive political interests.		
6. Other external influences.		
Total		
G. Change in Strategy		
1. Change in strategy to control from confine or contain		
2. Large amounts of unburned fuel within planned perimeter.		
3. WFSA invalid or requires updating.		
Total		

H. Existing Overhead		
1. Worked two operational periods without achieving initial objectives.		
2. Existing management organization ineffective.		
3. Overhead overextended mentally and/or physically.		
4. Incident action plans, briefings, etc. missing or poorly prepared.		
Total		

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

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

Sample Delegation of Authority:
Delegation of Authority
Colorado State Office
Montrose Field Office

As of 1800, May 20, 2005, I have delegated authority to manage the Crystal River Fire, Number E353, San Juan Resource Area, to Incident Commander Bill Jones and his Incident Management Team.

The fire, which originated as four separate lightning strikes occurring on May 17, 2005, is burning in the Crystal River Drainage. My considerations for management of this fire are:

1. Provide for firefighter and public safety.
2. Manage the fire with as little environmental damage as possible. The guide to minimum impact suppression tactics (MIST) is attached.
3. Key cultural features requiring priority protection are: Escalante Cabin, and overlook boardwalks along the south rim.
4. Key resources considerations are: protecting endangered species by avoiding retardant and foams from entering the stream; if the ponderosa pine timber sale is threatened, conduct a low intensity under burn and clear fuels along road 312.
5. Restrictions for suppression actions include: no tracked vehicles on slopes greater than 20 percent on meadow soils, except where roads exist and are identified for use. No retardant will be used within 100 feet of water.
6. Minimum tools for use are Type 2/3 helicopters, chainsaws, hand tools, and portable pumps.
7. My agency Resource Advisor will be Eric Johnson (wildlife biologist).
8. The NE flank of the fire borders private property and must be protected if threatened. John Dennison of the Big Pine Fire Department will be the local representative.
9. Manage the fire cost-effectively for the values at risk.
10. Provide training opportunities for the resources area personnel to strengthen our organizational capabilities.
11. Minimum disruption of residential access to private property, and visitor use consistent with public safety.

_____ _____
(Signature and Title of Agency Administrator) (Date)

Amendment to Delegation of Authority

The Delegation of Authority dated May 20, 2005, issued to Incident Commander Bill Jones for the management of the Crystal River Fire, number E353, is hereby amended as follows. This will be effective at 1800, May 22, 2005.

3. Key cultural features requiring priority protection are: Escalante Cabin, overlook boardwalks along the south rim, and the Ute Mountain study site.
12. Use of tracked vehicles authorized to protect Escalante Cabin.

_____ _____
(Signature and Title of Agency Administrator) (Date)

Local Incident Commander Briefing

The Incident Briefing, ICS-201 form provides the basis for the local incident commander to brief the incoming team.

Briefing Information

Forms Available or Attached:		Other Attachments:
☐ ICS 201	☐ ICS 215	☐ Map of Fire
☐ ICS 207	☐ ICS 220	☐ Aerial Photos
☐ ICS 209	☐	☐ Weather Forecast
Fire Start Date:		
Time:		
Fire Cause:		
Fuels Ahead of Fire:		
Fuels at Fire:		
Fire Behavior:		
Fire Spread:		
Natural Barriers:		
Anchor Points:		
Perimeter Secured, Control/Mitigation Efforts Taken, and Containment Status:		

Life, Improvements, Resources and Environmental Issues:				
Weather Forecast:				
	Established	Possible	Copy Machine Available	
ICP:	☐	☐	☐ Yes	☐ No
Base:	☐	☐	☐ Yes	☐ No
Camp(s):	☐	☐		
Staging Area(s):	☐	☐		
Safety Issues:			EMS in Place: ☐ Yes	☐ No
Air Operations Effectiveness to Date:				
Air Related Issues and Restrictions:				
Hazards (Aircraft and People):				
Access from Base to Line:				
Personnel and Equipment on Incident (Status and Condition):				
Personnel and Equipment Ordered:				
Cooperating and Assisting Agencies on Scene:				
Helibase/Helispot Location:				

Crash Fire Protection at Helibase:
Medivac Arrangement:
Communication System in Use: ☐ **Radio** ☐ **Telephone** ☐ **Mobile Phone**
Water Availability:
Review of Existing Plans for Control in Effect; Copy of Approved WFSA:
Smoke Conditions:
Local Political Issues:
Damage Assessment Needs:
Security Problems:

☐ Initial Rating
☐ Final Rating

Incident Management Team Evaluation

Team IC:_____ Type:_____
Incident:_____ Fire Number:_____

1. Did the Team accomplish the objectives described in the Wildland Fire Situation Analysis (WFSA), the Delegation of Authority, and the Agency Administrator Briefing (if available)? Yes No

