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

2010


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Standards for Fire and Fire Aviation Operations

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Release Date: January 2010

NATIONAL INTERAGENCY FIRE CENTER
3833 S. Development Avenue
Boise, Idaho 83705-5354

January 1, 2010

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*

In 2004 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 2010

This document addresses specific action items that are contained in the *2009 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

The *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 2009 *Implementation Strategy for the Federal Wildland Fire Policy* and other existing federal policy.

Purpose

The 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 and with fire operations standards stated in the *NWGC Incident Response Pocket Guide (PMS 461, NFES 1077)* and the *NWCG Fireline Handbook PMS 410-1, NFES 0065).*

2009 Implementation Strategy for the Federal Wildland Fire Policy

The *2009 Implementation Strategy for the Federal Wildland Fire Policy* comprises the following guiding principles and discreet policies. As a whole these 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 (FMP)s, 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. FMPs 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. FMPs 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.

Elements of the Federal Wildland Fire Management Policy

1. Safety

Firefighter and public safety is the first priority. All FMPs 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, the likely consequences on firefighter and public safety and welfare, the natural and cultural resources and the 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 FMPs 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 public communities and community infrastructure, other property and improvements and natural and cultural resources will be done based on the values to be protected, public 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 partners in the wildland urban interface are wildland firefighting, hazard reduction, cooperative prevention, 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 FMP. FMPs are strategic plans that define a program to manage wildland and prescribed fires based on the area's approved land management plan (LMP). 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.

9. Science

FMPs and fire 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 LMPs, FMPs 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-be protected methodologies and public education programs for all fire management activities.

14. Interagency Cooperation and Coordination

Fire management planning, preparedness, prevention, suppression, 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 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 in areas of conflict and identify resource shortages and agency priorities. See *2001 Federal Wildland Fire Management Policy, pages 22-24.*

Guidance for Implementation of Federal Wildland Fire Management Policy

In February, 2009, the Fire Executive Council (the fire directors of the DOI - OWFC, BLM, BIA, USFWS and the USDA- USFS) issued the *Guidance for Implementation of Federal Wildland Fire Management Policy, February 13, 2009*, which was intended to "be used to provide consistent implementation of federal wildland fire policy." The key statements from that document are:

- Wildland fire management agencies will use common standards for all aspects of their fire management programs to facilitate effective collaboration among cooperating agencies.
- Agencies and bureaus will review, update and develop agreements that clarify the jurisdictional inter-relationships and define the roles and responsibilities among local, state, tribal and federal fire protection entities.
- Responses to wildland fire will be coordinated across levels of government regardless of the jurisdiction at the ignition source.
- Fire Management Plans will be intergovernmental in scope and developed on a landscape scale.
- Wildland fire is a general term describing any non-structure fire that occurs in the wildland. Wildland fires are categorized into two distinct types:
  - Wildfires - Unplanned ignitions or prescribed fires that are declared wildfires.
  - Prescribed Fires - Planned ignitions.
- A wildland fire may be concurrently managed for one or more objectives and objectives can change as the fire spreads across the landscape. Objectives are affected by changes in fuels, weather, topography; varying social understanding and tolerance; and involvement of other governmental jurisdictions having different missions and objectives.
- Management response to a wildland fire on federal land is based on objectives established in the applicable Land/Resource Management Plan and/or the Fire Management Plan.
- Initial action on human-caused wildfire will be to suppress the fire at the lowest cost with the fewest negative consequences with respect to firefighter and public safety.
- Managers will use a decision support process to guide and document wildfire management decisions. The process will provide situational assessment, analyze hazards and risk, define implementation actions and document decisions and rationale for those decisions.

See *Guidance for Implementation of Federal Wildland Fire Management Policy, February 13, 2009*, page 7.

Fire Operations Doctrine

Purpose of Fire Operations Doctrine

Fire operations doctrine states the fundamental principles on the subject of fire operations. This 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.

Wildland Fire Operations Risk Management

The primary means by which we prevent accidents in wildland fire operations is through aggressive risk management. Our safety philosophy acknowledges that while the ideal level of risk may be zero, a hazard free work environment is not a reasonable or achievable goal in fire operations. 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 ready 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 conduct fire operations. First and foremost, in order to generate effective decision making in fire operations and to cope with the unpredictable nature of fire, commanders' 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 Leadership

Leadership is the art of influencing people in order to achieve a result. The most essential element for success in the wildland fire service is good leadership. Good leaders provide purpose, direction and motivation for wildland firefighters working to accomplish difficult tasks under dangerous, stressful circumstances. Leaders often face difficult problems to which there are no simple, clear-cut, by-the-book solutions. In these situations, leaders must use their knowledge, skill, experience, education, values and judgment to make decisions and to take or direct action - in short, to provide leadership. All firefighters, regardless of position, must provide leadership.

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 small. When the management goal is full suppression, aggressive initial attack is the single most important method to ensure the safety of firefighters and the public and to limit suppression costs. Aggressive initial attack provides the Incident Commander maximum flexibility in suppression operations. Successful initial 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 provide 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 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.

Professional Liability Insurance

With the signing of Public Law 110-161 on December 26, 2007 temporary fire line managers, in addition to management officials and law enforcement officers, may be reimbursed for up to one half of the cost incurred for professional liability insurance including any administrative processing cost charged by the insurance company. To qualify, these "temporary fire line managers" must meet one of the following three criteria:

- Provide temporary supervision or management of personnel engaged in wildland fire activities;
- Provide analysis or information that affects a supervisor's or manager's decision about a wildland fire;
- Direct the deployment of equipment for a wildland fire, such as a base camp manager, an equipment manager, a helicopter coordinator, or an initial attack dispatcher.

Refer to agency specific policies for reimbursement.

Chapter 02
BLM Wildland Fire and Aviation Program Organization and Responsibilities

Introduction

This chapter 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 chapter will be reviewed and updated annually.

Fire and Aviation

The BLM Fire and Aviation Directorate (FAD) consists of an Assistant Director (AD), Boise Office Deputy Assistant Director (BODAD), Washington Office Deputy Assistant Director (WODAD), Fire Operations Division Chief, Aviation Division Chief, Planning and Resources Division Chief, Support Services Division Chief, Budget and Evaluation Chief, External Affairs Division Chief, National Radio Communication Division Chief, and Equal Employment Opportunity Manager.

Program Manager Responsibilities

Assistant Director, Fire and Aviation (FA-100)

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 BLM 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, BLM.
- 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.

Equal Employment Opportunity Manager (EEO) (FA-102)

- 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 and 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.

Support Services Division Chief (FA 200)

- Manages 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 BLM-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 BLM's Automation/Modernization/ Information Resource Management (IRM) initiatives as they apply to BLM/NIFC.

Fire Operations Division Chief (FA 300)

- Serves as the principal technical expert on fire operations to the Assistant Director, Deputy Assistant Director (FA) and to the BLM State Fire Programs.
- Provides the Assistant Director and the Deputy Assistant Director (FA) 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 Assistant Director and Deputy Assistant Director (FA), 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.
- Develops and implements safety programs, accident investigation procedures, and safety trend analyses.

Budget and Evaluation Division Chief (FA 400)

- Serves as principal budget advisor of the Wildland Fire program to the Assistant Director (WO 400), Deputy Assistant Director (FA 100), BLM Fire Leadership Team, and to other BLM staffs.
- Serves as primary BLM representative in the DOI Wildland Fire Budget formulation and execution process.

- Represents BLM on the DOI Fire Budget team and at other interagency meetings in regards to budget related policies, requirements, procedures, and reports.
- Coordinates all budget activities between Washington Office, Office of Wildland Fire Coordination, and Fire and Aviation.
- Provides national oversight for BLM Wildland Fire program budget formulation, justification, and execution. Responsible for the development and preparation of the Budget Justifications, Planning Target Allocation, Annual Work Plan, capability statements, effects statements, and Congressional responses.
- Reviews NIFC offices at mid-year, third quarter and end-of-year and distributes available funding in accordance with BLM policy.
- Provides oversight of Casual Payment Center. Ensures all DOI casual payments are processed in a timely and cost-effective manner adhering to procedures and practices set forth by the DOI agencies.

Aviation Division Chief (FA 500)

- Serves as principal aviation advisor to the Assistant Director, Deputy Assistant Director (FA), 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 missions for incorporation into the directives system.
- Coordinates aviation-related activities and services between the Washington Office (WO), and states with other wildland firefighting, regulatory, investigative, and military agencies.
- 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 and reports, 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 Division Chief (FA 600)

- 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 BLM'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 BLM'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 Bureauwide 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.

External Affairs Division Chief (FA 700)

- 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 Accountability 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 NIFC.
- 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 Assistant Director, 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 Assistant Director, 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.

- Coordinate with legislative affairs on proposed legislation regarding FA.

National Radio Communications Division (WO-410)

- The National Radio Communications Division (NRCD) provides national leadership and policy development for national level cooperative agreements and memorandums of understanding with cooperators and partners to achieve radio interoperability, system sharing, and other areas of mutual interest.
- Provides support regarding the national radio contracts (GSA, DOI, etc.) to evaluate conventional P-25 radio equipment requirements.
- Coordinates national level interagency sharing initiatives and develops long term national overarching radio system plans to share radio backbone and mountaintop facilities, frequencies and equipment with federal, state and local cooperators. Process radio frequency authorizations (RFAs), and performs 5-year radio frequency reviews to ensure compatible operation and optimal use of the limited frequency spectrum resources.
- Leads/participates in meetings and represent the Bureau's radio interests with established federal, state, and local technical advisory groups. Manage Bureau-wide radio equipment tracking systems, life cycle replacement planning, and equipment replacement budget procedures.
- Develops national policies and guidance for the BLM related to OSHA and other federal laws and standards. Utilizes the BLM CASHE Audit program to ensure communication site inspections and facility assessments are conducted every five years in coordination with WO-360. Leads the development of national training programs concerned with the standardization, control, operation, testing and repair of communications programs.
- Responsible for reviews and investigation or reports related to safety issues with radio equipment. Works with the National Safety Manager (WO-740) in establishing radio related safety training. Develops safety handbooks and leads risk assessments analysis associated with the National Radio Communications Program.
- Responsible for radio telecommunication systems security and ensures strong security encryption needs are established.

State Director

The State Director is responsible for fire management programs and activities within the state. The State Director will meet the required elements outlined in the *Interagency Fire Program Management Qualifications Standards and Guide* at: http://www.ifpm.nifc.gov/default.htm 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	State Director /Associate	District/ Field Manager
1. Ensures the 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
2. Develops fire prevention, fire suppression, and fire use standards that are compliant with agency fire policies.	X	X
3. Ensures use of fire funds is in compliance with department and agency policies.	X	X
4. Ensures incident responses will be based on current and approved Resource Management Plans (RMP) and FMPs.	X	X
5. Attends the Fire Management Leadership Course. Ensures that personnel delegated fire program responsibilities have completed the Fire Management Leadership Course.		X
6. Ensure Wildland Fire Decision Support System (WFDSS) are certified at the appropriate level.	X	X
7. Provides a written Delegation of Authority to FMOs that gives them an adequate level of operational authority. If fire management responsibilities are zoned, ensures that all appropriate Agency administrators have signed the delegation.	X	X
8. Ensures only trained, certified fire and non-fire personnel are available to support fire operations at the local and national level.	X	X
9. Ensures master agreements with cooperators are valid and in compliance with agency policy, and that attached Annual Operating Plans are current.	X	X

PERFORMANCE REQUIRED	State Director /Associate	District/ Field Manager
10. Personally visits at least one wildland and one prescribed fire each year.		**X**
11. Annually convenes and participates in pre-and post season fire meetings.	**X**	**X**
12. Reviews critical operations and safety policies and procedures with fire and fire aviation personnel.	**X**	**X**
13. Ensures timely follow-up to fire management program reviews.	**X**	**X**
14. Ensures fire and fire aviation preparedness reviews are conducted annually in all unit offices. Participates in at least one review annually.	**X**	**X**
15. Ensures investigations are conducted for incidents with potential, entrapments, and serious accidents as per the standards in Chapter 18.	**X**	**X**
16. Provides a written delegation of authority, Wildland Fire Decision Support System (WFDSS) and an Agency Administrator Briefing to Incident Management Teams.		**X**
17. Ensures resource advisors are identified, trained and available for incident assignment. Refer to *Resource Advisors Guide for Wildland Fire PMS 313, NFES 1831, Jan 2004.*		**X**
18. Attends post fire closeout on Type 1 and Type 2 fires. (Attendance may be delegated.)		**X**
19. Ensures 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**
20. Ensures compliance with National and State Office policy for prescribed fire activities. Provides periodic reviews of the prescribed fire program.	**X**	**X**
21. Ensures Prescribed Fire Plans are approved and meet agency policies.	**X**	**X**
22. Ensures the Prescribed Fire Plan has been reviewed and recommended by a qualified technical reviewer who was not involved in the plan preparation.		**X**

PERFORMANCE REQUIRED	State Director /Associate	District/ Field Manager
23. Ensures a policy has been established to review and sign the go/no go checklist.		X
24. Ensures Unit Safety Program is in place, has a current plan, has an active safety committee that includes the fire program.	X	X
25. Annually updates and reviews the *Agency Administrator's Guide to Critical Incident Management* www.nwcg.gov	X	X
26. Ensures current fire and weather information is posted (hardcopy, web etc) and available for all employees.		X

State Fire Management Officer (SFMO)

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 Fire Management Officer District

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.

Post Incident Review

Appendix B the *Managers Supplement for Post Incident 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.

Fire Training for 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 Staff Performance Requirements for Fire Operations

PERFORMANCE REQUIRED	State FMO	District/ Zone/Field Office FMO
1. Establishes and manages a safe, effective, and efficient fire program.	X	X
2. Ensures the fire program is funded and managed to provide safe, effective, fire management activities.	X	X
3. Ensures 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.	X	X
4. Ensures only trained and qualified personnel are assigned to fire and fire aviation duties.	X	X
5. Ensures the unit safety program is implemented and provides direction for fire and non fire safety regulations, training and concerns.	X	X

PERFORMANCE REQUIRED	State FMO	District/ Zone/Field Office FMO
6. Ensures completion of a Job Hazard Analysis (JHA)/Risk Assessment for fire and fire aviation activities, and non fire activities so mitigation measures are taken to reduce risk.		**X**
7. Ensures compliance with work/rest guidelines during all fire and fire aviation activities.	**X**	**X**
8. Ensures fire and fire aviation management employees understand their role, responsibilities, authority, and accountability.	**X**	**X**
9. Organizes, trains, equips, and directs a qualified work force.	**X**	**X**
10. Establishes and implements a post incident assignment performance review process for each employee.	**X**	**X**
11. Develops, implements, evaluates, and documents fire and fire aviation training to meet current and anticipated needs.	**X**	**X**
12. Ensures fire and fire aviation policies are understood, implemented, and coordinated with other agencies as appropriate.	**X**	**X**
13. Monitors fire suppression activities to recognize when complexity levels exceed program capabilities. Increases managerial and operational resources to meet the need.	**X**	**X**
14. Monitors fire season severity predictions, fire behavior, and fire activity levels. Ensures fire severity funding is requested in a timely manner, used, and documented in accordance with agency standards.	**X**	**X**
15. Ensures master agreements with cooperators are valid and in compliance with agency policy, and that attached Annual Operating Plans are current.	**X**	**X**
16. Develops, maintains and implements current operational plans. (e.g., dispatch, preparedness, prevention).		**X**
17. Develops, maintains, and implements restrictions procedures in coordination with cooperators whenever possible.	**X**	**X**

PERFORMANCE REQUIRED	State FMO	District/ Zone/Field Office FMO
18. Ensures that the use of fire funds, complies with department and agency policies.	X	X
19. Reviews and approves appropriate overtime authorization requests for personnel providing fire suppression coverage during holidays, special events, and abnormal fire conditions.		X
20. Ensures a process is established to communicate fire info to public, media, and cooperators.	X	X
21. Annually convenes and participates in pre-and post season fire meetings where management controls and critical safety issues are discussed.	X	X
22. Oversees pre-season preparedness review of fire and fire aviation program.	X	X
23. Initiates, conducts, and/or participates in fire program management reviews and investigations.	X	X
24. Personally participates in periodic site visits to individual incidents and projects.		X
25. Utilizes the Incident Complexity Analysis appendix F & G to ensure the proper level of management is assigned to all incidents.	X	X
26. Ensures that transfer of command occurs as per appendix D on incidents.		X
27. Ensures incoming personnel and crews are briefed prior to fire and fire aviation assignments.		X
28. Ensures an accurate and defensible Wildland Fire Decision Support System (WFDSS) is completed and updated daily for all fires that escape initial attack.	X	X
29. Ensures a WFDSS is completed, approved, and certified daily for all fires managed for multiple objectives.	X	X
30. 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

PERFORMANCE REQUIRED	State FMO	District/ Zone/Field Office FMO
31. Ensures 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.	X	X
32. Ensures required unit personnel are trained in fire cause determination and fire trespass.	X	X
33. Ensures compliance with National and State Office policy for prescribed fire activities. Provides periodic reviews of the prescribed fire program.	X	X
34. Annually updates and reviews the *Agency Administrator's Guide to Critical Incident Management*.	X	X
35. Ensures 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
36. Ensures standards in current National and Local Mobilization Guides are followed.	X	X
37. Complies with established property control/management procedures.	X	X

Delegation of Authority

Delegation for State Fire Management Officers (SFMO)

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 and Health Program

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 to support the fire and aviation management program, the following checklist shall be utilized.

Safety and Health Responsibilities to the Fire Program

PERFORMANCE REQUIRED	State Safety Manager	District/ Zone Safety Manager	Unit FMO	Field Manager
1. An annual Unit Safety and Health Action Plan is developed, approved and signed by unit agency administrator. This plan outlines courses of action to improve the unit's safety program and is based upon an assessment of what is needed to make the safety program fully functional.		**X**	**X**	**X**

PERFORMANCE REQUIRED	State Safety Manager	District/ Zone Safety Manager	Unit FMO	Field Manager
2. Risk assessments (RAs) are completed for non-suppression related fire activities. JHAs/RAs are completed for suppression related activities and crews are briefed on JHA/RA prior to beginning work.			**X**	**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**	**X**
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**	**X**

PERFORMANCE REQUIRED	State Safety Manager	District/ Zone Safety Manager	Unit FMO	Field Manager
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*).				
10. Assures that risk management process is integrated into all major policies, management decisions, and the planning and performance of every job. *BLM Manual 1112 Safety*			**X**	
11. Procedures are in place to monitor Work Capacity Test (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**	

PERFORMANCE REQUIRED	State Safety Manager	District/ Zone Safety Manager	Unit FMO	Field Manager
13. 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**
14. Personal Protective Equipment (PPE) supplied, is serviceable, and being utilized.		**X**	**X**	
15. Ensures tailgate safety meetings are held and documented.			**X**	
16. Monitors and inspects operations and work sites for unsafe acts and conditions and promptly takes appropriate preventative and corrective measures. *BLM Manual 1112 Safety.*				
17. Procedures are in place for reporting unsafe and unhealthful working conditions.		**X**		**X**

PERFORMANCE REQUIRED	State Safety Manager	District/ Zone Safety Manager	Unit FMO	Field Manager
18. Promptly reports and investigates all job-related accidents/incidents that result in or have the potential to cause fatalities, injuries, illnesses, property or environmental damage. All such reports are electronically submitted to the Safety Management Information System (SMIS). *BLM Manual 1112 Safety*			**X**	**X**
19. Injury data is monitored and reviewed to determine trends affecting the health and welfare of employees.		**X**		**X**
20. Ensures facility and work areas inspections are conducted to ensure requirements are met. *29 CFR 1960* and *485 DM, Chapter 5 requirements*.	**X**	**X**		**X**

Employee Safety and Health Program Responsibility

All employees have personal responsibility to ensure safe and healthful work practices and the following elements specifically outline these responsibilities:

- Complying with applicable work rules, practices, and procedures.
- Using safety devices, personal protective equipment, clothing, and other means provided or directed by recognized authority at all times when necessary for their protection.
- Reporting unsafe and unhealthful working conditions to management.
- Reporting every job-related accident/incident to their supervisor that results in, or has the potential to harm people, property, or the environment.

- Reporting personal conditions that could adversely affect their ability to perform in a safe and healthful manner on the job.

Employee Responsibility

All employees, cooperators, contractors, and volunteers who participate in wildland fire operations have the duty to treat each other 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.

BLM Mobile Fire Equipment Policy

Introduction

The following section represents a general overview of the BLM Mobile Fire Equipment Policy. The policy can be found in it's entirety on the BLM National Fire Equipment Program (NFEP) Website at:
http://web.blm.gov/internal/fire/EquipDev/index.htm

Policy and Guidance

The BLM fire equipment program includes the design, development, and acquisition of specialized wildland fire equipment suitable to meet the full range of fire management requirements. The design and development is accomplished through the analysis of performance needs required by BLM Field Units, and working with industry to produce prototypes for testing and eventually production units. Acquisition of equipment is accomplished primarily through contracting. The BLM fire equipment program balances advanced technology with overall cost efficiency to provide maximum safety for personnel while effectively meeting its fire management needs.

It is agency policy to maintain each piece of 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 damaged while on assignment, and in accordance with all agency fiscal requirements. Repairs shall be made, as identified, to keep the equipment functional and in top operating condition.
BLM mobile fire equipment is not to be altered or modified without approval of the BLM National Fire Equipment Committee.

Equipment Groups

There are three levels of Fire Equipment Committees: National, State, and Interagency. Fire equipment committees address the broad spectrum of equipment subjects and make recommendations. State committees will report to the respective State Fire Management Officer. The National Fire Equipment Committee (NFEC) and the BLM Engine Committee report to the Fire Operations Group (FOG). Equipment committees should invite other agency equipment leads to share ideas, transfer technology and coordinate efforts.

Equipment Development

The BLM National Fire Equipment Program (NFEP) has established a fire equipment development process to ensure that new fire equipment or technologies meet or exceed established performance standards. All new fire equipment will follow this development process and will be tested and evaluated under actual field conditions prior to being made available for general ordering.

BLM National Fire Equipment Program (NFEP)

The BLM National Fire Equipment Program (NFEP) located at NIFC. This unit is responsible for the development, ordering, inspection, receiving and distribution of new fire equipment that will meet or exceed the minimum performance standards established by the BLM National Fire Equipment Committee and the BLM Engine Committee. The NFEP website is located at: http://web.blm.gov/internal/fire/EquipDev/index.htm.

Standardization

Standardization of fire equipment aides in the ability to produce equipment that effectively meets the Bureaus mission by providing cost effective equipment at the lowest possible cost with the least impact on fire programs. Standardization also contributes to the ability to provide effective, consistent and quality training to the BLM Fire Program workforce. The BLM National Fire Equipment Committee and Engine Committee have the responsibility to approve establish and approve the minimum performance standards for all BLM specific fire equipment.

Deficiency Reporting

The BLM Fire Equipment Improvement/Deficiency Reporting System is used to collect improvement suggestions and deficiency reports for all BLM fire equipment. The reporting system enables the BLM National Fire Equipment Program (NFEP) to build a comprehensive database to document problems, identify trends, and establish priorities for development and modification of new and existing equipment.

Field Offices submit reports for problems encountered with BLM fire equipment. Reports may also be submitted for suggestions of improvement. Submitted reports receive immediate attention and the sender receives verification of receipt. The NFEP will follow-up with the submitting Field Office to correct the deficiency or work to incorporate the improvement suggestion. The Improvement/Deficiency Reporting System can be found on the BLM National Fire Equipment Program Website at: http://web.blm.gov/internal/fire/EquipDev/index.htm.

Acquisition of Working Capitol Fund Equipment

The National Operation Center (NOC) located in Denver manages the Working Capital Fund (WCF). Each class of vehicle has an established replacement cycle based on miles or hours, vehicle replacement costs and residual value. The WCF acquires funds through Fixed Ownership and Use Rates determined by the replacement cycle. At the end of the replacement cycle adequate funds to replace the vehicle are available. In the event that a new purchase is made, funds are acquired/secured by the receiving unit and the new purchase is added to the WCF. The NOC monitors and determines when vehicles shall be replaced and notifies the NFEP. The NFEP then coordinates with the receiving unit to order

the replacement vehicle. Once the order is placed the NFEP works with the WCF, the receiving unit, the WCF, contracting, the vendor to fill the order.

Funding

Procurement of nonstandard equipment with fire management funds, when standard equipment is available, must have written approval by the Operations Division Chief of the BLM Fire and Aviation Directorate and the State Fire Management Officer. Most fire vehicles are funded through the WCF. Other types of fire equipment are funded through the normal budget process at the State and local level. Special projects may be funded in a variety of ways including through the Fire and Aviation Directorate, special project allocations, available mid or year end funds, State or local funding, Interagency agreement, or through the WCF.

BLM Fire Equipment Ordering Guide

The BLM Fire Equipment Ordering Guide lists standard fire equipment, outside the cache system, that is available for ordering by BLM units. This equipment has been approved by the NFEP, NFEC and WCF as the current standard. The guide contains current model fire apparatus, support vehicles, and equipment. The guide can be found on the National Fire Equipment Program website at: http://web.blm.gov/internal/fire/EquipDev/index.htm.

Equipment Modification/Retrofitting

Any major retrofit, change or addition to BLM fire equipment requires submission of a proposal to the BLM National Fire Equipment Committee (NFEC). The NFEC in conjunction with the BLM National Fire Equipment Program will consider and approve/disapprove any such proposals. Minor changes or add-ons may be approved through the NFEP.

Working Capital Fund

The BLM Working Capital Fund (WCF) is managed by the BLM Vehicle Fleet Manager at the Denver Service Center. Replacement of fire vehicles that have reached the end of their service life and certain maintenance expenditures are managed through the WCF. Vehicle replacement and maintenance is accomplished with funds that are paid into the WCF over the life of the vehicle. The WCF collects funds through Fixed Ownership Rates (FOR) and Use Rates.

Property Transfer/Replacement

Surplus, early turn-ins, and transfer fire vehicles may be transferred to another area for continued service with the approval of the State Fire Management Officer and the WCF 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 for the FOR

collected on that unit prior to disposal. Field offices acquiring this type of equipment continue payment of the FOR and use rates.

Conversions

Offices requesting to convert replacement fire equipment to a different class of equipment must follow and provide the following criteria and documentation: Proposed changes meet current and future preparedness requirements identified in RMPs/FMPs/FPA. Proposed changes result in an overall cost savings to the government (replacement of 2 Type 6 engines for 1 Type 4 engine).

This documentation will require signature by. The requesting State Director and State FMO, the Operations Division Chief at BLM Fire & Aviation Directorate, and the WCF Manager for final approval.

If any proposed changes in equipment result in additional overall costs to the government documentation must include increased production rates which may offset additional costs and the requesting states availability of sufficient funds to cover additional costs.

Incident Business

Administrative guidance related to payroll operations, hiring authorities, ESF#4, fire contracting, cost reviews, etc can be found on the BLM Fire & Aviation web site at: http://web.blm.gov/internal/fire/budget/index.html

BLM Firefighter Organization

Introduction

Firefighters operate within the Incident Command System (ICS), which is a component of the National Interagency Incident Management System (NIIMS). In the ICS, firefighters are either assigned as single resource overhead (individuals assigned to specific supervisory positions) or as members of an organized unit. These units include:

- **Hand Crews -** Vehicle mobile firefighters that specialize in the use of hand tools, chainsaws, portable pumps and ignition devices for tactical operations. Hand crew types include Interagency Hotshot Crews (IHC)s, Type 2 Initial Attack Crews, and Type 2 Crews.
- **Engine Crews -** Engine mobile firefighters that specialize in the use of engines for tactical operations.
- **Helitack -** Helicopter mobile firefighters that specialize in the use of helicopters for tactical and logistical operations.
- **Smokejumpers -** Fixed wing aircraft and parachute mobile firefighters that specialize in the use hand tools, chainsaws, and ignition devices for tactical operations.

