Interagency Standards

for

Fire and Fire Aviation

Operations

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

<u>Department of Agriculture</u>
Forest Service

January 2005
NFES 2724

Standards for Fire and Fire Aviation Operations

January 2005
NFES 2724

Produced by the Standards for Fire and Fire Aviation Operations Task Group, National Interagency Fire Center, Boise, ID.

Additional copies of this publication may be ordered from: National Interagency Fire Center, ATTN: Great Basin Cache Supply Office, 3833 S. Develpoment Ave., Boise, ID 83705. Order NFES #2724.

Release Date: January 2005

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

January 1, 2005

To: Agency Personnel

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

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

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

Interagency Standards for Fire and Fire Aviation Operations states, references, or supplements policy for Bureau of Land Management, Forest Service, Fish and Wildlife Service, and National Park Service fire and fire aviation program management. Agency specific exceptions are identified in the text.

The Incident Pocket Response Guide (IRPG) NFES #1077 and the *Fireline Handbook NFES #0065* are the standard references for interagency fire management operations.

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

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

For the U.S. Fish and Wildlife Service this document is incorporated in the *Fire Management Handbook.*

For the National Park Service this document supplements *Reference Manual 18*.

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

Release Date: January 2005

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.

_____
Signed by:
Larry Hamilton
Director, Office of Fire & Aviation, Bureau of Land Management

_____
Signed by:
Alice Forbes
Assistant Director, Fire & Aviation Management, USDA, Forest Service

_____
Signed by:
Phil Street
Fire Director, U.S. Fish and Wildlife Service

_____
Signed by:
Sue Vap
Director, Fire Management Program Center, National Park Service

Federal Fire and Aviation Task Group agency representatives:
Kurt La Rue, BLM
Vince Mazzier, BLM
Rod Bloms, FWS
Loren DeRosear, FWS
Bill Van Bruggen, FS
Don Scronek, FS
Paul Broyles, NPS
Doug Alexander, NPS
Andrew Bellcourt, BIA

Release Date: January 2005

Chapter 01
Federal Wildland Fire Management Policy and Guidance Overview

Chapter 02
BLM Wildland Fire and Aviation Program Organization and Responsibilities

Chapter 03
National Park Service Program Organization & Responsibilities

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

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

**Chapter 06
Safety**

<div align="center">

Chapter 07
Interagency Coordination & Cooperation

</div>

**Chapter 08
Fire Management Planning**

**Chapter 09
Preparedness**

Chapter 10
Developing a Response to Wildland Fires

Chapter 11
Incident Management

Chapter 12
Suppression Chemicals & Delivery Systems

Chapter 13
Training & Qualifications

Chapter 14
Firefighting Personnel

Chapter 15
Firefighting Equipment

<div align="center">

Chapter 18
Fuels Management/Prescribed Fire

</div>

Chapter 19
Reviews & Investigations

Chapter 20
Administration

Appendices

Chapter 01
Federal Wildland Fire Management Policy and Guidance Overview

Scope
These standards apply to all the signatories of this document. They are designed to ensure safe and efficient wildland fire, fuels, and fire aviation operations. This document is reviewed annually and updated as needed. Exceptions and/or supplemental direction to the *Interagency Standards for Fire and Fire Aviation Operations* are found in agency specific manuals and handbooks as referenced in individual chapters of this document.

Purpose
This document provides a reference for current operational policies, procedures, and guidelines for managing wildland fire and fire aviation operations. Employees engaged in fire management activities will follow all safety standards and guidelines in their agency specific health and safety guides and handbooks. All employees engaged in fire suppression activities will adhere to standards and mitigate risks defined in the *Incident Response Pocket Guide (PMS #461, NFES #1077).*

Federal Wildland Fire Management Policy
In 2001 an update of the 1995 Federal Fire Policy was completed and approved by the Secretaries of Interior and Agriculture. On April 21, 2004 the Secretaries approved the *"Interagency Strategy for the Implementation of the Federal Wildland Fire Policy"*. This document directs the agencies to work together to develop common language, unified guidance and direction for all agencies and bureaus manuals, handbooks and guidelines to complete final implementation of the policy.

Elements of the Federal Wildland Fire Management Policy

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

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.

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

welfare, natural and cultural resources, and values to be protected; dictate
the appropriate response to fire.

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

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

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

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

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

Science

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

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.

Suppression

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

Prevention

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

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.

Interagency Coordination

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

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.

Agency Administrator and Employee Roles

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

Evaluation

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

Training and Qualification

All fire personnel will meet specific agency training, experience, and qualification requirements for incident assignments. *(See NWCG 310-1, DOI Incident Qualification and Certification System, and FSH 5109-17.)* Follow all safety policies, standards, and guidelines identified within the *Interagency Incident Business Management Handbook (IIBMH), Fireline Handbook, Interagency Helicopter Operations Guide (IHOG), Interagency Standards for Fire and Fire Aviation Operations, and Incident Response Pocket Guide (IRPG).*

Code of Conduct for Fire Suppression

Firefighter safety comes first on every fire every time. The Ten Standard Firefighting Orders are firm. We don't break them, we don't bend them. All 18 Watch Out Situations must be mitigated before engagement or re-engagement of wildland fire suppression activities. Every firefighter has the right to know that their or her assignments are safe. Every fireline supervisor, every fire manager, and every administrator has the responsibility to confirm that safe practices are known and observed.

Economic Efficiency

Fire management programs and activities will be based on economic analyses that incorporate commodity, non-commodity, and social values.

Fire Cause Determination and Cost Recovery

Agency policy requires all wildland fires to be investigated to determine cause, origin, and responsibility. Agencies 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 agreements.

Employee Responsibility

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

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.

There is zero tolerance of misconduct, whether it is harassment or hazing, or any other inappropriate behavior. We must all take responsibility for creating and ensuring a healthy and safe work environment.

Every individual has a responsibility to report harassment, inappropriate behavior, and take positive action to mitigate its effects.

Operational Clarification for Consistent Wildland Fire Management Policy Implementation:

Only one management objective will be applied to a wildland fire. Wildland fires will either be managed for resource benefits or suppressed. A wildland fire cannot be managed for both objectives concurrently. If two wildland fires converge, they will be managed as a single wildland fire.

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

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

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

The Wildland Fire Situation Analysis process is used to determine and document the suppression strategy from the full range of responses available for suppression operations. Suppression strategies are designed to meet the policy objectives of suppression.

Wildland fire use is the result of a natural event. The Land/Resource Management Plan, or the Fire Management Plan, will identify areas where the strategy of wildland fire use is suitable.

The Wildland Fire Implementation Plan (WFIP) is the tool that examines the available response strategies to determine if a fire is being considered for wildland fire use.

When a prescribed fire or a fire designated for wildland fire use is no longer achieving the intended resource management objectives and, contingency or mitigation actions have failed, the fire will be declared a wildfire. Once a wildfire, it cannot be returned to a prescribed fire or wildland fire use status.

Fire Management Objectives

The federal wildland fire management agencies fire management activities should result in safe, cost-effective fire management programs that protect, maintain, and enhance federal lands.

The objectives of the wildland fire management program are to:

- 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.
- Restore and rehabilitate resources and improvements lost in or damaged by fire or suppression activities.
- Minimize, and where necessary, mitigate human-induced impacts to resources, natural processes, or improvements attributable to wildland fire activities.
- Promote public understanding of fire management programs and objectives.
- Organize a fire staff that can apply the highest standards of professional and technical expertise.
- Encourage research to advance 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.

<div align="center">

Chapter 02
BLM Wildland Fire and Aviation Program
Organization and Responsibilities

</div>

Introduction

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

Office of Fire and Aviation

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

Program Manager Responsibilities

Director, Office of Fire and Aviation

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

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

Fire Operations Group Manager

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

Aviation Group Manager

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

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

Planning and Resources Group Manager

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

Support Services Group Manager

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

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

External Affairs Group Manager

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

Equal Employment Opportunity Manager (EEO)

- Manages the Equal Employment Opportunity (EEO) program in accordance with legal, regulatory, and policy requirements.
- Manages and directs the Counseling Program, and Alternative Dispute Resolution (ADR) programs, in accordance with Equal Employment Opportunity Commission (EEOC) regulations and BLM policy as well as for other NIFC agencies.
- Advises managers and aggrieved persons of employee rights and responsibilities, procedural options and timeframes in conflict situations, formulates proposed resolutions.

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

International Program Coordinator

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

1 •   Performs as both the National Military Logistics Coordinator and the
2   International Logistics Coordinator during National Preparedness Levels 4
3   and 5.
4
5 **State Director**
6 The State Director is responsible to the Director of BLM for fire management
7 programs and activities within their state. The State Director will meet the
8 required elements outlined in the *Interagency Fire Program Management*
9 *Qualifications Standards and Guide* and ensure training is completed to support
10 delegations to line managers and principal actings.
11
12 **District/Field Manager**
13 The District/Field Manager is responsible to the State Director for the safe and
14 efficient implementation of fire management activities within their unit. This
15 includes cooperative activities with other agencies or landowners in accordance
16 with delegations of authorities. The District/Field Manager and their principal
17 actings will meet the required elements outlined in the *Management*
18 *Performance Requirements for Fire Operations* below.
19
20   **Management Performance Requirements for Fire Operations**

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

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

PERFORMANCE REQUIRED	OF&A Directorate	State Director /Associate	District /Resource Area Manager	Field Manager
11. Reviews critical operations and safety policies and procedures with fire and fire aviation personnel.		X	X	X
12. Ensures timely follow-up to fire management program reviews.	X	X	X	X
13. Ensures that fire and fire aviation preparedness reviews are conducted annually in all unit offices. Personally participate in at least one review annually.	X	X	X	X
14. Ensures that investigations are conducted for incidents with potential, entrapments, and serious accidents as per agency policy.	X	X	X	X
15. Provides a written delegation of authority, WFSA, and an Agency Administrator Briefing to Incident Management Teams.		X	X	X
16. Ensures that resource advisors are identified, trained and available for incident assignment. Refer to *Resource Advisors Guide for Wildland Fire* PMS 313, NFES 1813, Nov 1996.			X	X
17. Attends post fire closeout on Type 1 and Type 2 fires. (Attendance may be delegated.)		X	X	X

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

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

State Office

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

District/Field Office

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

Manager's Oversight

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

After Action Review

Appendix B the "Managers Supplement for After Action Review" emphasizes the factors that are critical for ensuring safe and efficient wildland fire

1 suppression, and provides examples for managers to use in their review of
2 incident operations and incident commanders.
3
4 Requirements for fire management positions are outlined in the Interagency Fire
5 Program Management Qualifications Standards and Guide, referred to as the
6 IFPM Standard. The supplemental Qualification Standard for professional GS-
7 0401 Fire Management Specialist positions, approved by the Office of Personnel
8 Management, is also included in the IFPM Standard. The Interagency Fire
9 Program Management Qualification Standards and Guide can be found in it's
10 entirety on the IFPM website:
11 http://www.nifc.gov/training_quals/IFPM/ifpm.htm
12
13 **Training for Acting Agency Administrators**
14 The following training is required for acting Agency Administrators
15 • National- *Fire Management Leadership*
16 • Geographic- *Local Fire Management Leadership*
17
18 The national course is the preferred alternative. The training should be
19 completed within two years of appointment to a designated management
20 position.
21
22 Experience requirements for positions in AFS, O&C Districts, NIFC, national
23 office, and other fire management positions in units and state/regional offices
24 will be established as vacancies occur, but will be commensurate with the
25 position's scope of responsibilities. The developmental training to fully achieve
26 competencies should be addressed in an IDP within a defined time period.
27
28 **Fire Management Staff Performance Requirements for Fire Operations**

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

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

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

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

Delegation of Authority

Delegation for State Fire Management Officers

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

1 • Serve as the State Director's authorized representative on geographic area
2   coordination groups, including MAC groups.
3 • Coordinate and establish priorities on uncommitted fire suppression
4   resources during periods of shortages.
5 • Coordinate logistics and suppression operations statewide.
6 • Relocate agency pre-suppression/suppression resources within the
7   state/region based on relative fire potential/activity.
8 • Correct unsafe fire suppression activities.
9 • Direct accelerated, aggressive initial attack when appropriate.
10 • Enter into agreements to provide for the management, fiscal, and
11   operational functions of combined agency operated facilities.
12 • Suspend prescribed fire activities when warranted.
13 • Give authorization to hire Emergency Firefighters in accordance with the
14   DOI Pay Plan for Emergency Workers.
15 • Approve emergency fire severity funding expenditures not to exceed the
16   agency's annual authority.
17 • Appendix C provides a sample "Delegation of Authority".
18

19 **Safety Officer**
20 Safety and occupational health program responsibilities are interwoven
21 throughout Bureau program areas, including fire management. Safety of our
22 employees lies within every level of the organization and program
23 implementation can have a direct impact on firefighting personnel. To ensure
24 that program requirements are met, the following checklist shall be utilized.
25   **Safety Responsibilities to the Fire Program**

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

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

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

1

2 **Employee Responsibility**

3 All employees, cooperators, contractors, and volunteers who participate in

4 wildland fire operations have the duty to treat one another with respect and to

5 maintain a work environment free of misconduct and harassment.

6 Misconduct includes but is not limited to: alcohol misuse, driving while

7 intoxicated, the use of illegal drugs, hazing, insubordination, disregard for

8 policies and procedures and the destruction or theft of government property.

9

10

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

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

Examples of harassment and misconduct

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

Chapter 03
National Park Service Program Organization & Responsibilities

Agency Administrator Roles

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

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

Regional Director
The Regional Director is responsible to the Director for fire management programs and activities within his/her 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 acting's.

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

Management Performance Requirements for Fire Operations

PERFORMANCE REQUIRED	NPS Director.	Regional Director.	Park Supt.
1. Take necessary and prudent actions to ensure firefighter and public safety.	T	T	T
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.	T	T	T
3. Ensure Fire Management Officers (FMOs) are fully qualified as identified in the *Interagency Fire Program Management Qualification Standards.*	T	T	T

Release Date: January 2005   **03-1**

PERFORMANCE REQUIRED	NPS Director.	Regional Director.	Park Supt.
4. Provide a written delegation of authority to FMOs that provides an adequate level of operational authority. Include Multi-Agency Coordinating (MAC) Group authority, as appropriate.	T	T	T
5. Identify resource management objectives to maintain a current fire management plan (FMP) that identifies an accurate and defensible Normal Year Readiness of funding and personnel.		T	T
6. Develop protection and use standards and constraints that are in compliance with agency fire policies.		T	T
7. Ensure use of fire funds is in compliance with Department and Agency policies.	T	T	T
8. Management teams will meet once a year to review fire and aviation policies, roles, responsibilities, and delegations of authority. Specifically address oversight and management controls, critical safety issues, and high-risk situations such as team transfers of command, periods of multiple fire activity, and Red Flag Warnings.	T	T	T
9. Review safety policies, procedures, and concerns with field fire and fire aviation personnel. Discussions should include issues that could compromise safety and effectiveness during the upcoming season.			T
10. Ensure timely follow-up actions to program reviews, fire preparedness reviews, fire and fire aviation safety reviews, fire critiques, and post-season reviews.	T	T	T
11. Ensure fire and fire aviation preparedness reviews are conducted in all unit offices each year.		T	T

PERFORMANCE REQUIRED	NPS Director.	Regional Director.	Park Supt.
12. Ensure an approved burn plan is followed for each prescribed fire project, including follow-up monitoring and documentation to ensure management objectives are met.		T	T
13. Meet annually with major cooperators and review interagency agreements to ensure their continued effectiveness and efficiency (may be delegated).		T	T
14. Ensure that a Wildland Fire Situation Analysis (WFSA) is completed and approved on all fires that escape initial attack.			T
15. Ensure reviews are conducted on all fires that require a WFSA. Personally attend reviews on Type 1 and Type 2 fires (Regional Director may delegate).		T	T
16. Ensure that a Wildland Fire Implementation Plan (WFIP) is completed and implemented for all fires managed for resource benefits.			T
17. Provide management oversight by personally visiting wildland and prescribed fires each year.		T	T
18. Provide incident management objectives, written delegations of authority, and Agency Administrator briefings to Incident Management Teams.			T
19. Monitor the fire situation and provide oversight during periods of critical fire activity/situations of high risk.	T	T	T
20. Evaluate the need for resource advisors for all fires, and assign as appropriate.			T
21. Convene and participate in annual pre- and post-season fire meetings.	T	T	T
22. Attend Fire Management Leadership Course.		T	T
23. Ensure appropriate investigations are conducted for incidents, entrapments, and serious accidents.	T	T	T

PERFORMANCE REQUIRED	NPS Director.	Regional Director.	Park Supt.
24. For all unplanned human-caused fires where liability can be determined, ensure trespass actions are initiated to recover cost of suppression activities, land rehabilitation, and damages to the resource and improvements.		T	T
25. Certify Wildland Fire Implementation Plan or Wildland Fire Situation Analysis on a daily basis.			T
26. Complete Go/No-Go checklist for prescribed fire.			T
27. Ensure there is adequate direction in fire management plans to identify fire danger awareness with escalating fire potential.			T
28. Ensure compliance with National and Regional Office policy and direction for prescribed fire activities and ensure that periodic reviews and inspections of the prescribed fire program are completed.	T	T	T
29. Review Prescribed Fire Plans and recommend or approve the plans depending upon the delegated authority. Ensure that the Prescribed Fire Plan has been reviewed and recommended by a qualified technical reviewer who was not involved in the plan preparation.		T	T

1

Fire Management Staff Roles

3

National Office

The National Fire Director (Chief, Division of Fire and Aviation Management) 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 National Fire Director is responsible and accountable for developing policy, program direction, and international coordination. The 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.

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.	T	T	T
2. Ensure completion of a job hazard analysis (JHA) for fire and fire aviation activities so mitigation measures are taken to reduce risk.			T
3. Ensure work/rest and length of assignment guidelines are followed during all fire and fire aviation activities. Deviations must be approved and documented.	T	T	T
4. Ensure that only trained and qualified personnel are assigned to fire and fire aviation duties.	T	T	T
5. Develop, implement, evaluate, and document fire and fire aviation training program to meet current and anticipated needs.	T	T	T
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.	T	T	T
7. Develop and maintain an open line of communication with public and cooperators.	T	T	T

PERFORMANCE REQUIRED	Fire Director	RFMO	FMO
8. Ensure that the fire and fire aviation management staff understand their role, responsibilities, authority, and accountability.	T	T	T
9. Based on allocated funding level, provide a safe, effective, and efficient fire protection and use program.	T	T	T
10. Organize, train, equip, and direct a qualified work force. An Individual Development Plan must be provided for incumbents who do not meet new standards. Establish qualification review committees.	T	T	T
11. Take appropriate action when performance is exceptional or deficient.	T	T	T
12. Ensure fire and fire aviation policies are understood, followed, and coordinated with other agencies as appropriate.	T	T	T`
13. Monitor to recognize when complexity levels exceed program capabilities. Increase managerial and operational resources to meet the need.	T	T	T
14. Initiate, conduct, and/or participate in fire management related reviews and investigations.	T	T	T
15. Provide for and personally participate in periodic site visits to individual incidents and projects.	T	T	T
16. Utilize the incident complexity analysis to ensure the proper level of management is assigned to all incidents.		T	T
17. Review and evaluate performance of the fire management organization and take appropriate actions.	T	T	T
18. Ensure incoming personnel and crews are briefed prior to fire and fire aviation assignments.		T	T
19. Ensure a Wildland Fire Situation Analysis (WFSA) is completed and retained for all fires that escape initial attack.		T	T
20. Monitor fire season severity predictions, fire behavior, and fire activity levels. Take appropriate actions to ensure safe, efficient, and effective operations.	T	T	T

PERFORMANCE REQUIRED	Fire Director	RFMO	FMO
21. Ensure that adequate resources are available to implement fire management operations.	T	T	T
22. Provide fire personnel with adequate guidance, training and decision-making authority to ensure timely decisions.		T	T
23. Ensure a written/approved burn plan exists for each prescribed fire project.		T	T
24. Ensure all escaped prescribed fires receive a review at the proper level.	T	T	T
25. Ensure effective transfer of command of incident management occurs and oversight is in place.	T	T	T
26. Develop and maintain agreements, annual operating plans, and contracts on an interagency basis to increase effectiveness and efficiencies.	T	T	T
27. Provide the expertise and skills to fully integrate fire and fire aviation management into interdisciplinary planning efforts.	T	T	T
28. Work with cooperators to identify processes and procedures for providing fire safe communities within the wildland urban interface.	T	T	T
29. Develop, maintain, and annually evaluate the FMP to ensure accuracy and validity.		T	T
30. Ensure budget requests and allocations reflect Normal Year Readiness in the FMP.	T	T	T
31. Develop and maintain current operational plans, e.g., dispatch, pre-attack, prevention.	T	T	T
32. Ensure that reports and records are properly completed and maintained.	T	T	T
33. Ensure fiscal responsibility and accountability in planning and expenditures.	T	T	T
34. Assess, identify, and implement program actions that effectively reduce unwanted wildland fire ignitions and mitigate risks to life, property, and resources.		T	T
35. Effectively communicate the "natural role" of wildland fire to internal and external agency audiences.	T	T	T

PERFORMANCE REQUIRED	Fire Director	RFMO	FMO
36. Complete trespass actions when unplanned human-caused fires occur.		T	T
37. Ensure compliance with National and Regional Office policy and direction for prescribed fire activities and ensure that periodic reviews and inspections of the prescribed fire program are completed.	T	T	T

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
concomitant qualifications.

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

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

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

Training

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

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

Training for Fire Management Officers
The following training is required for fire management officers.

Fire Program Management

Delegation of Authority

Delegation for Regional Fire Management Officers

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

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

Chapter 04

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

Introduction

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

Agency Administrator Roles

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

Director

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

Chief, National Wildlife Refuge System

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

Regional Director

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

Project Leader

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

1   objectives of each unit. The Project Leader will ensure that an approved FMP is
2   prepared for service lands under their jurisdiction. This would include
3   appropriate consultation with staff specialists such as the Regional Historic
4   Preservation Officer or Service Archeologist if appropriate. If the fire
5   management program warrants, the Project Leader will establish a position to
6   function as the Fire Management Officer for the field office. Otherwise, the
7   Project Leader will assign the fire management responsibilities to a staff
8   member as a collateral duty. A staff member, assigned fire management
9   responsibilities as a collateral duty, will meet fire management qualification
10 requirements established by the service. Project Leaders are to ensure that
11 personnel hired in dedicated, fire funded positions are made available for
12 dispatch to off-refuge/interagency wildland and prescribed fire management
13 operations. Project Leaders will meet fire management training requirements
14 established by the service for their positions.
15
16 **Management Performance Requirements for Fire Operations**

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

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

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

PERFORMANCE REQUIRED	FWS Director	Regional Director	Project Leader
29. Review Prescribed Fire Plans and recommend or approve the plans depending upon the delegated authority. Ensure that the Prescribed Fire Plan has been reviewed and recommended by a qualified technical reviewer who was not involved in the plan preparation.		T	T

Fire Management Staff Roles

National Office

Service Fire Management Coordinator (SFMC)

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

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

Regional Office

Regional Fire Management Coordinator (RFMC)

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

Refuge Fire Management Officer (FMO)

Fire Management Officers will be assigned where an individual refuge wildland fire management program requires wildland fire management expertise. An FMO may be assigned to provide wildland fire management support to a group

1 of refuges (zone or district) when individually each refuge does not warrant a
2 fulltime FMO. These are dedicated fire funded positions, and as such are a
3 regional and national resource. The FMO may be called upon to assist in both
4 intra-agency and interagency wildland fire management needs. The FMO will
5 meet qualification standards established or adopted by the Service for the
6 position.
7
8 **Fire Management Staff Performance Requirements for Fire Operations**

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

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

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

1
2
3
4
5
6
7

Delegation of Authority

Delegation for Regional Fire Management Coordinators

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

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

Zone/District Fire Management Officer

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

14. Manage "Red Card" system within the District.

_____   _____

Buenos Aires NWR Refuge Manager   Date

_____   _____

San Bernardino/
Leslie Canyon NWR Refuge Manager   Date

_____   _____

Imperial NWR Refuge Manager   Date

_____   _____

Cibola NWR Refuge Manager   Date

_____   _____

Bill Williams River NWR Refuge Manager   Date

_____   _____

Kofa NWR Refuge Manager   Date

_____   _____

Havasu NWR Refuge Manager   Date

_____   _____

Alchesay-Williams Creek Complex Manager   Date

_____   _____

FWS Region 2 Fire Management Coordinator   Date

_____   _____

Arizona Fire Management District FMO   Date

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

Introduction

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

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

Evaluation Criterion

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

Training and Core Competencies

Attend a regional or national "Fire Management Leadership for Agency Administrators" training session.

Require a shadow assignment with a fully qualified Agency Administrator.

Receive training or experience in the Wildfire Situation Analysis (WFSA) and Wildland Fire Implementation Plan (WFIP).

Provide a Delegation of Authority to Incident Commanders.

Performance Standards

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

- Integrate fire and fuels management across all functional areas.

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

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

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

Preparedness

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

Suppression

- Ensure use of fire funds is in compliance with Agency policies.

- Wildland Fire Situation Analysis (WFSA) is completed and approved on all fires that escape initial attack. Alternative evaluation and certification requirements are followed.
- WFSA's that are expected to exceed $10,000.000.00 in suppression costs are forwarded to the Regional Office for review and approval.
- Management reviews are conducted on all fires that require a WFSA. Personally attend reviews on Type 1 and Type 2 fires.
- Provide incident management objectives, written delegations of authority, and a complete Agency Administrator Briefing to Incident Management Teams.
- Evaluate the need for resource advisors for all fires, and assign as appropriate.
- For all unplanned human-caused fires where responsibility can be determined, ensure actions are initiated to recover cost of suppression activities, land rehabilitation, damages to the resource and improvements.

Safety

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

Fire Use

- Ensure an approved burn plan is followed for each prescribed fire project, including follow-up monitoring and documentation to ensure management objectives are met.
- Ensure that a Wildland Fire Implementation Plan (WFIP) is completed and implemented for all fires managed for resource benefits.
- Provide management oversight by personally visiting wildland and prescribed fire activities each year.
- Ensure compliance with National and Regional Office policy and direction for prescribed fire activities and ensure that periodic reviews and inspections of the prescribed fire program are completed.
- Approve Prescribed Fire Plans. Authority may be delegated to the Agency Administrators as provided under specific directions.
- Review Prescribed Fire Plans and recommend or approve the plans depending upon the delegated authority. Ensure that the Prescribed Fire

Plan has been reviewed and recommended by a qualified technical reviewer who was not involved in the plan preparation.

Fire Management Positions

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

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

Preparedness

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

- Develop and maintain current operational plans, (e.g., dispatch, pre-attack, prevention).
- Ensure that reports and records are properly completed and maintained.
- Ensure fiscal responsibility and accountability in planning and expenditures.
- Assess, identify, and implement program actions that effectively reduce unwanted wildland fire ignitions and mitigate risks to life, property, and resources.
- Work with cooperators to identify processes and procedures for providing fire safe communities within the wildland urban interface.

Suppression

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

Safety

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

Fire Use

- Ensure a written, approved burn plan exists for each prescribed fire project.
- Ensure all escaped prescribed fires receive a review at the proper level.
- Provide the expertise and skills to fully integrate fire and aviation management into interdisciplinary planning efforts.

1 • Effectively communicate the "natural role" of wildland fire to internal and
2   external agency audiences.
3 • Ensure compliance with National and Regional Office policy and direction
4   for prescribed fire activities and ensure that periodic reviews and
5   inspections of the prescribed fire program are completed.

Chapter 06
Safety

Policy

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

Safety comes first on every fire, every time.

The Standard Firefighting Orders are firm. "We don't break them, we don't bend them. All firefighters have the right to a safe assignment". *(Federal Wildland Fire Management Policy, January, 2001)*

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

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

Attention to safety factors is critical to the individual employee incident position evaluation process. These evaluations must be honest appraisals of performances. The documentation of sub-standard or unsafe performances is mandatory.

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

Goal

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

For additional safety guidance and reference refer to:

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

Risk Management Process

The Risk Management Process identified in the *NWCG Incident Response Pocket Guide (IRPG)* helps ensure that critical factors and risks associated with fireline operations are considered during decision making. This process must be applied to all fire operations prior to taking action.

The Risk Management Process is found in Appendix E.

Job Hazard Analysis (JHA)

A completed Job Hazard Analysis is required for:

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

Work/Rest

To assist in mitigating fatigue, days off are allowed during and after assignments. If necessary to reduce fatigue, the Type 1/2 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). State regulations may preclude authorizing this for State employees. 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.

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

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

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

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

Assignment Extension

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

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

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

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

Single Resource/Kind Extensions

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

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

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

Incident Management Team Extensions

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

Upon release from the assignment, regardless of extension duration, two mandatory days off will be provided immediately following the return to the home unit and are chargeable to the incident. (See above for compensation and days off guidelines).