2. Was the Team cost effective in their management of the incident? Yes No

3. Was the Team sensitive to resource limits and environmental concerns? Yes No

4. Was the Team sensitive to political and social concerns? Yes No

5. Was the Team professional in the manner in which they assumed management of the incident, managed the total incident, and returned it to the hosting agency? Yes No

6. Did the Team anticipate and respond to changing conditions in a timely and effective manner? Yes No

7. Did the Team place the proper emphasis on safety? Yes No

8. Did the Team activate and manage the demobilization in a timely, cost-effective manner? Yes No

9. Did the Team attempt to use local resources and trainees, and closest available forces to the extent practical? Yes No

10. Was the IC an effective manager of the Team and its activities? Yes No

11. Was the IC obviously in charge of the Team and incident? Was the IC performing a leadership role? Yes No

12. Was the IC aggressive in assuming responsibility for the incident and initiating action? Yes No

13. Did the IC express a sincere concern and empathy for the hosting unit and local conditions? Yes No

14. Other comments:

_____ _____
Agency Administrator or Agency Representative Date

_____ _____
Incident Commander Date

Fire Management Organization Assessment

This Appendix is a checklist to assist line managers in evaluating operational fire program needs and complexities in fire situations. A number of factors can occur which increase the complexity and workload for the local fire staff, and depending upon staff size and availability, could overload the organization. Managers should use this checklist to evaluate the current management structure and staffing levels to determine whether or not additional staff assistance is necessary. It is recommended that the checklist be utilized early during complex situations and reviewed periodically.

Safety	Yes	No
Accidents/injuries have occurred.	____	____
Multiple fixed/rotor wing operations are involved or planned.	____	____
Fire Management Staff is in compliance with work rest guidelines.	____	____
The current situation is expected to continue.	____	____
External Factors		
Multiple jurisdictions involved.	____	____
Larger than normal fires are occurring.	____	____
The unit has an approved severity request.	____	____
Severe weather conditions are occurring or forecasted.	____	____
Management		
Current organization is operating at full capacity.	____	____
IMT ordered or in place.	____	____
Local MAC group has been activated.	____	____
A number of critical fire positions are vacant or filled with actings.	____	____
Resource Issues		
Sensitive public/media relations are apparent.	____	____
Large loss of resources expected.	____	____
High value resources are threatened.	____	____
Personnel		
Heavy commitment of local resources.	____	____
Multiple support operations activated to assist in fire suppression effort.	____	____
A large number of resources from outside the local area are staged or involved in suppression operations.	____	____

Form 9213-1
(January 2004)

Wildland Firefighter
HEALTH SCREEN QUESTIONNAIRE

The purpose is to identify individuals who may be at risk in taking the Work Capacity Test (WCT) and recommend an exercise program and/or medical examination prior to taking the WCT.

Employees are required to answer the following questions. The questions were designed, in consultation with occupational health physicians, to identify individuals who may be at risk when taking a WCT. The HSQ is not a medical examination. Any medical concerns you have that place you or your health at risk should be reviewed with your personal physician prior to participating in the WCT.

The information on this form may be disclosed as permitted by the Privacy Act (5USC552a(b)) to meet employment requirements.

Circle the appropriate Yes or No response to the following questions:

Yes	No		
Y	N	1)	During the past 12 months have you at any time (during physical activity or while resting) experienced pain, discomfort or pressure in your chest.
Y	N	2)	During the past 12 months have you experienced difficulty breathing or shortness of breath, dizziness, fainting, or blackout?
Y	N	3)	Do you have a blood pressure with systolic (top #) greater than 140 or diastolic (bottom #) greater than 90?
Y	N	4)	Have you ever been diagnosed or treated for any heart disease, heart murmur, chest pain (angina), palpitations (irregular beat), or heart attack?
Y	N	5)	Have you ever had heart surgery, angioplasty, or a pace maker, valve replacement, or heart transplant?
Y	N	6)	Do you have a resting pulse greater than 100 beats per minute?
Y	N	7)	Do you have any arthritis, back trouble, hip /knee/joint /pain, or any other bone or joint condition that could be aggravated or made worse by the Work Capacity Test?
Y	N	8)	Do you have personal experience or doctor's advice of any other medical or physical reason that would prohibit you from taking the Work Capacity Test?
Y	N	9)	Has your personal physician recommended against taking the Work Capacity Test because of asthma, diabetes, epilepsy or elevated cholesterol or a hernia?

Regardless whether you are taking the Work Capacity test at the Arduous, Moderate or Light duty level, a "Yes" answer requires a determination from your personal physician stating that you are able to participate. For Arduous Duty Employees, if you do not have a personal physician determination allowing you to take the Work Capacity Test, the FMO may request an Annual Form examination through the Interagency Wildland Firefighter Medical Standards Program.
I understand that if I need to be evaluated, it will be based on the fitness requirements of the position(s) for which I am qualified.