The individuals within these units are trained to provide different levels and types of tactical, logistical, and managerial capability.

BLM Firefighter Priority for Use

- Initial attack on lands for which the BLM has suppression responsibility.
- Other fire suppression/management assignments on BLM lands.
- Other fire suppression/management assignments on other agency lands.
- All Hazard - ESF#4 reference: http://web.blm.gov/internal/fire/budget/Reference_docs/esf4/ESF4_page.htm

BLM Prepositioning Details

When BLM units require management or suppression resources to support their local fire programs they are encouraged to request prepositioning of appropriate resources early. These prepositioning details are for all BLM personnel and suppression resources. Reasons to consider management or operational support may include:

- Improve BLM initial attack capability in areas of peak fire danger.
- Provide BLM employees training opportunities with different BLM management offices.
- Provide oversight for efficient utilization of BLM resources to support BLM fire management priorities.
- Provide management support to maintain adequate span of control for both management and suppression activities.

BLM prepositioning details will be implemented using the following process:

- Unit fire management identifies the need for support and notifies their state fire managers.
- The requesting State FOG representative, in conjunction with their local fire management, will determine the need, location, and timeframes for management and suppression resources assistance, based on current and expected state fire activity.
- The requesting State FOG representative, will contact fellow Fire Operations Group (FOG) members to find qualified resources available to fill their needs.
- When resources are identified:
  - The requesting State FOG representative will electronically sign and email a *BLM Detail Request Form,* found at: http://web.blm.gov/internal/fire/fire_ops/index.html, to the identified resources home state (sending) S-AFMO.
  - On the date specified in the *BLM Detail Request Form* the requesting State FOG representative places a name request order for the specified asset through normal coordination system channels.
  - IHC details require signature from a representative of the FAD Fire Operations Group.

BLM resources filling these details will be assigned to a home unit within the requesting state by the requesting state FOG representative. With agreement of

the resource, sending state FOG representative, and requesting State FOG representative these resources can manage fatigue and meet tour of duty requirements by taking mandated days off in the requesting state.

BLM Firefighters General Non-Fire Training Requirements

	Training Required	Initial Requirement/Frequency
Agency Permanent, Career Seasonal, & Temporary Firefighters	Safety Orientation	Once
	Bloodborne Pathogens	Annually: For employees at increased risk due to assigned duties (e.g. IHC, Helitack, SMJ, Engine Crew) Once: Awareness level. For employees not at increased risk (e.g. non-fireline support personnel)
	Defensive Driving	Prior to operating motor vehicle for official purposes. Once every three years
	First Aid/Cardiopulmonary Resuscitation (CPR)	Upon initial employment. Every 3 years or per certifying authority.
	HAZMAT - First Responder Awareness Level	Upon initial employment. Annually.
	Do What's Right/EEO	Annually.
	Training Required	**Frequency**
Administratively Determined (AD) and Emergency Firefighters (EFF)	Defensive Driving (If operating GOV, including rental or leased, vehicle for official purposes, prior to operating vehicle).	Once every three years.
	First Aid/Cardiopulmonary Resuscitation (CPR)	Upon initial employment. Every 3 years or per certifying authority. At least two persons per crew (GS or AD) shall be current and certified in First Aid/CPR

For a complete listing of safety & health training - refer to *BLM Manual Handbook 1112-2, Safety and Health for Field Operations.*

BLM Firefighter Mandatory Physical Fitness Standards

The *Wildland Fire Qualifications System Guide* (PMS 310-1) establishes physical fitness standards for NWCG sanctioned firefighters. These standards are assessed using the Work Capacity Tests (WCT). Prior to attempting the WCT, all permanent, career-seasonal, temporary, Student Career Experience Program (SCEP), and AD/EFF employees who participate in wildland fire activities requiring a fitness level of arduous must participate in the Medical Qualification Standards Program (MSP). Information on the WCT and the MSP is located in Chapter 13 of this publication. Fitness and conditioning information may be found at www.nifc.gov/FireFit/index.htm

BLM Firefighter Target Physical Fitness Standards

These are voluntary targets. They are not mandatory. These targets are established to provide BLM firefighters a common standard against which to gauge their physical fitness level. BLM firefighters are encouraged to meet or exceed these standards.

	Age 20-29	Age 30-39	Age 40-49	Age 50 & Up
1.5 Mile Run	11:58	12:25	13:05	14:43
Sit-Ups (1 minute)	40	36	31	26
Push-Ups (1 minute)	33	27	21	15

The guide below may be used to adjust the 1.5 mile run times to compensate for altitude differences:

Altitude in feet	1.5 mile run time adjustment
0 - 5,000	No adjustment
5,000 - 6,000	Add 30 seconds
6,000 - 7,000	Add 40 seconds
7,000 - 8,000	Add 50 seconds

BLM National Fire Operations Fitness Challenge

The BLM national fire operations fitness challenge encourages and recognizes achievement in physical fitness by BLM firefighters. The fitness challenge provides a common system by which BLM firefighters can measure current fitness, establish fitness goals, and track fitness improvement. The fitness challenge is voluntary, but BLM firefighters are encouraged to participate. The fitness challenge tests participants in four basic exercises - push-ups, pull-ups, sit-ups and a timed run of either 1.5 or 3.0 miles. Test results are compiled into a final overall score. Unit and state offices are encouraged to support and recognize achievement in firefighter fitness. The BLM FA Division of Fire Operations will recognize high achievers annually. Specific information on the fitness challenge is located at:
www.blm.gov/nifc/st/en/prog/fire/fireops/fitness_challenge.html**.**

BLM Hand Crew Standards (all crew types)

- **Language -** CRWB and FFT1: must be able to read and interpret the language of the crew as well as English.
- **Flight Weight -** 5100 pounds
- **Personal gear -** Sufficient for 14 day assignments
- **Physical fitness -** Arduous, all positions
- **Required Equipment & PPE -** Fully equipped as specified in the: *Interagency Standards for Fire and Fire Aviation Operations.*

BLM Crew Standards by Type

Crew Type	Type 1	Type 2IA	Type 2
Crew Size	Minimum 18 Maximum 25	Minimum 18 Maximum 20	Minimum 18 Maximum 20
Leadership Qualifications	1-Supt. 1-Assist Supt 3 Squad Leaders	1 CRWB 3 ICT5	1 CRWB 3 FFT1
Incident Management Capability	Operate up to 3 independent squads w/ T4 and T5 command capability	Operate up to 3 independent squads with T5 command capability	Operate as single crew in full crew configuration
Crew Experience	80% of the crewmembers must have at least 1 season experience in fire suppression	60% of the crewmembers must have at least 1 season experience in fire suppression	Meets leadership qualification listed above
Crew Utilization	National Shared Resource	Local unit control	Local unit control
Communication	7 programmable handheld radios. 1programmable mobile radio in each truck	4 programmable handheld radios	4 programmable handheld radios
Training	40 hours annual training prior to assignment.	40 hours Basic firefighter training or once red carded; 4 hours annual fireline fresher training prior to assignment.	40 hours Basic firefighter training or once red carded; 4 hours annual fireline fresher training prior to assignment.
Logistics	Squad level agency purchasing authority	Crew level agency purchasing authority	No purchasing authority
Transportation	Own transportation	Need transportation	Need transportation
Works together 40 hours/week	Yes	No	No

BLM Interagency Hotshot Crews

BLM IHCs, carry 18-25 firefighters and are used primarily for wildfire suppression, fuels reduction, and other fire management duties. They are capable of performing self-contained initial attack suppression operations, and commonly provide incident management capability at the Type 3 or 4 levels. BLM IHCs, meet all IHC standards stated in the *Standards for Interagency Hotshot Crew Operations.*

BLM IHC Annual Crew Mobilization

BLM IHCs will comply with the Annual Crew Pre-Mobilization Process outlined in the *Standards for Interagency Hotshot Crew Operations* before becoming available for assignment each spring. BLM specific direction is outlined below:

- The superintendent will complete an appendix C from the *Standards for Interagency Hotshot Crew Operations* with their local FMO and agency administrator.
- A copy of Appendix C will be sent to the BLM State Fire Management Officer for approval.
  - The extent of the preparedness review required every 12 months will be at the discretion of the State Fire Management Officer, local Fire Management Officer, and crew superintendent.

The State Fire Management Officer will notify the local GACC of crew availability.

BLM IHC Crew Status

If a change in crew capabilities results in the *National Interagency Hotshot Crew Operations Guide* or *Standards for Fire and Fire Aviation Operations* not being met, the superintendent is required to contact their local GACG and have the crew typing amended to the appropriate level as listed in the BLM crew typing chart.

Re-statusing the crew back to the IHC level will use ether the Annual Crew Pre-Mobilization Process outlined in the *Standards for Interagency Hotshot Crew Operations* or the Crew Certification Process outlined in the *Standards for Interagency Hotshot Crew Operations.* The choice of which process will be at the discretion of the State Fire Management Officer, local Fire Management Officer, and crew superintendent.

BLM IHC Crew Size

BLM IHCs have the local unit option of traveling with 25 personnel when on incident assignments. BLM IHC superintendents will obtain prior approval from the dispatching GACC when the assignment requires fixed wing transport and the crew size is greater than 20.

BLM IHC Status Reporting System

- BLM IHCs will report status through the BLM IHC Status Reporting System.
- BLM IHC superintendents will regularly update the system by contacting the BOI SMKJ Duty Officer with any change in crew status and/or current utilization when on assignment.
- The BOI SMKJ Duty Officer is available 24 hours, seven days per week at
  - 800-925-8307 (work hours)
  - 208-387-5426 (work hours)
  - 208-850-5144 (after hours)
- BLM IHC status will be posted at http://www.nifc.gov/smokejumper/smjrpt.php.

BLM IHC Training and Qualification Requirements

Position	NWCG Qualification	Fire Training
Firefighter	FFT2	I-100 Intro to ICS S-130 Firefighter Training S-190 Intro to Wildland Fire Behavior L-180 Human Factors on the Fireline
Senior Firefighter	FFT1	All the above plus: S-211 Portable Pumps and Water Use S-212 Chain Saws S-131 Firefighter Type 1 S-133 Look Up, Look Down, Look Around S-270 Basic Air Operations
Squad Boss	ICT5	All the above plus: I-200 Basic ICS S-215 Fire Ops in the WUI S-230 Crew Boss Single Resource S-234 Ignition Operations S-260 Incident Business Management S-290 Intermediate Fire Behavior L-280 Followership to Leadership
Assistant Superintendent	STCR ICT4	All the above plus: I-300 Intermediate ICS S-200 Initial Attack IC S-330 Task Force/Strike Team Leader S-390 Intro to Fire Behavior Calculations L-380 Fireline Leadership M-410 Facilitative Instructor or equivalent
Superintendent	TFLD ICT4 FIRB	All the above.

BLM IHC Locations

State	Crew	Location
AK	Chena	Fairbanks
	Midnight Sun	
CA	Diamond Mountain	Susanville
	Kern Valley	Bakersfield
ID	Snake River	Pocatello
MS	Jackson	Jackson
NV	Silver State	Carson City
OR	Vale	Vale
CO	Craig	Craig
NV	Ruby Mountain	Elko
UT	Bonneville	Salt Lake City

BLM Engines

BLM engines carry 2-6 firefighters and are used primarily for wildfire suppression, fuels reduction, and other fire management duties. They are capable of performing self-contained initial attack suppression operations, and can generally provide single resource incident management capability up to the Type 4 level.

BLM Engine Equipment Inventory

BLM engines will be stocked as per the BLM National Engine Equipment Inventory found at: http://web.blm.gov/internal/fire/EquipDev/index.htm

Fire Engine Maintenance Procedure and Record (FEMPR)

The FEMPR will be used to document periodic maintenance on all engines. Apparatus safety and operational inspections will be performed at the intervals recommended by the manufacturer and on a daily and post-fire basis as required. All annual inspections will include a pump gpm test to ensure the pump/ plumbing system is operating at desired specifications. Fire Engine Maintenance Procedure and Record (FEMPR) shall be maintained and archived to record historic engine maintenance for the duration of the vehicles service life. This historic data is beneficial in determining trends, repair frequency and repair costs. The FEMPR can be found at: http://www.blm.gov/nifc/st/en/prog/fire/training/fire_training/projects/engine_training/enop.html.

BLM Engine Ordering

- BLM engines will status themselves with their local dispatch center in accordance with local policy and procedure.
- Availability of BLM engines for off unit assignments rests with local unit fire management.
- BLM units needing engines from off their own unit for support will contact their state operations with a request.
- State operations will contact the FA or other BLM state office operations with the request.

BLM Engine Typing

BLM engines are typed according to the following interagency standards stated in the *NWCG Fireline Handbook (PMS 410-1):*

Components	Structure Engines		Wildland Engines				
	1	**2**	**3**	**4**	**5**	**6**	**7**
Pump Rating							
Min. Flow (GPM)	1000+	250+	150	50	50	30	10
At rated pressure (PSI)	150	150	250	100	100	100	100
Tank Capacity Range (Gallons)	400+	400+	500+	750+	400-750	150-400	50-200
Hose, 2.5" (feet)	1200	1000					
Hose, 1.5" (feet)	400	500	500	300	300	300	
Hose, 1" (feet)			500	300	300	300	200
Ladders	48'	48'					
Master Stream (GPM)	500						
Personnel (Minimum)	4	3	3	2	2	2	2

BLM Engine - Fire Training and Qualification Standards

Position	IQCS	Training
Crewmember	**FFT2**	I-100 Intro to ICS S-130 Firefighter Training L-180 Human Factors on the Fireline S-190 Intro to Wildland Fire Behavior
Engine Operator	**FFT1** **ENOP**	All the above plus: BLM Engine Operator Course (ENOP) S-131 Firefighter Type 1 S-133 Look Up/Down/Around S-211 Pumps and Water Use S-212 Wildfire Power Saws L-280 Followership to Leadership
Engine Captain	**ENGB** **ICT5**	All the above plus: I-200 Basic ICS S-200 Initial Attack Incident Commander S-215 Fire Ops in the Wildland/Urban Interface S-230 Crew Boss (Single Resource) S-231 Engine Boss (Single Resource) S-234 Ignition Operations S-260 Incident Business Management S-270 Basic Air Operations S-290 Intermediate Fire Behavior

BLM Engine Minimum Staffing Requirements

All BLM engines will meet these staffing standards on every fire response. BLM engines operating with more than 4 firefighters will always have a fully qualified ENOP (other than the captain). BLM engines operating with more than 3 firefighters will always have an FFT1 (other than the captain). Chase vehicles are considered part of the engine staffing.

BLM WCF Vehicle Class	NWCG Type Class	Engine Captain	Engine Operator	Engine Crewmember
625 Unimog	4	1	1	1
626 Unimog	4	1	1	1
650 Hummer	6	1		1
662 Light	6	1		1
663 Light	6	1		1
664 Enhanced Light	6	1		1
665 Interface	3	1		2
667 Heavy Engine	4	1		2
668 Super-heavy Tactical Engine	4	1	1	1
668 Super-heavy Tactical Tender	2 (Tender)	1		1

BLM Engine - Driver Training and Qualification Requirements

Position	Initial Training	Refresher Training
Crewmember	BLM Engine Driver Orientation (BL-300) and Defensive Driving	BLM Engine Driver Orientation (annual)* and Defensive Driving (every 3 years)
Engine Operator and Engine Captain	BLM (ENOP)Engine Operator Course and CDL Permit (GVW 26,000 or greater) and Defensive Driving	BLM Engine Driver Refresher (annual) and Defensive Driving (every 3 years)
WCF class 650 and 668 drivers	WCF class 650 and 668 driver and maintenance training **	

* S-216 Driving for the Fire Service or the BLM Engine Operator Course will satisfy this refresher training requirement.
** WCF class 650 and 668 driver and maintenance training will be conducted by the FAD Division of Fire Operations Equipment Development Unit annually. Travel, per-diem, vehicle operating charges and fuel costs directly related to this training will be covered by the EDU; base 8 salary and overtime costs will be covered by the students' home unit. BLM engine training courses can be found at:
http://www.blm.gov/nifc/st/en/prog/fire/training/fire_training/projects/engine_training.html.

All hands-on components of engine driver training courses will be conducted on the specific vehicle or vehicle type that the driver will be using.

Equivalent courses that satisfy driver training requirements, such as the National Safety Council sanctioned Emergency Vehicle Operator Course (EVOC), will be approved in writing by FAD Fire Operations on a case-by-case basis.

BLM Smokejumpers

BLM Smokejumpers operate in teams of 2-8 firefighters and are used primarily for wildfire suppression, fuels reduction, and other fire management duties. They are capable of performing self-contained initial attack suppression operations, and commonly provide incident management capability at the Type 3 level. BLM Smokejumpers provide personnel to Type 1 and Type 2 incidents as command and general staff or other miscellaneous single resource. The primary locations of the BLM smokejumper bases are Boise, Idaho and Fairbanks, Alaska.

BLM SMKJ Operations

BLM smokejumper operational and administrative procedures are located in the *Interagency Smokejumper Operations Guide (ISOG), the BLM Ram-Air Training Manual (RATM), the Boise Smokejumpers User Guide, Alaska Geographic Area Coordination Center Mob Guide,* and other pertinent agreements and operating plans.

BLM SMKJ Coordination & Dispatch

Smokejumpers are a national shared resource and are ordered according to geographic area or national mobilization guides. The operational unit for Smokejumpers is "one load" (8-20 smokejumpers). Specific information on the coordination, dispatch, ordering, and use of BLM smokejumpers can be found in the *BLM Boise Smokejumpers User Guide*, and in the *Alaska Geographic Area Coordination Center Mob Guide.* Contact BLM smokejumpers in Boise at (208) 387-5426 or in Alaska at (907) 356-5540 for these publications.

BLM SMKJ Equipment

BLM smokejumpers use aircraft approved by the interagency Smokejumper Aircraft Screening and Evaluation Board (SASEB). All aviation operations will be performed according to established agency policies and procedures. BLM smokejumpers use the Smokejumper Ram-Air Parachute System exclusively. All abnormalities in personnel parachute equipment and procedures will be reported through the Malfunction and Abnormality Reporting System (MARS). All parachuting operations will be performed according to established agency policies and procedures. All modifications to and deviations from established standards will be reported, documented, and approved through the BLM SMKJ Modification Documentation (MODOC) process.

BLM SMKJ Training

To ensure proficiency and safety, smokejumpers complete annual training in aviation, parachuting, fire suppression, administration, and safety. Experienced jumpers receive annual refresher training in these areas. First year smokejumpers undergo a rigorous four week long smokejumper training program. 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

BLM Smokejumper Training and Qualification Standards

Position	IQCS Target	SMKJ Training Target
Dept Managers	T1 and T2 C&G	
Spotter	ICT3, DIVS, ATGS RXB2, SOFR	
Lead Smokejumper	STLD, TFLD	Senior Rigger
Smokejumper	ICT4, CRWB, FIRB	
Rookie Smokejumper	ICT5, FFT1 FOBS	

BLM Smokejumper Physical Fitness Standards

The national smokejumper physical fitness standards are mandatory. The BLM smokejumper target standards are voluntary. The target standards are established to provide BLM smokejumpers a common standard against which to gauge their physical fitness level. BLM smokejumpers are encouraged to meet or exceed these standards.

National SMKJ Standard	BLM SMKJ Target Standard
1.5 mile run in 11:00 minutes or less	1.5 mile run in 9:30 or less, or 3 mile run in 22:30 minutes or less
45 sit-ups	60 sit-ups
25 push-ups	35 push-ups
7 pull-ups	10 pull-ups
110 lb pack-out over 3 miles over level terrain in 90 minutes or less	110 lb pack-out over 3 miles over level terrain in 90 minutes or less
Successful completion of the WCT at an arduous rating	Successful completion of the WCT at an arduous rating

BLM Exclusive Use Helitack Standards

The BLM contracts for the exclusive use of vendor supplied and supported helicopters. These aviation resources are Type 2 (Medium) or Type 3 (light) helicopters and are located at BLM Districts throughout the western United States. Helitack Crews are assigned to manage each contracted helicopter and perform suppression and support operations to accomplish fire and resource management objectives.

Each contract specifies a Mandatory Availability Period (MAP) that the aircraft will be assigned for the exclusive use of the BLM. The National Aviation Office provides the funding to pay for the aircraft's availability costs. The BLM host unit is responsible for providing a Helitack crew that meets the Exclusive Use Fire Helicopter Position Prerequisites in Chapter 16 of this document. Each functional or supervisory level must have met the experience requirements of

the next lowest functional level. The minimum daily staffing level (7 day staffing) must meet the level indicated in the *National Interagency Mobilization Guide, Chapter 20, paragraph 22.5 Helicopter Module*. The host unit is also responsible for providing administrative support, and *Interagency Helicopter Operations Guide (IHOG)* specified equipment, vehicles and facilities for their Helitack Crews and any other associated specialized equipment.

Minimum and Target (Desired) Exclusive Use Helitack Crew Qualifications & Composition

Position	Min IQCS Qualifications	Target IQCS Qualifications	Target Training	Currency Requirements
Fire Helicopter Crew Supervisor	ICT4, HEB2	ICT3 or DIVS HEB1, PLDO HLCO, ASGS	S-300 or S-339 S-378, L-381 S-375	RT-372 RT-130
Assistant Fire Helicopter Crew Supervisor	ICT4, HMGB, HEB2(T)	TFLD, HEB2 PLDO	S-215, S-330 S-390, S-371 L-380	RT-372 RT-130
Fire Helicopter Squad Leader	FFT1, ICT5, HECM	ICT4, HMGB	S-200, S-230 S-290, M-410 S-230	RT-130
Helicopter Senior Crew Member	FFT1, HECM	ICT5, HMGB(T)	S-372, L-280	RT-130
Helicopter Crew Member	One season as a FFT2, HECM(T)	FFT1, HECM	S-131, S-133	RT-130

BLM Operational Duty Officer (ODO)

Each BLM unit Fire Management Officer will perform the duties of an ODO or will provide a delegated ODO for their units during any period of predicted incident activities. ODOs responsibilities may be performed by any individual with a signed Delegation of Authority from the local agency administrator. Qualifications for the ODO will be identified within the Unit Annual Operating Plan. The required duties for all BLM ODOs are:

- Monitor unit incident activities for compliance with BLM safety policies.
- Coordinate and set priorities for unit suppression actions and resource allocation.
- Keep unit agency administrators, suppression resources, and Information Officers informed of the current and expected situation.
- Plan for and implement actions required for future needs.
- Document all decisions and actions.

ODOs will provide operational oversight of these requirements as well as any unit specific duties assigned by the local fire managers through the local unit fire operating plan. ODOs will not fill any ICS incident command functions connected to any incident. In the event that the ODO is required to accept an

incident assignment, the FMO will ensure that another qualified and authorized ODO is in place prior to the departure of the outgoing ODO.

Employee Advocacy

Fire operations doctrine acknowledges the inherent danger of fire operations and the potential for serious injury or death to firefighters. When these occur, it is important that Bureau employees are provided the best and most appropriate care possible. Managers should consult their human resources experts to ensure that applicable Departmental and Bureau human resources policies and guidelines are followed. In addition, the following website provides information to assist managers in dealing with the many complexities of these occurrences. http://web.blm.gov/internal/fire/fire_ops/index.html

Notification

After emergency response actions deliver an injured employee to the immediate medical care facility, prompt notification through the chain of command is essential to ensure proper management support to the employee. For BLM fire operations, notification criteria are as follows:

- Supervisor of the injured employee will notify the local state Fire Operations Group member immediately after treatment when the injured employee is not released to full or light duty. This contact will be in addition to contacts made to the home unit chain of command.

Operational Guidelines for Aquatic Invasive Species

In order to prevent the spread of aquatic invasive species, it is important that fire personnel not only recognize the threat aquatic invasive species pose to ecological integrity, but how our fire operations and resulting actions can influence their spread. Each local land management unit may have specific guidelines related to aquatic invasive species. Therefore, it is recommended that you consult established local jurisdictional guidelines for minimizing the spread of aquatic invasive species and for equipment cleaning guidance specific to those prevalent areas and associated species. To minimize the potential transmission of aquatic invasive species, it is recommended that you:

- Consult with local biologists, resource advisers (READ) and fire personnel for known aquatic invasive species locations in the area and avoid them when possible.
- Avoid entering (driving through) water bodies or saturated areas whenever possible.
- Avoid transferring water between drainages or between unconnected waters within the same drainage when possible.
- Use the smallest screen possible that does not negatively impact operations and avoid sucking organic and bottom substrate material into water intakes when drafting from a natural water body.
- Avoid obtaining water from multiple sources during a single operational period when possible.

- Remove all visible plant parts, soil and other materials from external surfaces of gear and equipment after an operational. If possible, power-wash all accessible surfaces with clean, hot water (ideally > 140° F) in an area designated by a local READ.

For additional information and guidelines please refer to the links provided in the document titled *BLM Fire Program Aquatic invasive Species Guidance* found at: http://web.blm.gov/internal/fire/FEM/docs.html

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*.

Agency Administrator Performance Requirements for Fire Management

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

PERFORMANCE REQUIRED	NPS Director.	Regional Director.	Park Supt.
3. Ensure Fire Management Officers (FMOs) are fully qualified as identified in the *Interagency Fire Program Management Qualification Standards.*	X	X	X
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 Multiagency Command (MAC) Group authority, as appropriate. Depending on park organizational structure, written delegations may be provided to the Chief Ranger, Natural Resource Specialist, 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. Ensure applicable park resource management objectives are included in Fire Management Plan (FMP). Ensure FMP is annually reviewed and valid. Copies of the park's signed annual FMP Review and Update template (RM-18, Chapter 4, Exhibit 2) or packet, will be sent to the Regional FMO and to the FMPC in Boise.			X
6. Review and approve wildland fire preparedness funding based on and accurate and defensible readiness analysis. Review and approve fuels management funding requests.	X	X	X

PERFORMANCE REQUIRED	NPS Director.	Regional Director.	Park Supt.
7. Develop protection and fire use standards and constraints that are in compliance with agency fire policies.		X	X
8. Ensure use of fire funds is in compliance with Department and Agency policies.	X	X	X
9. 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
10. 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
11. 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
12. Ensure fire and fire aviation preparedness reviews are conducted in all units each year. Parks must complete checklists applicable to their specific program scope and complexity and include appropriate program elements, such as prescribed fire. A summary of the preparedness review findings including standards exceeded or needing improvement will be submitted to the Regional FMO before the fire season.		X	X

PERFORMANCE REQUIRED	NPS Director.	Regional Director.	Park Supt.
13. Ensure an approved burn plan is followed for each prescribed fire project, including technical review and Go/No Go checklists are completed, follow-up monitoring and documentation to ensure management objectives are met.		X	X
14. Meet annually with major cooperators and review interagency agreements to ensure their continued effectiveness and efficiency (may be delegated).		X	X
15. Ensure post fire reviews are conducted on all fires that escape initial attack or are managed as long term incidents. Participate in all reviews that require management by any type of Incident Management Team (Regional Director may delegate).		X	X
16. Provide management oversight by personally visiting wildland and prescribed fires each year.			X
17. Provide incident management objectives, written delegations of authority and Agency Administrator briefings to Incident Management Teams.			X
18. Monitor wildfire potential and provide oversight during periods of critical fire activity/situations.	X	X	X
19. Evaluate the need for resource advisors for all fires and assign as appropriate.			X
20. Convene and participate in annual pre- and post-season fire meetings.	X	X	X
21. Attend *Fire Management Leadership Course.*		X	X
22. Ensure appropriate investigations are conducted for incidents, entrapments and serious accidents.	X	X	X

PERFORMANCE REQUIRED	NPS Director.	Regional Director.	Park Supt.
23. For all unplanned human-caused fires where liability can be determined, ensure actions are initiated to recover cost of suppression activities, land rehabilitation and damages to the resource and improvements.		X	X
24. Ensure that the appropriate level response plan is completed and approved for all fires according to determined cost and complexity.	X	X	X
25. Ensure there is adequate direction in fire management plans to identify fire danger awareness with escalating fire potential.			X
26. 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
27. 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
28. At National Preparedness Level 4 and 5, approve the initiation or continuation of prescribed fire applications based on an assessment of risk, impacts of the proposed actions on area resources and activities and include feedback from the Geographic Area Multi-Agency Coordinating Group.		X	

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 Park Group.