Detail Assignments

Agencies may enter into agreements to provide personnel for extended periods of time to meet staffing needs. This may be done through an interagency agreement or though the use of the Preparedness/Detail Request. A detail assignment in this context does not require a formal personnel action. Personnel on a detail assignment are compensated under normal regulations including pay for travel, overtime, and per diem. Personnel are under their normal tour of duty, unless this has been changed between agreement of the requesting unit and home unit. Personnel are not considered to be on an assignment and are not compensated for normal days off if not performing work.

Driving Standard

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

General Driving Policy

- Employees must have a valid state driver's license in their possession for the appropriate vehicle class before operating the vehicle. Operating a government-owned or rental vehicle without a valid state driver's license could result in disciplinary action.
- All drivers whose job duties require the use of a motor vehicle will receive initial defensive driver training within three months of entering on duty and refresher driver training every three years thereafter.
- The operator and all passengers are required to wear seat belts and obey all federal and state laws.
- All traffic violations or parking tickets will be the operator's responsibility.
- All driving requiring CDL will be performed in accordance with applicable Department of Transportation regulations.

- **BLM** – *All employees operating a Government motor vehicle will be required to submit Form DI-131 (Application for U.S. Government Motor Vehicle Operator's Identification Card) and OF-345 (Physical Fitness Inquiry for Motor Vehicle Operators). When the supervisor signs the DI-131, the employee is authorized to operate Government-owned or leased vehicles, or privately-owned vehicles on official business. Individual office forms equivalent to the OF-345 and DI-131 are acceptable.*
- **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.*

Non-incident Operations Driving

Refer to the current Driving Standards for each individual agency.

Incident Operations Driving

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

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

Fire Vehicle Operation Standards

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

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

Personal Protective Equipment (PPE)

All personnel assigned on wildfires and prescribed fires are required to use Personal Protective Equipment (PPE) appropriate for their duties and/or as identified in JHAs. Employees must be trained to use safety equipment effectively.

- **BLM – "***PPE devices will be used only when equipment guards, engineering controls, or management control do not adequately protect employees.***"**

Required PPE includes:

- 8-inch high, lace-type leather work boots with non-slip (Vibram type), melt resistant soles and heels. (Alaska Exempt) To measure boots for compliance with national policy (8" tall) the boot will be measured from the bottom of the heel to the top of the boot.
- fire shelter
- hard hat with chinstrap
- goggles/safety glasses
- ear plugs/hearing protection
- yellow aramid shirts
- aramid trousers
- leather gloves
- Wear additional PPE as identified by local conditions, material safety data sheet (MSDS), or JHA.

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

Aramid clothing will be cleaned or replaced whenever soiled, particularly with oils. Aramid clothing will be replaced when the fabric is so worn as to reduce the fire resistance capability of the garment or is so faded as to significantly reduce the desired visibility qualities. Any modification to personal protective equipment that reduces the fire retardant ability such as iron-on logos is an unacceptable practice and will not be allowed on fires. Due to the strength of aramid weave, stagging is generally ineffective. It also makes the pants unsuitable for trade-in for clean pants or for return to the cache system.

Head Protection

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

Acceptable helmets for fireline use are "helmet, safety, plastic" (NFES 0109, 8415-01-055-2265/GSA) listed in NWCG *National Fire Equipment System Catalog: Fire Supplies and Equipment*, or equivalent helmet meeting 1977 NFPA standard requirements and ANSI Z89.1-1986. Hard hats consist of two components - the shell and the suspension - which work together as a system. Both components require periodic inspection and maintenance. Specific inspection and maintenance instructions are found in an MTDC Tech Tip publication (0267-2331-MTDC).

Eye and Face Protection

The following positions require the wearing of eye protection:
- nozzle operator
- chainsaw operator/faller
- helibase and ramp personnel
- retardant mixing crews
- Other duties may require eye protection as identified in a specific JHA.

Face shields providing full face protection must be worn when working in any position where face protection has been identified as required in the job specific JHA: Terra-Torch®, power sharpener operators, etc.

Hearing Protection

Personnel who are exposed to a noise level in excess of 85db must be provided with, and wear, hearing protection. This includes, but is not limited to:
- chainsaw operators/fallers
- pump operators
- helibase and aircraft ramp personnel
- retardant mixing personnel,
- any other personnel exposed on a regular basis to damaging noise levels.

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

Employees with a time weighted average exposure of 85 db or higher are required to be placed under a hearing conservation program as required by *29 CFR 1910.95*—consult with local safety & heath personnel for specifics.

Neck Protection

Aramid fiber "shrouds" are not required PPE. If used, the shrouds must meet the design and performance requirements identified in the *NFPA 1977 Standard on Protective Clothing and Equipment for Wildland Fire Fighting, 1998 ed*. If issued, shrouds should be used only in impending flash fuel or high radiant heat situations and not routinely worn throughout the operational period, due to increases in physiological heat stress.

Leg Protection

All chainsaw chaps will meet specification FS 6170-4F. All chainsaw operators must wear chainsaw chaps maintained as per the manufacturer's specifications.

Foot Protection

Personnel assigned to fires must wear all leather, lace-type work boots with non-slip (Vibram type), melt-resistant soles and heels. (Alaska exempt)The leather top must be at least 8 inches in height. To measure boots for compliance with national policy (8" tall) the boot will be measured from the bottom of the heel to the top of the boot.

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

- *FWS - The leather top must be at least 8 inches in height, measured from the top of the heel. Red carded fire line permanent, temporary and seasonal Fish and Wildlife personnel will be provided with these boots from station funds not more often than every three years. Emergency or casual fire fighters will provide their own boots. Some refuge situations may require special footwear such as waders, hip boots, snake boots, etc.*

- *NPS - Government funds will be utilized for purchase of wildland fire boots for those employees currently red carded/certified in positions which require wildland and prescribed fireline duties. The individual employee must be available to perform those duties when assigned; if not routinely available for park fire assignments, FIREPRO funds should not be used to purchase boots for that employee.*

- *NPS - FIREPRO funds, not to exceed $100 a pair, may be used to purchase or repair boots. Other government funds, such as from safety, protection or maintenance accounts, may also be used for purchase or to augment FIREPRO funds, dependent on local management direction. Costs to repair boots not damaged on fire should be charged to other appropriate accounts.*

- *NPS - It is the responsibility of the local FMO to determine those employees requiring boots as personal protective equipment, and the frequency of necessary replacement or repair. Boots will be considered*

similar to uniform items and will not be subject to cache item return, due
to health, sanitation, and individual sizing considerations.

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

- ***BLM -** Managers and supervisors will not knowingly place BLM wildland
  firefighters in positions where exposure to noxious gases or chemicals
  would require the use of self-contained breathing apparatus.*
- ***FS - FSM - 5135.3 - Self-Contained Breathing Apparatus** Wildland
  firefighters may use only an open-circuit, self-contained breathing
  apparatus (SCBA) of the positive pressure type when smoke from vehicle,
  dump, structure, or other non-wildland fuel fire cannot be avoided while
  meeting wildland fire suppression objectives (29 CFR 1910.134,
  Respiratory Protection). If such an apparatus is not available, avoid
  exposure to smoke from these sources.*
- ***FS -** The acquisition, training, proper use, employee health surveillance
  programs, inspection, storage, and maintenance of an SCBA must comply
  with the National Fire Protection Association Standard, NFPA-1981 and
  29 CFR 1910.134I, and be justified by a Job Hazard Analysis. Where an
  SCBA is approved, it may be carried only on a fire engine and its use must
  be consistent with FSM 5130.2 and FSM 5130.3.*

Fire Shelters
Fire shelters will be issued and carried in a readily accessible manner by all line
personnel. Fire shelters will be inspected regularly, to ensure they meet agency
and manufacturer standards. "Training Shelters" will be deployed at required
annual fireline safety refresher training. No "live fire" exercises for the purpose
of fire shelter deployment training will be conducted. The deployment of
shelters is to be viewed as a last resort, and will not be used as a tactical tool.
Supervisors and firefighters must never rely on fire shelters instead of using
well-defined escape routes and safety zones. When deployed on a fire, fire
shelters will be left in place and not be removed pending approval of authorized
investigators.

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

A risk assessment must be completed and reviewed by the Unit Safety Officer
and supervisor's approval is required. Items must meet agency and industry
standards for specific intended use. In the case of fire resistant clothing such as
cold weather inner and outer wear all materials (cloth, zipper tape, thread) other

than "Velcro ®" must be certified inherently flame resistant by the manufacturer.

Fireline Safety

Incident Briefings

Fire managers must ensure that safety briefings are occurring throughout the fire organization, and that safety factors are addressed through the IC and communicated to all incident personnel at operational briefings. The identification and location of escape routes and safety zones must be stressed. A briefing checklist can be found in Appendix F and in the *Incident Response Pocket Guide (IRPG).*

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

- **LCES—A System for Operational Safety**
- 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 wildfires, and personally visit an appropriate number of escaped fires each year. PPE is required for certain scenarios. Fire and aviation management staff can provide the appropriate PPE and guidance.

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

At least one person, operationally qualified at a level commensurate to the complexity of the incident, should be assigned the responsibility for safety oversight. Additional safety oversight may be requested when:

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

Every individual has the right to turn down unsafe assignments as well as be responsible in identifying alternative methods of accomplishing the mission. Appendix G contains process for "How to Properly Refuse Risk".

Unit/Area Closures

Threats to public safety may require temporary closure of a unit/area, or a portion of it. When a fire threatens escape from the unit/area, adjacent

authorities must be given as much advance notice as possible in order to achieve orderly evacuation.

Standard Safety Flagging

The NWCG recommends the following Safety Zone/Escape Route flagging for wildland fire (prescribed and suppression) activities:

- Hot-pink flagging marked "Escape Route" (NFES 0566). Crews with colorblind members may wish to carry and utilize lime-green flagging in addition to the hot-pink flagging.
- 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 make known to all firefighters.

Unexploded Ordnance (UXO)

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

Hazardous Materials

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

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

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

- Read and understand the Material Safety Data Sheets.
- Keep the work area clean and orderly.

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

Heat Stress

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

Smoke and Carbon Monoxide

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

Six Minutes for Safety Training

It is recommended that daily "Six Minutes for Safety" training be conducted that focuses on high-risk, low frequency activities that fire personnel may encounter during a fire season.

A daily national "Six Minutes for Safety" briefing can be found at www.nifc.gov and in the National Situation Report.

Safety for Non-Operational Personnel Visiting Fires

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

Visits to an Incident Base

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

- Lace-up shoes with non-slip soles and heels
- Long trousers
- Long-sleeve shirt
- For agency personnel, the field uniform is excellent; however for more flexibility the aramid fire shirts and trousers or flight suit may be worn.

- **BLM -** *Refer to BLM Handbook 1112-2, 3.3 BLM requires 6" shoes.*

Visits to the Fireline

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

- Visitors must maintain communications with the DIVS or appropriate fireline supervisor of the area they are visiting.
- Required PPE:
  - 8-inch high, lace-type leather work boots with non-slip (Vibram type), melt resistant soles and heels. (Alaska Exempt) To measure boots for compliance with national policy (8" tall) the boot will be measured from the bottom of the heel to the top of the boot.
  - Yellow aramid shirts
  - aramid trousers
  - hard hat with chinstrap
  - leather gloves
  - fire shelter
  - hand tool
  - water canteen

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

- **Non-Escorted**
  - Visitors must have a physical fitness level of "light."
  - Must have adequate communications and radio training.
  - Annual Fire Safety Refresher Training.
  - Completed the following training:
  - Introduction to Fire Behavior (S-190)
  - Firefighter Training (S-130)
- **Other non-escorted support personnel**
  - Incident personnel involved in vehicle operations on established roadways and working in areas which pose no fire behavior threat.
  - Annual Fire Safety Refresher Training.
- **Escorted personnel**
  - 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.
  - 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
- **Training Requirements**

  For agency personnel, training requirements can be met by any of the following courses:
  - ➢ A-101 Aviation Safety
  - ➢ S-270 Basic Air Operations
  - ➢ S-271 Interagency Helicopter Training

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.

Training Requirements

- For agency personnel, training requirements can be met by any of the following courses:
  - ➢ A-101 Aviation Safety
  - ➢ S-270 Basic Air Operations

SAFENET

SAFENET is a form, process, and method for reporting and resolving safety concerns encountered in wildland fire, prescribed fire, or all risk operations. The information provided on the form will provide important, safety-related data to the National Interagency Fire Center, and determine long-term trends and problem areas.

The objectives of the form and process are:

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

Individuals who observe or who are involved in an unsafe situation shall initiate corrective actions if possible, and then report the occurrence using SAFENET. You are encouraged, but not required, to put your name on the report.

Prompt replies to the originator (if name provided), timely action to correct the problem, and discussion of filed SAFENETs at local level meetings encourage program participation and active reporting.

SAFENET is not the only way to correct a safety-related concern or 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 www.nifc.gov, (click on the safety link and follow directions to SAFENET)
- postage paid mail-in form (PMS 405-2, NFES 2633)
- verbally by telephone at 1-888-670-3938.

Appendix H contains the SAFENET form.

Accident/Injury Reporting

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

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

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

- DOI employees will report accidents using the Safety Management Information System (SMIS) at www.smis.doi.gov within six working days of the incident.
- Forest Service employees will use the Safety and Health Information Portal System (SHIPS) through the Forest Service Dashboard at https://asp.talx.com/dashboard/usdafs/ within six working days of the incident.

Critical Incident Management

The National Wildfire Coordinating Group has published the *Agency Administrator's Guide to Critical Incident Management (PMS 926, NFES 1356).* The guide is a series of subject-area checklists designed to be reviewed in detail

1 before a critical incident occurs, during the actual management of the incident,
2 and after the incident has taken place. It is a compilation of lessons learned and
3 suggestions that are designed to assist an Agency Administrator in the
4 management of a critical incident. The guide is not intended to replace local
5 emergency plans or other specific guidance that may be available, but should be
6 used in conjunction with existing SOPs. It is available through the Publications
7 Management System, National Interagency Fire Center.

Chapter 07
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.

Successful implementation of any fire management program is dependent on good coordination and cooperation with and between other agencies. This requires an understanding of agencies' organizational structures and their roles in fire management. This understanding, coordination, and cooperation will enhance efficiency across jurisdictional boundaries.

Areas and Levels of Coordination and Cooperation

Department of Interior and Agriculture Interagency Agreement

The authority for interagency assistance is found in the Interagency Agreement 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.

Under the Interagency Agreement for Fire Management, Interior agencies support the Forest Service's efforts in international disaster response. The Forest Service has an agreement with the U.S. Agency for International Development's Office of Foreign Disaster Assistance (OFDA) to support OFDA's international disaster relief activities.

Under provisions of the Robert T. Stafford Disaster and Emergency Assistance Act (P.L. 93-233, as amended) and Executive Order 12148, Federal Emergency Management (July 20, 1979, as amended), wildland agencies provide assistance to Presidential declared disasters and emergencies nationwide. The Federal Emergency Management Agency (FEMA) is the overall coordinator of the Federal Response Plan (FRP).

The fire suppression assistance portion of the Stafford Act for state and municipalities is managed by FEMA.

Outside Agency Agreement

The authority for rendering emergency fire or rescue assistance outside of the agencies is given through the Reciprocal Fire Protection Act of May 27, 1955 (69 Stat. 66), and the *DOI Departmental Manual, 620 DM.*

National Level Coordination

Wildland Fire Leadership Council (WFLC)
The Council is a cooperative, interagency organization dedicated to achieving consistent implementation of the goals, actions, and policies in the National Fire Plan and the Federal Wildland Fire Management Policy. The Council provides leadership and oversight to ensure policy coordination, accountability and effective implementation of the National Fire Plan and the Federal Wildland Fire Management Policy.

Members of the WFLC represent the USDA Forest Service and Department of the Interior's Bureau of Indian Affairs, Bureau of Land Management, US Fish and Wildlife Service, and the National Park Service. Other participants include the National Association of Counties, Intertribal Timber Council, National Governors Association, Federal Emergency Management Agency, and the National Association of State Foresters representing local, state, and tribal governments.

Office of Wildland Fire Coordination (OWFC)
The Office of Wildland Fire Coordination is a Department of Interior organization that provides management, coordination, and oversight for the department's wildland fire management programs and policies. It coordinates efforts between wildland fire management bureaus and other federal and non-federal groups.

The National Fire and Aviation Executive Board
The Council is a self-directed group, comprised of the federal agency Fire Directors, which provides a forum for discussion in which federal issues, both short and long term, can be resolved. It is authorized based on the master agreement between the Forest Service and DOI agency directors. The Council seeks to improve coordination and integration of federal fire and aviation programs, while recognizing individual agency missions. The Council deals with long-term strategic views and fosters improved integrated operations at national, geographic, and local levels. Teams may be established as needed by the Council to address specific federal issues.

National Wildfire Coordinating Group (NWCG)
The purpose of the NWCG is to improve the effectiveness and efficiency of all federal, tribal, and state wildland fire management agencies in the United States. The group accomplishes this goal by coordinating the programs of the participating agencies in order to work together constructively. The NWCG provides a formalized system through which agreement may be reached on substantive issues in fire management. Agreed on policies, standards, and procedures are then implemented directly by each agency. Each agency will identify a representative to NWCG.

Federal Emergency Management Agency (FEMA)

Under provisions of the Robert T. Stafford Disaster and Emergency Assistance Act (P.L. 93-233, as amended) and the Executive Order 12148, Federal Emergency Management (July 20, 1979, as amended) Wildland Fire Management Agencies can provide assistance to Presidential declared disasters and emergencies nationwide. The Federal Emergency Management Agency (FEMA) is the overall coordinator of the Federal Response Plan (FRP), which guides 26 Federal agencies and the American Red Cross in response activities. In the FRP, the Forest Service is the primary agency responsible for emergency support functions under firefighting.

Federal Fire and Aviation Safety Team (FFAST)

This team is comprised of fire and aviation safety representatives from the federal wildland fire agencies and the Aviation Management Directorate (ADM), of the National Business Center. The National Fire and Aviation Management Executive Board charters a FFAST. It functions as a single federal wildland fire and aviation safety staff to oversee and monitor national fire and aviation safety practices, and make recommendations to improve safety and prevent accidents.

National Multi-Agency Coordination (MAC) Group

The national MAC group is comprised of the Fire Directors or their designees of the BLM, FS, BIA, NPS, FWS, FEMA, a State Foresters' representative, and a representative of the NWS. The BLM, BIA, FS, NPS, and FWS directors at NIFC have written delegated authority from their respective agency heads to:

- Represent their agency on all matters related to wildland fire operations. This includes membership on the national MAC group, determining national priorities, and allocating or reallocating incident resources.
- Represent the states' interests in the absence of the State Foresters' representative, as established in the agreement with the National Association of State Foresters.

When National Preparedness reaches levels 4 and 5, the national MAC group is activated and briefings are conducted twice daily to establish priorities and direction for wildland fire activities.

Geographic Area Level Coordination

State/Regional offices oversee and facilitate the implementation of interagency standards and policies developed at the national level. Within their geographic areas, State/Regional Fire Management Officers/Fire Directors help develop and implement interagency wildland fire management programs to improve effectiveness and efficiency. At GACC preparedness level 4/5, a geographic MAC is convened to establish priorities and direction for wildland fire activities by allocating scarce resources. Refer to *National Mobilization Guide, Chapter 30.*

Sub-Geographic Area Coordination

Fire management plans, preparedness plans, mobilization guides, cooperative agreements, and other supporting documents identify the necessary local sources, types, and levels of interagency coordination. They also delineate the process whereby compliance with national and geographic area policies and standards will be achieved. Fire Management Officers and their staffs develop and maintain cooperative interagency relationships. A Sub-Geographic Area MAC should be convened at preparedness level 4/5 to establish priorities and direction for wildland fire activities by allocating scarce resources.

Interagency Mobilization

National Dispatch/Coordination System

The wildland fire dispatch system in the United States has three levels (tiers): national, geographic area, and local level. 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.

The National Interagency Mobilization Guide, which is revised annually, describes interagency mobilization and dispatch procedures at all levels. All state/regional and local units without deviation will follow its directives.

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

Levels of Dispatch (Tiers)

National Interagency Coordination Center (NICC)

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

NICC works with Geographic Area Coordination Centers (GACCs), as well as with other countries (e.g. Canada and Mexico). NICC coordinators also interact with the directors of fire and aviation programs, as well as with the national MAC Group.

NICC supports non-fire emergencies when tasked by an appropriate agency, such as FEMA, through the Federal Response Plan. NICC collects and consolidates information from the GACCs and disseminates the *National Incident Management Situation Report*. This report is sent to the GACCs, agency directors, and Washington Office personnel.

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 Unit/Interagency 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 addition workload should offset this increased workload with additional funding or personnel.

Agreements & Contracts

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. The best general reference on agreements is *Partnership for Efficiency through Cooperative Agreements* by the NWCG.

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)

Each agreement shall be accompanied by an Annual Operating Plan, which 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.
- A completed and authorized Continuity of Operations Plan (COOP) is required for each federal communications center.

Elements of an AOP

The following items shall be addressed in the operating plan:

- **Mutual Aid**
  The operating plan should address that there may be times when cooperators are involved in emergency operations and unable to provide mutual aid. In this case other cooperators may be contacted for assistance.
- **Command Structure**
  Unified command should be used, as appropriate, whenever multiple jurisdictions are involved, unless one or more parties request a single agency incident commander (IC). If there is a question about jurisdiction, fire managers should mutually decide and agree on the command structure

as soon as they arrive on the fire; Agency Administrators should confirm
this decision as soon as possible. Once this decision has been made, the
incident organization in use should be relayed to all units on the incident as
well as dispatch centers. In all cases, the identity of the IC must be made
known to all fireline and support personnel.

- **Communications**

In mutual aid situations, a common designated radio frequency identified
in the operating plan should be used for incident communications. All
incident resources should utilize and monitor this frequency for incident
information, tactical use, and changes in weather conditions or other
emergency situations. In some cases, because of equipment availability/
capabilities, departments/agencies may have to use their own frequencies
for tactical operations, allowing the "common" frequency to be the link
between departments. It is important that all department /agencies change
to a single frequency or establish a common communications link as soon
as practical. Clear text should be used. Avoid personal identifiers, such as
names. This paragraph in the Annual Operating Plan shall meet Federal
Communications Commission (FCC) requirements for documenting shared
use of radio frequencies.

- **Distance/Boundaries**

Responding and requesting parties should identify any mileage limitations
from mutual boundaries where "mutual aid" is either pay or non-pay status.
Also, for some fire departments, the mileage issue may not be one of initial
attack "mutual aid," but of mutual assistance. In this situation, you may
have the option to make it part of this agreement or identify it as a situation
where the request would be made to the agency having jurisdiction, which
would then dispatch the fire department.

- **Time/Duration**

Responding and requesting parties should identify time limitations (usually
24 hours) for resources in a non-reimbursable status, and "rental rates"
when the resources are in a reimbursable status. Use of geographic area
interagency equipment rates is strongly encouraged.

- **Qualifications/Minimum Requirements**

Agencies, under the National Interagency Incident Management System
(NIIMS) concept, have agreed to accept cooperator's standards for fire
personnel qualifications and equipment during initial attack. Once
jurisdiction is clearly established, then the standards of the agency(s) with
jurisdiction prevail. This direction may be found in the documents *NWCG
Clarification of Qualifications Standards - Initial Attack 6/20/01.*

- **Reimbursement/Compensation**

Compensation should be "standard" for all fire departments in the
geographic area. The rates identified shall be used. Reimbursements
should be negotiated on a case-by-case basis, as some fire departments
may not expect full compensation, but only reimbursement for their actual
costs. Vehicles and equipment operated under the federal excess property
system will only be reimbursed for maintenance and operating costs.

- **Cooperation**
  The annual operating plan will be used to identify how the cooperators will
  share expertise, training, and information on items such as prevention,
  investigation, safety, and training.
- **Dispatch Center**
  Dispatch centers will ensure all resources know the name of the assigned
  IC and announce all changes in incident command. Geographic Area
  Mobilization Guides, Zone Mobilization Guides and Local Mobilization
  Guides should include this procedure as they are revised for each fire
  season.

Types of Agreements

National Interagency Agreements

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

Regional/State Interagency Agreements

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

Local Interagency Agreements

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

Emergency Assistance

Emergency assistance may be provided by agencies to adjacent jurisdictions
upon their request, without a formalized agreement. However, to provide safe,
efficient, and effective emergency responses, units must enter into agreements
with emergency response agencies. The appropriate Agency Administrator must
approve local emergency response.

FEMA and the Wildland Fire Program

FEMA guides 26 federal agencies and the American Red Cross in response
activities. The Federal Response Plan (FRP) is based on the fundamental
assumption that a significant disaster or emergency will overwhelm the
capability of state and local governments to carry out extensive emergency
operations. These operations have been grouped into 12 Emergency Support

1 Functions (ESFs); departments and agencies have been assigned primary and
2 support responsibilities for each of these functions.
3
4 The fire suppression assistance portion of the Stafford Act for state and
5 municipalities is ESF4. The lead federal agency for ESF4 is the USDA Forest
6 Service with the Department of the Interior as a supporting agency.
7
8 **International Cooperation**
9
10 **U.S. - Mexico Cross Border Cooperation on Wildland Fires**
11 In June of 1999, the Department of Interior and the Department of Agriculture
12 signed a Wildfire Protection Agreement with Mexico. The agreement has two
13 purposes:
14 •   To enable wildfire protection resources originating in the territory of one
15   country to cross the United States-Mexico border in order to suppress
16   wildfires on the other side of the border within the zone of mutual
17   assistance (10 miles/16 kilometers) in appropriate circumstances.
18 •   To give authority for Mexican and U.S. fire management organizations to
19   cooperate on other fire management activities outside the zone of mutual
20   assistance.
21
22 National Operational Guidelines are being developed for this agreement, which
23 will be put into the *National Interagency Mobilization Guide*. These guidelines
24 cover issues at the national level and also provide a template for those issues that
25 need to be addressed in local operating plans. The local operating plans identify
26 how the agreement will be implemented by the GACCs (and Zone Coordination
27 Centers) that have dispatching responsibility on the border. The local operating
28 plans will provide the standard operational procedures for wildfire suppression
29 resources that could potentially cross the U.S. border into Mexico.
30
31 **U.S - Canada, Reciprocal Forest FireFighting Arrangement**
32 Information about United Stated - Canada cross border support is located in
33 Chapter 40 of the *National Interagency Mobilization Guide*.
34
35 This chapter provides policy guidance, which was determined by an exchange of
36 diplomatic notes between the U.S. and Canada in 1982.
37
38 This chapter also provides operational guidelines for the Canada – U.S.
39 Reciprocal Forest Fire Fighting Arrangement. These guidelines are updated
40 yearly.
41
42 **U.S. - Australia/New Zealand Wildland Fire Arrangement**
43 Information about United States - Australia/New Zealand support is located in
44 Chapter 40 of the *National Interagency Mobilization Guide*.
45 This chapter provides a copy of the arrangements signed between the U.S. and
46 the states of Australia and the country of New Zealand for support to one

another during severe fire seasons. It also contains the Annual Operating Plan
that provides more detail on the procedures, responsibilities, and requirements
used during activation.

International Disasters Support
Federal wildland fire employees may be requested through the Forest Service, to
support the U.S. Government's (USG) response to international disasters by
serving on Disaster Assistance Response Teams (DARTs). A DART is the
operational equivalent of an ICS team used by the U.S. Agency for International
Development's Office of Foreign Disaster Assistance (OFDA) to provide an on-
the-ground operational capability at the site of an international disaster. Prior to
being requested for a DART assignment, employees will have completed a
weeklong DART training course covering information about:

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

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.

Chapter 08
Fire Management Planning

Policy

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

Fire Management Plans must identify and integrate all wildland fire management and related activities within the context of approved Resource Management Plans.

Wildland fire management goals and components must be coordinated across administrative boundaries on a landscape basis.

Bureau or agency fire management decisions must be consistent or compatible across administrative lines.

Interagency Fire Management Plan Template

An Interagency Fire Management Plan Template (IFPT) was issued and approved by the respective Agency Directors on July 11, 2002. Specific Template elements include:

- Introduction
- Relationship to Land Management Planning/Fire Policy
- Wildland Fire Management Strategies
  - A. General Management Considerations
  - B. Wildland Fire Management Goals
  - C. Wildland Fire Management Options
  - D. Description of Wildland Fire Management Strategies by Fire Management Unit (FMU)
- Wildland Fire Management Program Components
  - A. Wildland Fire Suppression
  - B. Wildland Fire Use
  - C. Prescribed Fire
  - D. Non-Fire Fuel Applications
  - E. Emergency Rehabilitation and Restoration
- Organization and Budget
- Monitoring and Evaluation

Glossary

Appendix

Operational Importance of Fire Management Units

Fire management units and strategies within fire management plans are the cornerstones for planning the management of the wildland fire program. This section must tie directly to the decisions made in the land and resource management planning process by management area, aggregated into FMUs. This section identifies objectives, standards, guidelines and/or future desired conditions within the FMU and the wildland fire management strategies that will be used to accomplish them.