Participant:_____Administrator:_____Date:_____

WORK CAPACITY TEST RECORD

Units will document the administration of the WCT to all employees and job applicants. This documentation must be retained until the next WCT is administered. Units may also be requested to provide data from these records to assist in the evaluation of the WCT process.

Privacy Act - No employee may disclose records subject to the Privacy Act unless the disclosure is permitted under 43 CFR 2.56 or to the individual to whom the record pertains. The Privacy Act contains a criminal penalty for unauthorized disclosure of records. (5 U.S.C. 552a)

To be completed by employee:

Name (Last, First):_____Where employed:_____

Date test taken:_____Test administered by: (Print Name)_____

ICS position for which test is required (highest needed)_____

Performance level needed (circle one): Arduous Moderate Light

Type of test taken (circle one): Pack Test Field Test Walk Test

Work Capacity Test Descriptions:

	Pack Test	Field Test	Walk Test
Pack weight	45 lbs.	25 lbs	None
Distance	3 miles	2 miles	1 mile
Time	45 minutes	30 minutes	16 minutes

To be completed by test administrator:

Test result time:_____

Employee passed test (circle one): Yes / No

I certify that the work capacity test was administered according to agency guidelines.

_____ _____ _____

(Signature of Test Administrator) (Title) (Date)

APPENDIX N
Medical Examination Requirement

Employment Status	Fitness Requirement	Clearance Process	
	Arduous	**IMQS**	**HSQ**
Permanent, Career-Seasonal & TERM	Arduous	**X**	
	Moderate/Light		**X**
Temporary Seasonal	Arduous	**X**	
	Moderate/Light		**X**
AD/EFF Under Age 45	Arduous		**X**
	Moderate/Light		**X**
AD/EFF Age 45 and Older	Arduous	**X** (annual)	
	Moderate/Light		**X**

Note: **IMQS:** Federal Interagency Wildland Firefighter Medical Qualification Standards Examination

Permanent, Career-Seasonal and TERM Employees
- Baseline exam in the first year.
- A "Periodic Exam" every 5th year when under age 45.
- A "Periodic Exam" every 3rd year when age 45 and older.
- An "Annual Exam" in intervening years.
- Exit exam upon retirement or removal/reassignment from arduous level.

Seasonal Employees
- Annual Exam every year when under age 45.
- Periodic Exam at age 45 and every 3rd year thereafter.
- Annual Exam in intervening years when over age 45.

HSQ: Health Screen Questionnaire

Delegation of Authority - Template
_____ Geographic Area
Fire & Aviation Safety Team (FAST)

Situation Summary (Issues and Concerns/ Reason for ordering the FAST)

Objectives (Measurable)

Team Skills Required (Per Objectives listed above.)

The final team composition will be determined at time of dispatch and members named on the resource order.

Mission
The FAST is to conduct an independent assessment and evaluation of operational and managerial activities (related to the specific objectives stated above) at the following locations (mission segments):

The team may determine visits to other incidents/organizations/operations as appropriate, and may do so after coordination with the GMAC.
The FAST will contact the GMAC Coordinator (describe frequency of contact):

The FAST is to provide technical or managerial assistance when requested and where necessary to immediately correct an identified, critical problem. The FAST may also provide short-term assistance in managing situations or incidents when requested by the incident, organization, or operation.

Protocols
The FAST will organize and conduct an entry briefing with the appropriate managers of the locations/incidents identified previously. The entry briefing will provide the objectives and operational parameters of the mission.

Once the mission segment is completed, the FAST will organize and conduct an exit briefing with the same officials or their designees, during which a draft of the mission-segment report will be presented and discussed. Components of this report will include:

- Purpose and Objectives
- Findings, Commendations, and Recommendations
- Follow-up Actions Needed
- Immediate
- Long-term
- Scope [local, area, national]
- Copy of the DoA

The FAST will contact the GMAC Coordinator_____.

FAST will provide a final written report to the GMAC Coordinator upon completion of all mission segments. This report will include:

- FAST Final Report Outline
- Executive Summary
  - Purpose and Objectives
  - Summary (Findings, Recommendations, Commendations, Assistance Provided)
  - Critical and Immediate Follow-up Actions Required
- Introduction
- Methods and Procedures
- Mission Segments (Summary of Incidents, Organizations, Operations Reviewed. Include copies of Mission Segment Reports).
- Analysis
- Findings and Trends, Commendations, and Recommendations
- Follow-up Actions Needed
  - Immediate
  - Long-term
- Scope [local, area, national]
- A copy of the DoA

The _____ Multi-Agency Coordination Group hereby charters and delegates the preceding authority to _____, FAST Leader, effective on _____.