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

PERFORMANCE REQUIRED	FIRE DIRECTOR	RFMO	FMO
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 programs 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 the 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. Organize, train, equip and direct a qualified work force. Establish "red card" certification/qualification process at the local level. Individual Development Plans (IDP) should be developed for all employees, but special emphasis must be on employees that do not meet standards.	X	X	X
10. 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
11. Recognize when complexity levels exceed program capabilities. Increase managerial and operational resources to meet the need.	X	X	X
12. Initiate, conduct and participate in fire management related reviews and investigations, including converted and prescribed fires.	X	X	X
13. Provide for and personally participate in periodic site visits to individual incidents and projects.	X	X	X
14. Utilize the incident complexity analysis to ensure the proper level of management is assigned to all incidents.		X	X
15. Review and evaluate performance of the fire management organization and take appropriate actions.	X	X	X
16. Ensure incoming personnel and crews are briefed prior to fire and fire aviation assignments.		X	X
17. Ensure an appropriate level response plan is completed and approved for all fires according to policy.		X	X
18. Monitor fire season severity predictions, fire behavior and fire activity levels. Take appropriate actions to ensure safe, efficient and effective operations.	X	X	X
19. Provide fire personnel with adequate guidance and decision-making authority to ensure timely decisions.		X	X
20. Ensure a written/approved burn plan exists for each prescribed fire project.			X
21. Ensure effective transfer of command of incident management occurs and oversight is in place.	X	X	X

PERFORMANCE REQUIRED	FIRE DIRECTOR	RFMO	FMO
22. Develop and maintain agreements, annual operating plans and contracts on an interagency basis to increase effectiveness and efficiencies.	X	X	X
23. Provide the expertise and skills to fully integrate fire and fire aviation management into interdisciplinary planning efforts.	X	X	X
24. Work with cooperators to identify processes and procedures for providing fire safe communities.	X	X	X
25. Develop, maintain and annually evaluate the FMP to ensure accuracy and validity.		X	X
26. Ensure budget requests and allocations reflect analyzed anticipated workload.	X	X	X
27. Develop and maintain current operational plans, e.g., dispatch, pre-attack, prevention.	X	X	X
28. Ensure that reports and records are properly completed and maintained.	X	X	X
29. Ensure fiscal responsibility and accountability in planning and expenditures.	X	X	X
30. Assess, identify and implement program actions that effectively reduce unwanted wildland fire ignitions and mitigate risks to life, property and resources. Utilize safe, effective and efficient management.		X	X
31. Effectively communicate the “natural role” of wildland fire to internal and external agency audiences.	X	X	X
32. Complete trespass actions when unplanned human-caused ignitions occur.		X	X

PERFORMANCE REQUIRED	FIRE DIRECTOR	RFMO	FMO
33. Ensure compliance with National and Regional 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.

The National Incident Management System (NIMS) training requirements for employees that participate in emergency response operations or support are outlined in the DOI Emergency Management Policy Guidance Bulletin 2007-1. This includes, but is not limited to, responses under the National Response Framework (NRF). All employees engaged in emergency related work, including temporary or administratively determined emergency hires, must complete this training. Below are the minimum criteria established by the October 6, 2008 NPS Director Memorandum National Incident Management System Training Requirements for the four basic levels of personnel:

- **Entry Level Personnel**
  - FEMA IS-700: NIMS, An Introduction
  - ICS-100: Introduction to ICS

- **Single Resource Personnel, Non-Supervisory**
  - IS-700, ICS-100 and ICS-200: Basic ICS or its equivalent

- **Team Leaders, Supervisors, Emergency Operations Center (EOC) Staff, etc.**
  - IS-700, IS-800.A NRP, ICS-100, ICS-200 and ICS-300 Intermediate ICS

- **Command and General Staff, Regional Emergency Coordinators, EOC Managers, etc.**
  - IS-700, IS-800.A, ICS-100, ICS-200, ICS-300 and ICS-400 Advanced ICS

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.

- 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.

- Refer to the Interagency Fire Program Management (IFPM) Standards and Qualifications required coursework per fire program complexity level.
- M-3 Aviation Management for Supervisors (every 3 years).

NPS Firefighters General Training Requirements

	One-Time Training	Recurring Training	Annual Training
All Firefighters	Hazardous Materials-First Responder Awareness Level Bloodborne Pathogen (on-line) Aviation B3:Helicopter/Airplane Safety–classroom	First Aid/CPR, every 2 years. Defensive Driving every 3 years. Aviation B3 (on-line), every three years.	RT-130 Annual Fireline Safety Training EEO, Discrimination & Whistleblowing in the Workplace (on-line) HazMat Refresher (on-line)

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:

- Serves 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 region-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 Regional annual authority.

NPS Duty Officer (DO)

All Fire Management Officers are responsible to provide DO coverage during any period of predicted incident activities. DO's responsibilities may be performed by any individual with a signed Delegation of Authority from the local agency administrator. The required duties for all DOs are:

- Monitor unit incident activities for compliance with NPS safety policies.
- Coordinate and set priorities for unit suppression actions and resource allocation.
- Keep agency administrators, suppression resources and Information Officers informed of the current and expected situation.
- Plan for and implement actions required for future needs.
- Document all decisions and actions.

DOs will provide operational oversight of these requirements as well as any specific duties assigned by fire managers through the fire operating plan. DOs will not fill any ICS incident command functions connected to any incident. In the event that the DO is required to accept an incident assignment, the FMO will ensure that another authorized DO is in place prior to the departure of the outgoing DO.

Capital Equipment Committee

The NPS Capital Equipment Committee meets twice yearly to identify equipment problems, needs, priorities and NPS standards for all wildland fire vehicles (WCF and non-WCF). This committee is comprised of engine foremen (captains), fire management officers and representation from the wildland fire modules. The permanent chairperson is the Fire Equipment and Facilities Specialist at the Fire Management Program Center.

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 8.8.3, 2006 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.

Engine Staffing Standards

Engine Type	Target †Daily Staffing	WCF Mandatory Staffing During Defined Season	Minimum 410-1 Standards	Min Quals, out-of-park Response	Min Quals, In-park Response
3	5*	4*	3	ENGB, 2-FFT2	ENGB, 2-FFT2
4	5*	4*	2	ENGB, 2-FFT2	ENGB, FFT2
5	5*	4*	2	ENGB, 2-FFT2	ENGB, FFT2
6	3	3	2	ENGB, 2-FFT2	ENOP**, FFT2
7	3	2	2	ENGB, FFT2	ENOP**, FFT2

† When statused available for off-park assignments

* Engines staffed with more than 3 will always have a qualified engine operator (ENOP) in addition to an ENGB

** ENOP must also be qualified as ICT5

ENOP is an agency specific qualification. To add this position to an employee in IQCS use the NPS00 SetID.

NPS ENOP Prerequisites: FFT1, L-280, RT130, FITCAT, ENOP PTB
ENOP PTB can be found at: http://www.nwcg.gov/pms/taskbook/taskbook.htm

Working Capital Fund

Most wildland fire vehicles are funded and managed under 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 including: engines, crew carriers, support vehicles and water tenders to meet the NPS's fire program requirements. Specialized fire equipment design and specifications are developed through the

analysis of identified needs and survey of new technologies. Acquisition of units is done through contracting with venders identified on GSA contracts.

Fire Equipment Development

The Fire Equipment and Facilities Specialist, located at NIFC, is responsible for ordering, receiving, inspection and distribution of new fire equipment.

Upgrades and Accessories

For equipment funded through the WCF, options added by parks that are not part of the current agency standard (e.g. supplemental lighting, winches, special paint, radios, etc.) are considered add-on items and are not funded with WCF funds. The cost of the modifications and optional equipment is the responsibility of the regional or local office. It is the responsibility of the Fire Equipment and Facilities Specialist to ensure that add-on equipment is safely and professionally installed and that it does not compromise the designated function, safety, or weight limits of the equipment/vehicle. Park units are not permitted to add options to WCF vehicles without prior authorization from the Fire Equipment and Facilities Specialist.

Travel on FMPC Funds

Travel using FMPC funding is allowed 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 FMPC also provides travel funding for park personnel to transport new specialized fire vehicles back their respective parks, or at the discretion of the Fire Equipment and Facilities specialist to transport equipment commercially. Ideally the retrieval of new vehicles should be done by park fire individuals so they can obtain a thorough briefing of the operational features of the vehicle by the manufacturer.

Vehicle Repairs Maintenance

The cost of all vehicle repairs and maintenance is the responsibility of the individual parks unless the damage is directly attributable to operations on a wildfire. In that case, with approval from the IC, the damages may be paid for under the fire's suppression account. Daily preventative maintenance checks, regular servicing and prompt repairs are critical to providing mission readiness, performance and safe operation. Wildland fire vehicles that are not operationally sound or have safety deficiencies must not be put into service. In addition, vehicles that suffer from mechanical or safety issues while enroute or on assignment must be taken out of service at the earliest opportunity in which it is safe to do so and must not be put back into service until corrective action can be completed.

Fixed Ownership Rates (FORs)

FORs are fees that are paid into the WCF annually for each vehicle in the program. 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 standards.

Property Transfer/Replacement

Surplus vehicles originally purchased through the WCF will be excessed through a defined process with funds generated from the sale returned to the BLM Working Capital Fund Program. To initiate disposal of surplus vehicles, a SF-126 form will be submitted to the NPS Fire Equipment and Facilities Specialist (FEFS) upon receipt of new vehicle. After review, the FEFS will ask the Capital Equipment Committee to determine if there is priority placement needed for the surplus unit within the NPS and the Park unit's cooperators. If so, a fair market value will be established and the receiving park unit or cooperator will reimburse the WCF for that amount. If there is no identified need or interest within the NPS or cooperator community, the SF-126 form will be transferred to BLM. The BLM will manage the disposal of all surplused WCF equipment. Sale proceeds from excessed fire vehicles are returned back into the WCF. Parks should not excess WCF fire equipment through normal GSA channels. Vehicles not purchased through the WCF should be disposed of per current NPS property disposal procedures.

Fitness Equipment and Facilities

DO/RM-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 fire funding expenditures for equipment purchase:

The fire funding expenditure will represent the percentage of arduously-rated fitness participants in a park. For example, park XX may have 20 total arduously-rated fitness participants in its health and fitness program, five of whom are wildland firefighters. Fire funding would pay 25 percent of the cost of equipment purchase.

Where all of a park's mandatory fitness participants are wildland firefighters; fire will fund up to a maximum of $1,200 per park per year for equipment purchase. The Regional Fire Management Officer's approval is required for purchases in excess of that amount.

DO-57/RM 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 fire funds for each

wildland firefighter mandatory program participant. Approval from the regional fire management officer is required for annual fees that exceed $360.

Firefighter Target Physical Fitness Standards

These are voluntary targets. They are not mandatory. These targets are established to provide NPS firefighters a common standard against which to gauge their physical fitness level. NPS firefighters are encouraged to meet or exceed these standards.

	Age 20-29	Age 30-39	Age 40-49	Age 50 & Up
1.5 Mile Run	11:58	12:25	13:05	14:43
Sit-Ups (1 minute)	40	36	31	26
Push-Ups (1 minute)	33	27	21	15

The guide below may be used to adjust the 1.5 mile run times to compensate for altitude differences:

Altitude in feet	1.5 mile run time adjustment
0 - 5,000	No adjustment
5,000 - 6,000	Add 30 seconds
6,000 - 7,000	Add 40 seconds
7,000 - 8,000	Add 50 seconds

National Fire Operations Fitness Challenge

The national fire operations fitness challenge encourages and recognizes achievement in physical fitness by NPS firefighters. The fitness challenge provides a common system by which NPS firefighters can measure current fitness, establish fitness goals and track fitness improvement. The fitness challenge is voluntary, but NPS firefighters are encouraged to participate. The fitness challenge tests participants in four basic exercises - push-ups, pull-ups, sit-ups and a timed run of 1.5 miles. Test results are compiled into a final overall score. Unit and Regional offices are encouraged to support and recognize achievement in firefighter fitness. Specific information on the fitness challenge is located at www.blm.gov/nifc/st/en/prog/fire/fireops/fitness_challenge.html.

Wildland Fire Uniform Standards

The Service-wide Uniform Program Guideline (DO-43) sets forth the servicewide policies and associated legal mandates for wearing the NPS uniform and for authorizing allowances to employees.

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:

- 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, fire program management funds may be used to support uniform purchases in accordance with allowance limits identified in DO-43.
- 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 fire and/or ONPS base-funded wildland fire staff.
- 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.

Where appropriate and justified, fire funds may be applied to the purchase of 100 percent cotton tee shirts, 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.).

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). $100 would normally be adequate to cover costs of this issuance.

Just as with uniform allowance discussed in DO-43, the intent of fire-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 fire-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. Exceptions to this should be well-justified and documented.

Fire Management Credentials

Official fire identification credentials are approved for issuance to National Park Service (NPS) employees with fire as a primary or secondary responsibility as identified in their individual position descriptions and approved by Firefighter and Law Enforcement Retirement Team (FLERT). These credentials provide fire personnel with similar professional identification as being used by many fire cooperators. The fire credentials consist of a badge, identification card and case

that are issued as government property. The badge complies with national fire standards, has red trim and labeled as Fire Chief, Fire Manager or Firefighter. The fire credentials are to be carried in a wallet type case and 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 returned when found.

Invasive Species Management

Operational Guidelines for Aquatic Invasive Species

In order to prevent the spread of aquatic invasive species, it is important that fire personnel, not only recognize the threat aquatic invasive species pose to ecological integrity, but how our fire operations and resulting actions can influence their spread. Each geographic area may have specific guidelines related to localized aquatic invasive species. Therefore, it is recommended that you consult established local jurisdictional guidelines for minimizing the spread of aquatic invasive species and for equipment cleaning guidance specific to those prevalent areas and associated species.

To minimize the potential transmission of aquatic invasive species, it is recommended that you:

- Consult with local biologists, resource advisers (READ) and fire personnel for known aquatic invasive species locations in the area and avoid them when possible.
- Avoid entering (driving through) water bodies or saturated areas whenever possible.
- Avoid transferring water between drainages or between unconnected waters within the same drainage when possible.
- Use the smallest screen possible that does not negatively impact operations and avoid sucking organic and bottom substrate material into water intakes when drafting from a natural water body.
- Avoid obtaining water from multiple sources during a single operational period when possible.

Remove all visible plant debris, soil and other materials from external surfaces of gear and equipment after an operation. If possible, power-wash all accessible surfaces with clean, hot water (ideally > 140^{o} F) in an area designated by a local READ.

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

Introduction

This document states, references, or supplements policy for the U.S. Fish and Wildlife Service Wildland Fire Management Program. The standards provided in this document are based on current U.S. Department of the Interior 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.

Agency Administrator Roles

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 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.

Regional Chief and Refuge Supervisors

Regional Chiefs and Refuge Supervisors are delegated specific leadership responsibilities by the Regional Director. They provide oversight and direction, in coordination with, the Wildland Fire Management Program for the National Wildlife Refuge System. These responsibilities occur through established lines of authority as assigned by the Regional Director.

Project Leader

The Project Leader 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 Project Leader, or principal

acting, will meet the required element outlined in the *Management Performance Requirements for Fire Operations.*

Management Performance Requirements for Fire Operations

PERFORMANCE REQUIRED	FWS Director	Regional Director	Regional Chief / Refuge Supervisor	Project Leader
1. Ensures that Fire Management Plans (FMP) reflect 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
3. Ensures use of fire funds is in compliance with department and agency policies.	X	X	X	X
4. Ensures that all fire management activities are supported by a current FMP and is integrated with an approved Comprehensive Conservation Plan.	X	X	X	X

PERFORMANCE REQUIRED	FWS Director	Regional Director	Regional Chief / Refuge Supervisor	Project Leader
5. Attends the *Fire Management Leadership Course.* Ensures 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, ensures 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	FWS Director	Regional Director	Regional Chief / Refuge Supervisor	Project Leader
9. Personally visits at least one wildland and one prescribed fire each year.				X
10. Annually convenes and participates in pre-and post season fire meetings.	X	X	X	X
11. Reviews critical operations and safety policies, 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 participates 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

PERFORMANCE REQUIRED	FWS Director	Regional Director	Regional Chief / Refuge Supervisor	Project Leader
15. Provides a written delegation of authority, Wildland Fire Decision Support System (WFDSS), analysis and an *Agency Administrator Briefing to Incident Management Teams.*				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
17. Attends post fire closeout on Type 1 and Type 2 fires. (Attendance may be delegated.)		X	X	X
18. Ensures that a WFDSS run is completed, implemented and updated daily for all fires managed as wildland fire use.		X	X	X

PERFORMANCE REQUIRED	FWS Director	Regional Director	Regional Chief / Refuge Supervisor	Project Leader
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 FWS *Fire Trespass Handbook*.		X	X	X
20. Ensures compliance with National and Regional 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

PERFORMANCE REQUIRED	FWS Director	Regional Director	Regional Chief / Refuge Supervisor	Project Leader
23. Ensures that a policy has been established for review and signing of the go-no/go checklist.				X
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* July *2008.*	X	X	X	X
26. Ensures that current fire and weather information is posted and available for all employees.				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 (NMAC Group). The SFMC is responsible for implementing the decisions of the NMAC as they affect U.S. Fish and Wildlife Service areas. The decisions of the NMAC 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 Regional Fire Management Coordinator 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 GMAC. 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 include the prioritizing of incidents and the allocation or reallocation of firefighting resources to meet wildland fire management priorities.

Refuge

Fire Management Officer (FMO)

The Fire Management Officer (FMO) is responsible and accountable for providing leadership for fire 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.

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.

Training

The qualification standards identified in the *Interagency Fire Program Management Qualification 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.

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

PERFORMANCE REQUIRED	Fire Director	RFMC	Zone/District 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 2009)*	X	X	X
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 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

PERFORMANCE REQUIRED	Fire Director	RFMC	Zone/District FMO
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
15. Ensures that use of fire funds are 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

PERFORMANCE REQUIRED	Fire Director	RFMC	Zone/District FMO
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 reviews of fire and fire aviation programs.	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 Decision Support System (WFDSS) analysis is completed and updated daily for all fires that escape initial attack.	X	X	X
27. Ensures that a Wildland Fire Decision Support System (WFDSS) analysis is completed, approved and certified daily for all fires managed for resource objectives.	X	X	X
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

PERFORMANCE REQUIRED	Fire Director	RFMC	Zone/District FMO
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 *FWS Fire Trespass Handbook*.	X	X	X
30. Ensures training for fire cause determination and fire trespass is completed.	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 July 2008.*	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 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.

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

Introduction

This Document 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*

1. 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*

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

3. 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.

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

5. 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.

6. 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*

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

- *Fire Suppression*

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

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

Leadership and Accountability

- *Forest Service Wide*

10. The hallmarks of Forest Service leadership are action, attitude, and accountability.

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

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

13. 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*

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

Roles and Relationships

- *Forest Service Wide*

15. 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 & Aviation Management*

16. Line officers with fire management responsibilities will have knowledge and understanding of fire program management.

17. Contracted resources will meet identified standards for qualifications, training, productivity, and efficiency necessary to meet emergency response needs.

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

- *Fire Suppression*

19. 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.

Operations

- *Forest Service Wide*

20. 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.

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

22. Clear, uncomplicated plans and concise orders maximize effectiveness and minimize confusion.

- *Fire Suppression*

23. 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.

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

25. 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.

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

27. 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.

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

29. 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*

30. 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 Wildland Fire Decision Support System (WFDSS).
- Provide a Delegation of Authority to incident commanders

Line Officer Certification Program

The following principles will guide certification of agency administrators in fire management:

- Regional Foresters are accountable for certification of line officers
- Line officer evaluation includes standards for training, background and experience, and demonstrated ability, which will result in a qualitative evaluation of readiness by the Regional Forester
- When the complexity level of a fire exceeds a line officer's certification, a coach will be assigned to advise (but not replace)
- This certification program will be periodically evaluated and updated as needed
- Decision Support Groups may be requested and would be assigned as fire costs approach certain thresholds
- The Coaching/Shadowing program, to be administered by each region, is an integral part of this certification program

Line Officers will be evaluated in three basic areas

- Training
- Background and experience
- Demonstrated understanding of concepts and principles

This certification program is a multi-level process where line officers demonstrate competence in one of three levels of managing fires. Those levels would be Working, Journey, and Advanced.

Guidelines

In consideration of the appropriate level (Working, Journey, and Advanced) to assign a line officer, the Regional Forester should consider the following guidelines:

- For individuals that do not meet at least the Working Level, a coach will be assigned to support that line officer in managing Type 3 or higher wildfire incidents.

Working Level - The line officer could manage a low to moderate complexity fire. The line officer should meet the following:

- **Training:** Fire Management Leadership or National Fire Management for Line Officers, and WFDSS Certification *(FSM 5130)*

- **Background and Experience:** Successful management of a minimum of one Type 3 or higher fire, or one successful higher complexity fire (Type 2 or higher) quality shadow assignment (consider complexity and size of the fires). Management oversight of a low-complexity fire program and/or experience as an agency administrator or representative. Applicable experience in all hazard or other incident oversight may be considered in lieu of this experience. Consider career fire experience.
- **Demonstrated Ability:** Successful evaluation by a coach (including feedback from ICs or ACs) that the candidate has demonstrated understanding and application of the responsibilities of an agency administrator on smaller low-complexity fires with a basic understanding of the elements of the core competencies.

Journey Level - The line officer could manage a moderate to high complexity fire. The line officer needs to be certified at the Working Level and should meet the following:

- **Training:** Fire Management Leadership or National Fire Management for Line Officers, and WFDSS Certification *(FSM 5130)*.
- **Background and Experience:**
  - Successful management of a minimum of one Type 2 or higher fire, or one successful higher complexity fire (Type I) quality shadow assignment, depending on fire experience (complexity and size of the fires should be considered).
  - Management oversight of a moderate-complexity fire program or experience as an agency administrator or representative on Type 2 or higher fires.
  - Applicable experience in all hazard or other incident oversight may also be considered in lieu of other guidelines.
- **Demonstrated Ability:** Successful evaluation by a coach (including feedback from ICs or ACs) that the candidate has demonstrated understanding and application of the responsibilities of an agency administrator on moderate to large complex fires in the core competencies, and other elements that may be relevant.

Advanced Level - The line officer could manage a high complexity fire. The line officer needs to be certified at the Journey Level and should meet the following:

- **Training:** Fire Management Leadership or National Fire Management for Line Officers, and WFDSS Certification *(FSM 5130)*.
- **Background and Experience:**
  - Successful management of a minimum of 5 Type 1 or 2 fires (at least one of which is a Type 1 fire), depending on fire experience (complexity and size of the fires should be considered).
  - Management oversight of a moderate to high-complexity fire program.
  - Applicable experience in all hazard or other incident oversight may also be considered in lieu of other guidelines.

- **Demonstrated Ability:** Successful evaluation by a coach (including feedback from ICs or ACs) that the candidate has demonstrated understanding and application of the responsibilities of an agency administrator on large complex fires in the core competencies, and other elements that may be relevant.

Other Considerations

Core competencies, consistent with Fire Doctrine principles, include:

- Safety.
- Strategies and tactics for cost containment.
- Incident management processes.
- Understanding of decision support tools.
- Situational awareness of resource availability & allocation.
- Understanding fire agreements and cost apportionment.
- WFDSS experience
- Monitoring and Evaluation of fire operations.
- Risk Management.
- Social/Political awareness and interpersonal relations.

Other training opportunities to achieve core competencies - Additional training opportunities/suggestions (will be updated as program is evaluated)

- Upper levels of fire leadership and fire management courses
- Be the actual line officer in the Type 3 IC certification sand table exercises
- Participate in advanced risk management training.
- The Fire Management for Agency Administrators course needs a curriculum revision.
- Get assigned to a Type 1 or Type 2 team as a training assignment (e.g. shadow Plans) and see the world from their viewpoint
- Assist in 420 simulation as a line officer
- WFDSS training
- Include risk management and fire management topics to annual line officer meetings
- Attend staff rides (staff rides need to include a stand that portrays the line officer perspective)
- Participate in prescribed fires and/or attend prescribed fire training.

Guidance on the Selection of Coaches

Coaches can be current or former line officers. The Regional Forester determines the level of certification for which a coach is qualified.

Criteria for individuals serving as Coaches are as follows:

- Must be a “Journey” level line officer in dealing with large fire incident, or rated at an experience level commensurate with incident being managed. Present and past agency administrators can serve as coaches, including retirees that were qualified/experienced.
- Is willing and able to serve as a Coach.

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 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 cooperators and review interagency agreements to ensure their continued effectiveness and efficiency.
- Convene and participate in annual conferences and fire reviews.
- 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.

Suppression

- Ensure use of fire funds is in compliance with Agency policies.
- The WFDSS will be used and approved on all fires that escape initial attack.
- WFDSS analysis that are expected to exceed $10,000.000.00 in suppression costs are forwarded to the Regional Office for review and approval.
- 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.
- Ensure structure exposure protection principles are followed.

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 investigation and analyses are conducted for incidents, entrapments, and serious accidents.

Prescribed Fire

- Ensure an approved burn plan is followed for each prescribed fire project, including follow-up monitoring and documentation to ensure management objectives are met.
- 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 Standard (including FS-FPM Fire Program Management)* will be used as a guide 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

- Use sound risk management practices 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 effective communication with the public and cooperators.
- Regardless of funding level, provide a safe, effective, and efficient fire management 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 Decision Support System 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.
- Ensure structure exposure protection principles are followed.

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.

Prescribed Fire

- 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.
- Ensure compliance with National and Regional Office policy and direction for prescribed fire activities and ensure that program reviews and inspections of the prescribed fire program are completed.

Structure Exposure Protection Principles

Mission and Role

A significant role of the Forest Service is to manage natural resources on public land, and management of unwanted wildland fire is a primary mission in that role. Wildland firefighter training, tools, and personal protective equipment are based on the wildland environment. This does not prevent using wildland tactics in the Wildland Urban Interface (WUI) when risks are mitigated. Wildland firefighter training for the WUI, however, is centered on the concepts of preventing wildland fire from reaching areas of structures and/or reducing the intensity of fire that does reach structures. Fire suppression actions on structures that are outside federal jurisdiction, outside the scope of wildland firefighting training, or beyond the capability of wildland firefighting resources are not appropriate roles for the Forest Service.

Forest Service leadership will express clear and concise "leader's intent" to ensure structure protection assignments are managed safely, effectively, and efficiently. Leaders are expected to operate under existing policies and doctrine under normal conditions. Where conflicts occur, employees will be expected to weigh the risk versus gain, and operate within the intent of Agency policy and doctrine.

Strategic Principles

- The Forest Service actively supports creation of Firewise Communities and structures that can survive wildland fire without intervention. We support the concept that property owners have primary responsibility for reducing wildfire risks to their lands and assets.
- The Forest Service will actively work toward applying Firewise concepts to all Forest Service owned structures, facilities, and permitted use to serve as a model to publics and communities.
- The Forest Service will apply strategy and tactics to keep wildland fires from reaching structures, as prudent to do so, considering risk management for firefighters and publics, fire behavior, values at risk including natural resources, availability of firefighting resources, and jurisdictional authorities.