Organization and Budget Formulation: Fire Program Analysis (FPA) (http://fpa.nifc.gov)

Fire Program Analysis is a performance-based, landscape scale interagency fire program planning and budgeting system. The system is comprised of two sets of integrated modules:

- A preparedness module focused on the planning and budgeting of the initial response to unplanned ignitions and program management; this module also includes use of wildland fire.
- A set of modules including extended response, large fires, fuels management, prevention program and emergency stabilization and rehabilitation.

The key attributes of FPA are that it:

- Is driven by land management objectives.
- Will use the cost effectiveness of meeting fire management objectives as the decision criteria.
- Will display the most cost-effective organization for any budget allocation.
- Displays tradeoffs between meeting objectives and performance measures for any given budget.
- Provides a common interagency approach to budgeting and planning.
- Facilitates reporting requirements.
- Allows for non-federal partners to participate in order to promote an integrated approach to managing wildland fire.

Chapter 09
Preparedness

Preparedness

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

Preparedness actions are based on operational plans such as fire danger operating plans, which use information from decision support tools such as the National Fire Danger Rating System (NFDRS), the Canadian Forest Fire Danger Rating System (CFFDRS, used in interior Alaska), the Palmer Drought Index, National Weather Service and other predictive services products, live fuel moisture data, Seasonal Risk Analyses, and other established information sources.

Fire Danger Rating Operating Plan

A fire danger rating operating plan is a fire danger applications guide for agency users at the local level. A fire danger rating operating plan documents the establishment and management of the local unit fire weather station network and describes how fire danger ratings are applied to local unit fire management decisions. Fire danger rating operating plans may be packaged as either stand-alone documents or as part of a larger planning effort such as a fire management plan. Fire danger rating operating plans include, but are not limited to, the following minimum 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 wet flags) are entered manually. This procedure (often called "taking the weather") also initiates the calculation of daily and forecasted outputs in the Weather Information Management System (WIMS) and ensures data storage in the National Interagency Fire Management Integrated Database (NIFMID). These efforts are coordinated with the local National Weather Service fire weather meteorologists and Geographic Area Coordination Center (GACC) predictive services meteorologists to provide timely forecasted NFDRS outputs. Observed (afternoon) and forecasted (tomorrow) NFDRS outputs are communicated daily. Live fuel moisture model inputs (such as herbaceous vegetation stage, season code, greenness factor) are adjusted seasonally in WIMS (http://famweb.nwcg.gov/) at appropriate times. Decision points (such as percentiles discussed below) are determined in FireFamily Plus and review and adjusted annually or more often as appropriate in WIMS and/or other fire danger platforms.

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

- **Climatic Breakpoints and Fire Business Thresholds**
  Climatic breakpoints and fire business thresholds are used to define fire danger inputs for management decisions in each fire danger rating area or group of areas. Activities, events, and fire operations affected by fire danger are identified, and appropriate NFDRS components or indices are selected as decision guides. Historical analysis of fire weather data is used to identify climatic breakpoints for staffing level and adjective fire danger rating outputs.

  The Staffing Level is used to make daily internal fire operations decisions. A unit can operate with anywhere from 3 to 9 levels of staffing. Most units typically use 5 (1,2,3,4,5) or 6 (1,2,3L,3H,4,5). Staffing Level is a direct output of the danger rating processor and is based on one of the following:
  - ➤ NFDRS (Burning Index, Energy Release Component, Spread Component, or Ignition Component)
  - ➤ Keetch-Byram Drought Index
  - ➤ Additional Considerations:

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

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

Climatic Breakpoints and Fire Business Thresholds
Climatic breakpoints and fire business thresholds are established to provide
NFDRS-based decision points for all appropriate management responses.
Climatological breakpoints are points on the cumulative distribution of one fire
weather/fire danger index without regard to 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 are
predetermined by agency directive as 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, as well as what percentiles are used. The
actual calculated 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.

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.

Applications for climatic breakpoints and fire business thresholds include:

- Public Information
- Public/Industrial Use Restrictions
- Staffing Levels
- Severity Requests
- Situational Awareness
- Predictive Services
- Fire Planning
- Pre-Positioning
- Dispatch Levels
- Fire Program Analysis (FPA)
- National Preparedness Levels
- Local Preparedness Levels
- Resource Allocation
- Resource Prioritization
- Rx Fire Complexity Analysis

Fire Danger Pocket Card for Firefighter Safety

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

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

Preparedness Plan

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

Preparedness Level/Step-up Plans

Preparedness Level/Step-up Plans are designed to direct incremental preparedness actions in response to increasing fire danger. Those actions are delineated by "staffing levels." Each step-up plan should address the five

preparedness levels (1, 2, 3, 4, and 5) and the corresponding planned actions that are intended to mitigate those fire danger conditions. Several assessment tools are available to measure fire danger.

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

The staffing plan describes escalating responses that are pre-approved in the fire management plan. Mitigating actions are designed to enhance the unit's fire management capability during short periods (one burning period, Fourth of July or other pre-identified events) where normal staffing cannot meet initial attack, prevention, or detection needs. The difference between preparedness level/step-up and severity is that preparedness level/step-up actions are established in the unit fire management plan, and implemented by the unit when those pre-identified conditions are experienced. Severity is a longer duration condition that cannot be adequately dealt with under normal staffing, such as a killing frost converting live fuel to dead fuel or drought conditions. Severity is discussed later in this chapter.

Mitigating actions identified in the fire management plan should include, but are not limited to, the following items:
- Management direction and considerations
- Fire prevention actions, including closures/restrictions, media messages, signing, and patrolling
- Prepositioning suppression resources
- Cooperation discussion and/or involvement
- Safety considerations: safety message, safety officer
- Augmentation of suppression forces
- Support function: consideration given to expanded dispatch activation, initial attack dispatch staffing, and other support needs (procurement, supply, ground support, and communication)
- Support staff availability outside of fire organization
- Communication of Fire Weather Watch and Red Flag Warning conditions
- Fire danger/behavior assessment
- Briefings for management and fire suppression personnel
- Fire information - internal and external
- Multi-agency coordination groups/area command activation
- Prescribed fire direction and considerations
- Increased detection activities

Seasonal Risk Analysis

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

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

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

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

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

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

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 risk analysis, even if no changes are made, should be documented.

Fire Severity Funding

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

Objective
The objective of fire severity funding is to mitigate losses by improving suppression response capability when, due to the potential for abnormally severe fire behavior or fire occurrence outside of the normal fire season, current fiscal year appropriations are insufficient to provide for an adequate suppression response. Fire severity funds are not provided to augment the current appropriation or to cover the difference between the resources funded by the current appropriation and those approved in the fire management plan.

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, and other supplemental contractual services.

Authorization
Authorization to use severity funding is provided in writing based on a written request. Specific information required in the request is outlined below. Authorization is on a project by project basis and comes with a unit specific cost code and a project code. Authorization is provided for a maximum of thirty days per request, however, regardless of the length of the authorization, use of severity funding must be terminated when abnormal conditions no longer exist.

State/Regional Level Severity Funding
Every fiscal year the national office will provide each state/region with $100,000 and a specific project number for state/regional short-term severity needs (e.g., wind events, cold dry front passage, lightning events, unexpected events such as OHV rallies that are expected to last less than one week). Expenditure of these funds is authorized by the state/regional director 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 project number is provided, and will request the applicable national finance center to enter the projects in the accounting system.

- **FS -** *Forest Service severity funding direction is found in FSM 5190.*

National Level Severity Funding

The National Fire Director is authorized to allocate suppression operations subactivity funds greater than $100,000 for use in preparedness activities to improve response capability. Expenditure of these funds is authorized by the national director at the written request of the state/regional director. Funds will be used only for preparedness activities and timeframes specifically outlined in the authorization, and only for the objectives stated above.

Appropriate Fire Severity Funding Charges

- **Labor**
  - ➢ Includes regular and overtime pay.
  - ➢ 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 severity project number while assigned to a wildland fires. The incident number will be used.
  - ➢ Overtime pay for severity funded personnel will be paid by severity funds, unless the personnel are assigned to a wildland fire.
  - ➢ Overtime pay must be based on need; it is not guaranteed.
  - ➢ Severity assignments/details may last up to 30 days and should not be constrained by 14-day fire assignment limitations.
- **Vehicles and Equipment**
  This includes GSA rental and mileage, agency-owned use rate (but not fixed ownership rate), and commercial rentals and contracts.
- **Aircraft**
  This includes contract extensions, the daily minimum for call when needed (CWN) aircraft, preposition flight time, and support expenses necessary for severity funded aircraft (facility rentals, utilities, telephones, etc.).
- **Travel and Per Diem**
  Off-unit personnel assisting in severity request assignments 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), and other miscellaneous travel and per diem expenses associated with the assignment.

Inappropriate Fire Severity Funding Charges

- Administrative surcharges, indirect costs, fringe benefits.
- Equipment purchases.
- The purchase of vehicles or maintenance, FOR, repairs, and upgrades.
- Radios (unless approved by the National Office).
- Purchase of Telephones (including cellular).

- Pumps, saws, and similar suppression equipment.
- Aircraft availability during contract period.
- Cache supplies which are normally available in fire caches.

Documentation

The state/regional and national office will document and maintain severity funding requests, authorizations, and use. At a minimum, this includes:

- Signed request from the Agency Administrator (or state director) with rationale for the request (abnormal increase in fire potential or danger, fire seasons that either start earlier or last longer than planned in the fire management plan, wind events, cold dry front passage, lightning events, unexpected events such as OHV rallies).
- supporting data such as predictive services products.
- signed authorization from the state/regional director (or national director)
- written record of how the funds are used.

Interagency Requests

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

Requesting Fire Severity Funding

National fire severity funding requests (including modifications and extensions of existing approved requests) should be requested in writing from the state/regional director to the national fire director. Requests should be dated and signed.

An example of a Fire Severity Funding Request may be found at the following website:

http://www.fire.blm.gov/Standards/BLM_Fire_Severity_Funding_Request.htm

Fire severity funding requests should include, at a minimum, the following information:

Narrative Statement

The signed and dated request letter should include a brief narrative description of the interagency fire situation (local and/or geographic) that justifies the request.

Quantification of Need

To adequately quantify the need for severity funding, at least one of the criteria below should demonstrate that fuel and weather conditions exceed those used in the Fire Management Plan, and, therefore, the planned workload.

- **Fire danger models**
  Fire danger analysis software (FireFamily Plus) that graphically contrasts the current seasonal trend for ERC-fuel model G and any appropriate fire danger indices with average and all-time worst values, based on an analysis of year-round data. Likewise, those areas employing the Canadian Forest Fire Danger Rating System should provide similar data for the Buildup Index (BUI) and/or Duff Moisture Code (DMC).
- **Precipitation/drought**
  The U.S. Drought Monitor plus one or more indices, such as the Standardized Precipitation Index and Palmer Drought Severity Index, which specify the departure from normal.
- **Fuel loading**
  Quantitative information comparing current to average conditions.
- **Live and dead fuel moistures**
  Current values, trends, average and all-time worst conditions. Include Normalized Difference Vegetative Index (NDVI), Great Basin Live Fuel Moisture Project reports, and Wildland Fire Assessment System (WFAS) products as appropriate. Note that NDVI and Great Basin Live Fuel Moisture Project data are compiled on weekly or longer basis.
- **30-day weather outlook**

Itemized List of Requested Resources
Resources should be requested by type, quantity, and cost. For each resource type requested, the actual number of that resource type funded under the current fiscal year appropriation should be identified, as per the example below.

Authorization to Use Fire Severity Funding
Requests for fire severity funding will be authorized or denied in writing from the national fire director to the state/regional director. The National Fire Director may authorize requests on a line item basis.

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 or consolidate with separate state/regional request. Forward to state/regional director for approval within 48 hours.	State/Regional FMO

Review, modify, and approve (or reject) request. Forward to National Fire Director within 48 hours. Notify the fire budget staff.	State/Regional Director
Review, modify, and approve (or deny) the request within 48 hours. Issue written authorization with project number.	National Fire Director
Establish projects in FFIS within 24 hours.	Applicable National Finance Center
Notify unit office(s) and state/regional budget lead upon receipt of authorization.	State/Regional FMO
Execute severity project. 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

- **BLM -** *Fire personnel outside their normal activation period and BLM employees whose regular salary is not funded by preparedness (2810), should charge regular time and approved severity overtime to the severity suppression operations subactivity (2821-HT) and the appropriate office's severity project number. Administratively Determined (AD) employees hired under an approved severity request should charge their time to the severity suppression operations subactivity (2821-HT) using the hiring unit's organizational code and severity project number.*

- **BLM -** *BLM fire funded personnel should charge their regular base (guarantee) hours (8, 9, or 10 hours per the normal weekly tour of duty) to preparedness (2810) using their home unit's organizational code. Overtime associated with the severity request should be charged to the severity suppression operations subactivity (2821-HT) using the appropriate office's organizational code and severity project number.*

- **BLM -** *Regular hours worked in suppression operations will require the use of the appropriate fire subactivity (2810-HU or 2821-HU) with the appropriate Fire Code number. Overtime in fire suppression operations will be charged to the suppression operations subactivity (2821-HU) using the home unit organizational code and Fire Code number.*

- **BLM -** *Non-federal agency employees should charge their time in accordance with the approved severity request and the appropriate local and statewide agreements. A reimbursable agreement should be established and is authorized under the Interagency Agreement for Fire Management.*

- **FWS -** *Labor Cost Coding. Refer to Fire Management Handbook.*
- **NPS -** *Labor Cost Coding. NPS severity funding direction in RM 18, Chapters 18 & 19.*
- **FS -** *Labor Cost Coding. Forest Service severity funding direction in FSM 5190 provides agency specific direction.*

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/Prevention
To "proactively" mitigate damages and losses from unwanted wildland fires, reduce undesirable human caused ignitions, reduce suppression costs and mitigate the risks of wildland fire to natural and cultural resources, private property and the lives of firefighters and the public, units are required to fund and implement a unit Fire Prevention Plan by completing a wildland mitigation/prevention assessment (see RAMS below).

- **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.*

Wildland fire mitigation/prevention programs based on risks, hazards and values as determined through the Risk Assessment and Mitigation Strategies (RAMS) process are extremely effective in reducing damages and losses during periods of "average" weather, fuels, and human activity conditions. As "fire season" weather and fuel conditions move from normal to above average or severe, and/or human activity increases substantially, mitigation/prevention programs must be "stepped up" to maintain their ignition and loss prevention effectiveness.

Therefore, as the components of wildland severity, human activities, Fire Danger Operating Plan thresholds, and other signals indicate, additional mitigation/prevention actions must be initiated and/or additional resources (Fire Prevention/Education Teams, etc.) should be obtained through fire severity requests or other means. With these additional efforts and resources in place

before conditions and fire activity become problematic, suppression resources become more efficient (with reduced human-caused ignitions, suppression resources are available for response to unpreventable ignitions) and exposure to all firefighters and the public is reduced.

The mitigation of risk and losses during periods of wildland severity can be addressed by:

- Conducting local/regional interagency fire prevention needs assessments which determine the appropriate level of mitigation/prevention actions and resources, then obtaining these resources through details, field/state office severity requests, regional/national resource orders, etc.
- Mobilizing local or regional "fire prevention/education" team(s) to quickly assess, plan and implement immediate mitigation and outreach strategies during periods of abnormal wildland fire risk and/or human activity. Refer to the *National Interagency Mobilization Guide (Chapter 20)* or regional mobilization guides for prevention/education team information and mobilization procedures.

Mobilization Guide
The National Interagency Coordination Center (NICC) at the National Interagency Fire Center (NIFC) is responsible for cost-effective and timely coordination of national emergency response for wildland fire suppression. This is accomplished through planning, situation monitoring, and expediting resource orders between the federal wildland fire agencies and their cooperators. The *National Interagency Mobilization Guide* contains standard procedures that guide the operations of multi-agency logistical support activity throughout the coordination system. It is designed to accommodate amendments as needed, and will be retained as current material until amended. Local mobilization guides should be used to supplement the *National Interagency Mobilization Guide.*

Geographic areas will provide NICC with two copies of their mobilization guides and will provide amendments as issued. Local mobilization guides should be prepared on an interagency basis. Local units will provide their geographic area coordination center with two copies of their mobilization guide or dispatch plan and amendments as issued.

Chapter 10
Developing a Response to Wildland Fires

Policy

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 circumstances under which a fire occurs, the likely consequences on firefighter and public safety and welfare, natural and cultural resources, and values to be protected, dictate the appropriate response to fire.

Annual Operating Plan

Developing an Annual Operating Plan

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

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

Appropriate Management Response to Wildland Fires

Definition

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

Developing Appropriate Management Response Evaluation Criteria
- Risks to firefighters and public health and safety
- Land and Resource Management Objectives
- Weather
- Fuel conditions
- Threats and values to be protected
- Cost efficiencies

Appropriate Management Response Options

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

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

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

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

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

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

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

Control and extinguishment

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

Responding to Wildland Fires

Report of Wildland Fire

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

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

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

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

Progressive development of these stages will occur for wildland fires managed for resource benefits or where initial attack is not the selected response. Objectives, fire location, cause, conditions of fuel continuity, current fire activity, fire location, predicted weather and fire behavior conditions, and risk assessment results will indicate when various WFIP Stages must be completed. Resource benefits become more important as strategic decision factors, additional planning and documentation requirements (additional WFIP Stages) are involved.

Initial Actions

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

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

Release Date: January 2005   **10-3**

Organization and Qualifications

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

Fire Size-up (Stage 1 WFIP)

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

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

Fire Cause Determination

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

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

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

Operational Briefings

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

If firefighters cannot be briefed prior to departure from base, the receiving
dispatch office will provide a briefing to the supervisor by radio. In all cases,
firefighters will be briefed prior to starting work. The IC or their delegate will
document all Operational Briefings.
The Briefing Checklist found in Appendix F and in the *IRPG*, contains the
minimum items required to brief all incoming crews, personnel, or resources.
Units are encouraged to expand the minimum briefing, as appropriate, to ensure
that safety and efficiency are addressed.

Spot Weather Forecast

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

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

1 **Strategy & Tactics**
2
3 **Determining Strategy and Tactics**
4 Determining appropriate initial attack strategies and tactics must be based on
5 appropriate management response while providing for firefighter and public
6 safety. Other factors to consider are: suppression objectives, values at risk,
7 current and predicated fire behavior, weather conditions, available resources and
8 their condition.
9
10 **Application of Risk Management**
11 Identification and mitigation of risk must be considered in all strategic and
12 tactical planning. Use of the Risk Management Process is mandatory. Tactical
13 assignments for all resources will not be initiated or continued without strict
14 adherence to the Risk Management Process, incorporating the 10 Standard Fire
15 Orders, 18 Watch Out Situations, and principles of LCES. Reevaluation of the
16 Risk Management/LCES process is essential.
17

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

18
19 For additional information on strategic and tactical guidelines and principles, see
20 the *NWCG Fireline Handbook 3 (PMS 410-1, NFES 0065), Chapter 1,*
21 *Firefighter Safety and Chapter 2, Initial Attack, and the Incident Response*
22 *Pocket Guide (PMS-461, NFES 1077).*
23
24 **Extended Attack Operations**
25
26 **Definition**
27 Suppression activity for a wildfire that has not been contained or controlled by
28 initial action or contingency forces and for which more firefighting resources are
29 arriving, en route, or being ordered by the initial attack incident commander.
30

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

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

Organization

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

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

Incident Complexity Analysis

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

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

Assumptions for Developing a Complexity Analysis

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

Wildland Fire Situation Analysis (WFSA)
Definition

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

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

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

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

Signature authorities for WFSA are as follows:

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

Wildland/Urban Firefighting

Introduction

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

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

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

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

Emergency Non-Wildland Fire Response
Authorized funding under the wildland fire preparedness and suppression activities includes funding for wildland fire related activities. Funding is not provided to prepare for or respond to emergency non-wildland fire response activities such as structure fires, vehicle fires, dump fires, hazardous materials releases, and emergency medical responses.

Management Controls to Mitigate Exposure
Agency policy states that PPE devices will be used only when equipment guards, engineering controls, or management control does not adequately protect employees. To meet this requirement:
- Managers and supervisors will not knowingly place wildland firefighters in positions where exposure to toxic gases or chemicals would require the use of self-contained breathing apparatus.
- Managers will not sign cooperative fire protection agreements that would commit wildland firefighters to situations where exposure to toxic gases or chemicals would require the use of self-contained breathing apparatus.
- Managers will avoid giving the appearance that their wildland fire suppression resources are trained and equipped to perform structure, vehicle, and dump fire suppression, to respond to hazardous materials releases, or to perform emergency medical response.

Structure Fires, Vehicle Fires, and Dump (Landfill) Fires
Structure, vehicle, and dump fire suppression is not a functional responsibility of wildland fire suppression resources. These fires have the potential to emit high levels of toxic gases. Firefighters will not be dispatched to structure, vehicle, or

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

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

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

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

Hazardous Materials

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

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

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

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

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

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

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

Wildland/Urban Interface Watch Outs
Checklists are provided in the Incident Response Pocket Guide for safe and efficient responses and operations. The primary considerations are firefighter safety and public safety. The Appendices that address interface situations can be found in the back of this book.

1 •   Structure Triage: Appendix O.

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

3

4 **Roadside Response**

5 Positioning of vehicles and employee awareness is paramount when responding

6 to incidents in close proximity to roadways. Refer to Appendix J which

7 highlights tactical considerations for roadway responses.

Chapter 11
Incident Management

National Interagency Incident Management System (NIIMS)
The National Interagency Incident Management System (NIIMS) is sponsored by several agencies including: the BLM, NPS, USFWS, and USDA-FS. It provides a universal set of structures, procedures, and standards for agencies to respond to all types of emergencies.

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

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

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

Incident Management
Effective incident management requires:
- Command Organizations to manage on-site incident operations.
- Coordination and Support Organizations to provide direction and supply resources to the on-site organization.

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

Command Organizations

Incident Command

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

- *FS - Agency Administrator will meet annually with Type 3, 4, 5 ICs to communicate expectations for IC performance in critical phases in wildland fire suppression.*
- *FS - Ensure that ICs on Type 1, 2 and 3 wildland fires have no concurrent incident management positions as a collateral duty.*

Type 4 and 5 Incident Command

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

Type 5 Incident Characteristics

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

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

Type 3 Incident Structure

Type 3 Incident Commanders (ICT3s) are qualified according to the *310-1*. ICT3s are required to manage the incident. They must not have concurrent responsibilities that are not associated with the incident, and they must not concurrently perform single resource boss duties. ICT3s establish the appropriate organizational structure to manage the incident based on span of control and incident complexity. ICT3s may assign personnel to any combination of ICS functional area duties in order to operate safely and effectively. The *310-1* establishes Type 3 specific qualifications standards for Safety Officers and Information Officers. Minimum qualifications for all other functional areas are established by agency policy in the chart below.

<div align="center">

Type 3 competencies

Type 3 Functional Responsibility	Specific 310-1 or equivalent qualification standards required to perform ICS functions at Type 3 level
Incident Command	Incident Commander Type 3
Safety	Safety Officer Type 3
Information	Information Officer Type 3
Operations	Strike Team Leader or Task Force Leader
Division	Single Resource Boss
Logistics	No minimum qualification
Plans	No minimum qualification
Finance	No minimum qualification

</div>

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

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

Type 3 Incident Characteristics
- Ad hoc or pre-established Type 3 organization managed by a Type 3 Incident Commander.
- The IC develops the organizational structure necessary to manage the incident. Some or all of ICS functional areas are activated, usually at the division/group supervisor and/or unit leader level.
- The Incident Complexity Analysis process is formalized and certified daily with the jurisdictional agency. It is the Incident Commander's responsibility to continually reassess the complexity level of the incident. When the complexity analysis indicates a higher complexity level the IC must ensure that suppression operations remain within the scope and capability of the existing organization
- A Delegation of Authority is required for non local ICT3s and optional for all other ICT3s.
- 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* or Appendix F for Briefing Checklist.
- Type 3 IC will not serve concurrently as a single resource boss or have any non incident related responsibilities.
- Wild Fire Situation Analysis (WFSA) will be initiated for any type 3 incident which escapes initial attack and is not controlled in the first operational period.

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
Teams are managed by Geographic Area Multi-Agency Coordinating Groups, and are coordinated by the Geographic Area Coordination Centers.
- Pre-established incident management team managed by Type 2 Incident Commander.
- ICS command and general staff positions activated.

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

Type 1 Incident Characteristics

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

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

Fire Use Management Teams (FUMT)

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

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

Area Command Characteristics

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 NMAC and are comprised of the following:

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

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

Unified Command

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

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

Advantages of Unified Command are:

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

Coordination and Support Organizations

Initial Attack Dispatch
This includes normal dispatching operations on initial actions using existing available resources.

Expanded Dispatch
As incidents develop and/or numbers of wildland fires increase, it is necessary to expand coordination organizations. Coordinators are added to handle requests for personnel, equipment, supplies, and aircraft. This allows initial attack dispatchers to concentrate on new starts.

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

- Filling and supervising necessary positions, if they are necessary, in accordance with coordination complexity.
- Implementing decisions made by the 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).

Release Date: January 2005   **11-7**

- A completed and authorized Continuation of Operations Plan (COOP).
- Qualified personnel on site to staff operations for the entire operational period.

Buying/Payment Teams

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

Multi-Agency Coordination (MAC) Group

Multi-Agency Coordination Groups are part of the National Interagency Incident Management System (NIIMS) and are an expansion of the off-site coordination and support system. MAC Groups are activated by the Agency Administrator(s) when the character and intensity of the emergency situation significantly impacts or involves other agencies. A MAC Group may be activated to provide support when only one agency has incident(s). The MAC group is made up of agency representatives who are delegated authority by their respective Agency Administrators to make agency decisions and to commit agency resources and funds. The MAC Group relieves the incident support organization (dispatch, expanded dispatch) of the responsibility for making key decisions regarding prioritization of objectives and allocation of critical resources. The MAC Group makes coordinated Agency Administrator level decisions on issues that affect multiple agencies. The MAC Group is supported by situation, resource status, and intelligence units who collect and assemble data through normal coordination channels.

MAC Group Direction

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

MAC Group Activation Levels

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

MAC Group Coordinator

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

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

MAC Group Functions

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

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

Managing the Incident

Agency Administrator Responsibilities

The Agency Administrator (AA) manages the land and resources on his/her 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 the Incident Management Team (IMT) include:

- Conduct an initial briefing to the Incident Management Team (Appendix D).
- Provide an approved and certified Wildland Fire Situation Analysis (WFSA) and validate daily.
- Complete an Incident Complexity Analysis (Appendix L or M) to accompany the WFSA.
- Issue a written Delegation of Authority (Appendix R) to the Incident Commander and to other officials (Agency Administrator Representative, Resource Advisor, Incident Business Advisor). For Type 1 and Type 2 Incidents, delegation must be written. For Type 3, 4, or 5 Incidents, delegations may be written or oral. The delegation should:
  - State specific and measurable objectives, priorities, expectations, constraints, and other required direction.
  - Establish the specific time for transfer of command.
  - Assign clear responsibilities for initial attack.

- ➢ Define your role in the management of the incident.
- ➢ Assign a resource advisor(s) to the IMT.
- ➢ Define public information responsibilities.
- ➢ If necessary, assign a local government liaison to the IMT.
- ➢ Assign an Incident Business Advisor (IBA) to provide incident business management oversight commensurate with complexity.
- ➢ Direct IMT to address rehabilitation of areas affected by suppression activities.
- Coordinate Mobilization with the Incident Commander:
  - ➢ Negotiate filling of mobilization order with the IC.
  - ➢ Establish time and location of Agency Administrator briefing.
  - ➢ Consider approving support staff additional to the IMT as requested by the IC.
  - ➢ Consider authorizing transportation needs as requested by the IC.

Agency Administrator Representative Responsibilities

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

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

Resource Advisor Responsibilities

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

- Rehabilitation requirements and standards
- Land Ownership
- Hazardous Materials
- Fuel Breaks (locations and specifications)

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

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

Transfer of Command

The following guidelines will assist in the transfer of incident command responsibilities from the local unit to incoming 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.

Release of Teams

The release of an 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

The Agency Administrator must complete a written evaluation of the IMT. Certain elements of the evaluation should not be completed at the closeout review; they should be completed within 30 days of the close out. These include; accountability and property control; completeness of claims investigation/documentation; completeness of financial and payment documentation; and effectiveness of suppression damage rehabilitation.

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

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

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

See Appendix U for the IMT evaluation form.