/s/
Chair, _____ Coordinating Group

Date: _____

Annual Operating Plan Elements

Organization
Chain-of-command/table of organization for local agencies and cooperators
Notification process/procedures; Roles/responsibilities, etc.

Dispatch Operations
General information; Dispatcher roles and responsibilities; Dispatcher training and qualifications; Procedures for dispatch of resources off unit.

Daily Duties
Check-in/out of administrative/fire personnel; Intelligence; Weather/briefings; Verify initial attack response levels; Status suppression resources; Preparedness level establishment and verification.

Initial Attack Response Plan Elements
Preplanned dispatch plans, Run-cards, Dispatch procedures
Notification of a reported fire; Procedures for identifying preparedness levels ; Fire weather; Identification of fire danger; Process for assessing the appropriate response; Identification and notification of resources to respond (Local units will establish standard response times for all initial attack resources); Appropriate management notification; Cooperator support and planned response; Communications procedures; Procedures to follow when activity exceeds the initial attack plan; Aviation procedures.

Emergency Operations (Fire/Non-fire)
Notification of a reported incident; Jurisdiction verification; Response plan activation; Agency and area notification; Move-up and cover procedures; Call-back procedures; Evacuation of incident area; Closing public/private roads; Ordering additional personnel, equipment, and aircraft; Fire Weather Watch and Red Flag Warning notification; Temporary Flight Restrictions (TFRs) ; Agency duty officers (roles and responsibilities) ; Aircraft pre-accident plan; Utility company notification (power and gas) ; Law enforcement dispatching procedures/requirements; HazMat/spill response notification procedures; Local government requesting all-risk assistance; Search and Rescue; Identify the incident commander.

Local Agreements
Copies of all interagency or inter-unit agreements and associated annual operating plans that govern the use of fire management resources. Maps delineating areas of responsibility for fire suppression coverage.

Communications
Procedures for assigning/managing local radio frequencies; Procedures for obtaining additional frequencies; maps of repeater sites; instructions for using local dispatch radio consoles, phones, computers, fax machines, paging systems, etc.

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

Fire Danger
Remain aware of locally significant fire danger indices and record those values daily; Update and post monthly the seasonal trends of those values versus seasonal averages.

Information to be provided by Dispatch for Suppression/Support
Resource availability, shortages radio frequencies to be used; burning conditions/fuel types; weather forecast updates; local fire activity; agency policies, etc. For management: fire activity, incident updates, weather updates, resource status.

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

Preparedness Levels
General information relating to the local preparedness plan

- procedures for identifying preparedness level
- notification to management
- dispatching roles and responsibilities at each preparedness level, etc.

Trigger Points
Specific triggers should be incorporated into preparedness plans that cause the preparedness level to move up or down. These triggers could be related to number/size of fires, amount and type of resources available/committed, regional/national fire situation, condition of local fuels, observed fire behavior, human-caused risk or predicted lightning activity level, etc. Specific actions should also be tied to each preparedness level, such as prepositioning of suppression resources (crews, engines, airtankers, smokejumpers, etc.), the activation of local Multi-Agency Coordination (MAC) groups, making contact with other agencies, and hiring of call when needed (CWN) aircraft, emergency equipment rental agreements (EERA), or administratively determined (AD) pay plan crews.

Aviation
Ordering/scheduling requirements and procedures; special use airspace; Special use mission requirements; Incident/accident reporting and documentation procedures; flight management/tracking procedures.

Dispatch Center Staffing Plan
Call-out procedures for additional personnel in emergency situations; designation of duty officer for dispatch center; shift limitations and day off/EFF hiring, etc.

Expanded Dispatch Plan
Indicators for considering establishment of expanded dispatch; recommended organization and points of contact; overhead positions to order; location/facilities; equipment/supplies; support needs; procurement or buying unit team considerations; service and supply plan, etc.

Administrative Items
Funding; travel; time sheets; fire reports, etc.

Accident/Incident
Criteria/definitions; agency notification and documentation requirements; procedures for mobilization of critical incident stress debriefing teams, etc.

Medical Plan
Activation/evacuation information; medical facility locations and phone numbers; air and ground transport (Medivac) capability; burn center information, etc.

Media Plan
General procedures; notification requirements to agency external affairs personnel; routing for media calls.

CRITICAL INCIDENT STRESS MANAGEMENT

Introduction

Critical Incident Stress Management (CISM) provides an organized approach to the management of stress responses for personnel having been exposed to a traumatic event in the line of duty. The use of CISM may decrease post-traumatic stress disorder, acute stress disorder, workman's compensation claims, fatalities, injuries, and suicide. The use of CISM does not prevent an employee from seeking individual consultation through the Employee Assistance Program or a trained Peer Supporter.