- The Forest Service will be proactive in developing agreements with interagency partners to clarify its structure protection policy.
- The Forest Service structure protection role is based on the assumption that other Departments and agencies will fulfill their primary roles and responsibilities. The Forest Service will not usurp individual, local, or state responsibility for structure protection.
- Prior to task implementation, a specific structure protection role briefing will be accomplished.

Tactical Applications

Structure Protection Definition

Actions taken in advance of a fire reaching structures or other improvements are intended to safely prevent the fire from damaging or destroying these values at risk. For the Forest Service, structure protection involves the use of standard wildland fire suppression tactics and control methods; including the use of standard equipment, fire control lines, and the extinguishing of spot fires near or on the structure when safe and practical.

USFS Role

As documented in a Forest Service doctrinal principle, "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." This principle serves as a foundational basis for the roles employees play in structure protection.

Pursuant to this "structure protection" policy provided above, Forest Service personnel may engage support from other cooperators in structure protection activities when 1) requested by local government under terms of an approved cooperative agreement or 2) when operating within a unified command. The agency is permitted, without agreement, to render emergency assistance to a local government in suppressing wildland fires, and in preserving life and property from the threat of fire, when properly trained and equipped agency resources are the closest to the need, and there is adequate leadership to do so safely. The agency will NOT routinely provide primary emergency response (medical aids, fire suppression, HAZMAT, etc… as identified on "run cards" or preplanned dispatch scenarios) nor will the agency supplant the local government responsibility to do so.

The contents of a cooperative agreement will clearly define the responsibilities of partners. Regarding structural fire protection, typical Forest Service responsibilities in the case of mutual aid, initial attack, extended attack, or large fire support include:

- To provide initial attack through extended attack actions consistent with application of wildland fire strategy and tactics.

- To supply water in support of tribal, state or local agencies having jurisdictional responsibility for the fire. This would include the use of water tenders, portable pumps, hose, tanks, and supporting draft sites.
- To assist or supply foam or chemical suppressant capability with engines or aerial application.
- To assist local authorities in the event of evacuations.
- To assist local authorities by assessing (triaging) structures for defensibility from wildfire.
- To coordinate with local authorities on actions taken by Private Structure Protection Companies.

As such, there should not be an expectation that the Forest Service will:

- "Wrap" or set up and administer sprinklers around privately owned structures
- Remove fuels immediately surrounding a structure such as brush, landscaping or firewood.

As addressed above, the Forest Service will apply strategy and tactics to keep wildland fires from reaching structures, as prudent to do so, considering risk management for firefighters and publics, fire behavior, values at risk including natural resources, availability of firefighting resources, and jurisdictional authorities.

The Forest Service shall not:

- Take direct suppression actions on structures other than those that tactically reduce the threat of fire spread to them.
- Enter structures or work on roofs of structures for the purpose of direct suppression actions.

In consideration of Forest Service owned or leased structures outside of structure fire protection areas these same policies apply. The use of Firewise principles and aggressive fire prevention measures will be employed for Forest Service structures at every opportunity.

If a Forest Service structure is determined to be at risk, "wrapping" or other indirect protection methods for the structure can be authorized by the Agency Administrator. Documentation of these decisions needs to be placed in the fire documentation package and the unit files. Any employee engaged in "wrapping" or other indirect methods of protection operations will be thoroughly briefed and trained in correct safety and personal protection equipment procedures, especially if the use of ladders or climbing on the structure is necessary. In any case, the Forest Service holds that no structure is worth the risk of serious injury to an employee in an attempt to protect that structure or facility from fire.

Local Government Role

Local government has the responsibility for emergency response, including structure protection, within their jurisdiction. This responsibility is usually found within the fire agencies' charter and is substantiated by tax dollar revenue (sales and/or property tax).

Cost

Local governments assume the financial responsibility for emergency response activities, including structure protection, within their jurisdictions. Local government will order resources deemed necessary to protect structures within their jurisdiction. Local agencies will not be reimbursed for performing their responsibilities within their jurisdiction.

Tactical Operating Principles

When engaging in structure protection activities, as defined above, Forest Service personnel will apply the following principles:

- The first priority for all risk-decisions is human survival, both of firefighters and the public.
- Incident containment strategies specifically address and integrate protection of defendable improved property and wildland values.
- Direct protection of improved property is undertaken when it is safe to do so, when there are sufficient time and appropriate resources available, and when the action directly contributes to achieving overall incident objectives.
- Firefighter decision to accept direction to engage in structure protection actions is based on the determination that the property is defendable and the risk to firefighters can be safely mitigated under the current or potential fire conditions.
- A decision to delay or withdraw from structure protection operations is the appropriate course of action when made in consideration of firefighter safety, current or potential fire behavior, or defensibility of the structure or groups of structures.
- Firefighters at all levels are responsible to make risk-decisions appropriate to their individual knowledge, experience, training, and situational awareness.
- Every firefighter is responsible to be aware of the factors that affect their judgment and the decision-making process, including: a realistic perception of their own knowledge, skills, and abilities, the presence of life threat or structures, fire behavior, availability of resources, social / political pressures, mission focus, and personal distractions such as home, work, health, and fatigue.
- An individual's ability to assimilate all available factors affecting situational awareness is limited in a dynamic wildland urban interface fire environment. Every firefighter is responsible to understand and recognize these limitations, and to apply experience, training and personal judgment to observe, orient, decide, and act in preparation for the "worst case".

- It is the responsibility of every firefighter to participate in the flow of information with supervisors, subordinates, and peers. Clear and concise communication is essential to overcome limitations in situational awareness.

Chapter 07
Safety and Risk Management

Introduction

The primary means by which we prevent accidents in wildland fire operations is through aggressive risk management. Our safety philosophy acknowledges that while the ideal level of risk may be zero, a hazard free work environment is not a reasonable or achievable goal in fire operations. 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.

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

Agency Specific Safety Policy Documents:

- ***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*

Guiding Principles

The primary means by which we implement command decisions and maintain unity of action is through the use of common principles of operations. These principles guide our fundamental wildland fire management 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 operations, and are intended to improve decision making and firefighter safety. They are not absolute rules. They require judgment in application.

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 manager 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 (IRPG) (PMS 461, NFES 1077).*
- *Wildland Firefighter Health & Safety Report (Annual MTDC Publication). National Interagency Mobilization Guide (NFES 2092).*

Definitions

Safety: A measure of the degree of freedom from risk or conditions that can cause death, physical harm, or equipment or property damage.

Hazard: A condition or situation that exists within the working environment capable of causing physical harm, injury, or damage.

Risk: The likelihood or possibility of hazardous consequences in terms of severity or probability.

Risk Management: The process whereby management decisions are made and actions taken concerning control of hazards and acceptance of remaining risk.

Risk Management Process

Fire operations risk management is outlined in the *NWCG Incident Response Pocket Guide (IRPG)*. The five step process provides firefighters and fire managers a simple, universal, and consistent way to practice risk management by:

- Establishing situation awareness.
- Identifying hazards and assessing the risk.
- Controlling or eliminating hazards.
- Making go/no-go decisions based on acceptability of remaining risk.
- Evaluating effectiveness of hazard controls and continuously re-evaluating situation.

Job Hazard Analysis (JHA)/Risk Assessment (RA)

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.
- ***BLM -*** *A risk assessment (in lieu of JHA) must be completed for all non-suppression work practices/projects that have potential hazards. Risk assessments may be developed for wildland fire operational activities at the local unit's discretion. Additional RA information can be obtained at:* http://web.blm.gov/internal/wo-700/wo740/riskmanagement.html

http://web.blm.gov/internal/wo-700/wo740/tools/RAWorksheets/RAWorksheet_Library.html

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, Incident Blanket Purchase Agreements (I-BPA), and Emergency Equipment Rental Agreements (EERA) should be reviewed for appropriate pay requirements and length of assignment. If the contract, (I-BPA) 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).

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 is prohibited.
- 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.
- Seat belts must be available and used in agency 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.
- 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 -*** *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.*
- ***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)).

Non-Incident Operations Driving
Refer to the current driving standards for each individual agency.

Mobilization and Demobilization
To manage fatigue, every effort should be made to avoid off unit (excluding IA response) mobilization and demobilization travel between 2200 hrs and 0500 hrs.

Incident Operations Driving
This policy addresses driving by personnel actively engaged in wildland fire suppression or all-risk activities; these include 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.

Personal Protective Equipment (PPE)

All personnel are required to use Personal Protective Equipment (PPE) appropriate for their duties and/or as identified in JHAs/RAs. 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.

Required Fireline PPE includes:

- Wildland fire boots
- Fire shelter
- Hard hat with chinstrap
- Goggles/safety glasses as identified by JHAs/RAs)
- 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/RA

Polyester, polypropylene, and nylon materials are not to be worn, because most synthetic fibers melt when exposed to flame or extreme radiant heat. Personnel should wear only undergarments made of 100 percent natural fibers, 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 its 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 hardhats for fireline use are “Helmet, Safety, Plastic” (NFES #0109, NSN 8415-01-055-2265) listed in listed in *NWCG National Fire Equipment System Catalog: Part 1, Fire Supplies and Equipment*, or equivalent hardhat meeting the National Fire Protection Association (NFPA) 1977, Standard on Protective Clothing and Equipment for Wildland Fire Fighting.

Hard hats consist of two components - the shell and the suspension - which work together as a system. Alteration of either of these components compromises the effectiveness of the system (e.g. wearing hardhat backwards) and is not allowed. 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). http://www.fs.fed.us/t-d/pubs/htmlpubs/htm02672331/index.htm.

Eye and Face Protection

The following positions require the wearing of eye protection (meets *ANSI Z87.1* Standards):

- Nozzle operator
- Chainsaw operator/faller
- Helibase and ramp personnel
- Wildland fire chemical mixing personnel
- Other duties may require eye protection as identified in a specific JHA/RA

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/RA: Batch Mixing for 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.
- Wildland fire chemical 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/RA.

Employees may be required to be placed under a hearing conservation program as required by *29 CFR 1910.95*. Consult with local safety & health personnel for specifics regarding unit hearing conservation program.

- ***DOI -*** *Employees may be placed under a hearing conservation program as identified in approved Medical Standards Program waivers with restrictions or risk mitigation decision memorandum.*

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.*

Shrouds should be positioned in a manner that allows for immediate use. For additional information see MTDC Tech Tip *Improved Face and Neck Shroud for Wildland Firefighters, 2004* (0451-2323-MTDC). http://www.nifc.gov/wfstar/index.htm.

The use of shrouds is not required and should be as a result of onsite risk analysis.

Leg Protection

All chain saw operators will wear chainsaw chaps meeting *NFPA 1977, Standard on Protective Clothing and Equipment for Wildland Fire Fighting* or the United States Forest Service Specification 6170-4F. Chaps meeting United States Forest Service Specification 6170-4E must be replaced with chaps meeting United States Forest Service Specification 6170-4F by January 1, 2011. Chainsaw chaps shall be maintained in accordance with MTDC Publication, *Inspecting and Repairing Your Chainsaw Chaps - User Instructions* (0567-2816-MTDC) and MTDC Safety Alert 2009-01, June 29, 2009. http://www.nifc.gov/wfstar/index.htm.

Wildland Fire Boot Standard

Personnel assigned to wildland fires must wear a minimum of 8-inch high, lace-type exterior leather work boots with 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 FWS firefighters will be provided a set amount of station funding (as determined by each region), toward the purchase of approved wildland fire boots, not more than once every three years. Emergency or casual firefighters will provide their own boots.*
- ***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 any respiratory protection, (e.g., dust masks, half-mask respirators, SCBA) 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 SCBA which are compliant with NFPA 1981, Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services. SCBA may only be used when contaminants 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 respiratory protection equipment must comply with applicable National Fire Protection Association standards and 29 CFR 1910.134, and be justified by a Job Hazard Analysis. Where the acquisition and use of 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. Firefighters will inspect their fire shelters at the beginning of each fire season and periodically throughout the year, to ensure they are serviceable. New generation fire shelters are required for all wildland firefighters as of January 1, 2010. For more information refer to http://www.nifc.gov/fire_equipment/fire_shelter.htm

Training in inspection and 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 if it is safe to do so and not be removed pending approval of authorized investigators.

Specialized or Non Standard Personal Protective Equipment (PPE)

Specialized PPE 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 Fire Fighting*. All cold weather inner wear should be composed of 100% natural fibers (cotton, wool or silk) or other flame resistant material such as aramid.

High Visibility Vests

In order to meet 23 CFR 634, high visibility apparel should be worn whenever a firefighter is working on or in the right of way of a public roadway, unless there is a reasonable chance that the employee will be exposed to flames, high heat or hazardous materials, or if the safety apparel hinders the firefighter's ability to do his or her job.

- Employees must wear high visibility safety apparel that meets ANSI/ISEA 107, Class 2 or 3.
- Apparel that meets ANSI/ISEA 107 currently does not meet the flame resistance requirements of the NFPA Standard on Protective Clothing and Equipment for Wildland Fire Fighting. The high visibility safety apparel should not be worn if:
  - There is a reasonable chance that the employee may be exposed to flames, high heat or hazardous materials.
  - The high visibility garment hinders an employee's ability to do their job because it prevents necessary motion or because it limits access to necessary equipment such as radios or fire shelters.

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 or their designee 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.

Agency administrators and/or fire managers may request additional safety oversight 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.

Location of Fire Camps and Plans to Remain in Place

Fire camps should be located in areas that will service the incident for the long term without having to relocate. Due to such factors as extreme fire behaviors, fire camp locations might be compromised. Incident commanders are to be especially vigilant to quickly identify situations that may put their fire camp(s) or any other adjacent fire camps in jeopardy. As such, planning for evacuation and/ or remain in place actions should be considered. Evacuation plans at a minimum shall include:

- Documented risk assessment
- Trigger points
- Egress routes
- Transportation for all personnel
- Accountability for all personnel
- Those individuals not meeting 310-1 qualifications will be considered escorted visitors as addressed elsewhere in this chapter.
- ***FS -*** *Plans, at a minimum shall also include:*
  - *ICP protection strategy referenced in the IAP.*
  - *Live-ability considerations including air quality, functionality of location and facilities, and safety factors for post burn conditions.*

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 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

General guidance is as follows: If Unexploded Ordnance (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. For additional UXO safety information, see current IRPG.

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 IRPG.

- 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.
- Firefighters need to immediately report H_2S or potential exposure and seek immediate medical care.
- ***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.

Responding to Wildland Fires in or near Oil/Gas Operations

For those offices with oil and gas operations within their fire suppression jurisdiction, the following is the minimum standard operating procedures to help ensure the health and safety of wildland firefighters:

- Firefighters shall receive annual oil and gas hazard recognition and mitigation training.
- Local unit shall complete a JHA/RA for wildland fire suppression activities in oil and gas areas and provide a copy with a briefing to all local and incoming resources. See WFSTAR website for example of a RA. http://www.nifc.gov/wfstar/index.htm..
- Establish Response Protocols which includes notification procedures to respective oil and gas company(s).
- Ensure oil and gas resource advisors are consulted.
- Ensure that at least one member of each squad or engine crew is knowledgeable in the use and data interpretation of the Hydrogen Sulfide gas monitor. Training on the device will include at a minimum:
  - Equipment charging and maintenance of sensors
  - Startup, zeroing, calibration and bump testing procedures as recommended by the manufacturer.
  - How the monitor elicits a warning alarm (visual, auditory, vibration)
  - Understand Peak Reading, Short Term Exposure Limits (STEL), and Time Weighted Averages.
  - Understand how to set the monitors alarm threshold.
- The monitor's alarm shall be set at the current American Conference on Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (10 PPM 2008) and STEL (15 PPM 2008).
- If hydrogen sulfide gas (H_2S) is encountered, immediately disengage and leave area.
- Do not establish incident base camps or staging areas in or near oil and gas operations.

The following websites provide additional information and training recourses:

- http://www.nifc.gov/wfstar/oil_gas.htm
- http://iirdb.wildfirelessons.net/main/Reviews.aspx

Responding to Wildland Fires in or Near Radioactive Locations

Abandoned uranium mines and other potential radioactive sites exist in many areas of public lands. When these areas are identified, local management should provide information and direction on operations to be used. General knowledge and understanding of potential radiation exposure is necessary for wildland fire program management to make valid risk management decisions in these areas. The following websites provide this information and general guidelines:

- http://www.nifc.gov/policies/red_book/doc/RadiationDocument.pdf
- http://www.nifc.gov/policies/red_book/doc/RadiationGuidance.pdf

Smoke and Carbon Monoxide

Site specific hazards and mitigations need to be identified to reduce firefighter exposure to smoke and potential carbon monoxide.

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 or 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

Recommended PPE for visits to incident base camps and other non-fireline field locations.

- Lace-up, closed toe shoes/boots with traction soles and ankle support.
- Long trousers.
- Long-sleeve shirt.
- For agency personnel, the field uniform is appropriate.

Visits to the Fireline/RX Burns

Visits to the fireline must have the approval of the IC/Burn Boss.

- Visitors must maintain communications with the DIVS or appropriate fireline supervisor of the area they are visiting.
- Required PPE:
  - Wildland fire boots.
  - Yellow aramid shirts.
  - Aramid trousers.
  - Hard hat with chinstrap.
  - Leather gloves.
  - Fire shelter.
- Required equipment/supplies:
  - Hand tool.
  - Water canteen.

Visitors to the Fireline/RX Burns 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 hazard 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 hazard 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
- 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. Managers and supervisors shall ensure that an appropriate level of investigation is conducted for each accident 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 https://www.smis.doi.gov/. Supervisors shall complete SMIS report within six working days after the accident/injury.
- Forest Service employees will use the Safety and Health Information Portal System (SHIPS) through the Forest Service Dashboard.

Required Treatment for Burn Injuries

The following standards will be used when any firefighter sustains burn injuries, regardless of agency jurisdiction.

After on-site medical response, initial medical stabilization, and evaluation are completed; the agency administrator or designee having jurisdiction for the incident and/or firefighter representative (e.g. Crew Boss, Medical Unit Leader, Compensations for Injury Specialist, etc.) should coordinate with the attending physician to ensure that a firefighter whose injuries meet any of the following burn injury criteria is immediately referred to the nearest regional burn center. It is imperative that action is expeditious, as burn injuries are often difficult to evaluate and may take 72 hours to manifest themselves. These criteria are based upon American Burn Association criteria as warranting immediate referral to an accredited burn center.

The decision to refer the firefighter to a regional burn center is made directly by the attending physician or may be requested of the physician by the agency administrator or designee having jurisdiction and/or firefighter representative.

The agency administrator or designee for the incident will coordinate with the employee's home unit to identify a Workers Compensation liaison to assist the injured employee with workers compensation claims and procedures.

Workers Compensation benefits may be denied in the event that the attending physician does not agree to refer the firefighter to a regional burn center. During these rare events, close consultation must occur between the attending physician, the firefighter, the agency administrator or designee and/or firefighter representative, and the firefighter's physician to assure that the best possible care for the burn injuries is provided.

Burn Injury Criteria

- Partial thickness burns (second degree) involving greater than 5% Total Body Surface Area (TBSA).
- Burns (second degree) involving the face, hands, feet, genitalia, perineum, or major joints.
- Third-degree burns of any size are present.
- Electrical burns, including lightning injury are present.
- Inhalation injury is suspected.
- Burns are accompanied by traumatic injury (such as fractures).
- Individuals are unable to immediately return to full duty.
- When there is any doubt as to the severity of the burn injury, the recommended action should be to facilitate the immediate referral and transport of the firefighter to the nearest burn center.

A list of possible burn care facilities can be found at:
http://www.blm.gov/nifc/st/en/prog/fire/im.html.

For additional NWCG incident emergency medical information see:
http://www.nwcg.gov/teams/shwt/iemtg/index.html.

Critical Incident Management

The NWCG has published the *Agency Administrator's Guide to Critical Incident Management* (PMS 926). This guide is designed as a working tool to assist agency administrators with the chronological steps in managing a critical incident. This document includes a series of checklists which outlines agency administrators and other functional area's oversight and responsibilities. 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. Local units should complete the guide and review and update at least annually. This guide is only available electronically at:
http://www.nwcg.gov/pms/pubs/pubs.htm.

Critical Incident Stress Management (CISM)

A critical incident may be defined as a fatality or other event that can have serious long term affects on the agency, its employees and their families or the community. Such an event may warrant stress management assistance. The local agency administrator may choose to provide CISM for personnel having been exposed to a traumatic event.

The availability of CISM teams and related resources (e.g. defusing teams) varies constantly - it is imperative that local units pre-identify CISM resources that can support local unit needs.

Some incident management teams have Human Resource Specialists (HRSP) on their teams who may be able to assist local units with CISM needs. Further information is provided in appendix Q.

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 State 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 WFLC 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 WFLC 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 WFLC 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 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.

National Wildfire Coordinating Group (NWCG)

The NWCG is made up of the USDA FS; four Department of the Interior agencies: BLM, NPS, BIA, and the FWS; Intertribal Timber Council, U.S. Fire Administration, 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 (NMAC) Group

National multi-agency coordination is overseen by the NMAC Group, which consists of one representative each from the following agencies: BLM, FWS, NPS, BIA, FS, NASF, and the 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 NMAC group and the Geographic Area Multi-Agency Coordination groups.
- Establish priorities among geographic areas.

- Activate and maintain a ready reserve of national resources for assignment directly by NMAC as needed.
- Implement decisions of the NMAC.

Geographic Area Coordinating (GMAC) 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.
- Provide NMAC with National Ready Reserve (NRR) resources as required.
- Issue coordinated and collective situation status reports.

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/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 Director, Office of Fire and Aviation or Forest Service Regional Director of Fire and Aviation.*

Local and Geographic Area Drawdown

Drawdown is the predetermined number and type of suppression resources that are required to maintain viable initial attack (IA) capability at either the local or geographic area. Drawdown resources are considered unavailable outside the local or geographic area for which they have been identified. Drawdown is intended to:

- Ensure adequate fire suppression capability for local and/or geographic area managers.
- Enable sound planning and preparedness at all management levels.

Although drawdown resources are considered unavailable outside the local or geographic area for which they have been identified, they may still be reallocated by the Geographic Area or National MAC to meet higher priority obligations.

Establishing Drawdown Levels

Local drawdown is established by the local unit and/or the local MAC group and implemented by the local dispatch office. The local dispatch office will notify the Geographic Area Coordination Center (GACC) of local drawdown decisions and actions.

Geographic area drawdown is established by the GMAC and implemented by the GACC. The GACC will notify the local dispatch offices and the National Interagency Coordination Center (NICC) of geographic area drawdown decision and actions.

National Ready Reserve (NRR)

NRR is a means by which the NMAC identifies and readies specific categories, types and numbers of fire suppression resources in order to maintain overall national readiness during periods of actual or predicted national suppression resource scarcity.

NRR implementation responsibilities are as follows:

- NMAC establishes national ready reserve requirements by resource category, type and number.
- NICC implements NMAC intent by directing individual GACCs to place specific categories, types, and numbers of resources on national ready reserve.
- GACCs direct local dispatch centers and/or assigned IMTs to specifically identify resources to be placed on national ready reserve.

National ready reserve resources must meet the following requirements:

  - Must be able to demobe and be enroute to new assignment in less than 2 hours.
  - Resources must have at least 7 days left in 14 day rotation (extensions will not be factored in this calculation).
  - May be currently assigned to ongoing incidents.
  - May be assigned to incidents after being designated ready reserve.
  - Designated ready reserve resources may be adjusted on a daily basis.

- GACCs provide NICC specific names of national ready reserve resources.
- NICC mobilizes national ready reserve assets through normal coordination system channels as necessary.

NMAC will adjust ready reserve requirements as needed. Furthermore, in order to maintain national surge capability, the NMAC may retain available resources within a geographic area, over and above the established geographic area drawdown level.

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.*

Interagency Incident Business Management Handbook

All federal agencies have adopted the 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.

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.*

National Interagency Coordination Center (NICC)

The NICC is located at the 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 resource orders between the BIA Areas, BLM States, National Association of State Foresters, 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 Framework. 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 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**
  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 AOP 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 (DHS) 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, managerial, technical, and advisory services) in support of state and local assistance efforts."

Homeland Security Presidential Directive-5

Homeland Security Presidential Directive (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 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 concepts, 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 Framework

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 Framework (NRF). The NRF, using the NIMS, is an all-hazards plan that establishes a single, comprehensive framework for the management of domestic incidents. The NRF 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

Emergency Support Function (ESF) Annex is the component of the NRF that details the mission, policies, structures, and responsibilities of federal agencies. They are utilized 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. Except for AK USDA-FS is the coordinator and primary agency for ESF #4 - Firefighting. For ESF #4 operations that occur in the State of Alaska, the operational lead is the Department of the Interior (DOI)/Bureau of Land Management. See http://www.fema.gov/pdf/emergency/nrf/nrf-esf-04.pdf for further information. Other USDA-FS and DOI responsibilities are:

ESF Support Annex	USDA Role	DOI Role
#01 Transportation	Support	Support
#02 Communications	Support	Support
#03 Public Works and Engineering	Support	Support
#04 Firefighting	Coord. & Primary	Support
#05 Emergency Management	Support	Support
#06 Mass Care, Emergency Assistance, Housing, & Human Services	Support	Support
#07 Logistics Management and Resources Support	Support	
#08 Public Health and Medical Services	Support	
#09 Search and Rescue	Support	Primary
#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		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 support, cooperation, available resources, 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 AOP 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 FS, 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 & Response

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 Land Management Plan (LMP). 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).*

For complete interagency policy guidance see:
http://www.nwcg.gov/branches/ppm/fpc/archives/fire_policy/index.htm

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

Concepts and Definitions

Land/Resource Management Plan

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 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.

Fire Management Plan

A plan that identifies and integrates all wildland fire management and related activities within the context of the approved L/RMP. It defines a program to manage planned and unplanned wildland fires. The plan is supplemented by operations plans, including but not limited to preparedness plans, preplanned dispatch plans, prescribed fire burn plans, and prevention plans. FMPs assure that wildland fire management goals and components are coordinated.

Purpose

The fire management planning process and requirements may differ among agencies. However, for all agencies (Forest Service, Bureau of Indian Affairs, Bureau of Land Management, Fish and Wildlife Service, and National Park Service), a common purpose of a FMP is to provide decision support to aid managers in making informed decisions on the appropriate management responses to unplanned ignitions. The FMP includes a concise summary of information organized by fire management unit (FMU) or units.

In addition, for the Department of the Interior (DOI) agencies, the FMP contains strategic and operational elements that describe how to manage applicable fire program components such as: response to unplanned ignitions, hazardous fuels and vegetation management, burned area emergency stabilization and rehabilitation, prevention, community interactions and collaborative partnerships roles, and monitoring and evaluation programs.

Each FMP will evolve over time as new information becomes available, conditions change on the ground and changes are made to L/RMP.

For an example of an FMP see *Interagency Fire Management Plan Template, April 9, 2009 at http://www.nwcg.gov/branches/ppm/ifpc/inex.htm*

- ***FS -*** *An example FS FMP can be found at: http://fsweb.wo.fs.fed.us/fire/fmp/*

Fire Management Unit

The primary purpose of developing Fire Management Units (FMU)s in fire management planning is to assist in organizing information in complex landscapes. The process of creating FMUs divides the landscape into smaller geographic areas to more easily describe physical/biological/social characteristics and frame associated planning guidance based on these characteristics. FMUs should be developed through interagency efforts and interactions to facilitate common fire management across boundaries. See the *Interagency Fire Management Plan Template, April 9.2009.*

An FMU can be 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 from the management characteristics of an adjacent FMU. The FMU may have dominant management objectives and pre-selected strategies assigned to accomplish these objectives. See *Guidance for Implementation of Federal Wildland Fire Management Policy February 2009.*

Wildland Fire

Wildland fire is a general term describing any non-structure fire that occurs in the wildland. Wildland fires are categorized into two distinct types:

- **Wildfires -** Unplanned ignitions or prescribed fires that are declared wildfires. See *Guidance for Implementation of Federal Wildland Fire Policy, February 13, 2009.*
- **Prescribed Fires -** Planned ignitions. See *Guidance for Implementation of Federal Wildland Fire Policy*, February 13, 2009.