Post Fire Activities

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

Damages resulting from wildland fires are addressed through four activities:

- **Fire 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 fire by the Incident Management Team before demobilization.
- **Emergency Stabilization -** Planned actions to stabilize and prevent unacceptable degradation to natural and cultural resources, to minimize

threats to life or property resulting from the effects of a fire, or to
repair/replace/construct physical improvement necessary to prevent
degradation of land or resources. Emergency stabilization actions must be
taken within one year following containment of a wildland fire and
documented in a Burned Area Emergency Stabilization Plan.

- **Rehabilitation -** Efforts taken within three years of containment of a
  wildland fire to repair or improve fire-damaged lands unlikely to recover
  naturally to management approved conditions, or to repair or replace minor
  facilities damaged by fire. These efforts are document in a separate
  Rehabilitation Plan.
- **Restoration -** The continuation of rehabilitation beyond the initial three
  years or the repair or replacement of major facilities damaged by the fire.

Burned Area Emergency Response (BAER) Teams

Burned Area Emergency Response (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
Stabilization Plans. They will meet the requirements for unescorted personnel
found in Chapter 06 under "Visitors to the Fireline" when working within the
perimeter of an uncontrolled fire. The team's skills and size should be
commensurate with the size and complexity of the fire.

It is the Agency Administrator's (not the Incident Commander's) responsibility
to designate an interdisciplinary BAER team. However, BAER teams must
coordinate closely with IC and Incident Management teams to work safely and
efficiently.

- ***DOI -*** *The Department of the Interior maintains two standing 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. DOI-BAER Teams may be
  dispatched to any complex DOI wildland fire incident or where DOI lands
  are involved and the local unit/agency cannot organize a competent ad hoc
  team. DOI-BAER Teams should be requested at least 10 days prior to
  anticipated fire containment.*
- ***USFS -*** *The Forest Service utilizes BAER Teams through a pool of
  resources with the skills identified by the receiving unit. When needed,
  BAER personnel from other units can either be contacted directly or
  through dispatch. Placing a general fire resource order for BAER team
  members via dispatch is not appropriate for ad hoc Forest Service teams.
  See FSM 2523 and FSH 2509.13 for agency specific policy and direction
  for BAER team.*

Cost Containment

The primary criteria for choosing suppression strategies are to minimize costs
without compromising safety. Planned and actual suppression costs must be

commensurate with the values to be protected. They must be included and
displayed in the Wildland Fire Situation Analysis. Even though resource
benefits may result in some areas of a fire, it is inappropriate to expend
suppression dollars with the explicit objective of achieving resource benefit.
Indirect containment strategies are appropriate only if they are the safest or least
cost option. Selection of these strategies must be carefully scrutinized when fire
danger trends are rising. Long duration wildfires need to be closely evaluated
by cost containment teams to ensure that operations are not occurring beyond
the point of diminishing returns.

An Incident Business Advisor (IBA) must be assigned to any fire with
suppression costs of more than $5 million. An IBA 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.

A National Cost Oversight Team will be assigned to a fire with suppression
costs of more than $5 million. This team will include a Line Officer (team
lead), Incident Business Specialist, Incident Management Team Specialist, and a
Financial Specialist. The team lead and the receiving Agency Administrator can
agree to add team members as needed to address issues specific to the incident,
i.e., aviation, personnel, or contracting specialists.

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

Wildland Fire Use
Agencies may apply this strategy in managing wildland fires for resource
benefit.
An approved Fire Management Plan (FMP) is required. This plan identifies
specific resource and fire management objectives, a predefined geographic area,
and prescriptive criteria that must be met.

A Wildland Fire Implementation Plan (WFIP) will be completed for all wildland
fires that are managed for resource benefit. This is an operational plan for
assessing, analyzing, and selecting strategies for wildland fire use. It is
progressively developed and documents appropriate management responses for
any wildland fire managed for resource benefits. The plan will be completed in
compliance with the guidance found in the *Wildland and Prescribed Fire
Management Policy Implementation Procedures Reference Guide, August 1998*.
A WFIP consists of three distinct stages:
- **Stage I -** The initial fire assessment, or size-up, is the preliminary
  information gathering stage. It compares current information to
  established prescription criteria found in the FMP. This is an initial
  decision making tool which assists managers in classifying fires for
  resource benefit or suppression actions.

- **Stage II** - "The Short-Term Implementation Action" stage provides managers and staff with needed information to initiate and continue management of the wildland fire for resource benefit. It provides predictions of potential fire spread, any necessary short-term management actions needed, fire complexity, and any long-range management actions anticipated.
- **Stage III -** "The Long-Term Assessment and Implementation Actions." This stage supplements the FMP by providing the site-specific long-term implementation actions necessary to manage the wildland fire to accomplish identified objectives.
- *NPS - Wildland Fire Use Program Oversight. Regional office fire management officers are responsible for appraising and surveying all wildland fire use activities within their region. The regional office fire staff will review implementation plans for fires with a Complex Rating. Direct contact with parks may be necessary in order to stay apprised of complex situations. On rare occasions, circumstances or situations may exist which require the regional director to intervene in the wildland fire use decision process.*
- *NPS - Review by the regional fire management officer or acting is mandatory for Wildland Fire Implementation Plans with a projected cost of greater than $500,000. Review by the NPS National Fire Management Officer at NIFC, or Acting, is mandatory for Wildland Fire Implementation Plans with a projected cost of greater than $1,000,000.*

Incident Status Reporting

The Incident Status Summary (ICS-209), submitted to the GACC, is used to report large wildland fires, WFU events, and any other significant events on lands under federal protection or federal ownership. Lands administered by states and other federal cooperators may also report in this manner.

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

Chapter 12
Suppression Chemicals & Delivery Systems

Policy For Use Of Fire Chemicals

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

A current list of qualified products and approved uses can be found on the Wildland Fire Chemical Systems website:
- www.fs.fed.us/rm/fire
- Click on Wildland Fire Chemicals
- Click on Qualified Products List

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

Retardant Policy

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

Wildland firefighting agencies will not accept retardants containing sodium Ferrocyanide (YPS) for contracts awarded in the year 2005 and beyond, and will only accept gum-thickened retardants in contracts awarded in the year 2005 and beyond.

Foam Policy

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

Types of Fire Chemicals

Long-Term Retardant

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

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

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

Fire Suppressant Foam

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

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

Water Enhancers for Wildland Fire Suppression

Water enhancers, such as fire fighting gels, are products added to water to
improve one or more of the physical characteristics of water. They are not
effective once the water has evaporated. Water enhancers are typically applied
from ground equipment and especially suited to exposure protection for vertical
surfaces. Be careful when using water enhancers as they can be extremely
slippery.

General Safety Criteria

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

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

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

Human health risk from accidental drench with retardant can be mitigated by
removing any residue from exposed skin by washing with water.

Containers of any fire chemical, including backpack pumps and engine tanks,
should be labeled to alert personnel that they do not contain plain water, and that
the contents must not be used for drinking purposes. Slickness is a hazard at
storage areas and unloading and mixing sites. Because all fire chemical

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

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

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

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

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

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

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

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

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

Environmental Guidelines for Delivery of Retardant or Foam Near Waterways

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

Aerial Application Guidelines

Avoid aerial or ground application of retardant or foam within 300 feet of waterways.

These guidelines do not require the pilot-in-command to fly in such a way as to endanger his or her aircraft, other aircraft, structures, or compromise ground personnel safety. Guidance to pilots can be found in Aviation Chapter 17.

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 foam or retardant application to the waterway. When anchoring a retardant or foam line to a waterway, use the most accurate method of delivery in order to minimize placement of retardant or foam in the waterway.

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

Environmental Procedures for Application of Fire Chemicals

Threatened and Endangered (T&E) Species

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

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

- As soon as practical after the aerial application of retardant or foam near waterways, determine whether the aerial application has caused any adverse effect on T&E species or their habitat using the following criteria:
  - Aerial application of retardant or foam outside 300 feet of a waterway is presumed to avoid adverse effects to aquatic species and no further consultation for aquatic species is necessary.
  - Aerial application of retardant or foam within 300 feet of a waterway requires that the unit administrator determine whether there have been any adverse effects to T&E species within the waterway.
  - If the action agency determines that there were adverse effects on T&E species or their habitats, then the agency must consult with Fish and Wildlife Service (FWS) or National Marine Fisheries Service (NMFS) as required by 50 CFR 402.05 (Emergencies). Procedures for emergency consultation are described in the *Interagency Consultation Handbook,* Chapter 8 (March 1998). In the case of a

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

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

Ground Application of Fire Suppressant Foams

Proportioners

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

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

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

Wet Water

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

Conventional Nozzles and Backpack Pumps

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

Aspirating Nozzles

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

Compressed Air Foam Systems (CAFS) Operating Standards

• Keep static air and water pressures equal.

• Start with a 0.3% mix ratio; adjust if necessary.

Release Date: January 2005   **12-5**

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

Chapter 13
Training & Qualifications

Introduction

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

Policy

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

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

- **FS -** *Standards which may exceed the minimum standards established by NWCG are identified in FSH 5109.17. AD hires will meet NWCG 310-1 qualification standards.*

Incident Qualification and Certifications System (IQCS)

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

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

All records will be stored and/or destroyed in accordance with agency policies.

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

Certification of Non-Agency Personnel

Non-agency firefighters will be certified by state or local fire departments. Agencies will not assist in the administration, or sponsor the work capacity test (WCT), as the certifying agency.

The Incident Qualifications and Certification Card (Red Card)

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

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

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

Red Card certification will have a 12-month currency.

Qualification System

Minimum Training Requirements

All personnel filling ICS positions on the fireline must have completed a minimum of 32 hours of basic wildland fire training, including the modules on basic firefighting, basic fire behavior, and standards for survival.

- **NPS -** *It is NPS policy that two or more assignments be experienced 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 experienced in a position*

before an individual may become a position performance evaluator.
Exceptions to this should be rare and well founded.

Annual Fireline Safety Refresher Training

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

- **Entrapments -** Use training and reference materials to study the risk management process (as identified in the Incident Response Pocket Guide) and rules of engagement (e.g., LCES, 10, 18, Look Up, Look Down, Look Around).
- **Current Issues -** Review and discuss identified "hot topics" and "national emphasis topics" including the "Do the Right Thing" video. Review forecasts and assessments for the upcoming fire season and discuss implications for firefighter safety.
- **Fire Shelter -** Review and discuss last resort survival. Conduct "hands-on" fire shelter inspections. Practice shelter deployments in applicable crew/module configurations. No "live fire" exercises for the purpose of fire shelter deployment training will be conducted.
- **Other Hazards and Safety Issues -** Choose additional hazard and safety subjects, which could include SAFENET, current safety alerts, site/unit specific safety issues and hazards.

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

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

Annual Fireline Safety Refresher Training will have a 12-month currency.

A web site, WWW http://www.nifc.gov/safety_study/index.htm, titled "Wildland Fire Safety Training Annual Refresher (WFSTAR)" is available to assist in this training.

- *FS - The Incident Complexity Analysis found in Appendix M will be shared with all Type 3, 4, & 5 Incident Commanders. Review of this guide should be a part of your annual refresher training.*

Entrapment avoidance and deployment protocols have been revised and issued in the *Incident Response Pocket Guide* (PMS No. 461/NFES No.1077). The

guide contains a specific "Risk Management Process", and "Last Resort Survival Checklist". An *Incident Pocket Response Guide* will be issued to every fireline supervisor.

Non-NWCG Agencies' Qualifications

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

Qualification and Certification Process

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

- Ensures that qualifications generated by IQCS or other agency systems for employees are valid by reviewing the training and experience of each employee.
- Evaluates if each employee possesses the personal characteristics necessary to perform the wildland and prescribed fire positions in a safe and efficient manner.
- Makes recommendations to the appropriate Agency Administrator or designee who is responsible for final certification signature.
- Develops interagency training needs and sponsors courses that can be offered locally.
- Ensures training nominees meet minimum requirements for attending courses.

Physical Fitness

Physical Fitness and Conditioning

Agency Administrators are responsible for ensuring the overall physical fitness of firefighters. The Agency Administrator may authorize employees who are available and/or serving in wildland or prescribed fire positions that require a physical fitness rating of arduous, one hour each day for fitness condition. All other wildland firefighting personnel may be authorized up to three hours per week of duty time for fitness conditioning. Furthermore, individuals who have a position with an arduous physical requirement may be periodically tested during the fire season to ensure they are retaining the required level of fitness and conditioning.

Fitness conditioning periods may be identified and structured to include aerobic and muscular exercises. Team sports are not authorized for fitness conditioning. Chapters 7, 8, and 9 of *Fitness and Work Capacity, 2nd ed. (1997)*, 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.*

Work Capacity Tests (WCTs)

Work Capacity Tests

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

WCTs are administered annually to all employees, including ADs and emergency hires, who will be serving in wildland or prescribed fire positions that require a fitness level. The currency for the WCT is 12 months.

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

Personnel taking the WCT will only complete the level of testing (Pack, Field, Walk) required by the highest fitness level identified for a position on their Red Card.

Agency Administrators (or delegates) are responsible for ensuring that the Health Screen Questionnaire (HSQ) is administered prior to initiating a physical training program and/or the WCT.

Agency Administrators for offices who have implemented the *Interagency Wildland Firefighter Medical Qualification Standards* (or delegates) are responsible for ensuring that medical clearance is given for each employee/incumbent prior to administering the WCT.

Test results must also be entered in the IQCS annually to update the fitness level and date that will appear on the Red Card. Physical fitness dates entered in IQCS will reflect the date the employee passed the fitness test. The information on this health screen is considered confidential and must be filed in the employee's Official Medical File.

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 number 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: www.fs.fed.us/fire/fire_new/.*

WCT Categories

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

Any position required to be on the fireline unescorted for suppression or non-suppression tasks will be required to have passed the WCT at the "light" physical fitness level. This requirement applies even to positions which are identified in the 310-1 with a fitness level of "None."

Work Capacity Test

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

Arduous - Duties involve field work requiring physical performance with above average endurance and superior conditioning. These duties may include an occasional demand for extraordinarily strenuous activities in emergencies under adverse environmental conditions and over extended periods of time. Requirements include running, walking, climbing, jumping, twisting, bending, and lifting more than 50 pounds; the pace of the work typically is set by the emergency conditions.

Moderate - Duties involve field work requiring complete control of all physical faculties and may include considerable walking over irregular ground, standing for long periods of time, lifting 25 to 50 pounds, climbing, bending, stooping, twisting, and reaching. Occasional demands may be required for moderately strenuous activities in emergencies over long periods of time. Individuals usually set their own work pace.

Light - Duties mainly involve office type work with occasional field activity characterized by light physical exertion requiring basic good health. Activities may include climbing stairs, standing, operating a vehicle, and long hours of work, as well as some bending, stooping, or light lifting. Individuals can usually govern the extent and pace of their physical activity.

WCT Administration

An HSQ will be administered prior to initiating a physical training program and/or the WCT with the following objectives:

- To identify, prior to the WCT, at-risk personnel.
- To identify existing injuries or illness and minimize the probability of new injuries.
- To establish the need for a medical examination (see Medical Examinations criteria below).

A Job Hazard Analysis (JHA) shall be developed and approved for each field office prior to administrating the WCT. See the sample JHA found in Appendix X.

Administer the test using the JHA as a briefing guide. Document using the HSQ Appendix W and WCT Record (see Appendix Y. These documents must be retained until the next testing.

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

Health Screen Questionnaire HSQ

The purpose is to identify individuals who may be at risk in preparing for and completing the WCT, which may result in a recommended exercise program and/or medical examination.

Title 5 CFR Part 339 – Medical Qualification Determinations, which provides a determination of an individual's fitness-for-duty, authorizes solicitation of this information. The HSQ can be found in Appendix W.

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 OPF medical file. This file may only be viewed by
Human Resource Management (HRM) or Safety personnel and the identity of
the individual must be protected.

Solicitation of this information is authorized by Title 5 U.S. Code Section 3301,
which provides for a determination of an individual's fitness-for-duty.

Work Capacity Test (WCT) 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.

Medical Examinations
Agency Administrators and supervisors are responsible for the occupational
health and safety of their employees performing wildland and prescribed 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.

The new Federal Interagency Wildland Firefighter Medical Qualification
Standards continue to be implemented throughout the DOI and FS
organizations. Those units who have not yet implemented the new standards
must continue to comply with the current standards as stated below until
implementation of the new standards is accomplished.

Where Interagency Wildland Firefighter Medical Standards are implemented no
person will be employed as an arduous duty fire fighter under AD/EFF hiring
authority if they have:
- failed to gain clearance through the Interagency Wildland Firefighters
  Medical Standards Program under any pay authority, or:
- personal knowledge of any physical reason that would prohibit them from
  carrying out arduous duties, or:
- medical professional's advice of any physical reason that would prohibit
  them from carrying out the duties of a wildland firefighter.

All employees who participate in wildland or prescribed fire activities requiring
a fitness level (Arduous, Moderate, Light) must answer all the questions on the
HSQ prior to taking their WCT.

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

All permanent, career-seasonal, temporary, and Student Career Experience Program (SCEP) employees who participate in wildland or prescribed fire activities requiring a fitness level of Arduous must have a current medical examination prior to attempting the WCT. Thereafter, employees 40 years of age and older must have a physical every three years or as indicated by the Health Screen Questionnaire.

- *NPS - see RM-18, Chapter 3 and NPS exceptions below.*

Stress EKGs are not required as part of the medical examination and will only be approved if recommended and administered by the medical exam physician.

If any "Yes" answer is indicated, a medical examination is required prior to the employee taking the WCT or 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 prior to taking WCT.

- *FWS - All permanent employees over 40 years of age who take the pack or field test to qualify for a wildland or prescribed fire position are required to take an annual physical examination before taking the test.*
- *NPS - "Wildland Firefighter" Defined: Those employees who perform duties of a hazardous and/or strenuous nature are targeted. Therefore, within this section, "wildland firefighter" hereinafter refers to an employee whose wildland fire position(s) qualifications require an "Arduous" fitness level, as defined in the current PMS 310-1 "Wildland and Prescribed Fire Qualifications System Guide."*
- *NPS - For health and fitness purposes, those who are fire-qualified at less than the Arduous fitness level are not required to meet the mandatory fitness program requirements of DO-57 for wildland fire management. However, they are strongly encouraged to participate in the voluntary fitness program, and must still meet physical fitness/work capacity requirements as outlined in 310-1 "Wildland and Prescribed Fire Qualification System Guide" for positions with Moderate and Light fitness requirements.*
- *NPS - Health Screening: Arduous duty medical exams must be taken once every 3 years by wildland firefighters. They do not include stress EKGs, except for those 41 years or older if required by the examining physician. Those cases would be considered exceptional. FIREPRO funding will not be used to pay for stress EKGs, except in exceptional cases, which require prior approval by the regional fire management officer.*
- *NPS - FIREPRO funding may be used to pay for medical exams for mandatory fitness program participants within the following limits:*

- **NPS -** *Those who meet the definition of "wildland firefighter" will have costs of all required medical examinations paid for by FIREPRO, not to exceed $350. Anything in excess of $350 requires approval of the regional fire management officer. This includes recent requirements for blood screenings.*

- **NPS -** *In the event an employee-selected physician indicates that an EKG or other advanced test is needed, the government may require a second opinion from an appointed physician.*

- **NPS -** *Pending implementation of the federal interagency wildland firefighter medical qualification standards in a geographic area, NPS units will continue to use the U.S. Civil Service Commission Certificate of Medical Exam, SF-78, Wildland Fire Medical Examination Standard, for use by examining physicians.*

- **NPS -** *The examining physician will submit the completed SF-78 to the employee's park, where it will be reviewed by the personnel office and retained in the employee's Official Personnel Medical File.*

- **NPS -** *The law enforcement medical exam for NPS rangers, who are collateral duty wildland firefighters, will suffice for wildland fire health screening purposes.*

- **NPS -** *Employees requiring medical exams on the 3-year cycle will have exams conducted prior to taking the Arduous fitness WCT (Pack Test).*

Chapter 14
Firefighting Personnel

Introduction

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

Leadership

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

A Good Leader Must

- Be technically and tactically proficient
- Be responsible for your actions
- Know yourself and seek improvement
- Know your firefighters and look out for their well-being
- Set the example
- Make sound and timely decisions
- Keep your firefighters informed
- Ensure the task is understood, supervised and accomplished
- Develop a sense of responsibility in your firefighters
- Build the team
- Employ your team in accordance with its capabilities

Policy

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

http://www.nifc.gov/training_quals/IFPM/ifpm.htm

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

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

Minimum Age Requirements for Hazardous Duty Assignments on Federal Incidents

Persons under 18 years old will not perform hazardous duties during wildland fire management operations on federal jurisdictions.

Engine Modules

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

Helicopter Modules

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

Smokejumpers

Smokejumpers provide wildland fire suppression and hazardous fuels reduction services to interagency land managers.

Policy

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

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

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

Smokejumper Organization

The operational unit for smokejumpers is "one load."

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

Concurrence with NICC must be obtained prior to configuring smokejumpers as a Type 2 IA crew.

Operational Procedures

Coordination & Dispatch

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

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

Communications

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

Transportation

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

Safety

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

Training

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

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

The following are ICS qualifications for smokejumpers:

Position	Target Recommendations
Overhead Cadre	ICT3, DIVS
Spotter	ICT3, DIVS
Squad Leader	STCR, ICT4
GS-6 Smokejumper	CRWB
GS-5 Smokejumper	FFT1, FFT2

Physical Fitness Standards

The national minimum standards for smokejumpers are:

- 1.5 mile run in 11:00 minutes or less
- 45 sit-ups in 60 seconds
- 25 pushups in 60 seconds

- 7 pull-ups
- 110 lb. packout over 3 miles/level terrain/90 minutes
- Successful completion of the WCT at the arduous level.

Interagency Hotshot Crews

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

Policy

IHC standards provide consistent planning, funding, organization, and management of the agency IHCs. The sponsoring unit will ensure compliance with the established standards. The arduous duties, specialized assignments, and operations in a variety of geographic areas required of IHCs dictate that training, equipment, communications, transportation, organization, and operating procedures are consistent for all agency IHCs.

As per agency policy all IHCs will be managed under the *National Interagency Hotshot Crew Operations Guide* (NIHCOG).

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

Certification

Annual certification of IHC's is required prior to being made available for assignment as an IHC. For certification the crew superintendent will:

- Submit a completed NIHCOG Appendix C to the local unit Fire Management Officer for approval.
- Upon approval, the local unit Fire Management Officer will submit the signed Appendix C to the State/Regional Fire Management Officer.
- Upon approval, the State/Regional Fire Management Officer will notify the Geographical Coordinating Committee and NICC of the crews status.

IHC Organization

Individual crew structure will be based on local needs using the following standard positions: Superintendent, Assistant Superintendent, Squad Leader, Skilled Firefighter, and Crewmember.

Availability Periods

All IHCs must be certified annually prior to initial assignment. Submit a completed "Appendix C" from the *NIHCOG* prior to the crew being made available for any incident assignment as an IHC. Any IHC not meeting all of the requirements in "Appendix C" before, or during, the crew's availability period will be available as an IHC(t). The Crew Superintendent is responsible to inform local supervisor and the local GACC of any required changes in the crew's typing.

IHCs will be available to meet or exceed availability periods specified in *NIHCOG* 2001 (Revised 2004).

- **BLM -** *IHC crewmembers will receive 40 hours of basic or refresher training before their first fire assignment in a fire season. Refresher training will include, but is not limited to, crew safety, risk management, firefighter safety, fire behavior, communications, and organization. The final responsibility for crew availability will rest with the Superintendent's certification to local unit management that all training is complete. The minimum tour of availability excluding required training periods for BLM IHCs will be 130 calendar days for crews in the lower 48 states and 90 calendar days for crews in Alaska.*
- **NPS/FS -** *IHCs follow the NIHCOG, including minimum tours. In some regions, tours may exceed the minimum based on preparedness and fuels funding levels, or non-fire funding for these resources.*

Communications

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

Transportation

Crews will be provided adequate transportation. The number of vehicles used to transport a crew should not exceed five. All vehicles must adhere to the certified maximum Gross Vehicle Weight (GVW) limitations.

Other Hand Crews

Policy

All crews must meet minimum crew standards as defined in Appendix Z 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 Z.

- **Contract Crews**
  These organized crews consist of personnel trained, equipped, and certified by a private contractor and must meet the contractual specifications as stated in their state or national crew contracts.
- *FS - The FS endorses the National Minimum Standards for crews and applies FSH 5109.17 for training requirements.*

Fire Use Modules

- *NPS - The National Park Service has Fire Use Modules. The primary mission and priority of the modules is to provide skilled and mobile personnel to assist with Wildland Fire Use (WFU) in the areas of planning, fire behavior monitoring, ignition, and holding. Secondary priorities follow in the order below:*
  - ➤ *Support burn unit preparation.*
  - ➤ *Assist with fire effect plot work.*
  - ➤ *Support mechanical hazardous fuel reduction projects.*
- *NPS - As an interagency resource, the modules are available nationally throughout the fire season. Each module is comprised of a module leader, assistant leader and three to eight module members. See the Fire Use Module Operation Guide for specifics. Modules are mobilized and demobilized through established ordering channels through the GACCs.*

Agency Certified Positions

As a supplement to the qualifications system, certain agencies have identified the additional positions of Prescribed Fire Burn Boss 3 (RXB3) – see Chapter 18; Engine Operator (ENOP) – see Chapter 15; and Chainsaw Operators and Fallers listed below.

Chainsaw Operators and Fallers

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

- Successful completion of S-212, including the field exercise, or those portions of S-212 that 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, including annual refresher training.
- The individual tasks required for completion of the "A" Task Book and the final certification for the "A" level saw operators must be certified or signed by a qualified "B or C" level saw operator.
- The individual tasks required for completion of the "B" Task Book must be evaluated by a qualified "B" or "C" level operator. The Final Evaluator Verification for "B" level operators must be signed by a "C" level saw operator.

- The individual tasks required for completion of the "C" Task Book must be evaluated by a qualified "C" level operator. The Final Evaluator Verification for "C" level operators must be signed by a state approved "C" level certifier.
- Each of the states/regions will certify and maintain a list of their current "C" class saw operators who they approve to be "C" class certifiers.
- The certification of "C" class certifiers will remain the responsibility of the Agency Administrator or delegate.
- All fire related (red carded) saw operation qualifications are maintained through the IQCS system and will have a currency of five years.
- All chain saw operators will attend annual chain saw refresher training specified and documented by the local unit.
- ***FS - FS direction can be found in FSH 5109-17 and FSH 6709.11.***

Chapter 15
Firefighting Equipment

Introduction
The agency wildland fire program equipment resources include engines, dozers, water tenders, and other motorized equipment for fire operations.

Policy
Each state/region will comply with established standards for training, equipment, communications, organization, and operating procedures required to effectively perform arduous duties in multi-agency environments and various geographic areas. Approved foam concentrate may be used to improve the efficiency of water, except near waterways where accidental spillage or over spray of the chemical could be harmful to the aquatic ecosystem, or other identified resource concerns.

Driving Standard
Refer to the current driving standards for each individual agency in Chapter 06.

Firefighting Engines

Operational Procedures
All engines will be equipped, operated, and maintained within guidelines established by the Department of Transportation (DOT), regional/state/local operating plans, and procedures outlined in *BLM Manual H-9216, Fire Equipment and Supply Management,* or agency equivalent. All personnel assigned to agency fire engine modules will meet all gear weight, cube, and manifest requirements specified in the *National Mobilization Guide*.

Fire Engine Module Staffing
Engines will be staffed to meet NWCG standards. An ENGB will be with every engine, and the minimum staffing is two individuals for Type 6 and Type 7 modules. For Type 3, 4, and 5 engines, minimum staffing is three individuals, including a Single Resource Boss for each engine.