Agency Administrator Responsibilities

- **Identification of Event**
  The agency administrator of the unit where the incident occurred is responsible for identifying an event as a critical incident. The agency administrator is the highest ranking line officer, regardless of agency, with direct responsibility for the personnel involved in the incident.
- **Request CISM**
  The agency administrator or designee is responsible for requesting CISM services from the CISM Coordinator as soon as possible after the event. The general accepted method for contacting a CISM Coordinator is through the local dispatch office or appropriate Coordination Center.
- **Provide Information/Pay Codes**
  The agency administrator or designee is responsible for providing the CISM Coordinator with information about the incident (See Supplement 2 in the Great Basin Mobilization Guide). The agency administrator is responsible for providing the CISM Coordinator with a budget code for expenses associated with CISM response.

Local Dispatch Responsibilities

- **Request CISM**
  When the agency administrator has deemed an incident as a Critical Incident, attempt to fill CISM Response resources locally before placing the order at the appropriate Coordination Center.
  In the event the local dispatch center does not have local resources available, an order for a CISM Coordinator (THSP) will be placed with the local GACC within one hour of receiving an order from the agency administrator.
- **Identify a Logistic Support for CISM**
  The local dispatch center will identify a person to work with the CISM Coordinator to provide logistical support such as rooms, office space, etc.

Coordination Center Responsibilities

- **Request CISM**
  Coordination Centers are responsible for contacting the CISM Coordinator and requesting CISM services within 1 hour of receiving the local Dispatch Center order. In the event the CISM Coordinator or qualified CISM Leader from that area is unavailable, the Coordination Center will pass the request on to another center or the National Interagency Coordination Center (NICC).

CISM Coordinator Responsibilities

- Decides on the size and make up of the group.
- Sets time frames for CISM activities with the CISM Leader.
- Provides follow up to the CISM Leader throughout the CISM Groups activities.
- Does an AAR with the CISM Leader at the close of CISM activities.

Definitions

Critical Incident: Any event which has a stressful impact sufficient enough to overwhelm the usually effective coping skills of either an individual or group. Critical incidents are typically sudden, powerful events which are outside the range of ordinary human experiences.

Critical Incident Stress Debriefing (CISD): A structured group meeting that emphasizes venting or show of emotions and other reactions to a critical incident. It also emphasizes educational and informational elements which are of assistance to employees in understanding and dealing with the stress generated by the event. Debriefings generally occur within 24 – 72 hours of the critical incident.

Critical Incident Stress Management (CISM): A wide range of programs and services designed to prevent and mitigate the effects of traumatic stress.

Initial Incident Stress Defusing: This is a shorter and less structured version of a Critical Incident Stress Debriefing (CISD) that usually occurs within a few hours of a critical incident. The main purpose of a Defusing is to stabilize the affected personnel so that they can return to work if necessary or go home without unusual stress. Defusing's allow for initial venting of reactions to the incident and provides stress related information to affected personnel. A Defusing may eliminate the need for a formal CISD or enhance a subsequent CISD.

Individual Crisis Debriefing: One-on-one confidential assistance with any issue by trained peer supporter or mental health professional.

Peer Support: Personnel trained to assist their fellow employees by listening without judgment and maintaining confidentiality. They are also trained in positive coping strategies for stress, and to help others validate their thoughts and emotions about an overwhelming trauma or loss.

The following chart shows the NUS minimum stocking levels required for agency engines.

Category	Item Description	NFES #	Type	
			3, 4, & 5	6
Fire Tools & Equip	McLeod	0296	1	
	Combination Tool	1180	1	1
	Shovel	0171	3	2
	Pulaski	0146	3	2
	Backpack Pump	1149	3	2
	Fusees (case)	0105	1	½
	Foam, concentrate, Class A (5-gallon)	1145	1	1
	Chainsaw (and chaps)		1	1
	Chainsaw Tool Kit	0342	1	1
	Drip Torch	0241	2	1
	Portable Pump		*	*
Medical	First Aid Kit, 10-person	1143	1	1
	Burn Kit		1	1
	Body Fluids Barrier Kit	0640	1	1
General Supplies	Flashlight, general service	0069	1	1
	Chock Blocks		1	1
	Tow Chain or Cable	1856	1	1
	Jack, hydraulic (comply w/GVW)		1	1
	Lug Wrench		1	1
	Pliers, fence		1	1
	Food (48-hour supply)	1842	1	1
	Rags	3309	*	*
	Rope/Cord (feet)		50	50
	Sheeting, plastic, 10’ x 20’	1287	1	1
	Tape, duct	0071	1	1
	Tape, filament (roll)	0222	2	2
	Water (gallon/person) minimum		2	2
	Bolt Cutters		1	1
	Toilet Paper (roll)	0142	*	*
	Cooler or Ice Chest	0557	*	*
	Hand Primer, Mark III	0145	*	*
	Hose Clamp	0046	2	1
	Gaskets (set)		1	1
	Pail, collapsible	0141	1	1
	Hose Reel Crank		*	*