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, and across agency boundaries. Response to wildland fires is based on ecological, social and legal consequences of the fire. The appropriate response to the fire is dictated by:

- The circumstances under which a fire occurs
- The likely consequences to firefighter/public safety and welfare
- The natural/cultural resource values to be protected

See *Guidance for Implementation of Federal Wildland Fire Policy, February 13, 2009.*

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. See *NWCG Glossary of Wildland Fire Terminology, January 2005*. Initial action on human-caused wildfire will be to suppress the fire at the lowest cost with the fewest negative consequences with respect to firefighter and public safety.

Initial Attack
A planned response to a wildfire given the wildfire's potential behavior. The objective of initial attack is to stop the spread of the fire and put it out in a manner consistent with firefighter and public safety and values to be protected. See *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. See *NWCG Glossary of Wildland Fire Terminology, January 2005.*

Wildfire Suppression
Suppression - all the work of extinguishing a fire or confining a fire beginning with its discovery. See *Guidance for Implementation of Federal Wildland Fire Policy, February 13, 2009.*

Wildland Fire Management Objectives
A wildland fire may be concurrently managed for one or more objectives and objectives can change as the fire spreads across the landscape. Objectives are affected by changes in fuels, weather, topography; varying social understanding and tolerance; and involvement of other governmental jurisdictions having different missions and objectives.

Management response to a wildland fire on federal land is based on objectives established in the applicable Land/ Resource Management Plan and/or the Fire

Management Plan. See *Guidance for Implementation of Federal Wildland Fire Policy, February 13, 2009.*

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

Wildfire Responses

Responding to a Wildfire

Responses to wildland fire will be coordinated across levels of government regardless of the jurisdiction at the ignition source. Management response to a wildland fire on federal land is based on objectives established in the applicable Land/ Resource Management Plan and/or the Fire Management Plan. Initial action on human-caused wildfire will be to suppress the fire at the lowest cost with the fewest negative consequences with respect to firefighter and public safety. See *Guidance for Implementation of Federal Wildland Fire Policy, February 13, 2009.*

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 Decision Support System (WFDSS)

The Wildland Fire Decision Support System (WFDSS) is a web based decision support system, which replaces the Wildland Fire Situation Analysis (WFSA), Wildland Fire Implementation plan (WFIP), Long Term Implementation Plan (LTIP) and Strategic Implementation Plan (SIP). These documents have been combined into a single dynamic process within the WFDSS. WFDSS utilizes GIS information that incorporates modeling, documentation of a decision process, and multiple databases. These features are combined into a system that gives the decision maker maximum flexibility in defining their course of action and subsequent strategic and tactical actions based on planning documents, incident specific analysis and risk assessment. As an internet based system with multiple database links; WFDSS can give decision support in a timely and efficient manner.

Use of WFDSS for all unplanned fires has been implemented differently throughout the agencies. It is the decision of the local unit to determine who shall be responsible for initial entry and updating fires in the system. Mandatory use of WFDSS is required for all agencies.

WFDSS Support

A National Fire Decision Support Center (NFDSC) has been established to support analysis used in wildland fire decision making and WFDSS. The support provided by NFDSC consists of developing, improving, and increasing production and operational use of decision support products. As part of that support NFDSC will provide not only direct decision support but also mentoring and training to develop and strengthen regional and unit level decision support capacity. Information for requesting assistance from the NFDSC can be found at the WFDSS website: http://WFDSS.usgs.gov. An over view of the WFDSS Elements can be found in appendix S.

WFDSS User Roles

Privileges within WFDSS are controlled by several user roles which have varying levels of capability in relation to creation and editing of incidents, analyses, reports, and decisions. More information can be found on the WFDSS homepage under the Related Resources link.

Fire Modeling

Fire modeling has been incorporated into WFDSS, in the form of the FIRE Spread Probability model (FSPro) and FlamMap. Single purpose models from FlamMap; the "Basic" and "Short Term", have been incorporated in to the system. Comparison of WFDSS short and basic models to stand alone FlamMap and other fire behavior information can be found on the WFDSS homepage under the Related Resources link, fire behavior section. Information for requesting assistance in running these models for your incident can be found at the WFDSS homepage through the National Fire Decision Support Center (NFDSC).

Response Levels

WFDSS can be used to assess the entire spectrum of incident complexity and risk within three Response Levels (RL), RL1, RL2, and RL3. These response levels are used in a manner similar to that of the stages of a WFIP in that your incident can escalate and de-escalate through these levels as the incident progresses. WFDSS differs from the WFIP process in that there is no nationally prescribed time requirement in which a RL must be completed. The movement through Response Levels does not necessarily need to be linear and should be determined by incident complexity, objectives, and expected duration of the incident.

- **RL1 -** Most fires will not progress beyond this point. Response Level 1 is characterized by basic analysis and preplanned actions and decisions. This RL will be similar to the WFIP stage 1.
- **RL2 -** Response Level 2 is characterized by a more detailed analysis and planning process. It is at this point your initial course of action is developed and a decision is approved by an agency administrator. This RL is comparable to WFIP stage 2.

- **RL3 -** Response Level 3 is characterized by a very detailed analysis and course of action that may include long-term planning considerations. This RL is comparable to WFIP stage 3 or the Long Term Implementation Plan (LTIP). Fires in this category will typically be large, highly complex, or long-term fire management events. This RL decision document must also be approved by an agency administrator.

WFDSS Decision Approval and Publication

Decisions in WFDSS are approved and published by the appropriate line officer as defined in the table below. Incident privileges must be assigned within WFDSS to designate the approver. During the approval process, prior to publishing a decision, the timeframe for periodic assessment can be set (1-14 days).

It is imperative that a decision be reviewed carefully as once approved and published, a decision becomes a system of record and all WFDSS users can view the information. Additionally, the action CANNOT be undone. If there is an error in the information, or new information is added for documentation or update (i.e. fire behavior, Management Action Points) a new decision must be made to permanently update the record.

WFDSS Approval Requirements

Cost Estimate	BIA	BLM	FWS	NPS	USFS
$0-$2M	Agency Superintendent	Field/District Manager	Project Leader/ Refuge Manager	Park Superintendent	District. Ranger
$2M-5M	Regional Director.	State Director.	Regional Director.	Regional Director.	Forest Supervisor
$5M-10M	BIA Director.	BLM Director.	FWS Director.	NPS Director.	Forest Supervisor
$10M-50M	BIA Director.	BLM Director.	FWS Director.	NPS Director.	Regional Forester
>50M	BIA Director.	BLM Director.	FWS Director.	NPS Director.	USFS Chief

Periodic Assessment

The Periodic Assessment must be completed by the designated approver at the time frame set during the publication process. This timeframe can be set 1-14 days depending upon the complexity and status of the incident and the Line Officer can request a reminder email for the morning the next assessment is due. It is beneficial to document clear, concise information about the incident when completing the periodic assessment as this information will be part of the decision record. It is a way for someone to gather situational awareness of the incident and should be useful information not only during the incident but for years to come when looking back at the incident. It is especially pertinent because it will outline your thought process and reasons for either continuing a current decision or requiring a new decision.

Wildland Fire Decision Support System (WFDSS) Tools

Modeling tools are available to assist fire managers and agency administrators in decisions regarding strategies and tactics.

Rapid Assessment Values-at-Risk (RAVAR) is the primary fire economics tool within the Wildland Fire Decision Support System (WFDSS). It utilizes Fire Spread Probability Model (FSPro) outputs and county assessor cadastral data for structural property values as well as other Tier 1 (national) and Tier 2 (regional) values at risk. RAVAR is typically integrated with the FSPro model to identify the likelihood of a resources being impacted in the potential fire path but can be linked to any expected fire spread polygon. This quantifiable data can be used to inform managers while developing the best course of action.

- ***USFS -*** Congressional mandate required the Forest Service to develop a performance measure for wildland fire suppression expenditures which resulted in the development of the Stratified Cost Index (SCI). The SCI estimates expenditures on individual large wildland fires (>300 acres) by geographic area considering characteristics of the fire, the fire environment and values within proximity of the fire. The use of SCI for Forest Service fires is not mandated however it is recommended that SCI be used for large FS fires exceeding 5 million dollars or that will likely be audited. Check with your Forest or Region for local protocol on the use of SCI.
- ***DOI -*** There are unique SCI models which have been developed for each DOI agency. Agency-specific direction will be given in the future related to when the models will be available in WFDSS, and how field units will use them in cost estimation.

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 (FDOPs). FDOP 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 Operating Plan

A Fire Danger Operating Plan is a fire danger applications guide for agency users at the local level. A Fire Danger 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. FDOP should be prepared by individuals trained at the Intermediate NFDRS (S-491) level, and preferably the Advanced NFDRS level. FDOP are generally prepared for local interagency areas, such as a zone-wide operating plan. Interagency FDOP are an integral component of unit fire management plan(s). 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://fam.nwcg.gov/fam-web/) 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. Fire danger rating inventory incorporates 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) levels. 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 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 the 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://fam.nwcg.gov/fam-web/pocketcards/default.htm. Fire Danger Pocket Cards are recommended at each local unit where weather data exists.

- ***BLM/FS -*** *Fire Danger Pocket Cards are developed for and implemented at each local unit.*

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. The 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 (SRA) 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 SRA can be used to modify the Annual Operating Plan (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 SRA 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. SRA for each geographic area are prepared, issued, and updated each year by GACC Predictive Service staffs. These analyses consider detailed information for each of the Predictive Services Areas (PSA) within the geographic area.

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

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:

- Preparedness plans (fire management plan, fire danger operating plan, annual operating plan, etc.) indicate the need for additional preparedness/suppression resources.
- Current fire workload has exceeded capabilities of local resources.
- Fire seasons that either start earlier or last longer than planned in the fire management plan.

- An abnormal increase in fire potential or danger that is not planned for in existing preparedness plans.
- Fire season occurs outside what is planned in the fire management plan when required suppression resources are not otherwise funded (e.g. seasonal/temporary fire personnel.)

The objective of fire severity funding is to mitigate losses by improving suppression response capability.

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 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 30 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 30 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 funding 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 PER1, PER2, 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 per severity event.*
- ***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.

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
- 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 must work together to generate and submit joint requests, to minimize duplication of required resources, reduce interagency costs 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 interagency standard format for fire severity funding requests may be found at: http://www.nifc.gov/policies/red_book/2009/ISFRF.doc.

- ***BLM -*** *severity request form is at: http://www.blm.gov/nifc/st/en/prog/fire/fireops/severity.html*

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, employees whose regular salary is not fire funded, 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 their budgeted subactivity 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 Reviews

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/policies/preparedness_reviews/preparedness_reviews.htm

- ***BLM -*** *Severity funding is not a reviewed item of the BLM national Preparedness Review. BLM Preparedness Review Checklists can be found at: http://www.blm.gov/nifc/st/en/prog/fire/fireops/preparedness/preparedness_review/checklists.html*

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 & Response

National Interagency Incident Management System

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 Framework.

Incident Command System (ICS)

The ICS is the on-site management system used in NIIMS/NIMS. The ICS is a standardized emergency management system 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 and all risk incidents.

Wildland Fire Decision Support System (WFDSS)

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 Incident Complexity Analysis format to replace appendix G. 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.

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
Type 5 Incident Command
Type 4 Incident Command
Type 3 Incident Command
Type 2 Incident Command
Type 1 Incident Command
Wildland Fire Management Teams
NIMO
Area Command
Unified Command

Off Site Coordination and Support
Initial Attack Dispatch
Expanded Dispatch
Buying /Payment Teams
Coordination Centers (Geographic or National)
Multi-Agency Coordinating Groups (Local, Geographic, or National)
National Multiagency Coordination (NMAC)

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) and are established as required to perform key functional responsibilities for the IC.

For purposes of initial attack the first IC on scene, qualified at any level, will assume the duties of initial attack IC. The initial attack IC 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.

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.

- ***FS -*** *See FSH 5109.17 for additional standards.*

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*. When ICT3s are required to manage an 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 ICT3 is expected to exercise their authority and establish the appropriate organizational structure for each incident based on complexity and span of control.

As an incident escalates, a continuing reassessment of the complexity level should be completed to validate the continued type 3 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 (ICT3)
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 FSH 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 Incident Qualification Card.

Type 3 Incident Characteristics

- Ad hoc or pre-established type 3 organization managed by an ICT3.
- 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.
- ICT3's 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

Most 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.
- 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 WFDSS or other decision support document.
- 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.
- 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 WFDSS or other decision support document.
- Requires a written Delegation of Authority to the incident commander.

Wildland Fire Management Teams (WFMT)

Wildland Fire Management Teams provide land managers with skilled and mobile personnel to assist with the management of wildfires and prescribed fires. WFMT are available as an interagency resource for assignment to all agencies and units.

National Incident Management Organization Teams

Four 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. NIMO teams are mobilized from Boise, Atlanta, Portland and Phoenix.

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 ACDR).

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

An initial Attack Dispatch Organization is the primary unit responsible for implementing the initial response to incidents upon report. It is integrated within the fire organization and the decision for deployment of response resources is made by an authorized individual.

IA dispatch is also responsible for coordination of communications and logistical support for incidents and field operations.

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

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 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 required operations.

Buying/Payment Teams

Buying/Payment Teams support incidents by procuring services, supplies, 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)

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, the 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 the 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 Wildland Fire Management Team (WFMT) include:

- Conduct an initial briefing to the Incident Management Team (appendix D).
- Provide an approved and certified WFDSS.
- ***FS -*** *Ensure that significant decisions related to strategy and costs are included in a key decision log.*
- Complete an Incident Complexity Analysis (appendix F & G) to accompany the WFDSS
- Issue a written Delegation of Authority (appendix H) to the type 1 or 2 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, agency administrator's intent, 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.
  - Conduct during action reviews with the IC.
  - 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 WFDSS to the incident management teams.

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 WFDSS.
- 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. The Resource Advisor should 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/aquatic invasive species
- 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).*

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.

Incident History and Financial Records

Wildland fire incidents on Federal lands managed by the FS and DOI (except BIA) require creation of an Incident History File (IHF) to document significant events, actions taken, lessons learned and other information with long-term value for managing natural resources. IHF contents and instructions and tools for creating the IHF are found at http://www.nifc.gov/.

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

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 and the respective GACC within 60 days. See appendix J for the IMT evaluation form.

The Delegation of Authority, the WFDSS documents and other documented 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 or agency managing the IMT.

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.

Post wildfire activities references can be found in *Interagency Burned Area Emergency Response Guidebook, Interpretation of Department of the Interior 620 DM 3 and USDA Forest Service Manual 2523, For the Emergency Stabilization of Federal and Tribal Trust Lands, Version 4.0 dated Feb. 2006 and "Interagency Burned Area Rehabilitation Guidebook, Interpretation of Department of the Interior 620 DM 3, For the Burned Area Rehabilitation of Federal and Tribal Trust Lands, Version 1.3* dated October 2006 http://www.fws.gov/fire/ifcc/Esr/home.htm.

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 Organization.
- **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 improvements 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 -** Continuing the rehabilitation beyond the initial three years or the repair or replacement of major facilities damaged by the wildfire.

BAER Components Table

	Suppression Repair	**Emergency Stabilization**	**Rehabilitation**	**Restoration**
Objective:	Repair suppression damages	Protect life and property	Repair damages	Long Term Ecosystem Restoration
Damage due to:	Suppression activities	Post-fire events	Fire	Fire
Urgency:	Immediately after containment	1-12 months	1-3 years	3 + years
Responsibility	Incident commander	Agency administrator	Agency administrator	Agency administrator
Funding type:	Suppression (fire)	Emergency Stabilization	Rehabilitation	Regular program

Approval Authorities Table

	BIA	**BLM**	**FWS**	**NPS**	**FS**
Local Approval Level	$100,000 Agency Superintendent	$0 Field/District Manager	$0 Refuge Manager	$0 Park Superintendent	$0 District Ranger
					$0 Forest Supervisor
Regional/ State Approval Level	$100,000/ $250,000 Regional Director	<$100,000 State Director	<$500,000 Regional Director with Regional Fire Management Coordinator concurrence	<$500,000 Regional Director	$500,000 Western Regional Foresters
					$100,000 Eastern Regional Foresters
National Approval Level	>$500,000 Director of Fire Management	>$100,000 Director	>$500,000 Chief, Branch of Fire Management	>$500,000 Fire Director	>$100,000 or $500,000 Chief

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 07 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 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 two standing National BAER Teams 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 Teams are dispatched by the National Interagency BAER Team Dispatch Prioritization Criteria Evaluation. http://www.fws.gov/fire/ifcc/Esr/BAER/BAER_Team_Management/BAERteams.htm.. The DOI-BAER Teams should be requested at least 10 days prior to expected date of wildfire containment and ordered through the National Mobilization Guide.*
- ***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.*

Incident Business Management

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 Decision Support System (WFDSS) documentation. Indirect containment strategies are appropriate only if they are the safest or least costly 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.

Large Fire Cost Reviews

A large fire cost review will be required for incidents (single fire or complex) that meet or exceed federal combined expenditures of $10 million.

It is the responsibility of the agency administrator to monitor large fire costs and advise the appropriate individual(s) within their agency of the need for a Large Fire Cost Review. When a multi-jurisdictional fire requires review, the local agency administrator will determine which agency will be designated as the lead in the review process.

The *Large Fire Cost Review Guidebook* and draft Delegation of Authority for use by all federal wildland fire management agencies can be found at http://www.nwcg.gov/general/memos/nwcg-003-2009.html.

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 http://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 the *Fire Equipment Storage and Refurbishment Standards (www.nwcg.gov).* Those items not identified in this document 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 trackable 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 Management and Environmental Sustainability

Every incident should seek opportunities to reduce unnecessary waste and limit impacts associated with management actions. This may be accomplished, for example, by promoting recycling and encouraging the use of alternative energy sources as long as such efforts do not compromise operational or safety objectives.

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.

- Trackable ID 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 *Interagency Incident Business Management Handbook*. 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/trackable 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 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*.

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.

Incident Emergency Medical Services

Agencies will follow interim NWCG minimum standards for incident emergency medical services as defined in appendix L (NWCG#011-2208) to assist wildland fire incident commanders with determining the level and number of emergency medical resources and related supplies needed based upon the number of incident personnel. This standard as well as other incident medical information can be found on the Incident Emergency Medical Task Group website at: http://www.nwcg.gov/teams/shwt/iemtg/index.html

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, 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 (WFCS) website:

- http://www.fs.fed.us/rm/fire/wfcs/index.htm
- Link to appropriate Qualified Products List (QPL)

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

Products must be blended or mixed at the proper ratio prior to being loaded into the aircraft. Quality control and safety requirements dictate that mixing or blending of wildland fire chemicals be accomplished by approved methods.

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. Retardants may be applied aerially by large air tanker, single engine airtanker (SEAT) and helicopter bucket. Some products are formulated specifically for delivery from ground sources. See the QPL for specific uses for each product.

Recommended coverage levels and guidelines for use can be found in the *10 Principles of Retardant Application,* NFES 2048, PMS 440-2 pocket card. Retardant mixing, blending, testing, and sampling requirements can be found at the WFCS website Lot Acceptance and Quality Assurance page: http://www.fs.fed.us/rm/fire/wfcs/laqa.htm.

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 no longer effective once the water has evaporated. Foam may be applied by engines, portable pumps, helicopters and SEATs. Some agencies also allow application of foam from fixed-wing water scoopers. See the QPL for specific uses for each product.

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 F*oam vs. Fire, Aerial Applications, NWCG, PMS 446-3, NFES 1845, October 1995*.

Wet Water

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

Water Enhancer (Gel)

Water enhancers, such as fire fighting gels, are products added to water to improve one or more of the physical properties of water. They are not effective once the water has evaporated. These products may be used in structure protection within the wildland interface or on wildland fuels. They are fully approved for use in helicopter bucket and engine application. Many are also approved, at specific mix ratios, for use in SEATs, and fixed tank helicopters. See the QPL for specific uses for each product.

Safety Information

Personnel Safety

All qualified wildland fire chemicals meet minimum (June 2007) requirements in regard to aquatic and mammalian toxicity, acute oral toxicity, acute dermal toxicity, primary skin irritation, and primary eye irritation. Specifications for long-term retardants, fire suppression foams, and water enhancers, can be found on the WFCS website.

Personnel involved in handling, mixing, and applying fire chemicals or solutions shall be trained in proper procedures to protect their health and safety and the environment. Approved fire chemicals can be irritating to the eyes. Personnel must follow the manufacturer's recommendations; including use of PPE, as found on the product label and product MSDS. The MSDSs for all approved fire chemicals can be found on the web site at http://www.fs.fed.us/rm/fire/wfcs/msds.htm.

Human health risk from accidental drench with fire chemicals can be mitigated by washing with water to remove any residue from exposed skin.

Containers of any fire chemical, including backpack pumps and engine tanks, should be labeled to alert personnel that they do not contain only water and the contents are not potable.

Slippery footing is a hazard at storage areas, unloading and mixing sites, and wherever applied. 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. Firefighters should be aware

that fire chemicals can conceal ground hazards. Wildland fire chemicals can penetrate and deteriorate leather boots, resulting in wet feet and potentially ruined leather.

Aerial Application Safety

Persons and equipment in the flight path of intended aerial drops should move to a location that will decrease the possibility of being hit with a drop.

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

During training or briefings, inform all fire personnel of environmental guidelines and requirements for fire chemicals application and avoid contact with waterways.

Avoid dipping from rivers or lakes with a helicopter bucket containing residual fire chemicals without first cleaning/washing down the bucket.

Consider setting up an adjacent reload site and manage the fire chemicals in portable tanks or terminate the use of chemicals for that application.

Policy for Delivery of Wildland Fire Chemicals near Waterways

Avoid aerial application of wildland fire chemicals within 300 feet of waterways and any ground application of wildland fire chemicals into waterways. The policy has been adopted from the *2000 Guidelines for Aerial delivery of Retardant or Foam near Waterways* which were established and approved by the FS, BLM, NPS, and FWS. It has been expanded to include all wildland fire chemicals, including water enhancers.
This policy was updated in 4/09 and can be found at.
http://www.fs.fed.us/rm/fire/wfcs/Application_Policy-MultiAgency_042209-UPDATE.pdf

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 wildland fire chemical application to the waterway. When anchoring a wildland fire chemical to a waterway, use the most accurate method of delivery in order to minimize placement of wildland fire chemicals in the waterway (e.g., a helicopter rather than a heavy airtanker).

When potential damage to natural resources outweighs possible loss of aquatic life, the unit administrator may approve a deviation from these guidelines.

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

Guidance for Pilots
To meet the 300-foot buffer zone guideline, implement the following:

- **Medium/Heavy Airtankers:** When approaching a waterway visible to the pilot, the pilot shall terminate the application of wildland fire chemical approximately 300 feet before reaching the waterway. When flying over a waterway, pilots shall wait one second after crossing the far bank or shore of a waterway before applying wildland fire chemical. Pilots shall make adjustments for airspeed and ambient conditions such as wind to avoid the application of wildland fire chemical within the 300-foot buffer zone.
- **Single Engine Airtankers:** When approaching a waterway visible to the pilot, the pilot shall terminate application of wildland fire chemical approximately 300 feet before reaching the waterway. When flying over a waterway, the pilot shall not begin application of wildland fire chemical until 300 feet after crossing the far bank or shore. The pilot shall make adjustments for airspeed and ambient conditions such as wind to avoid the application of retardant within the 300-foot buffer zone.
- **Helicopters:** When approaching a waterway visible to the pilot, the pilot shall terminate the application of retardant or foams 300 feet before reaching the waterway. When flying over a waterway, pilots shall wait five seconds after crossing the far bank or shore before applying the wildland fire chemical. Pilots shall make adjustments for airspeed and ambient conditions such as wind to avoid the application of wildland fire chemicals within the 300-foot buffer zone.

This policy does not require the helicopter or airtanker pilot-in-command to fly in such a way as to endanger his or her aircraft, other aircraft, structures or compromise ground personnel safety.

Reporting Requirements of Wildland Fire Chemicals into Waterways:
Any fire chemicals aerially applied into a waterway or within 300 feet of a waterway require prompt upward reporting to incident management and agency administrator. Notifications will also be made for any spills or ground applications of fire chemicals into waterways or with potential to enter the waterway.

If it is believed that fire chemicals have been introduced into a waterway, personnel should immediately inform their supervisor. The incident or host authorities must immediately contact appropriate regulatory agencies and specialists within the local jurisdiction.

Initial notifications of wildland fire chemical mishaps will be reported as soon as possible to the WFCS Fire Chemical Project Leader in Missoula, Montana at

phone 406-329-4859 (if no answer please leave message) or to individuals listed on website referenced below. Include the date, location, and extent of the introduction.

All information, including reporting form and instructions, are posted on the web site at: http://www.fs.fed.us/rm/fire/wfcs/report.htm.

- ***FS -*** *Additional Reporting Requirements for Threatened and Endangered Species. Reporting is also required for all introductions of wildland fire chemicals into habitat for those Threatened and Endangered species identified by the U.S Fish and Wildlife Service (FWS). The list and other information can be found at http://www.fs.fed.us/fire/retardant/index.html. This requirement resulted from the Forest Service's acceptance of Biological Opinions received from the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS). When wildland fire chemicals adversely affect any threatened, endangered, or proposed species, or designated or proposed critical habitat, regardless of the 300' waterway buffer zone, the Forest Service Line Officer must initiate emergency consultation with the FWS and/or NMFS. The FS unit should coordinate with the local FWS or NMFS office to monitor, determine significance of effects, and design appropriate responsive measures. The procedures, reporting form and instructions can be found at the same website as listed above.*

Endangered Species Act (ESA) Emergency Consultation

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

Where aquatic threatened &endangered (T&E) species or their habitats are potentially affected by aerial application of wildland fire chemical, the following additional procedures apply:

- As soon as practicable after the aerial application of wildland fire chemical near waterways, determine whether the aerial application has caused any adverse effects to a T&E species or their habitat. This can be accomplished by the following:
  - Aerial application of wildland fire chemical outside 300 ft of a waterway is presumed to avoid adverse effects to aquatic species and no further consultation for aquatic species is necessary.
  - Aerial application of wildland fire chemical within 300 ft of a waterway requires that the unit administrator determine whether there has been any adverse effects to T&E species within the waterway.
- These procedures shall be documented in the initial or subsequent fire reports:
  - If there were no adverse effects to aquatic T&E species or their habitats, there is no additional requirement to consult on aquatic species

with Fish and Wildlife Service (FWS) or National Marine Fisheries Service (NMFS).

- If the action agency determines that there were adverse effects on T&E species or their habitats then the action agency must consult with FWS and/or 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.

Ground application of a wildland fire chemical into a waterway also requires determining whether the application has caused any adverse effects to a T&E species or their habitat. The procedures identified above also apply.

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

Chapter 13
Firefighter Training and Qualifications

Introduction
National Wildfire Coordinating Group (NWCG) sanctioned firefighters are trained and qualified according to the NWCG and other standards, as outlined below.