- ***BLM - Staffing levels -*** *Type 6 and 7 engines will have a minimum crew size of two. This crew will consist of one ENGB with ICT5 qualifications and one Engine Module Member.*
  - ➤ ***BLM -*** *An engine operating as a single resource will have a minimum of one ENGB who is qualified as an ICT5 and one Crew Member.*
  - ➤ ***BLM -*** *If configured with more than one engine module for local assignments, engines may be staffed by one Engine Operator (ENOP) and one Engine Module Member, provided an Engine Module Leader is assigned to the group for operational supervision.*

- **BLM - Staffing levels -** *Type 3, 4, and 5 engines will have a minimum crew size of three:*
  - ➢ *An engine operating as a single resource will have a minimum of one ENGB/ICT5 with one ENOP, and one or more Engine Module Members.*
- **NPS - Staffing levels -** *Engines of any type when responding to off-park assignments, will be staffed by an ENGB and the appropriate number of Module Members. Type 6 or 7 engines may be supervised by an ENOP on in-park fires only. For an engine supervised by an ENOP when used for initial attack (on in-park fires only), the ENOP must also be minimally ICT5 qualified. Type 3, 4, or 5 engines, regardless of assignment location, will be minimally supervised by an ENGB.*
- **NPS -** *Type 6 and 7 engines will have a minimum crew of two – an ENGB or ENOP (in-park only), and an Engine Module Member.*
- **NPS -** *Type 3, 4, or 5 engines will have a minimum crew size of three, an ENGB, an ENOP and one Engine Module Member; or an ENGB and two Engine Module Members.*
- **NPS - WCF/Non-WCF, Additional requirements**
- **NPS -** *WCF engines are identified below.*
- **NPS -** *All engines will be typed in accordance with the specifications identified in the IRPG. Minimum engine staffing requirements:*
- *Approved Working Capitol Fund (WCF) Type 6 or 7 engines during the defined fire season is 3 personnel effective 7 days per week.*
- *Approved Working Capitol Fund (WCF) Type 3, 4, or 5 engines during the defined fire season is 5 personnel effective 7 days per week.*
- *Non-WCF engines (or WCF engines outside defined fire season), Type 6 or 7 engines is a minimum of 2.*
- *Non-WCF engines (or WCF engines outside defined fire season), Type 3, 4, or 5 engines is a minimum of 3.*

Performance Requirements for Engine Modules
The following performance requirements are based on the daily duties of engine module personnel and may exceed the standards listed in the *Wildland Fire Qualifications Subsystem Guide (NWCG 310-1).*
The following standards are in addition to the minimum requirements found in the *Wildland Fire Qualifications Subsystem Guide (NWCG 310-1).*

Engine Module Member (EMM)
Minimum Qualifications
FFT2
Additional Required Training
None
Additional Performance Requirements
Apparatus Inventory
Ability to maintain inventory in a constant state of fire readiness.

Tool and Equipment Standards

Ability to use, check condition of, and identify repair/replacement needs as identified in *Firefighters Guide NFES 1571*. All tools and equipment must meet refurbishment standards specified in *Fire Equipment Storage and Refurbishment NFES 2249.*

Hose Packs

Working knowledge of hose pack types and how to safely and efficiently deliver water to the fire.

Types of Hose

Working knowledge of hose identification and use. See *Wildland Fire Hose Guide NFES 1308.*

Fittings/Nozzles

Ability to identify fittings and nozzles, understand use, capabilities, limitations, and perform maintenance.

- **FS -** *The FS recommends the performance requirements for each Engine Module Member.*

Engine Operator (ENOP)

The agencies have established an ENOP position and associated Task Book to meet field needs.

Minimum Qualifications

CDL (where appropriate for the GVW), FFT1

Additional Required Training

L-280- Followership to Leadership

Recommended Training

PMS 419 BLM Engine Operator Course

Additional Performance Requirements

Same as for the Engine Module Member, plus the following:

Stationary Pumping

Ability to set up stationary pumping operations to safely and efficiently deliver water to a fire through a hoselay.

Mobile Attack

Ability to set up and perform mobile attack safely and efficiently. Understand roles and responsibilities associated with multi-engine mobile attack.

Urban Interface

Understand strategies and tactics recognize hazards, and know BLM policy with regards to urban interface situations.

Interface with Municipal Fire Apparatus

Understand capabilities and limitations and how to effectively interface with equipment. Be aware of the pressures and flow rates used with municipal apparatus and their potential effects on wildland fire equipment.

Engine Protection

Ability to protect engine by positioning in a fire safe area; set up and use engine protection lines.

Pump Theory and Operation

Ability to effectively apply this knowledge to fire situations most commonly encountered. Must be able to troubleshoot pump/valve problems in various fire and drill situations.

Pump Package Maintenance Procedures

Ability to maintain pump package per manufacturer's/BLM standards. Pump package must be in a constant state of fire readiness. Ability to troubleshoot equipment problems and develop solutions/repair needs. Ability to perform required pump test to ensure pump/plumbing are operating to specifications, and maintain log.

Hydraulics

Ability to effectively apply calculations and formulas relating to fire hydraulics, including friction loss. Must understand pump capabilities and limitations (GPM, PSI, elevation gain and loss, etc.)

Simple Hoselays

Ability to perform initial layout and extend a simple hoselay delivering water to fire safely and efficiently.

Progressive Hoselays

Ability to perform initial layout and extend a progressive hoselay delivering water to fire safely and efficiently.

Hoselay Troubleshooting

Ability to troubleshoot hoselay problems and develop solutions.

Foam Equipment Maintenance

Ability to flush the engine foam proportioner according to the manufacturer's recommended procedures.

Foam

Ability to efficiently produce different types of foam from nozzle(s).

Drafting Theory

Ability to draft from external source and fill engine tank, and draft from external source and deliver water through a hoselay.

Hydrant Use

Understand and apply the safe and effective operation of fire hydrants and be able to set up an engine for hydrant water delivery.

Vehicle Maintenance Procedures

Ability to maintain vehicle per manufacturer's/BLM standards, keeping vehicle in a constant state of fire readiness. Ability to troubleshoot equipment problems, develop solutions/repair needs.

Winterization

Ability to properly winterize apparatus and pump package to protect from potential freeze damage.

Radio Use

Understand and apply BLM policy regarding radio use and protocol; be proficient at radio programming.

- ***FS -*** *The FS recommends the performance requirements for each engine ENOP.*

- ***BLM - Engine Module Leader (EML)-Agency Specific Position***

  Minimum Qualifications

  ➢ *ICT4, ENOP, ENGB.*
  ➢ ***BLM - Additional Required Training***
    I-200, S-200, S-231, S-234, S-260, S-270, S-390, L-381 (Leadership and Organizational Development) or equivalent.
  ➢ ***BLM - Additional Performance Requirements***
  ➢ ***BLM - Same as for ENOP, plus the following:***
  ➢ ***BLM - Supervision***
    The Engine Module Leader is responsible for the overall operation of the module's activities. Directs module personnel during fire preparedness review, suppression activities, fuels management, and project work. Provides direction to the module commensurate with members' qualifications and experience.
  ➢ ***BLM - Equipment Capability***
    Has a thorough knowledge of tactical equipment capabilities and limitations, and their relationship to fuels, topography, and fire behavior.
  ➢ ***BLM - Training***
    Provides and facilitates training of personnel through mentoring, formal and informal instruction. Identifies training needs (IDP) and performs Task Book management for module members.
  ➢ ***BLM - Administration***
    Performs administrative duties relating to the operation of the module, including (but not limited) to time and attendance, procurement activities (credit card), personnel management (recruitment and hiring), IDP development, and property management.
  ➢ ***BLM - Coordination***
    Develops and maintains working relationships with BLM counterparts, cooperators, other agencies, general public, and media.
  ➢ ***BLM - Safety***
    Ensures compliance with safety procedures and policies and mitigates potentially hazardous situations.
  ➢ ***BLM - Physical Fitness***
    Train, test, and evaluate Module Members to ensure that required physical fitness standards are met.
  ➢ ***BLM - Communication***
    Ensures that Module Members receive situational briefings. Provides briefings during daily work activities, fireline duties, and fireline transitions. Solicits and provides feedback.
  ➢ ***BLM - Equipment Development & Evaluation***
    Identifies problems with BLM equipment and suggests possible solutions. Provides feedback to equipment development groups. Tests and evaluates prototype equipment.

- ***NPS/FS -*** *The NPS/FS recommends the performance requirements for the Engine Module Leader.*

Engine Standards

Engine typing

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

Engine Water Reserve

Engine Operators will maintain at least 10 percent of the pumpable capacity of the water tank for emergency engine protection and drafting.

Chocks

At least one chock will be carried on each engine and will be properly utilized whenever the engine is parked or left unattended. This includes engine operation in a stationary mode without a driver "in place."

Fire Extinguisher

All engines will have at least one 5 lb. ABC-rated (minimum) fire extinguisher, either in full view or in a clearly marked compartment.

First Aid Kit

Each engine shall carry, at a minimum, a fully equipped 10-person first aid kit.

Gross Vehicle Weight (GVW)

It is each agencies policy to have an annually certified weight slip in the vehicle at all times. Operators of engines and water tenders must ensure that the maximum certified GVW is never exceeded, including gear, personnel and fuel. If the proper number of personnel are not available during the weighing the NFPA 1906 standard of 250 pounds for each person and their personal gear may be used to calculate the loaded weight.

Speed Limits

Posted speed limits will not be exceeded.

Lighting

All new orders for fire engine apparatus will include an overhead lighting package in accordance with statewide standards. It is recommended that the lighting package meet NFPA 1906 standards. Engines currently in service may be equipped with overhead lighting packages.

Colors

Lighting packages containing "blue" lights are not allowed and must be replaced. Blue lights have been reserved for law enforcement and must not be used on fire vehicles. A red, white, and amber combination is the accepted color scheme for fire.

Light Use

While off-road and/or during suppression, prescribed fire or other emergency activities, headlights and taillights shall remain illuminated at all times while the vehicle is in operation. In addition, overhead lighting (or other appropriate emergency lights) shall be illuminated whenever visibility is reduced to less than 300 feet.

- ***NPS -*** *Vehicle Color and Marking. Vehicles dedicated to wildland fire activities shall be white in color and have a single four-inch wide red*

*reflective stripe placed according to NFPA 1906 (NFPA 1906 7-6.2 1995
edition). The word "FIRE" red with white background color will be
centered on the front fenders. "FIRE" may also be placed on the front and
rear of the vehicle. The NPS Arrowhead will be placed on the front doors.
The size and placement of the arrowhead will be as specified in RM-9. An
identifier will be placed on the vehicle according to local zone or GACC
directions. Roof numbers will be placed according to local zone
procedures.*

On-Board Flammable Liquid Storage

OSHA regulations state, "*only approved metal containers, of not more than 5
gallons capacity, having a spring-closing lid and spout cover and so designed
that it will safely relieve internal pressure when subjected to fire exposure, be
used for storing or transporting flammable liquids*" (29 CFR 1910.106). To
comply with OSHA requirements and agency directives, only OSHA approved,
type II metal safety cans should be used. Approved are the 2-in-1 polyethylene
containers (Dolmars) used to fill chainsaws and steel Jerry cans that are used as
a fuel tank for Mark III pumps. Cans must be clearly marked as to their content
(e.g., gasoline, diesel, drip torch fuel). Dolmars must also be marked with the
fuel oil ratio and the date of the saw gas mix so its suitability for use can be
easily determined.

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 gpm test to ensure the pump/plumbing system is operating
at desired specifications. Specifications can be found at
http://web.blm.gov/internal/fire/textdocs/specs.pdf

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 AA.

Water Tenders

Water Tender Operators Performance Standards
- **Water Tender Operator (Support)**
- **Qualifications:** CDL (tank endorsement).
- **Staffing:** A water tender (Support) may be staffed with a crew of one (a
  driver/operator) when it is used in a support role as a fire engine refill unit
  or for dust abatement. These operators do not have to pass the WCT but
  are required to take annual refresher training.

- **Water Tender Operator (Tactical)**
  Tactical use is defined as "direct fire suppression missions such as pumping hoselays, live reel use, running attack, and use of spray bars and monitors to suppress fires."
- **Qualifications:** ENOP, CDL (tank endorsement).
- **Staffing:** Tactical water tenders will carry a minimum crew of two- one ENOP and one Engine Module Member.
- *FS – The FS recommends the performance requirements for support and tactical water tenders.*

Other Water Tenders

Contract water tenders will meet the specifications identified in their agreement/contract. All water tenders from other agencies will meet the requirements of their agency.

Dozers

Policy

Agency personnel assigned as dozer operators will meet the training standards for a Firefighter 2 (FFT2). This includes all safety and annual refresher training. While on fire assignments, all operators and support crew will meet PPE requirements including the use of aramid fiber clothing, hard hats, fire shelters, boots, etc.

- *FWS – Dozer Operators must be a Certified FWS Heavy Equipment Operator and must complete Intermediate Fire Behavior (S-290).*

Physical Fitness Standards

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

Operational Procedures

- Agency owned and operated dozers will be equipped with programmable two-way radios, configured to allow the operator to monitor radio traffic.
- Agency dozers with non-red carded operators and all contract dozers 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 boss or an agency-supplied radio. Contract dozers will meet the specifications identified in their agreement/contract.
- Operators of dozers 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)

Policy

- Specific authorization for ATV use is required. Refer to your state/regional or local policy.
- All personnel authorized to operate an ATV must first complete agency specific or manufacturer training in safe operating procedures and appropriate PPE.
- ATV refresher training is required every 5 years.
- Required PPE includes helmet (DOT, ANSI-90, or SNELL M-95 approved), eye protection (goggles, face shield, or safety glasses), gloves, long sleeves, long pants, and leather boots (minimum 8" height).
- The standard wildland hardhat will not be worn while operating an ATV.
- No passengers will be carried except in emergency situations.
- Operating speed will be appropriate for the conditions and terrain.
- ATV training shall include safe operation while carrying loads.
- Loads shall be mounted and secured as to not affect the vehicle's center of gravity.
- Load weights shall not exceed manufacturer's recommendations.
- A risk assessment must be completed prior to traversing steep slopes with operator's abilities and vehicle capabilities considered.
- *FWS/NPS - Exceptions to the above policy are:*
  - *SPH-4, SPH-5, or other comparable flight helmets meet the DOT requirements for a motorcycle helmet and may be used in lieu of.*
  - *Standard fire hardhats or flight helmets are required for ATV use when on the fireline under low operating speeds. (Motorcycle helmets have not yet been tested and approved for fireline use).*
  - *Chinstraps must be used.*
  - *A motorcycle helmet or flight helmet will be required when operating to and from fire management activities and while loading and unloading the ATV.*
  - *Refresher training is not required.*
- *FS - Refer to Health and Safety code 6709-17.*
- *FWS - Service Manual 241 FWS7 Firefighting. All Terrain Vehicle operations shall follow the detailed guidelines in the Service's All Terrain Vehicle Training Guide.*

Vehicle Cleaning/Noxious Weed Prevention

To reduce the transport, introduction, and establishment of noxious weeds or other biological contaminants on the landscape due to fire suppression activities, fire suppression and support vehicles should be cleaned at a predestinated area prior to leaving the incident. Onsite fire equipment should be used to thoroughly clean the undercarriage, fender wells, tires, radiator, and exterior of the vehicle. The cleaning area should also be clearly marked to identify the area for post fire control treatments, as needed.

Fire Remote Automated Weather Stations

Fire Remote Automated Weather Stations (FRAWS) are portable weather stations that pack up into a single container and may utilized in any location to monitor local weather conditions. FRAWS are intended for use on or near the fireline and are rapidly relocated to points desired by Fire Behavior Analysts (FBAs) for real time weather data. Fire Managers and FBAs use RAWS weather data to predict fire behavior, prescription times, fire weather forecasting, canyon, and ridgetop winds.

National resource FRAWS systems are cached at National Interagency Fire Center (NIFC) and may be ordered through standard equipment resource ordering systems. Maintenance and recalibration of these stations must be coordinated with the NIFC Remote Sensing/Fire Weather Support Unit (RSFWSU).

Ignition Devices

Aerial Ignition Devices

Information on types of aerial ignition devices, operational guidelines and personnel qualifications may be found in the *Interagency Aerial Ignition Guide*

Ground Ignition Devices

- ***BLM -*** *Guidance and direction for use and procurement of approved ground ignition equipment and the transportation and dispensing of drip torch fuel can be found in: Instruction Memorandum No. OF&A 2003-025, 04/14/0, Drip Torch Fuel Transportation and Dispensing Directions.*
- ***NPS -*** *Agency direction may be found in the 04/04/03 Memorandum Y14 (9560) Aerial and Ground Ignition Equipment.*
- ***FWS -*** *specific information on ignition devices may be found in the January 28, 2003 Memorandum: "Direction for Use and Purchase of Aerial and Ground Ignition Equipment."*
- ***FS -*** *direction is found in FSH5109.32a and 6709.11.*

Chapter 16
Communications

Radio Communications
Radio communications provide for the flow of tactical information needed for the command/control of personnel and resources.

Policy
Agency specific policies for radio communications may be found in:

- *Department of Interior, Department Manual, Radio Communications Handbook (377 DM).*
- *USDA Forest Service Handbook (FSH 6609.14 chapters 10-40 and Forest Service Manual (FSM) 6600 Systems Management Chapter 6640 - Telecommunications.*

Radio Contracts
Contracts specifying the requirements for radios have been let and may be found for the:

- Department of Interior Project 25 Digital Radio contract at
  - http://www.blm.gov/natacq/IDIQ/index.html.
- USDA Forest Service National Radio Contract at
  - http://www.fs.fed.us/business/2002%20awards.

- **BLM -** *New digital radios used in fire operations are tested by the National Wireless Technology Support Unit (NWTSU) for fire approval. The testing is conducted to verify that the radios will withstand the rugged work environments specific to fire and that the radios have operational features and programmability options to meet fires needs.*
- **BLM -** *Currently the Thales Racal P25 Handheld and the EF Johnson 5100 P25 Handheld have been approved for fire use by the BLM. Approved radios have software version requirements and hardware upgrades that must be completed prior to use on fire assignments.*
- **BLM -** *Testing of additional radios by the manufacturers is in progress.*
- **FS/FWS/NPS -** *The Thales Racal, EF Johnson 5100, Motorola XTS5000, Relm/Bendix King DPH, and Datron Guardian handhelds have all been approved for fire use by the National Interagency Incident Communications Division (NIICD).*

For information on software and hardware requirements and approved radios, contact the NWTSU at (208) 672-7880 ext. 103.

Dispatch Recording Devices
- **BLM -** *Recording devices will be used by each BLM dispatch office or an interagency office dispatching BLM resources. The purpose is to record radio communications during emergency operations. This will ensure that*

in the event of an accident, investigators will be provided with an accurate
record of events during reviews of those incidents.

- **BLM -** *If there is an accident or event that requires an investigation from*
  the state or national office, the recording covering that time period will be
  included in the investigation file.

Radio Frequency Management

- FM frequency assignments for normal operations or initial attack ground
  operations are made on a permanent basis and are requested through the
  state office ISO frequency manager to the Washington Office frequency
  manager.
- The NIFC Communications Duty Officer (CDO) coordinates and assigns
  incident frequencies at the national level. They will also assign
  Communications Coordinators (COMC) when necessary to support a
  specific Geographic Area(s). See the National Mobilization Guide for
  additional information.
- Mutual-aid agreements for frequency sharing can be made at the local
  level.
- A mutual-aid frequency sharing agreement is valid only in the specific
  locale it originates in. These agreements do not authorize the use of a
  shared frequency in any other area. NIFC national fire frequencies are not
  to be used for these agreements.
- Do not use a frequency unless authorized to do so by communications
  personnel at the local, state, regional or national level.
- Initial attack AM air operations frequencies will be assigned by the NIFC
  CDO and FM air operations frequencies will be facilitated/assigned by the
  NIFC CDO. These assignments will be on an interagency basis and
  coordinated with the GACC's.
- On Type 1 or 2 incidents, the Communications Unit Leader (COML) will
  request, assign, and report to the NIFC CDO/COMC, all frequencies used
  on the incident. This would include the request and assignment of aircraft
  frequencies. The ICS-205 and ICS-220 are always a part of the Incident
  Action Plan (IAP) and distributed at every operational period briefing.
- The COML will contact the NIFC CDO, or the COMC if assigned, for
  additional FM and AM frequencies. Requests for aviation frequencies will
  be placed through established ordering channels through NICC and will be
  filled by the NIFC CDO or COMC. COML's will ensure that the host
  agency Aviation Dispatcher and the NIFC CDO or COMC has the current
  ICS-220 for their incident.

- When incident management teams are pre-positioned in a-geographic area, consideration will be given to pre-positioning a system for immediate deployment by the team(s) when assigned to an incident. Pre-positioning will be based on equipment availability and/or priorities established by NMAC at NIFC.
- Prepositioned in a field unit or geographical area, consideration will be given to also repositioning a radio kit for immediate use by the team when assigned.
- Frequencies for Type 1 and Type 2 incidents are assigned through the National Interagency Incident Communications Division (NIICD) located at NIFC. The CDO is responsible for this function.
- During severe situations and/or when there are significant numbers of large incidents, additional frequencies can be assigned. These are temporary assignments, and are requested by the NIFC CDO from the Washington Office (Spectrum) managers and given by the CDO to the incident. This applies to frequencies for command, ground tactical, and aviation operations.
- Additional frequencies are provided in the following circumstances:
  - ➢ The NIICD national frequencies are all committed within a specific geographic area.
  - ➢ The requests continue for frequencies to support new incidents within a specific complex.
  - ➢ The fire danger rating is extreme and the potential for additional new incidents is high.

Pre-assigned National Frequencies

National Air Guard - 168.625 MHz - A National Interagency Air Guard frequency for government aircraft assigned to incidents. It is used in emergency communications for aviation. A separate aircraft priority receiver is required to permit continuous monitoring. Transmitters on this frequency should be equipped with an encoder on 110.9 Hz. 168.625 is restricted to the following use:

- Air-to-air emergency contact and coordination.
- Ground-to-air emergency contact.
- Initial call, recall, and re-direction of aircraft when no other contact frequency is available.

National Flight Following - 168.650 MHz

The National Interagency Air Net frequency is used for flight following of official aircraft. The intent is not to use this frequency for incident operations. All dispatch centers/offices will monitor the national fight following frequency at all times. 168.650 is restricted to the following use:

- Flight following, dispatch, and/or re-direction of aircraft.
- Air-to-ground and ground-to-air administrative traffic.
- Not authorized for ground-to-ground traffic.

National Interagency Air Tactics - 166.675 MHz, 167.950 MHz, 169.150 MHz, 169.200 MHz, 170.000 MHz

- Frequencies used to support air-to-air or ground-to-air communications on incidents west of the 95th meridian. These frequencies shall be used for air-to-air and ground-to-air communications only.
  - ➢ Exception: Pacific Southwest Geographic Area: 166.675 MHz, 169.150 MHz, and 169.200 MHz will be used for air-to-air only; 170.000 MHz will be used for ground-to-air only.
- Interagency geographic area coordination centers assign these frequencies. Assignment must be coordinated through the NIFC CDO.
- Transmitter power output of radios installed in aircraft operating on these frequencies shall be limited to 10 watts.

Base stations and repeaters are prohibited on these frequencies.

National Interagency Airtanker Initial Call - 123.975 MHz

The national interagency frequency assigned to all airtanker bases for their exclusive use. No other use outside of airtanker bases is authorized.

National Government All-Call Frequencies - 163.100 MHz and 168.350 MHz

For use anywhere, any time. They are good choices as travel frequencies for strike teams moving between assignments. They are available for ground tactical frequencies during initial attack or incident operations. They are not to be used for air-to-ground operations.

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

Incident Radio Support

All NIRSC cache communications equipment shall be returned to NIICD at NIFC immediately after the incident is turned over to the jurisdictional agency.

No cache communication equipment shall be moved from one incident to another without being first returned to NIFC for refurbishment. However, equipment unused and red-sealed may be moved, if approval is given by the NIFC CDO or COMC.

Military Communications on an Incident

Military units assigned to an incident already have radios. Each battalion is assigned 80 handheld radios. Sixteen of these radios are used by military crew liaisons. Intercrew communications within a military unit is provided by the military on its radios using its frequencies. All frequency assignments at the incident will be made by the COML in accordance with the ICS-205.

Some active military and guard units have aviation VHF-FM radios compatible with civilian systems. Other units are adapting their aircraft for the civilian

radios and can be easily outfitted prior to dispatch to an incident. A limited
number of wiring harnesses are available at NIFC for those military aircraft that
do not have civilian VHF-FM capability. The wiring harnesses and radios will
be resource ordered by the incident. The resource order will include a request
for trained personnel from NIICD to perform the installation of the equipment.
Equipment will not be sent without trained and qualified personnel to install it.

Cellular Communications/Satellite Phone Communication

Cellular/satellite telephones will not be used to communicate tactical operations,
unless they are the only means possible. Cellular/satellite telephones are not to
be used for flight following in lieu of normal flight-following protocols.

Phone communication can be used for logistical purposes.

Effective Radio Use

- If personnel do not follow basic guidelines and use the system properly, the best system, even with full coverage, will not meet the requirements of the situation or incident.
- All emergency communications equipment should be kept away from sources of possible interference. Existing radio communications sites are the best example of where not to place this equipment.
- Keep the antenna as high as possible and in a vertical position.
- Canting or tilting the radio 45 degrees lowers the effective transmitting power by half, so that a two-watt radio performs as a one-watt radio. Use of a chest harness reduces the effectiveness of the radio since most harnesses hold the radio at a 45 degree angle. A decrease in transmitting and receiving capability also occurs due to shielding from your body.
- Frequencies are a finite resource. There are a limited number available for initial attack and/or incident communications. Care must be taken how and where they are assigned to minimize the possibility of interference.
- The more channels that are scanned, the busier the radio receiver becomes. In the case of inexperienced radio users, the communication system will appear to be overloaded because the radio is never quiet.
- Use clear text language: use of codes potentially confuses interagency communications.
- Assistance with radio operations, troubleshooting and deficiency reports can be found at http://radios.nifc.gov/.

1   **Chapter 17**
2   **Aviation Operations/Resources**
3

4 **Purpose and Scope**
5 Aviation managers are responsible for all aircraft missions. Policy and
6 standards will ensure that aviation services are cost effective, minimize risk, and
7 benefit the agency and the public.
8
9 Aviation management provides a service for the customer, whether the customer
10 is the user of public resources or an activity within the organization. Clear
11 direction and good management practices can reduce risks inherent to aviation
12 missions.
13
14 The emphasis for any aviation mission is safety, minimizing risk, planning,
15 supervision, and evaluation.
16

17 **Organizational Responsibilities**
18

19 **Aviation Management Directorate**
20 The Aviation Management Directorate (AMD), of the National Business Center,
21 is responsible for aviation policy development, aircraft acquisition, and
22 maintenance management within the agencies of the Department of the Interior
23 (DOI). AMD has no operational responsibility. AMD provides aviation safety
24 program oversight, accident investigation, and aircraft and pilot card inspection.
25 •   **BLM -** *National Aviation Office (NAO) - NAO develops BLM policy,*
26   *procedures, standards, and maintains functional oversight and facilitates*
27   *interagency coordination for all aviation activities. The principal goals*
28   *are safety and cost-effectiveness. The NAO supports BLM activities and*
29   *missions, including fire suppression, through risk management. Refer to*
30   *BLM Manual 9400 for aviation policy and guides. (Refer to 112 DM 12*
31   *for a list of responsibilities.)*
32 •   **FS -** *National Aviation Officer (NAO) is responsible to the Assistant*
33   *Director of Fire and Aviation Management (Aviation) for the management*
34   *and supervision of theNational Headquarters Office detached Boise*
35   *Aviation Unit. The NAO provides leadership, support and coordination for*
36   *national and regional aviation programs and operations. (Refer to FSM*
37   *5704.22 for list of responsibilities.)*
38

39 **State/Regional Office**
40 A State/Regional Aviation Manager (S/RAM) is located in each state/regional
41 office. S/RAMs implement aviation program objectives and directives to
42 support the agency mission and state/region objectives. Several states/regions
43 have additional support staff, aircraft dispatchers, and/or pilots assigned to
44 support aircraft operations and to provide technical expertise. A state/regional
45 aviation operations and management plan is required to outline the state/region's

aviation program objectives and to identify state/region-specific policy and procedures.

- *FS - Local Level - 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)*
- *BLM - Local Level - Unit Aviation Managers (UAMs) have the responsibility for aviation activities at the local level, including aviation mission planning, safety measures, supervision, and evaluation. UAMs assist Field Office Managers with risk assessment/management and cost analysis.*
- *FS - Regional Aviation Officers (RAOs) are responsible for directing and managing Regional aviation programs in accordance with the National Aviation Safety Plan. (Refer to FSM 5720.47c for list of responsibilities.)*
- *NPS - Organizational responsibility refer to DO-60, RM-60.*

Aviation Information Resources

Aviation reference guides and aids for agency aviation management are listed for policy, guidance, and specific procedural requirements.

- *BLM - 9400 Manual Appendix 1, BLM Standard Operations Procedures, National Aviation Plan. (In all cases DOI policy Department Manuals [DMs], Operational Procedural Memoranda [OPMs], and BLM policy will take precedence.)*
- *FWS - Service Manual 330-339, Aviation Management and IHOG.*
- *NPS - RM-60 Aviation Management Reference Manual and IHOG.*
- *FS - FSM 5700,FSM 5709.14, FSH 5709.16 and IHOG.*

In addition, safety alerts, instruction memoranda, information bulletins, incident reports, and other guidance or information are issued as needed.

An up-to-date library with aviation policy and procedural references will be maintained at all permanent aviation bases, dispatch, and aviation management offices.