Category	Item Description	NFES #	Type	
			3, 4, & 5	6
Safety	Fire Extinguisher (5 lb)	2143	1	1
	Flagging, Pink (roll)	0566	*	*
	Flagging, Yellow w/Black Stripes (roll)	0267	*	*
	Fuel Safety Can (Type 2 OSHA, metal, 5-gallon)	1291	*	*
	Reflector Set		*	*
Vehicle & Pump Support	General Took Kit (5180-00-177-7033/GSA)		1	1
	Oil, automotive, quart		4	2
	Oil, penetrating, can		1	1
	Oil, automatic transmission, quart		1	1
	Brake Fluid, pint		1	1
	Filter, gas		1	1
	Fan Belts		1	1
	Spark Plugs		1	1
	Hose, air compressor w/adapters		1	0
	Fuses (set)		1	1
	Tire Pressure Gauge		1	1
	Jumper Cables		1	1
	Battery Terminal Cleaner		*	*
	Tape, electrical, plastic	0619	1	1
	Tape, Teflon		1	1
Personal Gear (Extra Supply)	File, mill, bastard	0060	*	*
	Head Lamp	0713	1	1
	Hard Hat	0109	1	1
	Goggles	1024	2	2
	Gloves		*	*
	First Aid Kit, individual	0067	1	1
	Fire Shirt		*	*
	Fire Shelter w/case & liner	0169	2	1
	Packsack	0744	2	1
	Batteries, headlamp (pkg)	0030	6	4
	Ear Plugs (pair)	1027	3	3
Radio	Portable		1	1
	Mobile		1	1
	Batteries (for portable radio)		2	2
Hose	Booster (feet/reel)	1220	100	100
	Suction (length, 8’ or 10’)		2	2
	1” NPSH (feet)	0966	300	300
	1 ½” NH (feet)	0967	300	300
	¾” NH, garden (feet)	1016	300	300
	1 ½” NH, engine protection (feet)		20	20

Category	Item Description	NFES #	Type	
			3, 4, & 5	6
	1 ½" NH, refill (feet)		15	15
Nozzle	Forester, 1" NPSH	0024	3	2
	Adjustable, 1" NPSH	0138	4	2
	Adjustable, 1 ½" NH	0137	5	3
	Adjustable, ¾" NH	0136	4	2
	Foam, ¾" NH	0627	1	1
	Foam 1 ½" NH	0628	1	1
	Mopup Wand	0720	2	1
	Tip, Mopup Wand	0735	4	2
	Tip, Forester, Nozzle, fog	0903	*	*
	Tip, Forester Nozzle, straight stream	0638	*	*
Wye	1" NPSH, Two-Way, Gated	0259	2	1
	1 ½" NH, Two-Way, Gated	0231	4	2
	¾" NH w/Ball Valve, Gated	0739	6	4
Adapter	1" NPSH-F to 1" HN-M	0003	*	*
	1" NH-F to 1" NPSH-M	0004	1	1
	1 ½" NPSH-F to 1 ½" NH-M	0007	1	1
	1 ½" NH-F to 1 ½" NPSH-M	0006	*	*
Increaser	¾" NH-F to 1" NPSH-M	2235	1	1
	1" NPSH-F to 1 ½" NH-M	0416	2	1
Coupling	1" NPSH, Double Female	0710	1	1
	1" NPSH, Double Male	0916	1	1
	1 ½" NH, Double Female	0857	2	2
	1 ½" NH, Double Male	0856	1	1
Reducer/ Adapter	1" NPSH-F to ¾" NH-M	0733	3	3
	1 ½" NH-F to 1 NPSH-M	0010	6	4
	2" NPSH-F to 1 ½" NH-M	0417	*	*
	2 ½" NPSH-F to 1 ½" NH-M	2229	*	*
Reducer	1 ½" NH-F to 1" NH-M	0009	1	1
	2 ½" NH-F to 1 ½" NH-M	2230	1	1
Tee	1" NPSH-F x 1" NPSH-M x 1" NPSH-M, w/cap	2240	2	2
	1 ½" NH-F x 1 ½" NH-M x 1" NPSH-M w/cap	0731	2	2
	1 ½" NH-F x 1 ½" NH-M x 1" NPSH-M w/valve	0230	2	2
Valve	1 ½" NH-F, Automatic Check and Bleeder	0228	1	1
	¾" NH, Shut Off	0738	5	5
	1" Shut Off	1201	1	1
	1 ½" Shut Off	1207	1	1
	Foot, w/strainer		1	1
Injector	1" NPSH x 1/12" NH, Jet Refill	7429	*	*
Wrench	Hydrant, adjustable, 8"	0688	1	1