Policy
Firefighters must meet standards identified in the NWCG publication *PMS 310-1 National Interagency Incident Management System Wildland Fire Qualifications System Guide.* The 310-1 may be found at http://www.nwcg.gov/pms/docs/docs.htm

- ***FS -*** *See FSH 5109.17 for additional requirements.*

Certain firefighters must meet standards identified in the *Interagency Fire Program Management Qualifications Standards and Guide*. The *Interagency Fire Program Management Qualification Standards and Guide* may be found at http://www.ifpm.nifc.gov

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

- ***BLM -*** *BLM Fire and Aviation Training Information Job Aid which can be found at : http://www.blm.gov/nifc/st/en/prog/fire/training/fire_training/publications/job_aid.html*
- ***FWS -*** *The Fire Management Handbook.*
- ***FS -*** *The FSH 5109.17. AD hires sponsored by the Forest Service will meet FSH 5109.17 position 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 their agency 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 the 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/wo/st/en/info/regulations/combined_record_schedules.html*
- ***NPS -*** *IQCS Account Managers should have an IQCS Delegation of Authority if they are serving as the Certifying Official. Delegation of Authority can be found at: http://iqcs.nwcg.gov/main/requestAccount.html*

Certification of Non-Agency Personnel

Non-agency firefighters will be certified by state or local fire departments, or private training providers approved by a 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 Qualification Card

The agency administrator (or delegate) is responsible for annual certification of all agency and Administratively Determined (AD) personnel serving on wildfire, prescribed fire, and all hazard incidents. This responsibility includes monitoring medical status, fitness, training, performance, and ensuring the responder meets all position performance requirements.

Training, medical screening, and successful completion of the appropriate WCT must be properly accomplished. All Incident Qualification 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. Incident Qualification 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 Area Command and Type 1 Command and General Staff (C&GS) position task books will be done at the national office level; Type 2 C&GS, and any position task books issued to park fire management officers will be certified at the regional office level. All other position task books may be certified at the local unit level.*

- ***NPS -*** *Certification of NPS Personnel. These policies can be found in RM18 Chapter 10*

Incident Qualification Card Expiration Dates

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

Universal Training Requirements

All personnel filling Incident Command System (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
- I-100 Introduction to ICS
- ***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. 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 positions as identified in the *Wildland Fire Qualifications System Guide* (NWCG 310-1) 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 as appropriate to the participants, e.g., LCES, Standard Firefighting Orders, Eighteen Watch Out Situations, Wildfire Decision Support System (WFDSS) 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 including escape and shelter deployment site selection. Conduct "hands-on" fire shelter inspections. Practice shelter deployments in applicable crew/module configurations.

- **Other Hazards and Safety Issues -** Choose additional hazard and safety subjects, which may 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.

The Annual Fireline Safety Refresher Training course (RT-130) is not a self-study course. Minimum requirements have been established for instructors for Annual Fireline Safety Refresher Training. These requirements will ensure that an appropriate level of expertise and knowledge is available to facilitate refresher training exercises and discussions.

- Lead instructors must be a qualified single resource boss.
- Unit instructors must be qualified firefighter type one (FFT1).
- Adjunct instructors may be utilized to provide limited instruction in specialized knowledge and skills at the discretion of the lead instructor. They must be experienced, proficient and knowledgeable of current issues in their field of expertise.

For additional information please refer to the current *NWCG Field Manager's Course Guide* (PMS 901-1) at:
http://www.nwcg.gov/pms/training/fmcg.pdf.

- ***BLM -*** *4 hours*
- ***FWS -*** *No minimum hourly requirement; core topics as shown above will be covered.*
- ***NPS -*** *8 hours*
- ***FS -*** *No minimum time requirement. Content dictated by National Fire Program Managers.*

Annual Fireline Safety Refresher Training will have a 12-month currency. Firefighters who receive initial fire training are not required to take Annual Fireline Safety Refresher Training in the same calendar year. 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 prerequisite for issuance of an Incident Qualification Card.*

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

Qualification and Certification Process

Each unit with fire management responsibilities will establish an Incident Qualification 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.
- Determines whether 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.

Non-NWCG Agency Personnel Qualifications

Personnel from non-NWCG agencies meeting *NWCG 310-1* prerequisites, can participate in and receive certificates for successful completion of agency taught courses. Agency employees can complete the Task Blocks, Evaluation Record and Verification/Certification sections of a cooperating organizations employee Position Task Book. Agency employees will not initiate or complete the Agency Certification sections of Position Task Book for non-agency employees.

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

Non-NWCG Agency Personnel Use on Prescribed Fire

The NWCG 310-1 *Wildland Fire System Qualifications Guide* establishes the minimum qualifications for personnel involved in prescribed fires on which resources of more than one agency are utilized - unless local agreements specify otherwise. This guide may be found at:
http://www.nwcg.gov/pms/docs/docs.htm.

Physical Fitness

Physical Fitness and Conditioning

Agency administrators are responsible for ensuring the overall physical fitness of firefighters. Employees serving in wildland fire positions that require a

fitness rating of arduous as a condition of employment are authorized one hour of duty time each work day for physical fitness conditioning. Employees serving in positions that require a fitness rating of moderate or light may be authorized up to three hours per week.

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. NFFE Partnership bargaining unit employees may only be required to successfully complete the WCT once per year.*
- ***FWS -*** *See the Fire Management Handbook for specific direction.*
- ***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. They are strongly encouraged to participate in the voluntary fitness program, and must still meet physical fitness/work capacity requirements as outlined in Wildland Fire Qualifications System Guide (310-1) for positions with Moderate and Light fitness requirements.*

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.

Department of Interior Wildland Firefighter Medical Qualification Standards Program (DOI/MSP)

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 IMSP at the appropriate level (see Medical Examination Requirements appendix N) and must be medically cleared prior to attempting the WCT. Additional information regarding the DOI-MSP can be obtained at http://www.nifc.gov/medical_standards/.

- ***FS -*** *Refer to current agency direction.*

Under the DOI-MSP the Health Screen Questionnaire (HSQ) will only be required for arduous duty AD/EFF hires less than 45 years of age. If the AD/EFF answers "yes" to a HSQ question and is determined to be "agency mission critical" (e.g. single resource boss) an annual exam may be requested through the medical standards program. The HSQ is not required prior to taking the WCT at the arduous level for all other employment categories (e.g. permanent, seasonal/temporary, term).

Employees or applicants who fail to meet the Federal Interagency Wildland Firefighter Medical Qualification Standards as a permanent, seasonal/temporary, or term employee may not perform as an AD/EFF for arduous duty positions.

If a Department of the Interior (DOI) BLM, NPS, FWS, BIA, arduous duty Wildland firefighter (WLFF) develops a change in medical status (injury or illness) between yearly medical exams that prevents them from performing arduous duty lasting longer than three consecutive weeks, the WLFF is required to report this change to his/her supervisor who will then contact the DOI-MSP at wlffcsr@blm.gov or call 888-286-2521. The DOI-MSP will consult with the respective Agency Fire Safety Representative and could request that the contracted medical provider ask for additional medical information from the WLFF and reevaluate the WLFF clearance status.

- ***NPS -*** *The law enforcement medical exam for NPS rangers, who are collateral duty wildland firefighters, will suffice for MSP clearance.*
- ***NPS -*** *Medical clearance must be entered into IQCS.*

Agency Specific Medical Examinations

This section applies only to those 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 a 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 -*** *The law enforcement medical exam for NPS rangers, who are collateral duty wildland firefighters, will suffice for MSP clearance.*

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 approved OMB Health Screen Questionnaire (HSQ) may be found a: http://www.fs.fed.us/fire/safety

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 -*** *See Work Capacity Test Implementation Guide, see website: http://www.fs.fed.us/fire/.*

Work Capacity Test (WCT) Administration

The Work Capacity Test (WCT) is the official method of assessing wildland firefighter fitness levels. General guidelines can be found in the "*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 prior to taking the WCT.

A Job Hazard Analysis (JHA) shall be developed and approved for each field unit prior to administrating the WCT. See the sample JHA found in appendix U. Administer the test using the JHA/RA as a briefing guide.

- ***BLM -*** *A risk assessment shall be developed and approved for each field unit prior to administering the WCT. A RA for the WCT can be found at: http://web.blm.gov/internal/wo-700/wo740/tools/RAWorksheets/RAWorksheet_Library.html*

Field units need to prepare a medical response plan (such as ICS-206 form) and evaluate options for immediate medical care and transport and identify closest emergency medical services. A minimum of a qualified First Responder/Emergency Medical Responder (EMR) must be on site during WCT administration. Based upon your specific evaluation a higher level of emergency medical qualifications on scene may be warranted e.g. EMT or Paramedic.

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 Incident Qualification Card. To further clarify, employees shall not take the WCT unless they have an Incident Qualification 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 Incident Qualification Card. Physical fitness dates entered in IQCS will reflect the date the employee passed the fitness test.

- ***FS -*** *The Forest Service requires a minimum of a qualified Emergency Medical Technician (EMT) must be on site during WCT administration.*

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. Positions in the "no fitness level required" 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 Categories

WCT Category	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.

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 14, Fire Fighting Equipment.

Helicopter Modules
Staffing levels and specific requirements for helicopter personnel may be found in Chapter 16, Aviation.

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

SMKJ Policy
Smokejumper operations are guided by direction in the *Interagency Smokejumper Operations Guide (ISMOG).*

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.

SMKJ Smokejumper Organization
The operational unit for smokejumpers is "one load." A load is typically 8-20 smokejumpers and varies as per aircraft type.

SMKJ Coordination & Dispatch
Smokejumpers are a national resource and are ordered according to geographic area or national mobilization guides.

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

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

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

SMKJ 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

SMKJ Qualifications

Smokejumper Position	Target ICS Qualification
Department Managers	T2 &T1 Command & General Staff, FUMA
Spotter	ICT3, DIVS ATGS, RXB2, SOFR
Lead Smokejumper	STLD, TFLD, FOBS
Smokejumper	ICT4, CRWB, FIRB
Rookie Smokejumper	ICT5, FFT1, FOBS

SMKJ Physical Fitness Standards

The national minimum standards for smokejumpers are:

- 1.5 mile run in 11:00 minutes or less
- 45 sit-ups
- 25 pushups
- 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 (IHC)

Interagency Hotshot Crews provide an organized, mobile, and skilled hand crew for all phases of wildfire suppression.

IHC 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 *Standards for Interagency Hotshot Crew Operations (SIHCO).*

- ***BLM/NPS -*** *BLM Preparedness Review Checklist #12 (Hotshot Crew) supersedes the checklist found in the SIHCO.*

IHC Certification
The process for IHC certification is found in the *Standards for Interagency Hotshot Crews* (SIHCO), Chapter 5, page 14.

Annual Crew Pre-Mobilization Process
The superintendent of crews holding IHC status the previous season are required to complete the Annual IHC Mobilization Checklist (SIHCO Appendix C) and send the completed document to the local GACC prior to making the crew available for assignment each season.

Annual IHC Readiness Review
On an annual basis the superintendent of crews holding IHC status the previous season are required to complete the Annual IHC Preparedness Review (SIHCO Appendix B). This process is designed to evaluate crew preparedness and compliance with SIHCO. The annual review will be conducted while the crew is fully staffed and operational. The review is not required prior to a crew being made available for incident assignment at the beginning of their availability period. When a review document is completed the document is kept on file at the local host unit fire management office.

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.

IHC Availability Periods
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 the current *SIHCO*.

- ***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 SIHCO, 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.*

IHC Communications
IHCs will provide a minimum of five programmable multi-channel radios per crew as stated in the *SIHCO.*

IHC 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.*

Wildland Fire Modules

Information on fire use modules can be found at:
http://www.nwcg.gov/pms/pubs/pubs317/PMS-317.pdf.

- ***NPS -*** *The National Park Service has Wildland Fire Modules The primary mission and priority of the modules is to provide skilled and mobile personnel to assist with Wildland Fire Managed for Multiple Objectives 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. 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 17; Engine Operator (ENOP) - see Chapter 2; and Chainsaw Operators and Fallers listed below.

- ***FWS -*** *See the Fire Management Handbook for agency specific position information.*

Chainsaw Operators and Fallers

The agencies have established the following minimum qualification and certification process for Chainsaw Operators (Incident Qualification Card certified as Faller A):

- Agency employees who are chainsaw operators and fallers must be minimally qualified as a FFT2 and meet the arduous fitness standards.
- 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 (Incident Qualification Carded) saw operation qualifications are maintained through the IQCS system and will have a currency of five years.
- ***BLM/NPS/FWS -*** *Position task book found at: http://www.fire.blm.gov/training/blmtrng/PDFs/Faller/PTBFallerABC.pdf.*
- ***FWS -*** *See the Fire Management Handbook for additional direction. Information regarding FWS required annual chainsaw refresher can be found at: https://fii.fws.gov/nclogon.html. Requires logon.*
- ***FS -*** *FS direction can be found in FSH 5109.17 and FSH 6709.11.*

- ***NPS -*** *Exceptions to the above policy are:*
- *Size classes used in the Faller A, Faller B, and Faller C Position Task Book are guidelines and are not the determining factor in the complexity of a tree felling operation. The size classes are to be used as an evaluation tool during trainee evaluation. Chainsaw operators are expected to conduct a thorough size up of each individual tree and determine the extent of qualification required to safely perform a felling operation.*
- *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 operations must be verified by a qualified "C" level operator.*
- *Certification of "C" level operators must be completed by a regionally-approved "C" level certifier.*

Chapter 14
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.

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 4, 5, 6, 7, engines.

For Type 3, engines, minimum staffing is three individuals, including an Engine Boss.

- ***BLM -*** *Fire Engine Staffing*
  - *For BLM engine staffing requirements see Chapter 2.*
- ***FWS -*** *Fire Engine Staffing*
  - *Minimum staffing for Type, 6 and 7 engines (on Refuge lands) is one ENOP and one FFT2. A minimum of one ICT5 must be available on the engine crew.*
- ***NPS -*** *Fire Engine Staffing*
  - *For NPS engine staffing requirements see Chapter 3.*
- ***FS -*** *A Single Resource Boss may supervise a type 6 or 7 engine.*

Engine Typing
Engine Typing and respective standards are identified in the *NWCG Fireline Handbook, 410-1.*

- ***FS -*** *See http://www.fs.fed.us/fire/equipment/engine-models/models.html for description of Forest Service national engine standards.*

Driving Standard
Refer to driving standards in Chapter 07.

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 set of wheel chocks 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 Standard for Wildland Fire Apparatus* requirements.

First Aid Kit
Each engine shall carry, in a clearly marked compartment, a fully equipped 10-person first aid kit.

Gross Vehicle Weight (GVW)
Each engine will have an annually certified weight slip in the vehicle at all times. Weight slip will show individual axle weights and total GVW. Operators of engines and water tenders must ensure that the maximum certified GVW is never exceeded, including gear, personnel and fuel. The NFPA 1906 standard of 250 pounds for each person and their personal gear will be used to calculate the loaded weight.

- ***FS -*** *Refer to FSH 7109.19, Chapter 30 for calculation of Rough Road Factor reduction for driving on rough or unsurfaced roads.*
- ***NPS -*** *A copy of the annual certified weight slip must be sent to the Fire Equipment and Facilities Specialist at the FMPC in Boise prior to the vehicle being put into service each season.*

Speed Limits
Posted speed limits will not be exceeded.

Lighting
Headlights and taillights shall remain illuminated at all times while the vehicle is in motion. All new orders for fire engine apparatus will include an overhead lighting package in accordance with agency standards. Lighting packages will meet NFPA 1906 standards (6.8, 2006 edition). Engines currently in service may be equipped with overhead lighting packages. A red, white, and amber combination is the accepted color scheme for fire. Lighting packages containing blue lights are reserved for law enforcement and are not allowed on fire vehicles.

Emergency Light Use
Emergency lighting will be used only during on site wildland 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.

- ***BLM -*** *Emergency lighting may be used during a response to an incident or to mitigate serious safety hazards. If emergency lighting is to be used it must be approved by State Director and meet all state and local emergency services training and certification requirements. Overhead lighting and other emergency lighting must meet state code requirements.*
- ***FS -*** *See FSM 5120 and 5135 for red lights and siren policy.*

Fuel Use, Storage and Transportation
Guidance and direction for the use, storage, and transportation of fuel can be found in the interagency interim policy *Interagency Transportation Guide for Gasoline, Mixed Gas, Drip Torch Fuel, and Diesel* at:
http://www.fs.fed.us/t-d/fueltran/ (Use t-d as user and password logins)

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 Staffing Standards

Water Tender Non-Tactical

- **Qualifications:** CDL (tank endorsement).
- **Staffing:** A water tender (Support) may be staffed with a crew of one 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 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

Dozer/Tractor Plow Training and Qualifications

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.

Dozer/Tractor Plow Physical Fitness Standards

- ***BLM -*** *All employee dozer/tractor plow operators will meet the WCT requirements at the Moderate level before accepting fire assignments.*
- ***FWS -*** *See the Fire Management Handbook*
- ***FS -*** *FS dozer operators refer to 5134.32.*

Dozer/Tractor Plow 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-Terrain Vehicles (UTV)

The operation of ATV/UTV can be high risk and their use needs to be evaluated to determine if it is essential to accomplish the mission and not as a matter of convenience.

Because of the high risk nature, agencies have developed specific operational policy (refer to current agency policy). Common policy requirements for wildland fire operations are highlighted below:

- Specific authorization for ATV/UTV use is required.
- All personnel authorized to operate an ATV/UTV must first complete agency specific or manufacturers training in safe operating procedures and appropriate PPE.
- Re-evaluation/Re-certification - Operators shall be re-evaluated every three years. Infrequent users (less than 16 hours of riding a year) shall have a check ride prior to scheduled use of an ATV/UTV.

Required PPE includes:

- ATV Helmet - For ATV use, helmets must meet DOT or Snell M2005 certification. ATV Helmet - Helmets meeting DOT, ANSI-90, or SNELL M-95 are required.
- ATV/Fire Helmet - For wildland firefighters on fire line duty, helmets must meet Snell SA2005 certification. Helmets worn by wildland firefighters on fire line duty must be lined by Nomex©/Aramid type fire-resistant material.
- Use of half "shorty" helmets require a JHA/RA for fireline use and must include justification for its use. Refer to MTDC Tech Tip publication, A Helmet for ATV Operators with Fireline Duties (0651-2350-MTDC).
- UTV Head Protection - Helmets must meet DOT or Snell M-2005 unless: UTV Head Protection - Helmets meeting DOT, ANSI-90, or SNELL M-95 approved are required unless:
- Approved ROPS Cab/brush cage is permanently installed on the vehicle then a hard hat meeting NFPA 1977 and ANSI Z 89.1 standards may be worn with chin straps secured in place under chin.
- ***BLM -*** *UTV is equipped with Roll over protection system (ROPS) and is operated on moderate terrain at moderate speeds then a hard hat meeting NFPA 1977 and ANSI Z 89.1 standards may be worn with chin straps secured in place under chin.*

- ***BLM -*** *Administrative use (low speeds on smooth travel surfaces), e.g. campgrounds, base camps; UTV operators are not required to wear hard hats or a helmet.*
- ***NPS -*** *Approved helmets are required for UTV operations that are rated moderate (amber) or high (red) using the "ORV Risk Assessment Tool" included in the NPS Off-Highway Vehicle Policy*
- Eye protection (goggles, face shield, or safety glasses) based upon JHA/RA.
- Leather gloves
- Yellow aramid shirt
- Aramid trousers
- Wildland fire boots
- ATV/UTV operator shall carry a personal communication device (e.g. two-way radio, cellular phone, or satellite phone).
- ATV - do not carry passengers on ATVs.
- UTV - carry no more passengers in a UTV than the number of seats installed by the manufacturer. The operator and each passenger must have their own seatbelt and it must be fastened at all times when the vehicle is in motion.
- Loads shall be mounted and secured as to not affect the vehicle's center of gravity. See agency specific policy for hauling liquid cargo.
- Load weights shall not exceed manufacturer's recommendations.
- ATV/UTV loading and transport - see agency specific policy.
- A JHA/RA must be completed and approved by the supervisor prior to vehicle operation.
- ***BLM -*** *Refer to BLM Manual 1112-1, Chapter 27 Off-Highway Vehicles. http://web.blm.gov/internal/wo-700/wo740/policy.html*
- ***FS -*** *Refer to FSH6709.11*
- ***FWS -*** *Use of hardhats requires a JHA for fireline use and must have Project Leader approval and include justification for its use. Refer to MTDC Tech Tip publication, A Helmet for ATV Operators with Fireline Duties (0651-2350-MTDC). Exceptions to the above stated policy should only be used in rare instances. Motorcycle helmets will be used for all loading and unloading operations.*
- ***NPS -*** *Refer to Reference Manual50B Occupational Health and Safety, Section 6.1 Off-Highway Vehicle Safety http://inside.nps.gov/waso/custommenu.cfm?lv=2&prg=46&id=5898.*

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 designated area prior to arriving and 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 Analyst (FBAN) for real time weather data.

National resource FRAWS systems are cached at the 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).

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 the 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 FSH 5109.32a and 6709.11.*

Chapter 15
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

For information on contracts, software, hardware requirements and approved radios. Contact your agency Telecommunications Department or the NIFC Communications Duty Officer at (208) 387-5644.

- ***BLM -*** *For information on BLM contracts, software, and hardware requirements and approved radios, contact the National Radio Communications Division (NRCD) at (208) 387-5830.*

Dispatch Recording Devices

- ***BLM -*** *Recording devices will be used by BLM dispatch offices or any interagency office dispatching BLM resources.*

Radio Frequency Management

- FM frequency assignments for normal operations or initial attack operations are made on a permanent basis and are requested through the state office. ISO frequency manager to the Washington Office frequency manager.
- Do not use any frequency without proper authorization from the authorized radio frequency management personnel at the local, state, regional or national level.
- The NIFC Communications Duty Officer (CDO) coordinates and assigns incident frequencies at the national level. The CDO will also request the GACC to assign Communications Coordinators (COMC) when necessary to support specific geographic areas. 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.

- 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 all frequencies used on the incident to the NIFC CDO/COMC. This includes 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 the 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, to be filled by the NIFC CDO or COMC. COML's will ensure that the host agency Aviation Dispatcher and the NIFC CDO or COMC have the current ICS-220 for their incident.
- Incidents that do not have an assigned COML will coordinate and request all additional frequency and communication equipment needs through the NIFC CDO and/or the COMC.
- 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.
- When there are significant numbers of large incidents additional frequencies can be assigned. These assignments are temporary, 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 - 168.6250 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. 168.6250 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 - 168.6500 MHz

The National Flight Following Frequency is used to monitor interagency and contract aircraft. This frequency is used for flight following, official aircraft flying point to point; and is not intended to be used during mission flights or incident operations. All dispatch centers/offices will monitor the national fight following frequency at all times. Transmitters on this frequency must be equipped with an encoder on 110.9 Hz. This frequency 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 - 166.6750 MHz, 167.9500 MHz, 169.1500 MHz, 169.2000 MHz, 170.0000 MHz

- These 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.
- 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.
- These frequencies will be assigned by the NIFC CDO/COMC or in coordination with the local unit if a National Telecommunications and Information Administration Radio Frequency Authorization (NTIA-RFA) is in effect.

National Interagency Airtanker Base Frequency Initial Call - 123.9750 MHz

This frequency is assigned by the FAA to all airtanker bases (unless otherwise notified) for exclusive use. It is restricted to a radius of 40 nautical miles and 10,000 feet MSL from the coordinates of the airtanker base. No other use is authorized.

National Government All-Call Frequencies - 163.1000 MHz and 168.3500 MHz

These frequencies are used on a non-interference basis and are not exclusive to any user. These frequencies are not to be used for air-to-ground operations and are prohibited by DOI and USDA from use as a frequency during operations involving the protection of life and property.

- **NOTE:** When traveling between incidents, be sure to monitor for incident radio traffic in the area before using these frequencies.

National Interagency Fire Tactical Frequencies
168.0500 MHz, 168.200 MHz, 168.6000 MHz, 168.2500 MHz, 167.1375 MHz, 166.7250 MHz, 166.7750 MHz
These frequencies are used to support ground tactical operations (line of sight) on incidents.
They are not authorized for:

- Air to air communications
- Air to ground communications
- Mobile radios with more than 5 watts output power
- Base stations
- Repeater frequencies

Use of these frequencies will be coordinated between the COML and the CDO/COMC. Power output is limited to 5 watts or less.

Incident Radio Support
All NIRSC communications equipment will 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. 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 have been assigned radios. Each battalion has 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 their radios using their frequencies. All frequency assignments at the incident will be made by the COML in accordance with the ICS-205.

Some 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 don't have civilian VHF-FM capability. 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.

Phone communication can be used for logistical purposes.

Chapter 16
Aviation Operations/Resources

Purpose and Scope

Aviation resources are one of a number of tools available to accomplish fire related land management objectives.

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, the effective capacity of the aircraft, and the deployment of ground resources.

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. Risk management process must include risk to ground resources, and the risk of not performing the mission, as well as the risk to the aircrew.

Organizational Responsibilities

National Office

DOI

Aviation Management Directorate (AMD)

The Aviation Management Directorate, of the National Business Center, is responsible for the coordination of 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, aircraft, pilot inspection and approval for DOI agencies.

Bureau of Land Management (BLM)

National Aviation Office (NAO) - NAO develops BLM policy, procedures, and standards. It also 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. This includes fire suppression, through strategic program guidance, managing aviation programs of national scope, coordination with AMD, and interagency partners. The Fire and Aviation Directorate 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 Bureau wide basis, and approving State Office requests to acquire supplemental aircraft resources.

Refer to *BLM National Aviation Plan and Manual 9400* for aviation policy and guides. (Refer to 112 DM 12 for a list of responsibilities.)

Forest Service (FS)

The FS has responsibility for all aspects of its aviation program, including aviation policy development, aircraft acquisition, and maintenance management. In addition, the FS 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.

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 -*** *State FMOs are responsible for providing oversight for aircraft hosted in their state. 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. A State Aviation Manager (SAM) is located in each state office. SAMs are delegated as the Contracting Officers Representative (COR) for all exclusive use aircraft hosted by their state. SAMs implement aviation program objectives and directives to support the agency mission and state objectives. A state aviation plan is required to outline the state aviation program objectives and to identify state specific policy and procedures.*
- ***NPS/FWS -*** *A Regional Aviation Manager (RAM) is located in each regional office. RAMs implement aviation program objectives and directives to support the agency mission and region objectives. Several regions have additional support staff, and/or pilots assigned to support aircraft operations and to provide technical expertise. A regional aviation operations and management plan is required to outline the region's aviation program objectives and to identify 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.

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; 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, 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.) IHOG, ISOG and Interagency Aerial Supervision Guide (IASG).*
- ***FWS -*** *Service Manual 330-339, Aviation Management and IHOG.*
- ***NPS -*** *RM-60 Aviation Management Reference Manual and IHOG & IASG.*
- ***FS -*** *FSM 5700, ISMOG, FSH 5709.16 and IHOG & IASG.*

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

The FS and the BLM have adopted Safety Management Systems (SMS) as the foundation to our aviation safety program. The four pillars of SMS are Safety Policy, Safety Risk Management, Safety Assurance and Safety Promotion. SMS is the standard for safety set by the International Civil Aviation Organization (ICAO) and the Federal Aviation Administration (FAA).