Aviation Safety

Risk Assessment and Risk Management

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

Aviation missions always have some degree of risk. The four sources of hazards are methods, medium, man, and machine. Managing risk is a 5-step process:

- Identify hazards associated with all specified and implied tasks for the mission.
- Assess hazards to determine potential of occurrence and severity of consequences.
- Develop controls to mitigate or remove risk, and make decisions based on accepting the least risk for the best benefit.
- Implement controls - (1) education controls, (2) physical controls, and (3) avoidance controls.
- Supervise and evaluate - enforce standards and continuously re-evaluate their effectiveness in reducing or removing risk. Ensure that controls are communicated, implemented, and enforced.

THE RISK MANAGEMENT PROCESS
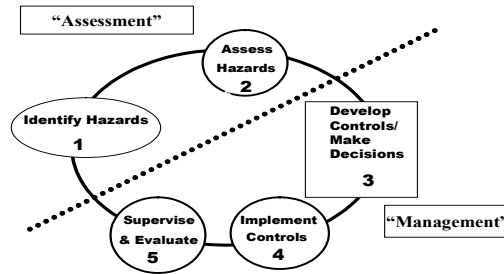
Aviation Watch Out Situations

As part of the risk management process, each aviation manager and employee should ask the following questions to develop controls and make good decisions.

- Is this flight necessary?
- Who is in charge?
- Are all hazards identified and have you made them known?
- Should you stop the operation or flight due to change in:
  - ➢ Conditions?
  - ➢ Weather?
  - ➢ Communications?
  - ➢ Turbulence?
  - ➢ Confusion?
  - ➢ Personnel?
  - ➢ Conflicting Priorities?
- Is there a better way to do it?
- Are you driven by an overwhelming sense of urgency?
- Can you justify your actions?
- Are there other aircraft in the area?

- Do you have an escape route?
- Are any rules being broken?
- Are communications getting tense?
- Are you deviating from the assigned operation or flight?

This list is found in the *IRPG*.

Mission Planning/Hazard Mitigation

Pre-flight planning will reduce risks on any mission. Flight planning and scheduling require the following points be addressed:

- Completed and signed Aircraft Flight Request/Schedule or an Incident Resource Order
- Cost analysis
- Assessment and mitigation of hazards
- Selection of aircraft
- Scheduling of pilots and aircraft
- Pre-flight briefings and post-flight debriefings

Aviation Safety Support

During high levels of aviation activity it is advisable to request an Aviation Safety Assistance Team (ASAT). An ASAT's purpose is to assist and review helicopter and/or fixed wing operations on ongoing wildland fires. They should operate under a delegation of authority from the appropriate State/Regional Aviation Manager(s). Formal written reports will be provided to the appropriate manager(s). A team should consist of the following:

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

Aircraft and Pilot Carding

AMD/FS are responsible for inspecting and approving all aircraft and pilots utilized by the agencies. State owned aircraft and state agency pilots may be approved by AMD and/or the FS. These pilots are not required to carry a card; however, they must have in their possession an approval letter. The letter of authorization or Memorandum of Understanding is agency specific and valid only for each agency that is a signatory of it. With the exception of a life-threatening situation, no employee will fly with unapproved pilots or in unapproved aircraft.

The unit dispatcher or UAM (NPS – fixed wing/helicopter manager) is responsible for checking and verifying pilot and aircraft cards for mission planning and procurement. The employee is responsible for checking pilot and aircraft cards or letters of approval before the flight.

Only the agency issuing authority can suspend or revoke a card. However, any employee can suspend operations that they consider unsafe.

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 NICC; National Guard resources are utilized through local or state MOUs.

Aviation Safety Briefing

Every passenger must receive a briefing prior to each flight. The briefing is the responsibility of the Pilot in Command (PIC) but may be conducted by the pilot, flight manager, helicopter manager, fixed-wing base manager, or an individual with the required training and experience to conduct an aviation safety briefing. Refer to the *Incident Response Pocket Guide (IRPG) - Aviation User Checklist*. The briefing will be specific to the mission, and will include (but is not limited to) the following:

- Pilot's card - qualified and current for aircraft type and mission?
- Aircraft card - aircraft approved for mission?
- Flight Plan/Following - filed (FAA/Agency/Bureau)?
- Personnel Protective Equipment (PPE) - required for missions - available and worn by all passengers and pilot?
- Pilot briefed on mission objectives/parameters of flight and known flight hazards?
- Pilot briefing to passengers will include:
  - ➢ Aircraft approach and departure paths
  - ➢ Seat belt - use and adjustment
  - ➢ Smoking rules
  - ➢ Fire extinguisher(s) - location and use
  - ➢ Emergency exits - location and use
  - ➢ Survival equipment - location and use
  - ➢ ELT - location and use
  - ➢ Other emergency procedures, e.g. fuel and electric shutoff
  - ➢ Radio operations
  - ➢ Equipment or tools - never store under seats while transporting passengers

Aviation Hazard

An aviation hazard is any condition, act, or circumstance that compromises the safety of personnel engaged in aviation operations. All personnel are responsible for hazard identification and mitigation. This includes pilots, flight crew personnel, aviation managers, incident air operations personnel, and passengers. Aviation hazards include the following:

- Deviations from policy, procedures, regulations, and instructions.
- Improper hazardous materials handling and/or transport.

- Airspace conflicts/flight following deviation.
- Deviation from planned operations.
- Failure to utilize PPE or Aviation Life Support Equipment (ALSE).
- Failure to meet qualification standards or training requirements.
- Extreme environmental conditions.
- Improper ground operations.
- Improper pilot procedures.
- Fuel contamination.
- Unsafe actions by pilot, air crew, passengers, or support personnel.

Aviation hazards also exist in the form of wires, low-flying aircraft, and obstacles protruding beyond normal surface features. Each office will post, maintain, and annually update a "known aerial hazard map" for the local geographic area where aircraft are operated, regardless of agency jurisdiction. This map will be posted and used to brief flight crews.

SAFECOM
The Department of Interior (DOI) and the US Forest Service (FS) have an incident/hazard reporting form called The Aviation Safety Communiqué (SAFECOM). The database www.safecom.gov fulfills the Aviation Mishap Information System (AMIS) requirements for aviation mishap reporting for the DOI agencies and the US Forest Service. Categories of reports include incidents, hazards, maintenance, and airspace. The system uses the SAFECOM Form OAS-34 or FS-5700-14 to report any condition, observation, act, maintenance problem, or circumstance with personnel or aircraft that has the potential to cause an aviation-related mishap. The SAFECOM system is not intended for initiating punitive actions. Submitting a SAFECOM is not a substitute for "on-the-spot" correction(s) to a safety concern. It is a tool used to identify, document, track and correct safety related issues. A SAFECOM does not replace the requirement for initiating an accident or incident report.

Any individual (including cooperators) with knowledge of an incident/hazard should complete a SAFECOM. The SAFECOM form should be entered directly on the internet at www.safecom.gov or can be faxed to the Aviation Management Directorate, Aviation Safety @ (208)433-5069 or FS at (208) 387-5735 ATTN: SAFETY. Electronic cc copies are automatically forwarded to the National, Regional, and State 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 1(888) 464-7427 or the

most expeditious means possible. Initiate the appropriate unit Aviation Mishap
Response Plan.

Incidents

An aircraft incident results in very minor damage to the aircraft, which meets
less than serious criteria or injury not requiring medical attention (first-aid only).

Accidents

The definition for aircraft "accident" is lengthy and technical. An investigation
team will make the determination as to the classification between an incident,
incident with potential, and an accident. In general, if an occurrence was more
serious than those described under the definition of "incident" above, then the
occurrence should be treated as an accident.

- ***BLM/FWS/NPS -** Aviation accidents are investigated in accordance with 352 Departmental Manual - Aviation Safety, and National Transportation Safety Board (NTSB) regulations.*
- ***FS -** Definitions for FS aviation mishaps are found in FSM 5720.5. Direction for FS related Aviation Accidents and Incidents are located in FSM 5723.*

Helitack

Helitack crews perform suppression and support operations to accomplish fire
and resource management objectives.

PPE Requirements - As referenced in the *IHOG*, Chapter 9, chart 9-2, full PPE
is required for all helicopter flights, including non-fire helicopter flights. Full
PPE consists of an approved aviator flight helmet, aramid flight suit (or
Nomex® shirt and pants), aramid or leather gloves, and all-leather boots.

The only acceptable situation where a hard hat may be substituted for a flight
helmet is passenger transportation during fire suppression operations between an
established, managed helispot/helibase and an established, managed
helispot/helibase.

Policy

The *IHOG* serves as the standard for Interagency Fire Operations.

- ***NPS -** With the implementation of NPS RM-60 the IHOG will become policy for all helicopter operations in the NPS.*

Organization

- ***BLM -** The standard BLM exclusive-use helitack crew is a minimum of nine personnel (PFT supervisor, long-term assistant, long-term lead, and six temporaries). As the need arises, each crew must be able to support and manage a call-when-needed (CWN) helicopter in addition to the exclusive-use helicopter.*

- *NPS - NPS exclusive use modules will consist of a minimum of 8 personnel.*
- *FS - Regions may establish minimum crew size and standards for their exclusive- use helitack crews. Experience requirements for exclusive-use helicopter positions are listed in FSH 5109.17, Chapter 40.*

Operational Procedures

The *IHOG* specifies how helicopter operations should be conducted, whether in support of wildland fire or natural resource missions, and provides guidance for helitack and helicopter operations.

Required and recommended equipment for helitack crews and helicopters changes frequently. Consult the *IHOG* and the contract for requirements.

- *BLM/NPS - exclusive-use contract helicopter and helitack crews are controlled and dispatched locally by the administrative unit. At the discretion of the local Fire Management Officer, these helicopters may be made available for off unit or out of state assignment.*
- *FS - Initial attack exclusive use aircraft are contracted by each region, dispatched by the local administrative unit and may be available for off unit or out of region assignments. National exclusive use aircraft and crews are hosted by Forest units but are ultimately dispatched by NICC.*

Communication

The helitack crew standard is one handheld programmable multi-channel FM radio per every 2 crew persons, and one multi-channel VHF-AM programmable radio in the primary helitack crew (chase) truck. Each helitack crew (chase) vehicle will have a programmable VHF-FM mobile radio. Each permanent helibase will have a permanent programmable FM radio base station.

Transportation

Dedicated vehicles with adequate storage and security will be provided for helitack crews. The required GVW of the vehicle will be dependent upon helicopter type and the number of helitack crewmembers.

- *BLM - A standard BLM Helitack Support Vehicle may be ordered through the Equipment Development Unit at NIFC.*

Safety

A risk assessment will be made and appropriate mitigation action taken for all suppression and resource aviation missions. For information on the risk assessment and management, see the *IHOG*, Chapter 3.

Training and Experience Requirements

All members will meet fire qualifications as prescribed by the 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.

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 HEB2		RT-372 [5], IAT Modules as required by agency [6]
Assistant Fire Helicopter Crew Supervisor	One season as a Fire Helicopter Squad Leader ICT4 HELB or HCWN HEB2 (T)	I-200, S-200, S-215, S-230, S-234, S-260, S-270, S-290, S-371, S-372	RT-372, IAT Modules as required by agency
Fire Helicopter Squad Leader	One season as a Fire Helicopter Crewmember FFT1 ICT5	S-131, S-133, S-211, S-212, S-281	Annual S-271 Refresher [7]
Fire Helicopter Crewmember	One season as a Firefighter FFT2 HECM Taskbook	I-100, S-130, S-190, S-271	Annual S-271 Refresher

[1] All Exclusive-Use Fire Helicopter positions require an arduous fitness rating.

[2] Minimum experience and qualifications required prior to performing in the Exclusive Use position. Each level must have met the experience requirements of the previous level(s).

[3] Minimum training required to perform in the position. Each level must have met the training requirements of the previous level(s).

[4] A "season" is continuous employment on a full-time wildland fire helicopter crew for a period of 90 days or more.

[5] After completing S-372, must attend Interagency Helicopter Manager Workshop (RT-372) every two years.

[6] Must attend IAT Modules as required by agency for Helicopter Manager.

[7] Must receive S-271 Refresher or serve as S-271 instructor every year.

Note: Exceptions to the above position standards may be granted, on a case-by-case basis, by the BLM National Aviation Office, NPS Regional Office or FWS Regional Office, as appropriate

Helicopter Rappel & Cargo Let-Down

Policy
Any rappel or cargo let-down programs must be approved by the Directors, Fire and Aviation Management. All rappel and cargo let-down operations will follow the *Interagency Helicopter Rappel Guide* (IHRG), as policy. Any exemption to the guide must be requested by the program through the state/region for

approval by the National Aviation Office. The objective is to standardize
procedures and techniques that allow individuals or crews to be used for a
variety of missions. To aid in this approach, methods are incorporated to cross
train personnel in more than one rappel system and more than one specific
helicopter type.

Training and Qualifications

Each Spotter and Rappeller is certified by an approved Rappel Check Spotter.
Check Spotters are approved annually by the State/Regional Aviation Manager
(S/RAM), ADM Training Specialist, or Helicopter Operations Specialist. For
more information on Rappeller initial training and certification, refer to *IHRG.*

Equipment and Procedure Development Process

When a field user has a need for a new or improved piece of equipment and/or
procedure, documentation of that need must be submitted to the National Rappel
Equipment Committee. Upon recommendation by the National Rappel
Equipment Committee to the National Rappel Working Group it may be
provisionally approved for evaluation at selected bases. The National Rappel
Working Group is charged with all phases of oversight for the National
Interagency Rappel Program and makes recommendations to the Interagency
Helicopter Operations (IHOPS) Committee for final approval on all
equipment/procedures proposals. Proposals will be evaluated based on the
objectives and the following criteria: critical safety, national focus, priority, and
probability of success.

Aerial Ignition

The *Interagency Aerial Ignition Guide (IAIG)* is policy for all aerial ignition
activities. Any exemption to the *IAIG* must be requested through the
state/region for approval by the National Aviation Office.

Airtankers

Airtankers are a national resource. Geographic areas administering these aircraft
will make them available for initial attack and extended attack fires on a priority
basis. All airtanker services are obtained through the contracting process
(except the MAFFS, which are Military Aviation Assets and used to supplement
the contract fleet when needed).

The Interagency Airtanker Board (IATB), consisting of Forest Service, DOI,
and states is responsible for approving the contract airtanker fleet. Large
airtankers are procured under a national interagency contract.

The management of these resources is governed by the requirements of the *DM,*
BLM Manual 9400, and the *Interagency Airtanker Base Operations Guide*
(IATBOG). Airtankers are operated by commercial vendors in accordance with
FAR Part 137.

- *FS - Forest Service operates under FSM 5703 and Grant of Exemption 392 as referenced in FSM 5714.*

Operational Principles

- Use retardant drops before an immediate need is recognized; pretreat according to expected fire behavior.
- Retardant dropped in the morning may still be effective in the afternoon.
- Build progressive retardant line.
- Use retardant drops to cool areas (reduce flame length), as necessary in support of ground forces.
- Be sure the line is clear of personnel prior to dropping retardant.
- Be alert for gaps in retardant lines.
- Expect fixed-wing vortices and rotor-wing down wash.
- Wildland fire can burn around, under, spot over, and with enough intensity, through retardant lines.
- Retardant drops should not be made within 300 feet of a waterway. Refer to *Interagency Leadplane Operations Guide (ILOG)*.

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 retardant approximately 300 feet before reaching the waterway. Pilots shall make adjustments for airspeed and ambient conditions such as wind to avoid the application of retardant within the 300-foot buffer zone.

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)

Qualifications

Type 1, 2, and 3 airtanker crews fall into two categories:

- Initial attack rated
- Initial attack candidates.

Type 4 (SEAT) pilots are classified as Level 1 or Level 2; both may operate without aerial supervision. Aerial supervision is required for a Level 2 SEAT pilot when more than two aircraft are operating within the incident airspace.

Initial Attack Qualified - A crew may drop retardant upon arrival at a fire without aerial supervision. This does not negate the requirements for aerial supervision if ordering agency policies, terrain, or congested areas dictate otherwise.

Initial Attack Candidate - A crew that is acquiring the experience, training, and prerequisite drops - but in the interim requires aerial supervision.

Tanker Bases & Reload Facilities

They may be contract or Force Account bases, and may be operated by the BLM, Forest Service, or states. Types of retardant (dry powder, liquid concentrate, etc.) will vary with locations.

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 Operations

The *IATBOG* defines and standardizes operating procedures at all airtanker bases. It facilitates personnel exchange through standardization and provides a common interagency approach in the government's relationship with airtanker and retardant contractors. It provides special instructions for personnel at airtanker bases and can provide supplemental site-specific guidance.

Airtanker Base Personnel

The *IATBOG* identifies a generic table of organization and recommended staffing for airtanker bases. The guide describes the duties of various positions at airtanker bases. Currently, there is no identified training for the positions at airtanker bases; the *IATBOG* contains a chart of recommended training for each position. It is critical that reload bases staff up commensurate with the need during periods of moderate or high fire activity at the base. All personnel conducting airtanker base operations should review the *IATBOG* and have it available.

Startup/Cutoff Time for Airtankers

These limitations apply to the time the aircraft arrives over the fire.

- Normally airtankers shall be dispatched to arrive over the fire not earlier than 30 minutes after official sunrise and not later than 30 minutes before official sunset.
- Airtankers may be dispatched to arrive over a fire as early as 30 minutes prior to official sunrise, or 30 minutes after official sunset, provided:
  - A qualified ATGS, ASM1, or ATCO is on the scene; and
  - Has determined visibility and other safety factors are suitable for dropping retardant; and
  - Notifies the appropriate dispatcher of this determination.
- An airtanker, crewed by an initial attack-rated captain, may be dispatched to arrive over a fire without aerial supervision by an ATGS, ASM1, or ATCO provided the airtanker's arrival and drop activities are conducted between 30 minutes after official sunrise and 30 minutes before official

sunset in the lower 48 states. In Alaska, an airtanker pilot will not drop retardant during periods outside civil twilight.

Single Engine Airtankers

Single Engine Airtanker (SEAT) Operations

The *Interagency SEAT Operating Guide (ISOG) (NFES #1844)* defines operating standards and is policy for both the DOI and FS. A SEAT manager (SEMG) must be assigned to each SEAT operation.

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*.

SEAT Policy and Standards

Units using SEATs will ensure the aircraft complies with appropriate AMD or FS contract standards prior to use. For interagency SEAT standards, refer to AMD exclusive use and CWN contract provisions and the *ISOG*.

SEAT Organization/ Training and Qualifications

The SEAT Manager position has been adopted by NWCG (2002) (refer to the *ISOG*).

Safety

All SEAT operators and users will adhere to AMD/Forest Service safety standards. Flight operations, pilot requirements, flight crew duty and flight limitations, and the use of PPE are addressed in the above referenced standards.

Pilot Training

All SEAT pilots will meet the minimum fire training standards as described in their contract. The following outline has been approved and includes the following fire topics as a minimum.

- Fire behavior.
- Air/ground tactical operations.
- Incident organizational structure and terminology.
- Fire perimeter designation.
- Radio communications and procedures.
- Use of retardants and suppressants.
- Mountain flying techniques.
- Unit-specific operational guidelines as appropriate.

Operational Procedures

Using SEATs in conjunction with other aircraft over an incident is standard practice. Agency or geographical area mobilization guides may specify different procedures and limitations.

Depending on location, operator, and availability, SEATs are capable of dropping suppressants, water, or other approved retardants. The fixed tanks are fiberglass.

Because of the load capacities of the SEATs (400 to 800 gallons), quick turn-around times should be a prime consideration. SEATs are capable of taking off and landing on dirt, gravel, or grass strips (pilot must be involved in selection of the site); a support vehicle reduces turn-around times.

Reloading at established airtanker bases or reload bases is authorized. (SEAT operators carry the required couplings). All base operating plans must include SEAT loading criteria.

Guidance for Pilots when dropping around waterways

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

- Single Engine Airtankers/Helicopters: When approaching a waterway visible to the pilot, the pilot shall terminate application of retardant or foam approximately 300 feet before reaching the waterway. The pilot shall make adjustments for airspeed and ambient conditions such as wind to avoid the application of retardant or foam within the 300-foot buffer zone.

Communication

All SEATs must have one VHF-AM and one VHF-FM (programmable) multi-channel radio. (See contract specifications.)

Aerial Supervision

Aerial supervision resources will be dispatched, when available, for initial and extended attack to enhance efficiency and safety. During initial response operations the recommended aerial supervision in priority order with regard to safety and efficiency is as follows:

- ASM1
- ATGS
- ATCO (Leadplane)
- Smokejumper Spotter
- Helicopter Manager

If aerial operations continue beyond initial response, an ASM1, ATGS, or ATCO will be ordered. Aerial supervision response will be commensurate with expected complexity.

Reconnaissance or patrol flights

The purpose of aerial reconnaissance or detection flights is to locate and relay
fire information to fire management. Only qualified Air Tactical Group
Supervisors, Air Tactical Supervisors (ATS-ASM) and Lead Plane Pilots have
the training and authority to coordinate fixed and rotor wing aerial firefighting
operations. Flights with a "Recon" or "Patrol" designation should communicate
with tactical aircraft only to announce location, altitude and to relay their
departure direction and altitude from the incident.

Aerial Supervision over Incidents
<div align="center">References are listed below the table*</div>

Situation	Lead/ATCO/ ASM1	Ref	ATGS	Ref
Airtanker not IA rated.	Required	1		
MAFFS	Required	1		
Retardant drops in congested areas.	Order	1	May use if no Lead/ATCO/ASM1.	
Level 2 rated SEAT operating over an incident with more than one (1) other tactical aircraft on scene.	Required if no ATGS	1	Required if no Lead/ATCO/ASM1.	1
Foreign Government airtankers.	Required if no ATGS	1	Required if no Lead/ATCO/ASM1.	1
Retardant drops conducted between 30 minutes prior to, and 30 minutes after sunrise, or 30 minutes prior to sunset to 30 minutes after sunset.	Required if no ATGS	1, 2	Required if no Lead/ATCO/ASM1.	1, 2
4 or more airtankers assigned.	Order	1	Order	1
2 or more helicopters with 2 or more airtankers over an incident.	Order	1	Order	1
Periods of marginal weather, poor visibility or turbulence.	Order	1	Order	1
2 or more airtankers over an incident.	Order	1	Order if no Lead/ATCO/ASM1.	3
When requested by airtanker or ATGS	Required	1	Required	
Smokejumper or paracargo aircraft with 2 or more airtankers over an incident.	Order if no ATGS	1	Order if no Lead/ATCO/ASM1.	1, 4
Incident has two or more branches.			Order	1, 4

*This table summarizes interagency aviation supervision policy, but individual agency policy must be consulted for currency and consistency.

Note: Aerial Supervision Modules (ASM1) may act as either a Lead or ATGS depending on incident requirements.

Interagency Lead Plane Operations Guide (and Interagency Air Tactical Group Supervisors Guide) (NFES 1393).

Requires determination by ATGS or Lead that visibility and safety factors are suitable and dispatch has been notified of this determination.

FS FSM 5716.32.

Both the ILOG and ATGS Guide reference ordering an ATGS only for these missions. FSM 5716.32 classifies these missions as complex. An ATCO and/or HLCO should be ordered as appropriate in addition to the ATGS.

Definitions of Key Words Used in the aerial supervision requirements chart.

- **Required** - Aerial supervisory resource(s) that shall be over the incident when specified air tactical operations are being conducted.
- **Ordered** - Aerial supervisory resources that shall be ordered by the controlling entity. (Air tactical operations may be continued while the aerial supervision resource is en route to the incident. Operations can be continued if the resource is not available.)
- **Over** - The air tactical resource is flying above or is in a holding pattern adjacent to the incident.
- **Assigned** - Tactical resource allocated to an incident. The resource may be flying en route to and from, or on hold at a ground site.

Low-level Flight Operations

The only fixed-wing aircraft missions authorized for low-level fire operations are:

- Para-cargo.
- Aerial Supervision Module-1 (ASM1) and leadplane operations.
- Retardant, water and foam application.

Operational Procedures:

- A high-level recon will be made prior to low-level flight operations.
- All flights below 500 feet will be contained to the area of operation.
- All resource flights below 500 feet must have an approved plan.
- PPE is required for all fixed-wing, low-level flights. Helmets are not required for multi-engine airtanker crews, smokejumper pilots and ASM flight/aircrew members.
- *FS - The use of the Aerial Supervision Module Operations Guide (ASMOG) as appended in the Interagency Leadplane Operations Guide (ILOG) is identified in FSM 5706 and will be implemented for the 2004 season.*

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 ASM1/leadplane is ordered to coordinate aerial operations.
- The air traffic control facility responsible for the airspace is notified prior to or as soon as possible after the beginning of the operation.
- A positive communication link must be established between the airtanker coordinator or aerial supervision module (ASM1), airtanker pilot(s), and the responsible fire suppression agency official.
- The Incident Commander (IC) for the responsible fire agency or designee will advise the ASM1/leadplane/airtanker that all non-essential people and movable property have been cleared prior to commencing retardant drops.

Aerial Supervision Module 1 (ASM1)

The Aerial Supervision Module is crewed with both a "Lead" qualified pilot (ATP) and an Air Tactical Supervisor (ATS). These individuals are specifically trained to operate together as a team. The resource is primarily designed for providing both functions (lead and Air Attack) simultaneously from the same aircraft, but can also provide single role service, as well.

The Air Tactical Pilot is primarily responsible for aircraft coordination over the incident. The Air Tactical Supervisor develops strategy in conjunction with the IC, and when no IC is present, assumes those responsibilities until ground personnel arrive.

- **BLM -** *The Aerial Supervision Module Operations Guide (ASMOG) and Interagency Leadplane Operations Guide (ILOG) are policy for BLM.*

Operational Considerations

The ASM1 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 ASM1 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. It will request additional supervision resources, or modify the operation to maintain mission safety and efficiency.

The 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. It will request additional supervision resources to maintain operational safety.

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 ASM1 crewmembers are defined in the Interagency Aerial Supervision Module Guide (IASMOG) ILOG appendix A.

Air Tactical Group Supervisor (ATGS)

The ATGS is primarily responsible for coordination of aircraft operations and firefighter safety on an incident. Specific duties and responsibilities are outlined in the *Fireline Handbook (PMS 410-1) and the Interagency Air Tactical Group Supervisor's Guide (NFES 1393)*. The ATGS reports to the Air Operations Branch Director (AOBD), or in the absence of the AOBD, to the Operations Section Chief (OSC), or in the absence of the OSC, to the IC. When airborne, the ATGS works for the IC or OSC, depending on the size of the incident. When the positions are in use on an incident, the Airtanker Coordinator (ATCO) and Helicopter Coordinator (HLCO) will be supervised by the ATGS. The ATCO, commonly called a leadplane pilot, provides direct supervision to fixed-wing retardant aircraft, while the HLCO directs tactical coordination and airspace management for rotary-wing aircraft.

Currently there are three operational modes for ATGS operations:

- The ATGS is in a contracted or ARA (rental) fixed-wing aircraft in orbit over the incident. It will always occur above 500' AGL. Pilot/aircraft carding requirements must be met, and PPE is recommended.
- The ATGS is in a contracted, CWN, or ARA (rental) rotary-wing aircraft, and PPE is required.
- The ATGS is on the ground with a vantage point of the entire incident. Generally only used due to an aircraft shortage, it is effective when the entire area can be viewed from the ground and the ATGS has VHF-AM and VHF-FM radio communication capability.
- *FS -* *PPE is required for FS ATGS operations below 500' AGL as per agency standard FSM 5700.*

Operational Considerations

A relief ATGS and aircraft or ASM1 should be ordered for sustained operations to ensure continuous coverage over an incident. Personnel who are performing aerial reconnaissance and detection will not perform air tactical duties unless they are fully qualified as an ATGS. Air tactical aircraft must meet all the basic

requirements listed in the National Air Tactical/Reconnaissance Standards and the pilot must be carded to perform the air tactical mission.

Leadplane

A leadplane is a national resource. The *Interagency Leadplane Operations Guide (ILOG)* is agency policy. Agency policy requires an ASM1/leadplane to be on order prior to retardant drops over a congested area. Operations may proceed before the SM1/leadplane arrives, if communications are established, authorization is granted from the IC, and the line is cleared prior to commencing retardant operations.

All firefighting aircraft are required to have operative transponders and will use a setting of 1255 when over the incident, unless given a discrete code by Air Traffic Control (ATC).

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) 2003*, which has been adopted as policy by the AMD and USDA Forest Service. Additional guidance may be found in the *National Interagency Mobilization Guide* and supplemented by local Mobilization Guides.