Category	Item Description	NFES #	Type	
			3, 4, & 5	6
	Spanner, 5", 1" to 1 ½" hose size	0234	4	1
	Spanner, 11", 1 ½" to 2 ½" hose size	0235	2	2
	Pipe, 14"	0934	1	1
	Pipe, 20"		1	1
Engine	Fireline Handbook	0065	1	1
	GPS Unit		1	1
	Belt Weather Kit	1050	1	1
	Binoculars		1	1
	Map Case w/ maps		1	1
	Inventory List		1	1
	Current *Interagency Standards for Fire and Fire Aviation Operations*		1	1
* No minimums – carried by engines as an option, within weight limitations				
NPS – Additional or differing items recommended by NPS				
Fire Tools & Equip[1]	Flapper (NPS)		*	*
	Council Rake (NPS)	1807	*	*
	Leaf blower		*	*
	Shovel	0171	2	1
	Extra Quart, 2 cycle mix		2	1
	Portable Pump		1	*
General Supplies	Chock Blocks		1	1
	Tape, filament (roll)	0222	2	1
	Bolt Cutters		*	*
	Hose Clamp	0046	2	2
Safety	Reflector Set		1	1
Vehicle & Pump Support	Oil, automotive, quart		2	1
	Power steering Fluid		1	1
	Antifreeze (seasonal)		*	*
	Filter, air for engine and pump		*	*
	Filter, oil w/ wrench		*	*
Personal Gear (Extra Supply)	File, mill, bastard	0060	*	*
	Fire Shelter w/case & liner	0169	1	1
	Packsack	0744	2	1
Radio	Batteries (for portable radio)		2	2
Hose	2 ½" Refill Hose, Water tender		*	*
Nozzle	Adjustable, 1 ½" NH	0137	3	3
Wyes	¾" NH w/Ball Valve, Gated	0739	6	2
Coupling	1" NPSH, Double Male	0916	2	1
	1" NH, Double Male	0856	2	2

Category	Item Description	NFES #	Type	
			3, 4, & 5	6
Reducer / Adapter	1" NPSH-F to ¾" NH-M	0733	3	2
	1 ½" NH-F to 1 NPSH-M	0010	6	3
Tee	1" NPSH-F x 1" NPSH-M x 1" NPSH-M, w/cap	2240	2	*
Valve	1 ½" NH-F, Automatic Check and Bleeder	0228	1	*
	¾" NH, Shut Off	0738	4	2
Wrench	Pipe, 20"		1	*
Engine	Accident Forms (Vehicle & Personnel)		1	1
	Compass		1	1

[1] A minimum of eight tools for type 3, 4, 5 engines and a minimum of five tools for type 6 engines is required. The listed numbers of tools in each box are required to be on the engine. Beyond that, the tools listed as optional or additional required tools can make up the rest of the minimum number required for engines.

* No minimums – carried by engines as an option, within weight limitations

WFSA Element Descriptions

Current Situation

This portion of the analysis provides basic information describing the fire situation at the time the analysis was conducted. It is important to clearly describe the situation that occurred at the time the decision was made. Elements to be addressed are:

- **Fire name and number**
- **Date of analysis**
  This is the date on which the current analysis was made. Enter the month, day, and year.
- **Time**
  Enter the time of day the analysis was completed. Enter the 24-hour clock time.
- **Location**
  Use local terminology for point of origin. Include a legal description and latitude and longitude.
- **Fire weather and behavior**
  - **Current** - Briefly discuss the fire weather in terms of temperature, wind, and daily patterns. Describe the fire in non-technical terms, such as creeping, spotting crowning, etc. Discuss the flame lengths, rates of spread, size, etc.
  - **Predicted** - Describe the predicted weather patterns, and fire behavior predictions based on weather, fuels, topography, and the potential size.
- **Resource availability**
  Briefly discuss the availability of suppression resources to control the fire and fire activity at the local and geographic level.
- **Management objectives and constraints**
  The management objectives and constraints should be summarized to assist in the decision process.
- **Social or external considerations**
  Discuss any issues that would contribute to making good suppression decisions.
- **Evaluation Criteria**
  Document the criteria used to evaluate suppression alternatives: Safety (firefighter/public); land and resource management objectives; environmental considerations; social, political, economic considerations; resources availability; local, geographic, and national fire activities; and reinforcement capabilities.
- **Alternatives**
  Produce WFSA alternatives that display a full range of appropriate management response options. All alternatives must be developed with strong emphasis on cost accountability based on the values to be protected, with due consideration given to a minimum cost alternative.