SMS will promote the transition from the traditional approach to aviation safety which:

- Reacts to undesirable events
- Focused on compliance
- Culture of blame and individual accountability
- Addresses only known safety concerns
- Identifies who, so we know who to punish

To the contemporary approach that is:

- Emphasis on proactive risk management
- Promotes a "Just" culture
- Addresses systemic safety concerns
- Holds the organization accountable
- Identifies "What" so we can manage the manageable
- Communicates the "Why" so the culture can learn from mistakes

The intent of SMS is to improve the aviation culture by increasing hazard identification, reduce risk taking behavior, learn from mistakes and correct procedures before a mishap occurs rather than after the accident. More information on SMS is available at the Wildland Fire Lessons Learned Center under the Lessons Learned in Link. WWW.wildfirelessons.net

Risk Assessment and Risk Management

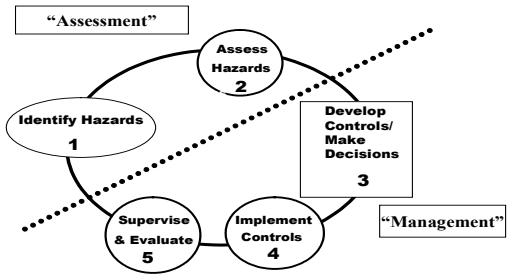
The use of Risk Management will help to ensure a safe and successful operation. Risk is the probability that an event will occur. Assessing risk identifies the hazard, the associated risk, and places the hazard in relationship to the mission. A decision to conduct a mission requires weighing the risk 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



How to Properly Refuse Risk (Aviation)

Every individual (government and contracted employees) have the right and obligation to report safety problems affecting his or her safety and has the right to contribute ideas to correct the hazard. In return, supervisors are expected to give these concerns and ideas serious consideration. When an individual feels an assignment is unsafe, he or she also has the obligation to identify, to the degree possible, safe alternatives for completing that assignment. Turning down an assignment is one possible outcome of managing risk.

A "turn down" is a situation where an individual has determined he or she cannot undertake an assignment as given and is unable to negotiate an alternative solution. The turn down of an assignment must be based on assessment of risks and the ability of the individual or organization to control or mitigate those risks. Individuals may turn down an assignment because of safety reasons when:

- There is a violation of regulated safe aviation practices.
- Environmental conditions make the work unsafe.
- They lack the necessary qualifications or experience.

Individuals will directly inform their supervisor that they are turning down the assignment as given. The most appropriate means of documented turn down criteria is using the Aviation Watch Out Situations (page 46 *IRPG*).

Supervisor will notify the Air Operations Branch Director (AOBD) immediately upon being informed of a turn down. If there is no AOBD, notification shall go to the appropriate Section Chief, the Incident Commander or local aviation staff.

Proper handling of turn downs provides accountability for decisions and initiates communication of safety concerns within the incident organization.

If the assignment has been turned down previously and the supervisor asks another resource to perform the assignment, he or she is responsible to inform the new resource that the assignment had been turned down and the reasons why. Furthermore, personnel need to realize that a "turn down" does not stop the completion of the assigned operation. The "turn down" protocol is an integral element that improves the effective management of risk, for it provides timely identification of hazards within the chain of command, raises risk awareness for both leaders and subordinates, and promotes accountability.

If an unresolved safety hazard exists the individual needs to communicate the issue/event/concern immediately to his or her supervisor and document as appropriate.

Aviation Safety Support

During high levels of aviation activity it is advisable to request a Safety and Technical Assistance Team (STAT). A STAT's purpose is to assist and review helicopter and/or fixed wing operations on 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) as outlined at the in-brief. 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 to conduct an aviation safety briefing. The pilot should also receive a mission briefing from the government aircraft manager 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. Pilots, flight crew personnel, aviation managers, incident air operations personnel, and passengers are responsible for hazard identification and mitigation. Aviation hazards may include but are not limited to 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)

Aerial Applications of Wildland Fire Chemical Safety

Chapter 12 contains information concerning the aerial application of wildland fire chemicals.

SAFECOM

The DOI and the FS have an incident/hazard reporting form called The Aviation Safety Communiqué (SAFECOM). The database, available at https://www.safecom.gov/ fulfills the Aviation Mishap Information System (AMIS) requirements for aviation mishap reporting for the DOI agencies and the FS. Categories of reports include: Accidents, Airspace, Hazards, Incidents, Maintenance, Mishap Prevention and Kudos. 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 https://www.safecom.gov/ or can be faxed to the Department of the Interiors Aviation Management Directorate, Aviation Safety (208)433-5069 or to the FS 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 agency aviation assets are: Helitack and Rappel crews, Smokejumpers, Large Airtankers, Single Engine Air Tankers, Water Scoopers, Helitankers, Air Attack, Aerial Supervision Modules, Lead Planes, Airtanker Bases, SEAT Bases, Helibases, Smokejumper Bases.

- ***BLM -*** *All BLM acquired aircraft, exclusive use On-Call, CWN and, Variable Term, are available to move to areas of greatest Bureau 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.*

Interagency Interim Flight and Duty Limitations

Phase 1 - Standard Flight and Duty Limitations (Abbreviated Summary)

- Fourteen (14) hour maximum duty day
- Eight (8) hours maximum daily flight time for mission flights
- Ten (10) hours for point-to-point, with a two (2) pilot crew
- Maximum cumulative flight hours of thirty-six (36) hours, up to forty-two (42) hours in six (6) days
- Minimum of ten (10) hours uninterrupted time off (rest) between duty periods

This does not diminish the authority or obligation of any individual COR (Contracting Officer Representative) or Aviation Manager to impose shorter duty days or additional days off at any time for any flight crew members for fatigue. This is currently provided for in agency direction and contract specifications.

Interim Flight and Duty Limitations Implementation

During extended periods of a high level of flight activity or maximum 14-hour days, fatigue factors must be taken into consideration by Fire and Aviation Managers. Phase 2 and/or Phase 3 Duty Limitations will be implemented for specific Geographic Area's Aviation resources. The minimum scope of operation should be by Geographic Area, i.e., Northwest, Great Basin, etc.

Implementation decisions will be made on a coordinated, interagency basis, involving the GACC, NICC, NMAC and National Aviation Representatives at NIFC.

Official notification of implementation should be made by the FS Regional Aviation Officer (RAO) and DOI Aviation Managers through the GACC and, for broader scope implementations, by National Aviation Management through NIFC.

Phase 2 - Interim Duty Limitations

When Phase 2 is activated, pilots shall adhere to the flight and day-off limitations prescribed in Phase 1 and the duty limitations defined under Phase 2.

Each flight crew member shall be given an additional day off each fourteen (14) day period. Crews on a twelve (12) and two (2) schedule shall have three (3) consecutive days off (11 and 3). Flight crews on six (6) and one (1) schedules shall work an alternating weekly schedule of five (5) days on, two (2) days off, then six (6) days on and one (1) day off.

Aircraft fixed daily rates and special rates, when applicable, shall continue to accrue during the extra day off. Contractors may provide additional approved crews to maximize utilization of their aircraft. All costs associated with providing the additional crew will be at the contractor's expense, unless the additional crew is requested by the Government.

Phase 3 - Interim Duty Limitations

When Phase 3 is activated, pilots shall adhere to the flight limitations of Phase 1 (standard), the additional day off of Phase 2, and the limitations defined under Phase 3.

Flight crew members shall have a minimum of twelve (12) consecutive hours of uninterrupted rest (off duty) during each duty day cycle. The standard duty day shall be no longer than twelve (12) hours, except a crew duty day extension shall not exceed a cumulative fourteen (14) hour duty day. The next flight crew rest period shall then be adjusted to equal the extended duty day, i.e., thirteen (13) hour duty day, thirteen (13) hours rest; fourteen (14) hour duty day, fourteen (14) hours rest. Extended duty day applies only to completion of a mission. In no case may standby be extended beyond the twelve (12) hour duty day.

Double crews (two (2) complete flight crews assigned to an aircraft), augmented flight crews (an additional pilot-in-command assigned to an aircraft), and aircraft crews that work a rotating schedule, i.e., two (2) days on, one (1) day off, seven (7) days on, seven (7) days off, or twelve (12) days on, twelve (12) days off, may be exempted from Phase 2 Limitations upon verification that their scheduling and duty cycles meet or exceed the provisions of Paragraph a. of Phase 2 and Phase 1 Limitations.

Exemptions of Phase 3 provisions may be requested through the local Aviation Manager or COR, but must be approved by the FS RAO or DOI Area Aviation Manager.

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 (HMGB). Exception to these minimum crew staffing standards must be exempted by the National Aviation Office.*
- ***NPS -*** *Helicopter Exclusive Use modules will consist of a minimum of 8 fire funded personnel. The NPS regions may establish larger crew size and standards for their exclusive use helicopter crews based on the need for an all hazard component (Fire, SAR, Law Enforcement, and EMT). Exception to minimum helicopter crew staffing standards must be approved by the National Aviation Office.*
- ***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.

- ***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 and should be provided a VHF-AM base station radio.

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.

- ***BLM -*** *Minimum vehicle configuration for a seven person crew will consist of one Class 661 Helitack Support Vehicle and one Class 156, 6-Pack pickup or Class 166 carryall.*

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.

Non-Exclusive Use HECM's and HMGB's should also meet the following currency requirements.

Exclusive Use Fire Helicopter Position Prerequisites			
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, HMGB, HEB2		RT-372[5]
Assistant Fire Helicopter Crew Supervisor	One season as a Fire Helicopter Squad Leader, ICT4, HMGB, HEB2 (T)	I-200, S-200, S-215, S-230, S-234, S-260, S-270, S-290, S-371, S-372	RT-372[5]
Fire Helicopter Squad Leader	One season as a Fire Helicopter Crewmember, FFT1, ICT5	S-131, S-133, S-211, S-212	
Fire Helicopter Crewmember	One season as a FFT2, HECM Taskbook	I-100, S-130, S-190, 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 in a primary wildland fire position for a period of 90 days or more.

[5] After completing S-372, must attend Interagency Helicopter Manager Workshop (RT-372) in three years and every three years thereafter.
[6] Must receive S-271 or serve as S-271 instructor, once every three years.
Note: Exceptions to the above position standards and staffing levels 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 (HMGB) 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 appropriate agency national headquarters.

- ***BLM -*** *BLM personnel involved in an Interagency Rappel Program must have SAM approval.*
- ***NPS -*** *Approval is required by the National Office.*
- ***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 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.

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).

For aviation safety and policy concerning wildland fire chemicals see chapter 12 (Wildland Fire Chemical Policy and Use)

Airtankers are operated by commercial vendors in accordance with FAR Part 137. The management of Large Airtankers is governed by:

- ***BLM -*** *The requirements of the DM' and BLM Manual 9400*
- ***FS -*** *FS operates Large Airtankers under FSM 5703 and Grant of Exemption 392 as referenced in FSM 5714.*

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 identified training for the positions at airtanker bases; the *IATBOG* contains a chart of required training for each position. It is critical that reload bases are prepared and staffed 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 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, Procedures and Safety

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*. To maintain incident qualifications currency a SEAT Manager is

required to attend RT-273 every three years. Elements and criteria of RT-273 can be found in the *Field Managers Course Guide*, PMS 901-1.

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 (500 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 BLM and FS Airtanker base operating plans will permit SEAT loading in conjunction with Large Airtankers.

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, aerial supervision priority order with regard to safety and efficiency are as follows:

- ASM
- ATGS
- ATCO (Leadplane)
- HLCO Helicopter Coordinator
- Smokejumper Spotter
- HMGB (Helicopter Manager)

If aerial operations continue beyond initial response, an ASM, ATGS, or Lead/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. In addition to detecting, mapping and sizing up new fires, this resource may be utilized to provide ground resources with intelligence on fire behavior, provide recommendations to the IC when appropriate, and describe access routes into and out of fire areas for responding units. Only qualified Aerial Supervisors (ATGS, ASM, HLCO and

Lead/ATCO) are authorized to coordinate incident airspace operations and give direction to aviation assets. Flights with a "Recon, Detection 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 Lead/ATCO 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.
- 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/Lead/ATCO 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 aerial supervision module ASM or Lead/ATCO, airtanker pilot(s), and the responsible fire suppression agency official.
- The 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/ATCO qualified Air Tactical 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/ATCO 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 ATS develops strategy in conjunction with the Operations Section Chief.

- ***BLM -*** *The Interagency Aerial Supervision Guide is policy for BLM. The Interagency Aerial Supervision Guide is available online at http://www.blm.gov/nifc/st/en/prog/fire/Aviation/aerial_supervision.html*

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.*

Air Tactical Group Supervisor (ATGS)

The ATGS manages incident airspace and controls incident air traffic. Specific duties and responsibilities are outlined in the *Fireline Handbook (PMS 410-1)* and the *Interagency Aerial Supervision Guide*. 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
- Natural fiber shirt, full length cotton or nomex pants or flight suit.

Operational Considerations

- Relief aerial supervision should be ordered for sustained operations to ensure continuous coverage over an incident.
- Personnel who are performing aerial reconnaissance and detection will not perform aerial supervision duties unless they are fully qualified as an ATGS.
- Air tactical aircraft must meet the avionics typing requirements listed in the Interagency Aerial Supervision Guide and the pilot must be carded to perform the air tactical mission.

- Ground resources will maintain consistent communication with Aerial Supervision in order to maximize the safety, effectiveness, and efficiency of aerial operations.

Leadplane

A leadplane is a national resource. The *Interagency Aerial Supervision Guide* is agency policy and is available online at http://www.blm.gov/nifc/st/en/prog/fire/Aviation/aerial_supervision.html. Agency policy requires an ASM/or Lead/ATCO to be on order prior to aerial applications over a congested area. Operations may proceed before the ASM/or Lead/ATCO arrives, if communications are established with on-site resources, authorization is granted from the IC, and the line is cleared prior to commencing water/chemical application 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 FS. Additional guidance may be found in the *National Interagency Mobilization Guide* and supplemented by local Mobilization Guides.
http://www.fs.fed.us/r6/fire/aviation/airspace/web/guide/index.html.

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, Sectional and Global Navigational Charts 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.*
- ***NPS -*** *Regional Aviation Managers*
- ***FS -*** *Regional Aviation Safety Officers, Regional Airspace Coordinators and the FS Airspace Program Manager.*
- ***FWS -*** *National Aviation Safety and Operations*

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 flights 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 FS 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 shall be conducted higher than 500 feet above ground level (AGL).

Agency policy requires designating a Flight Manager for point-to-point flights transporting personnel. The Flight Manager is a government employee that is responsible for coordinating, managing and supervising flight operations. The Flight Manager is not required to be on board for most flights. For those flights that have multiple legs or are complex in nature a Flight Manager should attend the entire flight. The Flight Manager will meet the qualification standard for the level of mission assigned as set forth in the *Interagency Aviation Training Guide* (IAT).

- ***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.*
- ***NPS -*** *Reference RM-60, Appendix 3 for agency specific policy.*
- ***FS -*** *Refer to FSM 5710.5 for administrative use, FSM 5705 for point-to-point and mission use for types of FS flights*.

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 below within 500'AGL. Flight helmets are not required for multi-engine airtanker crews, smokejumper pilots and ASM flight/aircrew members.

- 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.
- Agency FM radio capability is required for all mission flights.
- All passengers must be authorized and all personnel onboard must be essential to 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, or surface conditions

PPE requirements for fire reconnaissance are:

- Leather shoes or boots
- Natural fiber shirt, full length cotton or nomex pants or flight suit

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

Flight-Following All Aircraft

Flight-Following is mandatory for all flights. The pilot has the responsibility to determine which flight following procedure is to be utilized. Mission Flights are required to utilize agency flight following radio or automated flight following (AFF). Point-to-point, non-mission flights can utilize Agency or FAA flight following. Refer to the *National Interagency Mobilization Guide*, section 24.3 for specific direction.

- Aircraft Managers, Pilots and Dispatchers are responsible for coordinating and confirming the method of flight following to be utilized.

- Flight-following reports from the aircraft are the responsibility of the pilot-in-command (PIC) in accordance with 14 CFR.
- All dispatch centers designated for fire support shall have the ability to monitor AFF as well as the capability to transmit and receive "National Flight Following" and "Air Guard"
- 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.
- The default standard for lower-48 interagency fire operations is for all aircraft to maintain positive radio contact with 15 minute check-ins.
- Agency FM radio capability is required for all mission flights.
- Periodic radio transmissions are acceptable when utilizing AFF.
- Helicopters conducting Mission Flights shall check-in prior to and immediately after each takeoff/landing per IHOG 4.II.E.2
- 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.
- Violation of flight-following standards requires submission of a SAFECOM.

Sterile Cockpit All Aircraft

Sterile cockpit rules apply within a 5-mile radius of the airport. The flight crew will perform no radio or cockpit communication during that time that is not directly related to safe flight of the aircraft from taxi to 5 miles out and from 5 miles out until clearing the active runway. This would consist of reading checklists, communication with Air Traffic Control (ATC), Flight Service Stations, Unicom, or other aircraft with the intent of ensuring separation or complying with ATC requirements. Communications by passengers or air crew members can be accomplished when the audio panels can be isolated and do not interfere with flight operations of the flight crew.

Exception: When conducting firefighting missions within 5 miles of an uncontrolled airport, maintain sterile cockpit until departing the traffic pattern and reaching final altitude. Monitor CTAF frequency if feasible while engaged in firefighting activities. Monitor CTAF as soon as practical upon leaving the fire and returning to the uncontrolled airport. When conducting firefighting missions within Class B, C, or D airspace, notify dispatch that ATC communications will have priority over dispatch communications.

Chapter 17
Fuels Management

Introduction

The Hazardous Fuels Reduction (HFR) Programs within the Department of the Interior (DOI) and the Forest Service (FS) have the purpose of reducing hazardous fuels (HF), and risks to human communities while improving the health of the land. To ensure these programs are coordinated, common priorities for fuel treatments have been established which follow these guidelines.

The DOI and FS along with other federal, state, tribal, and local partners will work to ensure effective HFR treatment efforts are collectively planned and implemented. These efforts will be consistent with the direction provided in:

- *Restoring Fire -Adapted Ecosystems on Federal Lands- A Cohesive Strategy - (Federal Cohesive Strategy)*
- *Western Governors Association - A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment - 10 Year Comprehensive Strategy*

Policy

The DOI and FS both use the following guides as policy.

Interagency Prescribed Fire Planning and Implementation Procedures Guide (2008 Guide) provides standardized procedures, specifically associated with the planning and implementation of prescribed fire.

Some programmatic differences are identified in the following agency specific documentation and serve as agency specific direction.

- ***BLM -*** *Refer to (IM No. OF&A 2009-014)*
- ***FWS -*** *Refer to Fire Management Handbook*
- ***NPS -*** *Refer to RM 18*
- ***FS -*** *Refer to FSM 5140*

Policy, project planning and implementation priorities and standards common to all DOI and FS:

- The safety of firefighters and the public is the number one priority when planning and implementing HFR treatment projects.
- All HFR treatment projects will have plans that contain measurable objectives.
- All HFR treatment projects will comply with NEPA and all other regulatory requirements.
- All HFR management projects will be tracked and progress will be reported within required timeframes.
- All HFR treatment projects will be monitored to determine if treatment objectives were met and to document weather, fire behavior, fuels

information and smoke dispersion. Evaluation reports are to be completed and maintained in the project file. All HF treatment projects will support resource management objectives as identified in their agency specific Land Use Plans.

Reporting HFR Accomplishment

The HF module of the National Fire Plan Operations and Reporting System (NFPORS) has been developed and is the national interagency standard in DOI for submitting proposed projects for approval, tracking accomplishments of the program, reporting performance, measuring accomplishments and accountability.

DOI Policy Regarding Planned HF Treatments Burned in a Wildfire

Acres burned in a wildfire may only be reported in NFPORS as prescribed fire if all the following conditions are met:

- The area burned was in a pre-existing NFPORS treatment unit
- NEPA is complete
- The planned objectives were met
- The accomplishment is approved by a Regional Fuels Specialist

FS provides direction for reporting accomplishment from unplanned ignitions in the annual budget advice and by Washington Office interim direction letters.

Prescribed Fire during Preparedness Levels 4 and 5

Implementation of prescribed fires and approval at national preparedness Levels 4 and 5 is restricted. (See NFES 2092 *National Mobilization Guide* Sections 26.3.4 Preparedness Level 4 and 26.3.5 Preparedness Level 5)

Federal Agencies Assistance

It has long been the intent of congress that the, "Interior Agencies and Forest Service should not charge each other for personnel and other resources" when providing assistance in conducting hazardous fuel treatments.

The DOI agencies have agreed not to crossbill each other for fuels management assistance. Assistance to or from the FS, unless arranged otherwise, requires a local agreement, so that funds can be transferred between agencies. Informal agreements may be made where assistance is provided on a "quid pro quo" basis, where one agency provides assistance for another agency's project and then in turn is the recipient of assistance from the other agency on a project of their own.

Fuels management projects are considered regular planned land management activities as opposed to emergency activities; therefore, offices have the right to turn down requests from other offices to assist in fuels management activities. Offices should not consider providing personnel and resources at the expense of

their own target accomplishments, and no office should be placed in a position of subsidizing another office's fuels management activities.

Hazard pay for Prescribed Fire Implementation

Current policy is that hazard pay will not be paid for any prescribed fire. Under certain circumstances, environmental differential may be warranted. Offices should contact their servicing personnel office with specific questions.

- ***FS - i****s proposing to allow hazard pay for prescribed fire, consequently, this may change this year. If it does, this will not accurately reflect the current policy.*

Use of Contractors for Prescribed Fire Implementation

Agencies can contract to conduct all or part of the planning and implementation of prescribed fire operations and/or all or part of mechanical treatments for HFR projects.

If a contractor is actively involved in igniting, holding, or mopping up an agency prescribed fire, a Contracting Officer's Authorized Representative (COAR) or Project Inspector (PI) will be on the site (exceptions can be made for late stage mop up and patrol) to ensure that the burn objectives are being met and that the terms of the contract are adhered to. The agency administrator and/or FMO will determine the qualifications required for the agency representative (COAR or PI).

Use of Pay Plan for Casual Firefighters for the Hazardous Fuels Program

Refer to the DOI Pay Plan for Emergency Workers for information regarding the use of emergency workers for hazardous fuel reduction projects. Refer to the FS Pay Plan for Emergency Workers for information regarding the use of emergency workers for hazardous fuel reduction projects.

Activation of Contingency Resources

In the event an agency activates the contingency resources in their burn plan, sending units should respond and support the requesting agency immediately, to ensure that the public and firefighter safety are not compromised.

Chapter 18
Reviews, Investigations &Analyses

Introduction
Reviews and investigations are used by wildland fire and aviation managers to assess and improve the effectiveness and safety of organizational operations.

Reviews
Reviews are methodical examinations of system elements such as; program management, safety, leadership, operations, preparedness, training, staffing, business practices, budget, cost containment, planning, and interagency or intra-agency cooperation and coordination. Reviews do not have to be associated with a specific incident. The purpose of a review is to ensure the effectiveness of the system element being reviewed, and to identify deficiencies and recommend specific corrective actions. Established review types are described below and include:

- Preparedness review
- After action review
- Fire and aviation safety team review
- Aviation safety assistance team review
- Large Fire Cost Reviews
- Individual fire review
- Lessons learned review
- Escaped prescribed fire review

Preparedness Reviews
Fire preparedness reviews assess fire programs for compliance with established fire policies and procedures outlined in the current *Interagency Standards for Fire and Fire Aviation Operations* and other pertinent policy documents. Reviews identify; organizational, operational, procedural, personnel, or equipment deficiencies, and recommend specific corrective actions. Interagency Preparedness Review Checklists can be found at:
http://www.nifc.gov/policies/preparedness_reviews/preparedness_reviews.htm

- ***BLM/FS -*** *Preparedness review functional checklists that can be found at: http://www.blm.gov/nifc/st/en/prog/fire/fireops/preparedness/preparedness_review.html.*

After Action Reviews (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 soon 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*

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.
- Assist with providing immediate corrective actions.
- 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.

Fast reports will include 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. FAST reports should be submitted to the geographic area with a copy to the Federal Fire and Aviation Safety Team (FFAST) chair within 30 days. See Appendix O for sample FAST Delegation of Authority.

Aviation Safety Assistance Team (ASAT) Reviews

During high levels of aviation activity it is advisable to request an Aviation Safety Assistance Team (ASAT). The team's purpose is to assist and review helicopter and/or fixed wing operations on ongoing wildland fires. An ASAT team should be requested through the agency chain of command and operate under a delegation from the appropriate state/regional aviation manager or multi-agency coordinating group. Formal written reports will be provided to the appropriate manager. An ASAT should consist of:

- Aviation Safety Manager
- Operations Specialist (helicopter and/or fixed wing)
- Pilot Inspector
- Maintenance Inspector (optional)
- Avionics Inspector (optional)

Large Fire Cost Reviews

Information on large fire cost reviews can be found in Incident Management, and at http://www.nwcg.gov/general/memos/nwcg-003-2009.html

Individual Fire Reviews

Individual fire reviews examine all or part of the operations on an individual fire. The fire may be ongoing or controlled. These reviews may be a local, state/regional, or national. These reviews evaluate decisions and strategies, correct deficiencies, identify new or improved procedures, techniques or tactics, determine cost-effectiveness, and compile and develop information to improve local, state/regional or national fire management programs.

Notification

Near misses or successful operations should be reported to first line supervisors. Supervisors will notify the unit fire management officer, the unit fire management officer will then notify their agency administrator. In cases of entrapment near misses, notification to the respective agency's national fire office is required. The determination for review/investigation level will be made from the national level.

- ***NPS -*** *Park Units will notify Regional FMOs of the need for review or investigation.*

Lessons Learned Reviews (LLR)

The purpose of a LLR is to focus on the near miss events or conditions in order to prevent potential serious incident in the future. In order to continue to learn from our near misses and our successes it is imperative to conduct a LLR in an open, non-punitive manner. LLRs are intended to provide educational opportunities that foster open and honest dialog and assist the wildland fire community in sharing lessons learned information. LLRs provide an outside perspective with appropriate technical experts assisting involved personnel in identifying root causes and sharing findings and recommendations.

LLR Process

An LLR should be tailored to the event being reviewed and the extent of the review should be commensurate with the severity of the incident being reviewed. An LLR should not be used in lieu of a Serious Accident Investigation (SAI) if the SAI criteria have been met.

A LLR will be led by a facilitator not involved in the event. A facilitator should be an appropriate fire management expert who possesses skills in interpersonal communications, organization, and be unbiased to the event. Personnel involved in the event will be participants in the review process. Depending upon the complexity of the event, the facilitator may request assistance from technical experts (e.g., fire behavior, fire operations, etc.).

The LLR facilitator will convene the participants and:

- Obtain delegation of authority from appropriate agency level. See appendix K for a sample LLR Delegation of Authority.
- Identify facts of the event (sand tables maybe helpful in the process) and develop a chronological narrative of the event.
- Identify underlying reasons for success or failure.
- Identify what individuals learned and what they would do differently in the future.
- Identify any recommendations that would prevent future similar occurrences.
- Provide a final written report including the above items to the pertinent agency administrator(s) within two weeks of event occurrence. Names of involved personnel should not be included in this report (reference them by position).

A copy of the final report will be submitted to the respective agency's national fire safety lead who will provide a copy to the Wildland Fire Lessons Learned Center (WFLLC). Website: http://wildfirelessons.net/Home.aspx.

- ***FS -*** *The Forest Service has developed two processes for conducting Lessons Learned Reviews: the Facilitated Learning Analysis (FLA) and the Accident Prevention Analysis (APA). Guides have been produced for these processes and are available from Regional and National risk management and safety personnel.*

Declared Wildfire Reviews

Escaped prescribed fire review direction is found in Chapter 18 of this document and in these agency documents:

Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide (August 2008)

- ***BLM -*** *IM No. OF&A 2009-014*
- ***FWS -*** *Fire Management Handbook*
- ***NPS -*** *RM-18, Chapter7 & 17*
- ***FS - FSM*** *5140*

Investigations

Investigations are detailed and methodical efforts to collect and interpret facts related to an incident or accident, identify causes (organizational factors, local workplace factors, unsafe acts), and develop control measures to prevent recurrence. Established investigation types include:

- Serious wildland fire accident investigation.
- Non-serious wildland fire accident investigation.
- Entrapment/ burnover investigation.
- Fire shelter deployment investigation.
- Fire trespass investigation.