The *IACG* is the primary document to be used by aviation personnel for airspace issues. Additional information is located on several agency airspace websites http://www.fs.fed.us/r6/fire/aviation/airspace/web/index.html and http://airspace.nifc.gov/mapping/nifc/index.cfm

Flight planning and Temporary Flight Restriction (TFR) information on World Aeronautical (WAC) Sectional and Global Navigational Charts (GNC) has been made available at the BLM Airspace Information System website. TFRs are updated every 30 minutes during normal business hours 7 days a week. In addition, a tactical chart with TFR specific information with incident names, frequencies and altitudes are available. These charts are all current versions. These charts can be found at http://airspace.nifc.gov/mapping/nifc/index.cfm
Additional references can be found by contacting:

- ***BLM -*** *State Aviation Managers, Regional Airspace Coordinator and the BLM National Aviation Office Airspace Coordinator.*
- ***FS -*** *Regional Aviation Safety Officers, Regional Airspace Coordinators and the FS Airspace Program Manager.*
- ***FWS -*** *National Aviation Safety and Operations*
- ***NPS -*** *Regional Aviation Officers.*

Policy

The 9400-1a, Aircraft Flight Request/Schedule Form, will be used for approval and flight planning. This form will be completed between the aircraft dispatcher

and flight manager for missions not requested on a Fire Resource Order. The fixed-wing or helicopter manager will use this form to brief the pilot on the mission.

- *NPS - Reference RM 60, Appendix 3 & 4.*

Special use flight plans require approval by the immediate supervisor and final approval by the appropriate line manager.

- *NPS - Approval per unit aviation management plan.*
- *FWS - National Aviation Safety and Operations Specialist.*

Types of Flights

There are two types of flights: point-to point and mission flights.

Point-to-point flights typically originate at one developed airport or permanent helibase, with the direct flight to another developed airport or permanent helibase. These flights require approved pilots, aircrew, and aircraft.

- A point-to point flight is conducted higher than 500 feet above ground level (AGL).

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).

- *FS - Refer to FSM 5710.5 for administrative use, FSM 5705 for point-to-point and mission use for types of Forest Service flights.*

Fixed-wing Aircraft

Point-to-point Flights

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.

Agency policy requires designating a fixed-wing manager for point-to-point flights transporting personnel. The duties and responsibilities of the flight manager are:

- Check pilot card to ensure qualifications are current for aircraft type.
- Check aircraft card to ensure that aircraft is current and approved for the mission.
- Flight plan/flight following: filed with FAA or agency, facilitate as needed. (Filing, opening, and closing the FAA flight plan is the responsibility of the pilot.)
- Pilot briefing to passengers.

- Ensure passengers have received and understand briefing; all personnel on board are either air crew members, or authorized or official passengers.
- Check fiscal documents; ensure flight payment paperwork is accurate, (as outlined on the 9400-1a form) for the flight, and that procurement document and all signatures are secured.
- *NPS - Reference RM-60, Appendix 3 for agency specific policy.*

Mission Flights

Mission flights are aircraft operations associated with initial attack of wildfires, large fire support, and resource management.

- PPE is required for a mission flight conducted within 500'AGL.
- All personnel will meet training and qualification standards required for the mission.
- Mission flights for fixed-wing aircraft include but are not limited to the following:
  - ➢ Water or retardant application
  - ➢ Parachute delivery of personnel or cargo
  - ➢ ATGS operations (PPE recommended but not required)
  - ➢ Airtanker coordinator operations
  - ➢ Takeoff or landing requiring special techniques due to hazardous terrain, obstacles, pinnacles, or surface conditions
  - ➢ Fire reconnaissance (PPE recommended but not required)
  - ➢ Precision reconnaissance
- *NPS - Refer to RM-60, Appendix 3 and 4*

Helicopters

Mission Flights

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
- Night vision goggle operations
- Hoversite/autosurvey
- Rappelling
- Aerial capture, eradication, and tagging of animals
- Offshore vessel or platform landings
- Toe-in, single-skid and step-out landings (prior authorization or exemption is required)
- Takeoff or landing requiring special techniques due to hazardous terrain, obstacles, pinnacles, or surface conditions
- Free-fall cargo

- Fire reconnaissance
- Precision reconnaissance

The use of PPE is required for both helicopter flight missions and 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.

- **BLM -** *The flight request form, 9400-1a, is used when requesting fixed-wing or helicopters for non-fire missions. Reoccurring or "Special Use", resource mission flights require an approved Project Aviation Plan. A one time "Special Use" mission may use the reverse side of BLM form 9400-1a for this purpose.*
- **NPS -** *Refer to RM60 Appendix 3, planning guide, flight request form, 9400-1a.*

Flight-Following All Aircraft

Coordinating and confirming with the pilot the method of flight-following that will be utilized for any flight is the responsibility of the scheduling dispatch office. When agency flight following (radio or satellite) is being used, the scheduling dispatch office shall have flight following responsibility until transferred through a documented, positive hand-off. All dispatch centers designated for fire support shall have the capability to transmit and receive "National Flight Following" and Air Guard" within their area of responsibility. Flight-following reports from the aircraft are the responsibility of the pilot-in-command (PIC) in accordance with 14 CFR. Violation of flight-following standards requires submission of a SAFECOM.

For tactical aircraft that cross dispatch area geographic boundaries, the receiving unit is responsible to confirm arrival of the aircraft via landline to the sending Geographic Area Coordination Center.

- **BLM/FWS/NPS -** *Refer 351 Departmental Manual - Flight Operations Standards and Procedures, IHOG Chapter 4, and National and Geographic Area Mobilization Guides for specific direction.*
- **FS -** *Refer FSM 5700, FSH 5709 handbooks, IHOG Chapter 4, and National and Geographic Area Mobilization Guides for specific direction.*

Point to Point, Non-Mission Flights

Agency Radio communication is not mandatory. Flight Following for point to point, non-mission flights shall be accomplished using one of the following methods:

- **FAA IFR or VFR flight plan**
  Pilot/chief of party shall notify sending/receiving dispatch office of ETD, ETA and ATA. Radio Communication with agency dispatch office is not required.

- **Agency check-in via radio**
  Pilot checks in via radio with agency dispatch office on set intervals during duration of flight (usually every 15 to 20 minutes).
- **Satellite Flight Following**
  Pilot checks in with agency dispatch office just prior to or shortly after take off, and after landing. Agency Dispatch office monitors flight via computer for duration of flight. No intermediate check-ins is required.
  This should be supplemented with FAA IFR or VFR flight plan.

Mission Flights

Agency FM radio capability is required for all mission flights. Flight Following for mission flights shall be accomplished using one of the following methods:

- **Agency check-ins via radio**
  Pilot checks in via radio with agency dispatch office on set intervals during duration of flight (usually every 15 to 20 minutes).
- **Satellite Flight Following**
  Pilot checks in with agency dispatch office just prior to or shortly after take off, and after landing. Agency Dispatch office monitors flight via computer for duration of flight. No intermediate check-ins is required.
  Pilot shall monitor assigned agency FM frequency, including guard, for duration of flight. If satellite signal is lost, or dispatch office computer fails, revert to radio check-in procedure above.

Aviation Communication "Watch Out" Situations

When one or more of the following situations exist, they must be mitigated before aerial operations are continued:

- Poor or intermittent communications with ground and/or air resources.
- Ground resources are not continuously monitoring and communicating on assigned Air-to-Ground frequency.
- Any arrival of air resources in the incident airspace without establishing positive communications.
- Radio frequency overload or inattention makes communications difficult or ineffective.
- Any aircraft in the incident airspace with inoperable radios.
- Airtankers, Leadplanes or SEATs do not have a clear frequency to conduct retardant drop communications.
- Aircraft frequency assignments are changed in the middle of the day or during aerial operations.
- An aircraft emergency or medivac occurs.

Chapter 18
Fuels Management/Prescribed Fire

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

- Compliment federal land stewardship responsibilities by providing a fuels treatment program that can be realistically implemented.
- Represent a collaborative, efficient, and effective program necessary to reduce the wildland fire risk to both communities and the environment.
- Expand fuels treatment program capabilities and biomass utilization markets.

The DOI and USDA-FS along with other federal, state, tribal, and local partners will work collaboratively to ensure effective fuels treatment efforts are 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"* (10 Year Comprehensive Strategy)

The following chapter outlines the similarities in fuels management between the DOI agencies and the USDA Forest Service. However, there exist some programmatic differences that are identified in the following agency specific documentation and serve as agency specific direction.

- *BLM- Refer to (IM No. OF&A 2004-003) for specific agency direction.*
- *FWS– Refer to Fire Management Handbook for specific agency direction.*
- *NPS- Refer to RM 18 for specific agency direction.*
- *FS- Refer to FSM 5140 and The Wildland and Prescribed Fire Management Policy-Implementation Procedures Reference Guide for specific agency direction.*

This agency specific direction will be referenced throughout this chapter as "Refer to agency specific direction." Any different specific direction reference will be noted.

Policy
The safety of firefighters and the public is the number one priority when planning and implementing fuels treatment projects.

All prescribed fire projects will have an approved prescribed fire plan prior to ignition.

All prescribed fire plans will contain measurable objectives, a predetermined prescription, and an escaped fire plan to be implemented in the event of an escape.

All prescribed fire plans will contain the required elements as outlined in the agency policy.

All fuels treatment projects will be in compliance with NEPA requirements.

All fuels management projects will be tracked and progress will be reported within required timeframes. Impediments to the completion of the projects will be identified and actions will be taken to mitigate the impediment.

All fuels treatment projects will be monitored to determine if treatment objectives were met and evaluation reports completed and maintained in the project file. All fuels treatment projects will support resource management objectives as identified in the Land Use Plans. Refer to agency specific direction.

Priorities

The agencies will strategically focus fuels treatment activities as identified in the Fire Management Plan by placing priority on:

- **Wildland Urban Interface (WUI) Areas -** These areas currently have two accepted definitions:
  - ➢ "The urban Wildland interface community exists where humans and their development meet or intermix with wildland fuel." This definition is found in the *Federal Register*/Vol. 66, No. 3/Thursday, January 4, 2001/Notices; and *A Fire in the West, The Wildland/Urban Interface Fire Problem   A Report for the Western States Fire Managers*, September 18, 2000.
  - ➢ "The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuel." This definition is found in the NWCG Glossary and the *10-Year Comprehensive Strategy Implementation Plan.*

- **WUI fuel reduction projects**
  WUI fuel reduction projects mitigate the risks to people, their communities, and adjacent resource values important to the social/ economic stability of those communities from unwanted wildland fire. The National Interagency Fuels Coordination Group has defined valid WUI fuel treatment projects as those projects that meet the following criteria:

- ➢ They must focus on communities at risk that are published in the *Federal Register* or are identified as future communities by local collaborative efforts.
- ➢ They must be adjacent or in close proximity to federal lands where there is a risk of fire originating on federal lands and threatening life and community property.
- ➢ They must have a completed fire risk assessment and mitigation strategy, or be in the process of developing one, through collaborative efforts with interagency partners.
- ➢ They must implement the fire mitigation strategy.

- **Natural Resource Areas**
  Natural Resource Areas where actions will improve the resiliency and sustainability of wildland ecosystems to benefit and maintain: water quality, air quality, wildlife and fisheries habitat, and threatened, endangered, or other special status plant and animal species or habitat.

- **Areas where actions will reduce risks and damage from a wildfire.**
  Areas where actions will reduce risks and damage from a wildfire. This includes the reintroduction of fire into fire dependant ecosystems to maintain and enhance those ecosystems and the modification of vegetation to achieve specific land management objectives.

Project Planning, Selection, and Tracking

Planning

Hazardous Fuels Treatment activities are a coordinated interdisciplinary effort supported by Resource and Fire Management. All participating disciplines will coordinate their respective roles for the planning, implementation, monitoring, and evaluation, reporting, and funding of fuels treatment projects. Resource Management is responsible for managing vegetation and soils. Fire Management is responsible for identifying hazardous fuel situations and managing mitigation activities.

All use of fuels treatments and prescribed fire will support land and resource management plans. The agency specific land management plans serve as the document to initiate, analyze, and provide the basis for conducting fuels treatment activities and using prescribed fire to meet resource objectives.

The Fire Management Plan (FMP) serves as the program strategy document for fuels treatments and prescribed fire activities. The FMP captures and quantifies the overall fuels management program needs of the field office. The FMP identifies how fuels treatments and prescribed fire, along with other fire management strategies, will be used to meet the overall land management goals identified in land use plans.

1 Compliance with the National Environmental Policy Act (NEPA) is required for
2 all fuels treatment projects. As per Public Law 95-95, compliance with federal,
3 state, and local air quality regulations is mandatory and will require coordination
4 with state and local air quality authorities. Personnel developing Fuels
5 Treatment and Prescribed Fire Plans must be aware of state and local regulations
6 and the impacts that a specific project may have on critical areas. Prescribed
7 Fire and Fuels Treatment Plans need to identify sensitive areas and provide
8 operational guidance to mitigate potential impacts from smoke or other
9 particulates. Follow appropriate state and local requirements regarding smoke
10 dispersion modeling.
11
12 **Fuel Treatment Selection Process**
13 The following table illustrates the process steps, responsible organizational
14 levels, and associated timeframes involved in the fuel treatment program
15 development and collaboration process agreed to by the Forest Service and DOI
16 agencies. This process does not circumvent any agency specific budget
17 processes, which are documented in other memoranda particular to each agency.
18 All agencies have synchronized the critical steps and agree on the criteria to be
19 used in program development.
20
21 Refer to agency specific direction and (Interdepartmental Memo dated March
22 20, 2002 titled Fuels Treatment Development and Collaboration Process)
23

DOI/FS Fuels Treatment Selection Process		
Process Steps	**Responsibility**	**Timeframe (Due Date)**
DOI Agencies and Forest Service regional allocations of hazardous fuel reduction funds are determined annually at the national level. Distributions are based on criteria from the Federal Cohesive Strategy and include but may not be limited to: • Fire management workload; • Departure from historical fuel conditions and fire occurrence; • Risk to communities (for wildland/urban interface projects); • Risk to ecosystems; • Benefits that extend beyond treatment areas; • Potential for unwanted wildland fire to cause	Department of the Interior/Office of Wildland Fire Coordination (OWFC) staff, Forest Service Fire and Aviation Management staff, bureau offices in consultation with National Office level - Bureau Directors, FS and DOI Fuel Treatment Coordinators, FS and DOI Budget Coordinators	During the next and all future fiscal year budget development cycles

DOI/FS Fuels Treatment Selection Process		
Process Steps	**Responsibility**	**Timeframe (Due Date)**
irreversible damage to communities; ecosystems, or historical / cultural resources; • Projects that span multiple agency and ownership boundaries with broad interagency as well as non-governmental organizations and community participation; • Multi-year projects based on current land use and fire management plans, collaboration with federal, state, and tribal interagency partners, and • Prior performance in the hazardous fuels program.		
Adjusts database to reflect current fiscal year allocation and program emphasis.	States/ Regional Offices/	4/1 current year
Field units develop out year fuels program estimates.	Regional Offices/National Forests	5/1 each year
Forest Service and DOI bureaus will develop and maintain a list of fuels treatment cooperators/partners that have engaged in the project selection process in each state. List will be submitted to the DOI OWFC and FS Fire & Aviation Management.	FS and DOI Fuel Treatment Coordinators with support from Regional/State Fuels Coordinators	5/15 each year
DOI bureaus will indicate approximate number of acres of fuels to be treated in the budget out-year (current FY +2 years) for use in developing departmental budget guidance and budget justifications (e.g. 5/30/03 provide # acres to be treated FY05).	Bureau Directors/DOI Fuel Treatment Coordinators submit to OWFC	5/30 each year

DOI/FS Fuels Treatment Selection Process		
Process Steps	**Responsibility**	**Timeframe (Due Date)**
Forest Service and DOI bureau field units and tribes, in collaboration with local level partners, enter new single-year and new or continuing multi-year fuel treatment projects in NFPORS. The list of projects represents potential treatments for the next fiscal year based on the President's Budget, has been prioritized locally, and will be submitted to Regional/State offices. Priority considerations for local project development and prioritization will be based on the Federal Cohesive Strategy and local issues (refer to priority criteria in Federal Cohesive Strategy).	Local Level cooperators	7/1/current year
Forest Service and DOI Regional/State Offices, in consultation with states, tribes, and local partners, prioritize projects, consolidate lists, and submit consolidated package for their area of responsibility to national offices. Priority considerations for project development and prioritization will be based on the Federal Cohesive Strategy (refer to priority criteria in Federal Cohesive Strategy).	Regional/State Offices, cooperators	8/1/current year
DOI Bureau Directors submit proposed new project list to Department of the Interior; Forest Service National Office compiles project list for next fiscal year. This proposed project list serves as the initial DOI and Forest Service input to Budget Year Action and Financial Plan.	National Offices – Bureau Directors, Forest Service Chief	9/1/current year

DOI/FS Fuels Treatment Selection Process		
Process Steps	**Responsibility**	**Timeframe (Due Date)**
DOI National Offices utilize Federal Cohesive Strategy priorities for distributing wildland-urban interface and hazardous fuel treatment funds and establish Bureau regional/state budget caps, dependent upon budget approval and/or Department direction for implementation. Priority considerations for project development and prioritization will be based on the Federal Cohesive Strategy (refer to priority criteria in Federal Cohesive Strategy).	Bureau Directors, National Offices – Fuel Treatment Coordinators	Completed after budget approved.
DOI Bureaus make preliminary budget allocations to the Regions and States.	National Office – Bureau Directors	9/8 current year based on Congressional action to date. Subject to change upon final Congressional appropriations.
DOI Bureau Regional/State offices make fund allocation decisions for new fiscal year projects within their defined budget caps.	Regional/State Offices	9/15/current fiscal year based on Congressional action to date. Subject to change upon final Congressional appropriations.

DOI/FS Fuels Treatment Selection Process		
Process Steps	**Responsibility**	**Timeframe (Due Date)**
Forest Service and DOI Bureaus issue official budget allocations to regions and states.	National Offices – Bureau Directors, Forest Service Chief	For DOI Bureaus - upon apportionment of appropriation by the OMB. FS and DOI budget offices will give budget policy guidance upon completion of Congressional appropriation. Forest Service – Hazardous fuels budget allocations are transmitted as part of total FS budget program direction.
DOI administrative units/local groups get new funding allocations and Performance Measure Targets.	Local Level cooperators	Upon apportionment of appropriation by OMB.
Initiate priority project implementation.	Local level cooperators	10/1 new fiscal year.
Administrative units adjust planned program in NFPORS to reflect budget allocation.	Local/State/ Regional	30 days after notification from National Office.
National offices compile final Funded Project List (provide as final input to current fiscal year Action and Financial Plans).	National Office – Bureau Directors, Fuel Treatment Coordinators	Upon apportionment of appropriation by OMB. Transmitted 30 days after final budget.

DOI/FS Fuels Treatment Selection Process		
Process Steps	**Responsibility**	**Timeframe (Due Date)**
DOI Bureaus develop complete list of carryover projects that could not be implemented from previous fiscal year.	Local level cooperators, Regional/State Offices, National Offices – Bureau Directors, Fuel Treatment Coordinators	10/15
Forest Service and DOI compile previous fiscal year accomplishments (input to End of Year Report).	Regional/State Offices, National Offices	11/1 current year
If DOI projects cannot be implemented, the local level with cooperators will recommend a substitute project or carrying the existing project until a later date. If funds need to be shifted (within units, between units, between regions, or between bureaus), the Regional/State Offices will be notified and decisions will be made by Bureau Directors at the National level.

If FS projects cannot be implemented, changes will made at field level, and database adjusted. | Input and communication from all levels. Decisions regarding fund re-distribution or movement made by Bureau Directors.

FS local level | Ongoing |
DOI local administrative units, tribes, and other cooperators track project status and report to Regional/State Offices on status monthly.	Local Level cooperators	Ongoing – monthly reports
DOI Regional/State offices monitor accomplishment milestones and support increased implementation when needed, identify need for fund transfers when needed, and keep national offices informed of projects status.	Regional/State Offices	Ongoing – monthly
Units ensure that data in NFPORS is current.	Local/State/ Regional	Ongoing - monthly

Tracking and Reporting

Accountability (for monies spent and results achieved) is expected and closely monitored from within and outside the departments. The Wildland Fire Leadership Council has established NFPORS as the required interagency system to assist field, state, regional, and national personnel in managing and reporting accomplishments for work conducted under the National Fire Plan.

National Fire Plan Operations and Reporting System (NFPORS)

The Hazardous Fuels module of the system has been developed and is the national interagency standard for:

- Submitting proposed projects for funding,
- Tracking and managing the program,
- Reporting performance, measuring accomplishments and accountability.

The following business rules will be used in reporting accomplishments:

- **Wildland Fire Use**
  Acres burned in a wildland fire may only be reported as a fire use treatment if the unit has an approved Fire Management Plan allowing Wildland Fire Use, and the fire was managed as a Wildland Fire Use incident with an approved Wildland Fire Implementation Plan (WFIP). Limited suppression or confinement fire acres may not be counted as fire use accomplishments.
- **Planned 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.
  - The formal planning (NEPA, Burn Plan, etc.) had already begun to treat the unit.
  - The planned resource objectives were met.
  - The claim is approved by a Regional Fuels Specialist.

Fuels Management Performance Measures

The fuels management targets and accomplishments to be tracked are defined as:

- Total number of acres treated both in the WUI and Hazardous Fuels all condition classes.
- Total number of acres treated in the WUI.
- Total number of acres treated in condition classes 2 or 3 in fire regimes 1,2,3 outside the WUI.
- Total number of acres treated /total cost.
- Total number of RX fires conducted that result in violations/total # of RX fire treatments.
- Total number of acres treated in condition class 2 moved to condition class 1.

- Total number of acres treated in condition class 3 moved to condition class 1 or 2.
- Total number of acres moved to a better condition class per million dollars of gross investment.
- Number of acres treated by mechanical methods.
- Number of acres treated mechanically with by-products utilized.
- Number of projects implemented through (local) contractors.
- Number of communities at risk with completed risk assessments and mitigation plans/ total number of communities listed.
- Total number of WUI communities at risk with fire prevention programs in place/total number listed.
- Number of WUI communities at risk that initiated volunteer, community funded, or cost-share efforts to reduce hazardous fuels.
- Refer to agency specific direction.
- *FWS - Refer to FIREBASE for specific agency direction.*

Prescribed Fire Plans

Plan Contents

The Prescribed Fire Plan is a stand alone document that provides the Prescribed Fire Burn Boss all the information needed to implement the project. Prescribed fire projects must be implemented in compliance with the written plan. At a minimum, a listing of the required elements to develop a burn plan can be found in all the agency specific direction documents:

- Refer to agency specific direction.
- *BLM - Refer to BLM IM OF&A No. 2004-003.*

Restrictions

Implementation of Prescribed Fires at National Preparedness Levels 4 and 5 is restricted. (See the *National Mobilization Guide*.)

- **Preparedness Level 4:** WFU and prescribed fire application can be continued or be initiated if the proposed action is approved by an agency at the regional or state office level. This approval must be based on an assessment of risk, impacts of the proposed actions on area resources and activities and include feedback from the Geographic Area MAC Group. The Geographic Area MAC Group provides information or perspective to agencies wishing to proceed with or implement a WFU or prescribed fire application. The final decision to implement resides with the implementing agency.
- **Preparedness Level 5:** WFU and prescribed fire application can be continued or be initiated if the proposed action is approved by an agency at the regional or state office level. The national agency representative will assess risk and impacts of the proposed action and discuss with the National MAC Group. This group will have the opportunity to provide information or perspective to agencies wishing to proceed with or

implement a WFU or prescribed fire application. The final decision to
implement resides with the implementing agency.

Determination of Complexity

The NWCG *Prescribed Fire Complexity Rating System Guide* is the agency
standard for rating prescribed fire complexity. A complexity rating will be
completed for each prescribed fire project. The determination of the prescribed
fire complexity will be based on an assessment of risk (the probability or
likelihood of an unexpected event or situation occurring), and technical
difficulty (the level of skills needed to complete the project and deal with
expected events).

- *NPS - Refer to RM 1, chapter 10 for specific agency direction.*
- *BLM - Refer to BLM IM OF&A No. 2004-003.*

Safety and Qualifications

Safety Awareness

All personnel will be briefed prior to any prescribed fire assignment. The
briefing will ensure that all people involved understand how the project will be
implemented and what their assignments are. Briefings must cover safety
considerations for both known site specific hazards and potential hazards. A
briefing checklist must be developed and attached to the Prescribed Fire Plan. A
briefing will be given for each operational period of multi-period projects.

A Job Hazard Analysis (JHA) will be completed for each prescribed fire project
and attached to each Prescribed Fire Plan.

Safety Equipment

All personnel on a prescribed fire project will be equipped with required PPE
appropriate to their position or as identified in a JHA. For holding and ignition
personnel the minimum PPE (unless otherwise identified in the JHA) is the same
as that required for wildland fire assignments. (See Chapter 06, Safety.)

Smoke Exposure

Exposure to smoke during prescribed fire operations can be a significant safety
concern. Research has shown that exposure to smoke on prescribed fires,
especially in the holding and ignition positions, often exceeds that on wildfires.

- **Planning**
  Smoke exposure must be considered when planning prescribed fires.
  Altering line locations can have a significant impact on smoke exposure.
  Placing fire lines in areas of lighter fuels, or moving lines to roads or other
  barriers that will require less holding, patrol, and mop up, will significantly
  reduce the smoke exposure to personnel. The identification of "Buffer or
  Allowable Areas" (where fire outside the main control line may not need to
  be aggressively attacked) is a good method to reduce smoke exposure.

- **Implementation**

  Techniques that can help reduce the exposure of personnel to smoke:

  - ➢ Rotating people out of the heaviest smoke area may be the most effective method of limiting smoke exposure.
  - ➢ Changing firing patterns and pre-burning (black lining) during less severe conditions can greatly reduce exposure to smoke.
  - ➢ The use of retardant, foam, or sprinklers can also significantly reduce the workload and exposure time for holding crews.

- **Qualifications**

  The NWCG *Wildland and Prescribed Fire Qualification System Guide (PMS 310-1)* establishes minimum prescribed fire qualification and training standards for all agencies and provides a complete review of the qualification system and explains the task book process for documenting performance and certifying personnel. Agency personnel assigned to prescribed fire operations will meet the minimum NWCG qualifications, and any additional agency specific qualifications required, even when assisting other agencies.

  The IQCS does not separate prescribed fire qualifications by fuel group. The local units are responsible for ensuring that Prescribed Fire Burn Boss (RXB1 and 2) qualifications and training are appropriate for the fuel groups(s) that they will be working in.

  If the Prescribed Fire Burn Boss is not qualified as an IC, a qualified IC will be identified in the Escaped Fire Plan. Additionally, the transition from the Prescribed Fire Burn Boss to the IC needs to be explained.

- ***BLM - Prescribed Fire Burn Boss 3 (RXB3):*** *As a supplement to the qualifications system, the BLM has identified this position. This position supervises prescribed fire operations that are of "low complexity." These types of operations typically would have few personnel assigned, have a very low threat of escape, and present a minimal risk to the people involved in the operation. Examples include burning piled slash, burning landings, ditch burning, debris burning, and broadcast burns of less than one acre with a minimal chance for escape. This position is supported by the IQCS. The activity area is BL and the position code is RXB3. Managers will need to check the requirements individually, since IQCS will not check them automatically.*

Physical Fitness

Physical fitness levels are not established by the NWCG. The agencies have established physical fitness levels. Refer to agency specific direction

- ***USFS -*** *Refer to FSH 5109.17 for agency specific direction.*
- ***BLM -*** *Refer to BLM IM OF&A No. 2004-003.*

Currency Requirements

The *Wildland and Prescribed Fire Qualification System Guide* sets currency requirements at five years, the same as for suppression qualifications.

Prescribed Fire Monitoring

A monitoring plan is required as part of each Prescribed Fire Plan. It describes what data will be collected, when it will be collected, where on the prescribed fire site it will be collected, which methods will be used for each data element, and list the responsible person(s). The requirements for prescribed fire monitoring are found in the agency specific policies. Refer to agency specific direction.

Project Financing/Cooperation & Assistance

Funding for the implementation of prescribed fire projects must be identified and agreed to at the local unit office level. It is the responsibility of each program area (non-fire) to cover its own regular (base-eight) salaries and fixed costs. This applies to items such as preliminary site assessments, writing environmental assessments, developing Prescribed Fire Plans, obtaining clearances, training, and monitoring.

Federal Agencies Assistance

The FY02 Department of the Interior Wildland Fire Management Appropriation funded the five federal agencies Hazardous Fuels Reduction Programs. Funding was provided for the regular Hazardous Fuels Program and for Wildland Urban Interface Fuels. The Congressional intent for the fuels management program is that, "Interior Agencies and Forest Service should not charge each other for personnel and other resources."

All federal agency fire directors concur that the general policy of not cross billing is appropriate and meets the congressional intent. 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. Refer to agency specific direction.
- **BLM -** *Refer to BLM Fiscal Fund Coding Handbook for agency specific direction.*

Current policy is that hazard pay will not be paid for any prescribed fire.

Contractors

Agencies can contract to conduct all or part of the prescribed fire operations and/or all or part of mechanical treatments for "Hazard Fuel Reduction" 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 mopup and patrol) to ensure that the burn objectives are being met and that the terms of the contract are adhered to. The agency representative (COAR or PI) must have prescribed fire and/or wildfire qualifications equal to what the agency would require if an agency Prescribed Fire Burn Boss were conducting the actual operation.