- **Strategy**
  Briefly state the alternative strategies for management of the incident. Use geographic names, locations, etc. Roughly designate each strategy on a map.
- **Management Forces Required**
  Make general estimates with enough detail to help in estimation of costs, determine if resources are available, etc.
- **Estimate Date of Control**
  Estimates for each alternative should be made based on predicted weather and behavior factors, barriers, fuels etc., and the effects of suppression efforts.
- **Estimated Size at Containment**
  Estimates for acreage burned under each alternative should be recorded and displayed on a map.
- **Estimated Cost**
  Estimate total cost of suppression alternative. Include suppression costs and rehabilitation needs. The WFSA will include the least suppression cost option. This option will serve as a way to describe the values to protect and the context surrounding a suppression decision. If the least-cost alternative is not chosen the WFSA will include a written rational for not choosing it. Agency administrators are responsible for financial oversight. This responsibility cannot be delegated.
- **Estimated Probability of Success**
  Based on estimates from 0-100 for each alternative.
- **Analysis of Effects**
  Apply the above evaluation criteria to the alternatives. The results of the analysis will be the basis for selecting the appropriate alternative. The analysis of effects is based on the best estimates on the unit, resource, and fire management. The situation will determine the level of detail required. You may display the effects in dollars, or as positive or negatives, as demonstrated on the example forms. The important thing is to document your decision. Ensure that estimates of potential fire consequences are consistent with resource objectives, values, fire effects, and policy.
- **Record of Decision**
  Agency administrators select an alternative that best implements the objectives and constraints for the management of the area. Agency administrators select the level of management required to successfully implement the selected alternative (Type 1, Type 2, or Type 3 Incident Management Team). Briefly provide rationale for decisions. The WFSA shall become a permanent part of the final fire record. agency administrators are responsible for financial oversight. This responsibility cannot be delegated. See the Table following this section for approval thresholds.

- **Monitoring/Evaluation/Update**
  The WFSA must be reviewed prior to each operational period to determine if the alternative is still valid. The responsible agency administrator must sign the WFSA to document the review.

DOI-Signature Authorities For WFSA Are As Follows:

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

Ten Standard Firefighting Orders

- Keep informed on fire weather conditions and forecasts.
- Know what your fire is doing at all times.
- Base all actions on current and expected behavior of the fire.
- Identify escape routes and safety zones and make them known.
- Post lookouts when there is possible danger.
- Be alert. Keep calm. Think clearly. Act decisively.
- Maintain prompt communications with your forces, your supervisor and adjoining forces.
- Give clear instructions and insure they are understood.
- Maintain control of your forces at all times.
- Fight fire aggressively, having provided for safety first.

18 Watch out Situations

- Fire not scouted and sized up.
- In country not seen in daylight.
- Safety zones and escape routes not identified.
- Unfamiliar with weather and local factors influencing fire behavior.
- Uninformed on strategy, tactics, and hazards.
- Instructions and assignments not clear.
- No communication link with crew members/supervisor.
- Constructing fireline without safe anchor point.
- Building fireline downhill with fire below.
- Attempting frontal assault on fire.
- Unburned fuel between you and fire.
- Cannot see main fire, not in contact with anyone who can.
- On a hillside where rolling material can ignite fuel below.
- Weather is getting hotter and drier.
- Wind increases and/or changes direction.
- Getting frequent spot fires across line.
- Terrain and fuels make escape to safety zones difficult.
- Taking nap near fireline.

Risk Management Process

Step 1 Situation Awareness

Gather Information

- ☐ Objective(s)
- ☐ Communication
- ☐ Who's in Charge
- ☐ Previous Fire Behavior
- ☐ Weather Forecast
- ☐ Local Factors

Scout the Fire

Step 2 Hazard Assessment

Estimate Potential Fire Behavior Hazards

- ☐ Look up/Down/Around Indicators

Identify Tactical Hazards

- ☐ Watch Outs

What other safety hazards exist?

Consider severity vs. probability?

Step 3 Hazard Control

Fire Orders → LCES Checklist – MANDATORY

- ☐ Anchor Point
- ☐ Downhill Checklist (if applicable)

What other controls are necessary?

Step 4 Decision Point

Are controls in place for identified hazards?
NO - Reassess situation YES - Next question

Are selected tactics based on expected fire behavior?
NO - Reassess situation YES - Next question

Have instructions been given and understood?
NO - Reassess situation YES - Initiate action

Step 5 Evaluate

Personnel: Low experience level with local factors?
Distracted from primary tasks?
Fatigue or stress reaction?
Hazardous attitude?

The Situation: What is changing?
Are strategy and tactics working?