Wildland Fire Accident and Event Definitions

Notification

Near misses or successful operations should be reported to first line supervisors. Supervisors will notify unit fire management officer, who will then notify their agency administrator. In cases of entrapment near misses, notification to the respective agency's national fire office is required and determination for review/investigation level will be made from the national level.

- ***NPS -*** *Park Units will notify Regional FMOs of the need for review or investigation.*

Serious Wildland Fire Accident

An unplanned event or series of events that resulted in death; injury, occupational illness, or damage to or loss of equipment or property. For wildland fire operations, a serious accident involves any of the following:

- One or more fatalities.
- Three or more personnel who are inpatient hospitalized as a direct result of or in support of wildland fire operations.
- Property or equipment damage of $250,000 or more.
- Consequences that the Designated Agency Safety and Health Official (DASHO) judges to warrant Serious Accident Investigation.

Non-Serious Wildland Fire Accident
An unplanned event or series of events that resulted in injury, occupational illness, or damage to or loss of equipment or property to a lesser degree than defined in "serious wildland fire accident."

Near-miss
An unplanned event or series of events that could have resulted in death; injury; occupational illness; or damage to or loss of equipment or property but did not.

Entrapment
A situation where personnel are unexpectedly caught in a fire behavior-related, life-threatening position where planned escape routes or safety zones are absent, inadequate, or compromised. Entrapment may or may not include deployment of a fire shelter for its intended purpose (NWCG Glossary of Fire Terminology). Entrapment may result in a serious wildland fire accident, a non-serious wildland fire accident, or a near-miss.

Fire Shelter Deployment
The removing of a fire shelter from its case and using it as protection against fire (NWCG Glossary of Fire Terminology). Fire shelter deployment may or may not be associated with entrapment. Fire shelter deployment may result in a serious wildland fire accident, a non-serious wildland fire accident, or a near-miss. Any time a fire 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.

Escaped Prescribed Fire
A prescribed fire which has exceeded or is expected to exceed its prescription.

Fire Trespass
The occurrence of unauthorized fire on agency-protected lands where the source of ignition is tied to some type of human activity.

Review and Investigation Requirements

Wildland Fire Event	Review/Investigation Type	Management level determines review type and authorizes review*
Serious Wildland Fire Accident	Serious Accident Investigation (SAI)	National
Non Serious Wildland Fire Accident	Non-Serious Accident Investigation (NSAI)	Region/State/Local
Near-miss	Lesson Learned Review (LLR)	Region/State/Local
Entrapment	SAI, NSAI, LLR, depending on severity	National
Fire Shelter Deployment	SAI, NSAI, LLR, depending on severity	National
Escaped Prescribed Fire	Escaped Prescribed Fire Review	National/Region/State
Fire Trespass	Fire Cause Determination & Trespass Investigation	Local

*Management may override lower level management and request a review or investigation regardless of the above criteria.

Agency Specific Policy Documents

These documents provide specific direction related to incident and accident investigations.

	Safety	Prescribed Fire
DOI	485 DM Chapter 7	
BLM	Manual 1112-2, 1112-1	
FWS	Service Manual 095	
NPS	DO/RM-50B, RM-18 Chapter 3	RM-18, Chapter 7
FS	FSH-6709.11	FSM-5140
	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.	
Interagency	Information on accident investigations may be found at: http://www.nifc.gov/safety/accident_resources.htm. For reporting use *PMS 405-1, Wildland Fire Fatality and Entrapment Initial Report,*: http://www.nwcg.gov/pms/forms_otr/pms405-1.pdf.	

Serious Wildland Fire Accident Investigation Process

Fire Director Responsibilities

The Fire Director(s) or designee(s) of the lead agency, or agency responsible for the land upon which the accident occurred, will:

- Notify the agency safety manager and Designated Agency Safety and Health Official (DASHO).
- Immediately appoint, authorize, and deploy an accident investigation team.
- Provide resources and procedures 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 an accident review board/ 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 Responsibilities

- Develop local preparedness plans to guide emergency response.
- Identify agencies with jurisdictional responsibilities for the accident.
- Provide for and emphasize treatment and care of survivors.
- Ensure the Incident Commander secures the accident site.
- Conduct an in-briefing to the investigation team.
- Facilitate and support the investigation as requested.
- Determine need and implement Critical Incident Stress Management (CISM).
- Notify home tribe leadership in the case of a Native American fatality.
- Prepare and issue required 24 Hour Preliminary Report.

Notification

Agency reporting requirements will 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
- OSHA (within 8 hours if the accident resulted in one or more fatalities or if three or more personnel are inpatient hospitalized)

Notification to the respective agency's fire national safety/risk management lead is required.

- ***FS -*** *Forest Service protocol for fatalities or 3 or more serious injuries requiring hospitalization investigation teams are assigned by the Office of Safety and Occupational Health in the WO.*

Designating the Investigation Team Lead

The 1995 Memorandum of Understanding between the U.S. Department of the Interior and the U.S. Department of Agriculture states that serious wildland fire-related accidents will be investigated by interagency investigation teams. Following initial notification of a serious accident, the National Fire Director(s) or their designee(s) will designate a Serious Accident Investigation Team Lead(s) and provide that person(s) with a written delegation of authority to conduct the investigation and the means to form and deploy an investigation team.

Accidents involving more than one agency will require a collaboratively developed delegation of authority that is signed by each of the respective agencies.

Serious Accident Investigation 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 to the Designated Agency Safety and Health Official (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/Safety Manager**
  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/safety manager 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 specialized fire equipment, weather, and fire behavior.

- **Public Affairs Officer**
  For investigations with high public visibility and significant news media interest, a public affairs officer (PAO) should be considered to be part of the team. The PAO generally should not be affiliated with the home unit. The PAO should develop a communications plan for the team, be a designated point of contact for news media, and oversee all aspects of internal and external communications. Ideally, the PAO should be qualified as a Type 1 or Type 2 public information officer and be familiar with SAI team organization and function.
- ***BLM -*** *All media related documents (news releases, talking points, etc.) should be cleared through NIFC Public Affairs prior to external release.*
- ***BLM -*** *Coordination and mobilization is done by Fire and Aviation Directorate's Safety and Health Manager.*

SAIT 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 Designated Agency Safety and Health Official (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).

Factual Reports will be submitted to Wildland Fire Lessons Learned Center (WFLLC) by the respective agency's fire safety/risk management leads. http://iirdb.wildfirelessons.net/main/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. The MER categorizes findings identified in the factual report and provides recommendations to prevent or reduce the risk of similar accidents. Factual and Management Evaluation Report formatting can be found on the NIFC website at: http://www.nifc.gov/safety/accident_resources.htm.

Accident Review Board/Board of Review

An Accident Review Board/Board of Review is used by some agencies to evaluate recommendations, and develop a corrective action plan. Refer to respective agency's Safety and Health policy.

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.

Investigation Team Membership

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/manager, 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.

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 Agency Fire Director or their designee). If a lower level investigation is conducted, a courtesy copy of the final report shall be sent to the respective agency's fire safety/risk management lead.

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://iirdb.wildfirelessons.net/main/Reviews.aspx.

Processes Common to Serious and Non-Serious Wildland Fire Investigations

- **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, entrapments, injuries, fatalities, and the condition and location of personal protective equipment, property, and other equipment must be documented.
- **Management of Involved Personnel -** Treatment, transport, and follow-up care must be immediately arranged for injured and involved personnel. The agency administrator or delegate should develop a roster of involved personnel and supervisors and ensure they are available for interviews by the investigation team. The agency administrator should 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) -** CISM is the responsibility of local agency administrators, who should have individuals pre-identified for critical incident stress debriefings. Also refer to The *Agency Administrator's Guide to Critical Incident Management (PMS 926)*,

available at: http://www.nwcg.gov/pms/pubs/pms926.doc. Individuals or teams may be available through Employee Assistance Programs (EAP's) or Geographic Area Coordination Centers (GACC's).

- **24-Hour-Preliminary Report -** This report contains known 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).
- **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. It will be completed and forwarded by the SAI Team. Names of injured personnel are not to be included in this report (reference them by position).
- **24 and 72 Hour Reports** shall be sent to the respective agency's fire safety/risk management lead for national distribution and potential posting through NWCG Safety Alert System.

Non-Serious Accident Investigation Report Standard 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. Names of injured personnel or personnel involved in the accident are not to be included in this report (reference them by position).
- **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 will contain 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, simply note 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 adverbs that describe and thus render an opinion into pertinent facts.
- **Findings -** Findings are developed from the factual information. Each finding is a single event or condition. Each finding is an essential step in the accident sequence, but each finding is not necessarily causal. Do not include any more information in each finding than is necessary to explain the event occurrence. Findings must be substantiated by the factual data and listed in chronological order within the report.
- **Discussion -** Provide a brief explanation of factual and other pertinent information that lead to the finding(s).

- **Recommendations -** Recommendations are the prevention measures that should be taken to prevent similar accidents. Provide recommendations that are consistent with the findings and identify at which level the action 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, equipment maintenance reports, agreements).
- **Records -** Factual data and documents used to substantiate facts involving the accident.

Fire Cause Determination & Trespass Investigation

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*
- ***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 Wildfire Decision Support System 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 the 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? Do you have a TFR?
____If the fire escapes initial attack, what will your role be in developing the Wildfire Decision Support System?

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_____
Incident 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?
- 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.
- 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 Wildfire Decision Support System.
- If necessary, provided team transition briefing as assigned.
- Form ICS 201 was completed in accordance with local policy.

Delegation for Unit Fire Management Officers

_____, Fire Management Officer for the _____ (Unit) is delegated authority to act on my behalf for the following duties and actions:

1. Represent the _____(Agency) in the _____ Multi-Agency Coordinating Group in setting priorities and allocating resources for fire emergencies.

2. Coordinate all prescribed fire activities in the _____ (Unit) 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 _____ (Agency).

6. Request and oversee distribution of severity funding for Unit 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 unit fiscal guidelines are adhered to and targets are met.

11. Approve and sign aviation request forms.

12. Approve Red Cards in accordance with agency policy.

13. Authorized to hire Emergency Firefighters in accordance with the Emergency Worker Pay Plan.

_____ _____

Fire Management Officer Date

_____ _____

Agency Administrator Date

Agency Administrator's Briefing to Incident Management Team

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 WDFSS 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
Wildfire Decision Support System
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
Wildfire Decision Support System (Common WFDSS 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)

- 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.
- 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.
- 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. Wildfire Decision Support System 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.
3. Key cultural features requiring priority protection are:
4. Key resources considerations are:
5. Restrictions for suppression actions include:
6. Minimum tools for use are:
7. My agency Resource Advisor will be:
8. The fire borders are:
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.

12. Key cultural features requiring priority protection are:
13. 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: ☐ ICS 201 ☐ ICS 215 ☐ ICS 207 ☐ ICS 220 ☐ ICS 209	Other Attachments: ☐ Map of Fire ☐ Aerial Photos ☐ 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		
ICP:	☐	☐		
Base:	☐	☐		
Camp(s):	☐	☐		
Staging Area(s):	☐	☐		
Copy Machine Available			☐ Yes	☐ No
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 ☐ Cell Phone
Water Availability:
Review of Existing Plans for Control in Effect; Copy of Approved Wildfire Decision Support System.
Smoke Conditions:
Local Political Issues:
Damage Assessment Needs:
Security Problems:

Incident Management Team Performance Evaluation			
Team IC		**Incident Type**	
Incident Name		**Incident Number**	
Assignment Dates		**Total Acres**	
Host Agency		**Evaluation Date**	
Administrative Unit		**Sub-Unit**	

At the conclusion of each incident management team (IMT) assignment, the agency administrator or representative should complete this initial performance evaluation (sections 1 - 5). This evaluation should be discussed directly with the incident commander. The initial performance evaluation should be delivered by the agency administrator without delay to the incident commander, the state/regional fire management officer, and the chair of the IMT's home geographic area multi-agency coordination group to ensure prompt follow-up to any issues of concern.

Complete the follow evaluation narratives and rating for each question
0 - did not achieve expatiations, 3 - met expatiations, 5 - excelled

1. How well did the Team accomplish the objectives described in the Wildland Fire Decision Support System (WFDSS) the Delegation of Authority, and the Agency Administrator Briefing?

Circle one	0	1	2	3	4	5

(Explain)

2. How well did the Team manage the cost of the incident? Did the team follow agency incident operating guidelines? Were follow-up issues identified and documented for the Agency Administrator ie; invoices, OWCP and vendor issues?

Circle one	0	1	2	3	4	5

(Explain)

3. How did the Team demonstrate sensitivity to resource limits/constraints and environmental concerns?						
Circle one	0	1	2	3	4	5
(Explain)						
4. How well did the Team deal with sensitive political and social concerns?						
Circle one	0	1	2	3	4	5
(Explain)						
5. Was the Team professional in the manner in which they assumed management of the incident and how they managed the total incident? How did the Team handle transition either to another IMT or in returning the incident the hosting agency?						
Circle one	0	1	2	3	4	5
(Explain)						
6. How well did the Team anticipate and respond to changing conditions, was the response timely and effective?						
Circle one	0	1	2	3	4	5
(Explain)						
7. How well did the Team place the proper emphasis on safety?						
Circle one	0	1	2	3	4	5
(Explain)						

8. Did the Team activate and manage the mobilization/demobilization in a timely and cost effective manner?						
Circle one	0	1	2	3	4	5
(Explain)						
9. How well did the Team use local resources, trainees, and closest available forces?						
Circle one	0	1	2	3	4	5
(Explain)						
10. How did the Team notify the incident agency regarding triggers for initiating a cost share agreement or large fire cost review? How were those recommendations implemented?						
Circle one	0	1	2	3	4	5
(Explain)						
11. Was the IC engaged and in charge of the Team and the Incident? How well did the IC function and operate as a leader?						
Circle one	0	1	2	3	4	5
(Explain)						

12. How timely was the IC in assuming responsibility for the incident and initiating action?						
Circle one	0	1	2	3	4	5
(Explain)						
13. How did the IC show sincere concern and empathy for the hosting unit and local conditions?						
Circle one	0	1	2	3	4	5
(Explain)						
14. Was the agency administrator or designee made aware that the Time Unit closed out/transitioned per unit operating guidelines? Example: AD time complete per payment center and agency requirements, cooperators given appropriate documents per agreements, OF 288's complete and returned.						
Circle one	0	1	2	3	4	5
(Explain)						
15. Other comments:						

Agency Administrator or Representative:		**Date:**	
Incident Commander:		**Date:**	

Memorandum

To: LLR Facilitator; Title of Person/Office This is Meant For

From: Delegating Official

Subject: Delegation of Authority - (Incident Name) LLR

Situation Summary:

You are hereby designated the authority to lead and conduct an LLR for (Incident Name) The review process will begin at (Identify LLR start time, date, and location). The Fire Staff and Fire Management Office have identified the group of employees who will also be participating. That information will be provided to you upon your arrival.

- You have the authority to tailor your team and the LLR process to fit the situation and your style of facilitation. However, I would like you to utilize the guidance outlined in the *Interagency Standards for Fire and Fire Aviation Operations Chapter 18,* while conducting the LLR. This includes: convening the participants;
- identifying facts of the event and developing a chronological narrative of the event;
- identifying underlying reasons for success or failure;
- identifying what was learned and what should/could be done differently in the future;
- identify any recommendations that would prevent future similar occurrences; and
- providing a final, written report covering the above items, which is due to me within two weeks of the event occurrence.

If you need any assistance, your primary contact will be:

Thank you for your time and assistance.

Interim NWCG Minimum Standards of Incident Emergency Medical Services 2008

Incident Size	Initial Attack	<250	250 to 500	> 500
Medical Unit Leader (MEDL)	No	TBD by IC and jurisdictional agency	YES (1)	YES (1)
First Responder or Basic FA	Yes	Yes	N/A	N/A
MEDL EMTs	No	No	1	2
EMTs	No	To be determined by the IC or jurisdictional agency.	1	2
MEDL Quals	N/A	N/A	310-1 Basic EMT	310-1 Basic EMT
Med Unit EMT Quals	N/A	Basic EMT	310-1 Basic EMT	310-1 Basic EMT
EMTs per Division	N/A	To be determined in consultation with Operations and/or Medical Unit		
Establish Local Medical Direction	N/A	To be determined by the IC or jurisdictional agency.	Yes	Yes
First Aid Kits	Pocket & Vehicle First Aid Kits	Pocket, Vehicle & Crew First Aid Kits	Pocket, Vehicle & Crew First Aid Kits	Pocket, Vehicle & Crew First Aid Kits
100 person First Aid Kit	No	To be determined by the IC or jurisdictional agency.	Yes	No
500 person First Aid Kit	No	No	No	Yes
AED	No	To be determined by the IC or jurisdictional agency.	Yes	Yes
Oxygen	No	No	TBD	Yes
OTC Meds	No	To be determined in consultation with Safety Officer, Medical Unit Leader, and Finance Section Chief		
Emergency Transport	N/A	Method to provide transport to the nearest medical facility is to be identified in the Incident Action Plan		

NOTE: Regional differences/protocols exist: e.g., Northern Rockies (Incident Medical Specialist Program), Pacific Northwest (Incident Medical Specialist Program) and Alaska (Firemedic Program) that are different from these guidelines and may require a higher level of EMS service.

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 (DOI only)
*Medical Examination Requirement

Employment Category	Fitness Requirement	Clearance Process	
	Arduous	MSP	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

* This applies only to those units who have fully implemented MSP.
Note: MSP: Federal Interagency Wildland Firefighter Medical Qualification Standards Program

HSQ: Health Screen Questionnaire

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.

AD/EFF
- An "Annual Exam" when age 45 and older.
- A HSQ when under age 45 or annual exam if "yes" answers on HSQ and determined as agency mission critical.

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: _____

Dispatch Center 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/response resources); Appropriate management notification; Cooperator support and planned response; Communications procedures; Procedures to follow when activity exceeds the initial attack/response 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, 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.

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.

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.

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.

Medical Plan
- Activation/evacuation information.
- Medical facility locations and phone numbers.
- Air and ground transport (Medivac) capability.
- Burn center information.

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. 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 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. Defusings allow for initial venting of reactions to the incident, and provides stress coping information to affected personnel. A Defusing may eliminate the need for a formal CISD or enhance a subsequent CISD.

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.

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.
BLM units see the agency specific NUS in Chapter 2.

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		*	*

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
	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
	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	0925/0975	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

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

Wildland Fire Decision Support System Information

WFDSS Subsections

The incident is divided in to 8 subsections within WFDSS. These sections are: Information, Situation, Objectives, Courses of Action, Validation, Decisions, Periodic Assessment, and Reports.

Information

Basic information for an incident such as: location, name, size, fire number, cause, jurisdiction, geographic area, owner, start date, containment date, controlled date, and out date. Updating this section is essential, especially for ongoing incidents. It is also important to assure that the incident owner(s) will be available when the incident must be updated or transferred. Consider these needs when deciding how incidents will be created and how ownership will be assigned.

Situation

It is a map interface which gives you a variety of incident and reference information. It reduces the need for paper maps by giving users a dynamic and intuitive interface in which information needed for decision support is timely and easily accessible from anywhere with an internet connection.

The Map tab has several sections of spatial layers available: Incident, Analyses, Fire-Related, Reference, Values, and Editable information. In addition to viewing the spatial information, a screen capture of the map can be saved for later incorporation into the decision document. Within this section is the ability to create new shape files, view values and boundaries, and conduct basic and short term fire analyses.

Within the Info tab the user can access strategic objectives, fire danger ERC charts, fire weather forecasts and basic information such as aspect, fuel model, slope, etc. for a particular location.

Objectives

Strategic and Management Requirements are automatically loaded in to the program based on those entered from your approved plans (Land & Resource Management Plans, Fire Management Plans) and the location of the fire. Within this section incident requirements and incident objectives are created. A user can then control the active or deactivated status of these incident objectives and incident requirements based on location of the fire and activity to include them or exclude them from the next decision.

Courses of Action

Documentation for strategic direction and associated cost is completed in this section. Again, the user can edit, include or exclude the strategic direction each

time a decision is made. Several methods for determining cost can be found here, follow your agency direction.

Validation

Decisions are validated and documented in this section, prior to publication. It is important to document your justification in the comment section as completely as possible for answering the question - "Are the Strategic Objectives being satisfied with the proposed Course of Action?" While writing this justification, look to the "Other Items to Consider" as possible things to address. This information will be viewable throughout the decision process and after a decision is made.

Decisions

Within this section is the ability to create, view, edit, and download decisions. It is also where an owner can start the review and approval process. It is important in this area that owners, editors, and reviewers become familiar with their role and understand what they can and can't do with the incident information. Additionally knowing and understanding how and where to save information as agreed upon by the incident owner are essential. Within this section, multiple editors can be working on different sections with a little coordination and using the edit / check-in process. If a decision has not been published it can also be deleted, however once a decision has been published it is part of that incident record and cannot be removed. A new decision must be made if updated information or findings are to be documented.

Periodic Assessment

This is the section where the approver will go to complete the periodic assessment and view the previous actions and comments. Depending upon the complexity and activity on the incident, the timeframe can be set 1-14 days while publishing the decision or during the periodic assessment process. It is beneficial to document clear, concise information about the incident when completing the periodic assessment. This periodic assessment information will be part of the project record and a way for someone to gather situational awareness of the incident. It should be useful information not only during the incident but for years to come when reviewing incidents. This comment section is especially pertinent because it outlines your thought process and reasons for either continuing a current decision or requiring a new one.

Reports

This section allows you to compose reports from documentation and information within your incident that you can view, edit, publish or download but is NOT where you look for a report on a published decision. (Reports on published decisions can be found in the Decisions tab by using the download button.) When creating a report the user can decide on a custom or a Management Action Point report. Both reports give the user the ability to select pertinent information from the incident for the report they are constructing.

MINIMUM CREW STANDARDS FOR NATIONAL MOBILIZATION

Minimum Standards	Type 1	Type 2 with IA Capability	Type 2
Fireline Capability	Initial attack/can be broken up into squads, fire line construction, complex firing operations(backfire)	Initial attack/can be broken up into squads, fireline construction, firing to include burnout	Initial attack, fireline construction, firing as directed
Crew Size	18-20		
Leadership Qualifications	Permanent Supervision Supt: TFLD, ICT4,FIRB Asst Supt: STCR, ICT4 3 Squad Bosses: ICT5 2 Senior Firefighters: FFT1	Crew Boss: CRWB 3 Squad Bosses: ICT5	Crew Boss: CRWB 3 Squad Bosses: FFT1
Language Requirement	All senior leadership including Squad Bosses and higher must be able to read and interpret the language of the crew as well as English.		
Experience	80% 1 season	60% 1 season	20% 1 season
Full Time Organized Crew	Yes (work and train as a unit 40 hrs per week)	No	No
Communications	5 programmable radios	4 programmable radios	
Sawyers	3 agency qualified	3 agency qualified	None
Training	As required by the Interagency Hotshot Crew Guide or agency policy prior to assignment	Basic firefighter training and/or annual firefighter safety refresher prior to assignment	Basic firefighter training and/or annual firefighter safety refresher prior to assignment
Logistics	Crew level agency purchasing authority	No purchasing authority	No purchasing authority
Maximum Weight	5100 lbs		
Dispatch Availability	Available nationally	Available nationally	Variable
Production Factor	1.0	.8	.8
Transportation	Own transportation	Transportation needed	Transportation needed
Tools & Equipment	Fully equipped	Not equipped	Not equipped
Personal Gear	Arrives with: Crew First Aid kit, personal first aid kit, headlamp, 1 qt canteen, web gear, sleeping bag		
PPE	All standard designated fireline PPE		
Certification	Must be annually certified by the local host unit agency administrator or designee prior to being made available for assignment.	N/A	N/A

JOB HAZARD ANALYSIS	Date:	New:☐ Revised:☐
	Page 1 of 3	Reviewed by (Safety Mgr)
Field Office/Work Group	Supervisor:	Qual, Trng, Experience Reqd:
This JHA must be reviewed, approved, and signed by the Agency Administrator: Name: Title: Date:		

Basic Job Steps	Potential Hazards	Safe Job Procedures
Work Capacity Testing	Physical Overexertion	Provide prospective test participants information about the test course and review WCT level requirements (e.g., arduous, moderate, light).
		Test participants complete the Health Screen Questionnaire or provide documentation of clearance for Medical Standards Program (MSP). Only appropriate responses of the prospective subjects to the Health Screen will result in administering the Work Capacity Test.
		Test Administrators monitor subjects for distress during test. Test Administrator is to terminate test if indicated by level of subject distress.
		Ensure test participants understand they are to discontinue the test and seek assistance from test administrator and/or on-site medical personnel if they begin to experience adverse discomfort or illness during the test.
		Schedule tests when environmental conditions are most favorable.
		Have a person currently qualified as an EMT (with supplies and equipment) onsite when testing is done.
		Have unit medivac plan and make sure Test Administrators know how to activate it.
		Make sure test participants do not exceed a walking pace.
		Ensure test participants are properly hydrated.
Work Capacity Testing	Strains and Sprains	Ensure test participants properly warm up and stretch just prior to beginning the test. This is especially important to stretch the lower legs.

		Encourage participants to apply ice and massage to lower legs in the event of lower leg pain (shin splints).
		Give test participants time to properly adjust packs for comfort and positioning prior to beginning the test.
		Test administrator and on site medical personnel shall monitor test participants for indications of distress and terminate the test for them.
		Ensure test participants have comfortable footwear and socks that provides adequate support and protection to feet and ankles.
		Have test participants cool down and stretch after the test.
		Make sure the test participants do not exceed a walking pace.
Work Capacity Testing	Heat Stress	Make sure Test Administrators understand the effects of exercising in heat, can recognize the symptoms of heat stress, and how to treat it.
		Where possible, schedule tests for the most favorable environmental conditions. Use the Heat Stress chart, Fitness and Work Capacity, 2nd Edition (p. 29). Avoid the "High" range.
		Inform prospective test participants on how to dress for the conditions and include the information in the pre-test briefing.
		Make sure test participants are aware of the need for acclimatization. Provide time for employees to become acclimatized if conditions of their employment permit.
		Test Administrators include heat stress information in the test briefing if appropriate.
		Provide water at key point along the test course if conditions dictate.
		Test Administrators monitor all test participants for signs of heat stress, terminate test if stress is indicated, and are prepared to provide treatment needed.
Work Capacity Testing	Cold Temperature	Make sure Test Administrators know symptoms of cold-related physical effects and are prepared to treat them.

		Inform prospective test participants on how to dress for the conditions and include information in the pre-test briefing.
		Locate an indoor facility suitable for testing if conditions warrant.
		Postpone testing if conditions warrant.
Work Capacity Testing	Slippery Course Conditions (ice, snow, mud)	Locate a suitable test surface. Consider indoor facility, plowed airport, plowed road or other safe area.
		Postpone testing if conditions warrant.
		Test participants should wear footwear with good traction.
Work Capacity Testing	Traffic	Select test course without traffic.
		Arrange for traffic control to eliminate traffic hazard.
		Make sure test participants are briefed about traffic hazard and controls implemented prior to the test.
Work Capacity Testing	Pack Rubbing, Chafing, or Straining Subjects	Make sure test participants have practiced with a pack and have become work hardened to carry a pack.
		Recommend upper body clothing that protects from pack rubbing.
		Make sure subjects have an opportunity prior to testing to adjust and try out pack.
		Terminate testing for subjects struggling to carry the pack or maintain a pace adequate to complete the test successfully.
		Permit subjects to use a self-provided pack that meets the applicable weight requirement.

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?

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.

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.