Casual Firefighter Hire Authority

The DOI has been granted the authority to hire personnel under the pay plan for emergency workers for "fire use" work related to hazardous fuel reduction projects. The term of hire is restricted to no greater than 300 hours per year per person for emergency hazardous fuel reduction work.

Complete guidance for the use of this authority can be found in Chapter 20, Administration. Refer to agency specific direction.

- **FS** - *Forest Service has no authority for AD hiring plan to be used in Hazardous Fuel projects.*

Conversion to Wildfire

A prescribed fire will be declared a wildfire when the assigned Burn Boss determines that one or more of the following conditions or events has occurred or is likely to occur, and if these conditions cannot be mitigated within the next burning period by implementing the contingency actions in the prescribed fire plan by on-site holding forces and listed contingency resources staged during this operational period:

- The prescribed fire leaves the planned unit boundary.
- The fire behavior exceeds limits described in the prescribed fire plan and/or the fire is threatening to leave the planned unit boundary.
- The fire effects are unacceptable.
- Smoke production must be reduced because of adverse air quality impacts.
- Local and/or geographic area fire activity escalates and resources committed as contingency or holding forces are needed for re-assignment to other incidents.

After wildfire declaration, a prescribed fire project is over. A Wildland Fire Situation Analysis will define appropriate future management action.

Actions

When a prescribed fire is declared a wildland fire, managers still have the full range of suppression options available under the concept of the "Appropriate Management Response." If a prescribed fire is declared a wildfire, an agency specific "Fire Number" will be assigned and all suppression costs will be charged to it.

The following actions will be taken on all prescribed fires that escape and are declared wildland fires:

- Take prompt and reasonable action to control and suppress the fire. This could include the development of a WFSA.
- Notify the agency administrator responsible for the area.
- Notify the other agency administrator(s), and/or other landowners that may be affected, of the escaped fire. Coordinate suppression actions with the other affected parties.
- Document the time and environmental conditions that existed when the escape occurred.
- Document the incident, including all actions prior to and after the escape. Set up a file that includes all pertinent information, i.e., the Prescribed Fire Plan, a chronology of events including the prescribed fire report and unit logs or individual statements, the fire investigation report, weather forecasts including any spot forecasts, Remote Automated Weather Station (RAWS) data and National Fire Danger Rating System (NFDRS) data for the day of the escape for the nearest weather stations, photos, and any appraisal of damages.

Reviews

Escaped Prescribed Fire

Escaped prescribed fires will receive an administrative review. The level and scope of the review will be determined by the injuries, damage, and cost associated with the escape.

A prescribed fire that escapes and requires an expenditure of suppression funds or results in property damage, injuries, or fatalities will be investigated. The following guidelines apply to escaped prescribed fire reviews:

Refer to agency specific direction.

- ***BLM -*** *Refer to BLM IM OF&A No. 2004-003.*
- ***BLM - Fire Management Officer*** *- The FMO is required to make an investigation of escaped prescribed fires either personally or through an appropriate designated investigator.*
- ***BLM - Field Office Manager*** *- The Field Office Manager has the responsibility for ensuring adequate and proper investigation of all escaped prescribed fires that result in personal injuries, burn onto private or other agency land, or requiring expenditures of up to $50,000 for suppression and/or damage to property. The field office manager may appoint an investigation team or request that one be appointed. The Field Office Manager will notify the State Director of escaped prescribed fires meeting the above criteria within 24 hours. Copies of the completed review report will be sent to the State Director, SFMO and to the Director, Office of Fire and Aviation.*

- **BLM - State Director** - *State Directors have the responsibility for ensuring adequate proper investigation of all prescribed fire escapes resulting in serious or multiple personal injuries, significant burned area on private or other agency lands, or have an estimated expenditure of from $50,000 to $100,000 for suppression and/or property damage.*

- **BLM -** *The State Director will notify the Director, Office of Fire and Aviation, of escaped prescribed fires meeting the above criteria within 24 hours. Copies of the completed review report will be sent to the Director, Office of Fire and Aviation. The Director is responsible for ensuring adequate and proper investigation of all prescribed fire escapes resulting in fatalities, injuries to people not involved in the prescribed fire smoke significantly impacting a major population center or causing a public health concern, or where suppression expenditures and/or property damage will exceed $100,000.*

- **BLM -** *The documentation required for a review are those listed below. A review team will be provided with all of the original documents related to the incident.*
  - ➢ *Those items listed under (Actions) above.*
  - ➢ *The Prescribed Fire Plan and all attachments.*
  - ➢ *Documents pertaining to the qualifications and experience of the Prescribed Fire Burn Boss, Ignition Specialist, Holding Specialist, and other key overhead. This would include Red Cards, training and experience records, and Position Task Book.*
  - ➢ *Dispatch logs, radio logs, and any aviation records or logs.*

- **FS -** *Refer to FSM 5190 for agency specific direction.*

Prescribe Fire Program Review

Refer to Agency Specific Direction.

- **BLM - Fuels Management/Community Protection and Assistance Program Review**
  National Fuels Management/Community Protection and Assistance Program Reviews are conducted annually. The purpose of these reviews is to evaluate the states' programs against established standards, identify deficiencies, develop corrective actions, and to make recommendations designed to enhance or improve the program. The reviews consist of several major elements, of which safety is the primary concern. These elements include:
  - ➢ *Management Direction and Considerations*
  - ➢ *Organization and Staffing*
  - ➢ *Community Assistance*
  - ➢ *Planning*
  - ➢ *NEPA*
  - ➢ *Budget*
  - ➢ *Business Practices*
  - ➢ *Reporting*
  - ➢ *Risk Assessment and Mitigation Plans*

Release Date: January 2005   **18-17**

1   ➢   *Training and Qualifications*
2   ➢   *Safety*
3   ➢   *Fuels Treatment Procedures and Practices*
4   ➢   *Record Keeping*
5   •   **BLM -** *Review teams will include national fuels/community protection and*
6   *assistance program lead, agency administrator, fire manager, program*
7   *analyst, safety, fuels and mitigation technical specialist. (Other technical*
8   *specialists as required, i.e., contracting, resource specialist, etc.)*
9   *Expertise should be gathered from diverse backgrounds, and should*
10   *include cooperators.*

<div align="center">

Chapter 19
Reviews & Investigations

</div>

Introduction

Reviews and investigations are two methods used by wildland fire and aviation managers to ensure or improve safety and efficiency, determine if any policy or operational changes should be initiated, and identify any management system failures. Reviews are usually based on improving performance and increasing safety, while investigations are conducted when an accident or incident with potential for injury or fatality occurs.

Depending on the complexity and severity, reviews and investigations may be conducted at the local, state/regional, or national level.

Policy

Agency policy requires investigation or review of all fires where:

- Entrapments and/or fire shelter deployments have occurred.
- Multiple serious injuries or fatalities have occurred.
- Fires have escaped prescribed fire plans.
- Property or equipment damage is more than:
  - ➢ DOI $2,000,000
  - ➢ FS $1,500,000
- Fires with projected large expenditures of more than:
  - ➢ DOI $5,000,000
  - ➢ FS $1,500,000
- **BLM -** *Management reserves the right to review any fire deemed appropriate.*

Policy requires each field unit to have on-site a current copy of the *Interagency Standards for Fire and Fire Aviation Operations*, *Investigating Wildland Fire Entrapments* (Missoula Technology and Development Center), *Fireline Handbook*, an agency Safety and Health handbook, and a copy of applicable agency prescribed fire direction.

	Safety	*Prescribed Fire*
BLM	*Manual 1112-2, 1112-1*	*Prescribed Fire Handbook*
FWS	*Service Manual 095*	*Fire Management Handbook*
NPS	*DO/RM-50*	*RM-18, Chapter 10*
FS	*FSH-6709.11*	*FSM-5140*

Reviews

Reviews address all or any aspects of wildland fire and aviation management. Reviews may focus on program oversight, safety, leadership, operations, specific incidents, preparedness, training, staffing, business practices, budget, cost containment, planning, interagency cooperation, and coordination between

fire and other agency programs. Review teams will develop findings and
recommendations and establish priorities for action.
Reviews may be conducted in the form of Preparedness Reviews, Fire and
Aviation Safety Team (FAST) Reviews, Individual Fire Reviews, or program
specific reviews.

Types of Reviews

Preparedness Reviews
Wildland fire and aviation preparedness reviews are conducted annually prior to
the fire season to help the field unit prepare for the fire season, identify
operational, procedural, personnel, or equipment deficiencies, and recommend
corrective actions. Standards for preparedness reviews are based on the
Interagency Standards for Fire and Fire Aviation Operations and conducted
according to the *Fire Preparedness Review Guide*.

- *BLM - Preparedness reviews consist of several functional checklists that can be found at:*
  http://www.fire.blm.gov/Standards/FIRE_AVIATION_PREPAREDNESS_REVIEW_GUIDE.htm

Review teams should include line and fire managers, fire and aviation operations
specialists, dispatch and logistics specialists, fire business management
specialists, and other technical experts as needed (safety & occupational health
specialists, contracting officers). This expertise may be internal, interagency, or
contract, and include members from other states/regions, geographic areas.
Reviews will benefit greatly if interagency in composition. The Agency
Administrator determines local level review team membership; state/regional
level review team membership is identified by the State/Regional Director; and
national review teams are identified by the National Fire Directors.

Review Frequency/Reviewing Level

	Local	*State/Regional*	*National*
BLM	*Annual/Any Level*	*2 yrs/National*	*4 yrs*
FWS	*Annual/Any Level*	*3-5 yrs/National*	*N/A*
NPS	*Annual*	*3-5 yrs/Regional*	*N/A*
FS	*Annual*	*N/A*	*N/A*

- *BLM - Copies of preparedness review reports will be distributed to the Director, Office of Fire and Aviation, and to the reviewed field office through the State Director. A copy of the written action plan addressing the executive summary findings will be submitted to the Director, National Office of Fire and Aviation, within (30) calendar days upon receipt of the review.*
- *BLM - Field office preparedness reviews will be conducted annually. Field Office will be reviewed every other year by the state office. National-level reviews of each state are conducted every four years.*

- **FS -** *FS preparedness reviews are guided by FSM 5100 /5190 on frequency of reviews and reporting requirements.*

Fire and Aviation Safety Reviews (FASTs)

Fire and Aviation Safety Teams assist Agency Administrators during periods of high fire activity by assessing policy, rules, regulations, and management oversight relating to operational issues. They can also do the following:

- Provide guidance to ensure fire and aviation programs are conducted safely.
- Review compliance with OSHA abatement plan(s), reports, reviews and evaluations.
- Review compliance with *Interagency Standards for Fire and Fire Aviation Operations.*

FAST reviews can be requested through geographic area coordination centers to conduct reviews at the state/regional and local level. If a more comprehensive review is required, a national FAST can be ordered through the National Interagency Coordination Center.

FASTs include a team leader, who is either an Agency Administrator or fire program lead with previous experience as a FAST member, a safety and health manager, and other individuals with a mix of skills from fire and aviation management.

FASTs will be chartered by their respective Geographic Area Coordinating Group (GACG) with a delegation of authority, and report back to the GACG.

The team's report includes an executive summary, purpose, objectives, methods/procedures, findings, recommendations, follow-up actions (immediate, long-term, national issues), and a letter delegating authority for the review. As follow-up, the team will gather and review all reports prior to the end of the calendar year to ensure identified corrective actions have been taken. FAST reports should be submitted to the geographic area with a copy to the Federal Fire and Aviation Safety Team (FFAST) within 30 days. See Appendix BB for sample FAST Delegation of Authority.

Individual Fire Reviews

Fire reviews examine all or part of the operations on an individual fire. The fire may be ongoing or controlled. These evaluations may be a local, state/regional, or national review, a "hotline" review, an incident management team closeout and review, a wildland fire review, or an escaped prescribed fire review.

Local Level Review

Should be conducted by the local manager (or designated representative) to provide the Agency Administrator with recommendations or commendations pertaining to the fire program or operations.

State/Regional Level Review

Convened by the state/regional FMO (or designated representative). This review is generally conducted for any fire that results in controversy involving another agency, adverse media attention, or in large expenditures of funds ($2,000,000 or more), or involves serious injury to less than 3 personnel, significant property damage, or is an incident with potential.

National Level Review

Convened by National Fire Director (or designate). This review is generally conducted for any fire that involves agency wide or national issues, significant adverse media or political interest, multi-regional resource response, a substantial loss of equipment or property, large expenditure of funds (more than $5,000,000).

- *FS - $10,000,000 plus a fatality, or multiple, serious fire related injuries (three or more personnel), and other fires the National Fire Director identifies to be reviewed.*

Hotline Review

Normally conducted by the FMO in conjunction with the incident commander, this review examines an ongoing fire to confirm decisions made daily in the WFSA, or to determine where the decision process has been faulty and what corrective actions are needed.

Incident Management Team Closeout and Review

The Agency Administrator conducts a closeout with the IMT prior to a team's release from the incident. This ensures effective transfer of command of the incident to the local unit, or to another team, evaluates the status of fire business, and addresses issues or suggested improvements.

Wildland Fire Review

Examines an ongoing fire to evaluate decisions or correct deficiencies; identifies new or improved procedures, techniques or tactics; compiles consistent and complete information to improve local, state/regional or national fire management programs; examines fire related incidents to determine cause(s), contributing factors, and to recommend corrective actions; and determine cost-effectiveness of an operation.

Escaped Prescribed Fire Review

Examines escaped prescribed fires to:

- prevent future escapes from occurring
- establish accountability
- determine if the prescribed fire plan was adequate
- determine if the prescription, actions and procedures set forth in the prescribed fire plan were followed

- determine if overall policy, guidance, and procedures relating to prescribed fire operations are adequate
- determine the level of awareness and understanding of procedures and guidance of the personnel involved
- determine the extent of prescribed fire training and experience of personnel involved.

Escaped prescribed fire review direction is found in the following agency manuals/direction.

- **BLM -** *IM No. OF&A 2004-003*
- **FWS -** *Fire Management Handbook*
- **NPS -** *RM-18, Chapter 10 & 13*
- **FS -** *5140-1*

After Action Review (AAR)

The AAR is a training tool intended for post-evaluation of an incident or project in order to sustain strengths and improve on weaknesses. It is performed immediately after the event by the personnel involved. The leader of the incident or project should lead this exercise in an informal setting, encouraging input on an assessment of what was planned, what actually happened, why did it happen, and what can be done the next time. This process should not be interpreted as an investigational review.

An example would be a post-operational evaluation by a Hotshot Superintendent with the crew.

The format can be found in the IRPG, PMS#461, NFES #1077

Investigations

Guidance

The following provides guidance and establishes procedures for national level incident/accident investigations (as defined below). Each state/region and local unit must have procedures in place to conduct investigations for incidents/accidents that do not require national involvement. The following information may be used as a guide for this procedure as well as referencing the following applicable agency guidance.

- **BLM -** *Handbook 1112-1, Safety and Health Management*
- **FWS -** *Fire Management Handbook*
- **NPS -** *RM-18, Chapter 13*
- **FS -** *FSM-5100 and FSH-6709.11*

Per the 1995 Memorandum of Understanding between the U.S. Department of the Interior and the U.S. Department of Agriculture *"Investigation of Serious Wildland Fire-Related Accidents,"* serious wildland fire-related accidents will be investigated through the use of interagency investigation teams.

Investigation Categories

Entrapment

Defined by NWCG as situations where personnel are unexpectedly caught in a fire behavior-related, life-threatening position where planned escape routes and safety zones are absent, inadequate, or have been compromised. Entrapments may or may not include deployment of a fire shelter for its intended purpose, and they may or may not result in injury. They include "near misses." Notification to the National Fire and Aviation Safety Office of the jurisdictional agency is required. Level of investigation will be determined at the national level.

Incidents with Potential and/or Non-Serious Injury

Wildland fire-related mishaps or non-fire incidents involving agency fire personnel that result in serious or non-serious injuries involving personnel, near miss accident /close-call (which would have resulted in an injury or fatality), substantial loss of property (less than $250,000), or an incident so complex and fraught with operational discrepancies that it has the potential to produce an accident, injury, or fatality given a similar environment or set of circumstances that existed at the time of the incident. Investigations are required and conducted at the state/region or local level (national assistance is available upon request). Notification to the National Fire and Aviation Safety Office is required.

Wildland Fire Serious Accident

Defined as accidents where one or more fatalities occur and/or three or more personnel are inpatient hospitalized as a direct result, or in support of, wildland fire suppression or prescribed fire operations, or substantial property or equipment damage of $250,000 or more occurs. Notification to the National Fire and Aviation Safety Office is required. National Office will conduct the investigation with the delegation of authority coming from the National Fire Director or agency director.

- ***FS -*** *Forest Service protocol for multiple fatalities or 3 or more serious injuries requiring hospitalization investigation teams are assigned by the Safety and Health Branch in the WO and are Chief's Office Investigations.*

For more information on conducting investigations, refer to USDI, Interior 485 Departmental Manual 7, Serious Accident Investigation; USDA Forest Service Manual 6730, Accident Reporting and Investigation; the Interdepartmental Memorandum of Understanding between the U.S. Department of the Interior and the U.S. Department of Agriculture dated October 26, 1995; *Executive Order 12196, Occupational Safety and Health Programs for Federal Employees; 29 CFR 1960.29,Accident Investigation; 29 CFR 1960.70, Reporting of Serious Accidents; Investigating Wildland Fire Entrapments; Interagency Standards for Fire and Fire Aviation Operations*; and the *Fireline Handbook*.

Investigation Process

Notification

Interagency investigations will be co-led and/or have interagency team members. Agency reporting requirements shall be followed. As soon as a serious accident is verified, the following groups or individuals should be notified: Agency Administrator, public affairs, agency law enforcement, safety personnel, county sheriff or local law enforcement as appropriate to jurisdiction, National Interagency Coordination Center (NICC), agency headquarters, and OSHA (within 8 hours only if resulting in a fatality[ies] or three or more personnel are inpatient hospitalized).

- After initial notification, NICC will advise the national fire director(s) or designee(s).
- The fire director(s) or designee(s) will ensure notification to the agency safety manager and Designated Agency Safety and Health Official (DASHO).

Personnel Involved

Treatment, transport, and follow-up care should be immediately arranged for injured and involved personnel. Develop a roster of involved personnel and supervisors and ensure they are available for interviews by the investigation team. Consider relieving involved supervisors from fireline duty until the preliminary investigation has been completed. Attempt to collect initial statements from the involved individuals prior to a Critical Incident Stress Debriefing (CISD). CISD is available through local Employee Assistance Programs (EAPs) or may be ordered through NICC.

Site Protection

The site of the incident should be secured immediately and nothing moved or disturbed until the area is photographed and visually reviewed. Exact locations of entrapment(s), injury(ies), and fatality(ies), and the condition and location of personal protective equipment, and any damaged property or equipment must be documented.

Investigation

The 24-Hour Preliminary Brief that contains only the most obvious and basic facts about the accident will be completed and forwarded by the Agency Administrator responsible for the jurisdiction where the accident occurred. In the case of an entrapment and/or fire fatality, use NWCG *"Wildland Fire Entrapment/Fatality Initial Report," NFES 0869.*

Investigation Team Ordered

Following initial notification of a serious accident, the National Fire Director(s) will immediately dispatch an investigation team.

Roles and Responsibilities

Director

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

- Immediately appoint, authorize, and dispatch an accident investigation team.
- Ensure that resources and procedures are adequate to meet the team's needs.
- Receive the factual and management evaluation reports and take action to accept or reject recommendations.
- Forward investigation findings, recommendations, and corrective action plan to the DASHO (the agency safety office is the "office or record" for reports).
- Convene a board of review (if deemed necessary) to evaluate the adequacy of the factual and management reports and suggest corrective actions.
- Ensure that a corrective action plan is developed, incorporating management initiatives established to address accident causal factors.

Agency Administrator

- Identify agencies with statutory/accident jurisdictional responsibilities for the incident; develop local preparedness plans to guide emergency response.
- Provide for and emphasize treatment and care of survivors.
- Ensure the Incident Commander secures the accident site to protect physical evidence.
- Conduct in-briefing to the investigation team.
- Facilitate and support investigation as requested.
- Implement CISD.
- Notify home tribe leadership in the case of a Native American fatality.
- Receive an in-briefing from the local Agency Administrator to include the 24-hour Preliminary Brief (if not already completed by local unit), as well as other general information about the accident.
- Produce a 72-hour Expanded Report - see reports section below.

Team Composition

Team Leader

A senior agency management official, at the equivalent associate/assistant regional/state/area/division director level. The team leader will direct the investigation and serve as the point of contact with the agency DASHO.

Chief Investigator

A qualified accident investigation specialist responsible for the direct management of all investigation activities. The chief investigator reports to the team leader.

Accident Investigation Advisor

An experienced safety and occupational health specialist or manager who acts as an advisor to the team leader to ensure that the investigation focus remains on safety and health issues. The accident investigation advisor also works to ensure that strategic management issues are examined.

Interagency Representative

An interagency representative will be assigned to every fire-related Serious Accident Investigation Team. They will assist as designated by the team leader and will provide outside agency perspective.

Technical Specialists

Personnel who are qualified and experienced in specialized occupations, activities, skills, and equipment, addressing specific technical issues such as arson, third-party liability, weather, and terrain.

- *BLM - BLM has established Serious Accident Investigation Teams (SAIT) that are managed on a rotational basis. Dispatching is done from the National Office of Fire and Aviation Safety Manager and teams are ordered through NICC.*

Reports

The 24-Hour-Preliminary Report

This report contains only the most obvious and basic facts about the accident. It will be completed and forwarded by the Agency Administrator responsible for the jurisdiction where the accident occurred. In the case of an entrapment and/or fire fatality, use NWCG *Wildland Fire Entrapment/Fatality Initial Report, NFES 0869*.

The 72-Hour Expanded Report

This report provides more detail about the accident and may contain the number of victims, severity of injuries, and information focused on accident prevention.

The Final Report

Within 45 days of the incident, a Factual Report (FR) and a Management Evaluation Report (MER) will be produced by the investigation team to document facts, findings, and recommendations and forwarded to the DASHO through the agency Fire Director(s).

Factual Report

This report contains a brief summary or background of the event, and facts based only on examination of technical and procedural issues related to equipment and tactical fire operations. It does not contain opinions, conclusions, or recommendations. Post-accident actions should be included in this report (emergency response attribute to survival of a victim, etc). This report contains the following sections.

- **Executive Summary:** A brief narrative of the facts involving the accident including dates, locations, times, name of incident, jurisdiction(s), number of individuals involved, etc.
- **Narrative:** A detailed chronological narrative of events leading up to and including the accident, as well as rescue and medical actions taken after the accident. This section should spell out in detail who, what, and where.
- **Investigative Process:** A brief narrative stating that 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 state that fact and move on to the next factor. Human factors or material factors paragraphs should not be formulated so as to draw conclusions, nor should they contain adjectives or adverbs to describe and thus render an opinion into pertinent facts.
- **Findings:** Findings are developed from the factual information and are listed in the following order:
  - ➢ Direct cause of the accident.
  - ➢ Indirect causes which contributed to the accident.
  - ➢ Other findings which, if left uncorrected, could lead to future accidents.
  - ➢ Opinions or recommendations are not findings.
  - ➢ Findings must be substantiated by the factual data within the report.
  - ➢ Maps, Illustrations, and Photographs: graphic information used to document and visually portray facts.
  - ➢ Records: factual data and documents used to substantiate facts involving the accident.
  - ➢ Appendices: excerpts, tests results, and similar items used as reference information for documented facts involving the accident.

Management Evaluation Report (MER)

The MER is intended for internal use only and explores management policies, practices, procedures, and personal performance related to the accident. It takes the abnormalities/and findings identified in the factual report and categorizes them for management. This report may contain:

- Opinions by the investigators as to the cause of the accident.
- Conclusions and observations.

- Confidential information.
- Recommendations for corrective measures.

This report includes the following sections:

- **Executive Summary:** A brief narrative of the facts involving the accident. Keep this section short. Readers can refer to the factual report if they want more detail.
- **Other Findings:** Other findings that did not contribute to the accident but, if left uncorrected, could lead to other accidents.
- **Other Information:** This paragraph can contain opinions by the investigators, conclusions and observations, and confidential information which the team feels in relevant for management consideration. (This paragraph is not required).
- **Recommendations:** Recommendations are prevention measures that management may take to prevent similar accidents. Although this is not an absolute requirement, there should be a recommendation for each cause. The recommendations must be reasonable, feasible, relate to the cause(s) of the accident, and allow for definitive closure. Depending upon the scope of impact the recommendations can be implemented by a local unit, the state office or the national office. The team should specify who should implement the recommendations.
- **Enclosures:** Information that is not contained in the Factual Report, but which the team feels is necessary to support their recommendations. Since this report can be obtained by the public under certain circumstances, do not include anything that is not needed to substantiate recommendations.

Board of Review

- A Board of Review is used to evaluate recommendations, determine responsibility, and follow up on serious accident investigations. After determining responsibility for an incident, the Board of Review can make recommendations ranging from no action taken to termination of employment.
- Only the Agency Director or Deputy Director may appoint a Board of Review.

Fire Investigation &Trespass

Introduction

Agency policy requires any wildfire to be investigated to determine cause, origin, and responsibility. Accurate fire cause determination is a necessary first step in a successful fire investigation. Proper investigative procedures, which occur concurrent with initial attack, more accurately pinpoint fire causes and can preserve valuable evidence that would otherwise be destroyed by suppression activities.

The agency or its employees must pursue cost recovery or document why cost recovery is not initiated for all human caused fires on public and/or other lands under protection agreement.

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

Policy

The agency must pursue cost recovery, or document why cost recovery is not required, for all human-caused fires on public lands. The agency will also pursue cost recovery for other lands under fire protection agreement where the agency is not reimbursed for suppression actions, if so stipulated in the agreement.

For all human-caused fires where negligence can be determined, trespass actions are to be taken to recover cost of suppression activities, land rehabilitation, and damages to the resource and improvements. Only fires started by natural causes will not be considered for trespass and related cost recovery.

The determination whether to proceed with trespass action must be made on "incident facts," not on "cost or ability to pay." Trespass collection is both a cost recovery and a deterrent to prevent future damage to public land. Therefore, 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 Council 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 Council 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*

Chapter 20
Administration

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

Policy
Since the 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 and
  Fire Management Handbook for specific agency direction.*
- **NPS -** *Refer to RM-18 for specific agency direction.*
- **FS -** *Refer to FSH 5109.34 for specific agency direction.*
  Regions/Geographic Areas may issue supplements.

Use of Pay Plan for Hazardous Fuel Reduction
Refer to the DOI Pay Plan for Emergency Workers for information regarding the
use of emergency workers for hazardous fuel reduction projects on
Departmental lands. Refer to the Forest Service Pay Plan for Emergency
Workers for information regarding the use of emergency workers for hazardous
fuel reduction projects on Forest Service Lands.

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

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

National Interagency Support Caches
The eleven national caches are part of the National Fire Equipment System
(NFES). Each of these caches provides incident support in the form of
equipment and supplies to units within their respective geographic areas. The
NFES cache system may support other emergency, disaster, fire-related or land
management activities, provided that such support is permitted by agency

Release Date: January 2005   **20-1**

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 Woodsy Owl and Junior Forest Ranger environmental educational materials. It also distributes DOI Fire Education materials and provides resource kits for National Fire Prevention Teams. The website at www.symbols.gov contains the catalog of these materials and offers information having to do with these programs.

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

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

Inventory Management

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

Reporting Requirements
By April 1st of each year, all local interagency support and initial action caches will submit to their servicing NISC, available quantities of the items referenced in Appendix CC.
All items reported will conform to refurbishment standards set forth in *NFES 2249, Fire Equipment Storage and Refurbishment Standards*. Those items not identified in NFES 2249 will not be refurbished.

Accountability

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

Trackable Items

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

Durable Items

Include cache items considered to have a useful life expectancy greater than one incident. High percentages of return for these items are expected. These items are not specifically cache identified/tagged/engraved.

Acceptable loss tolerance/use rates for the following durable goods have been established:

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

Consumable Items

Include items normally expected to be consumed during incident use.

Consumable items returned in unused condition are credited to the incident.

Examples of consumable items are: batteries, plastic canteens, cubitainers, forms, MREs, fusees, hot food containers, petroleum products, and medical supplies.

Incident to Incident Transfer of Supplies and Equipment

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

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

- NFES Number

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

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

These reports are complied by the geographic area NFES cache 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. Several steps must be followed to facilitate complete data resulting in accurate reports:

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

Incident Supply and Equipment Return Procedures

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

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

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

Cache Returns and Restock Procedures

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

Mobile Fire Equipment Policy

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

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

Fire Equipment Management

Introduction

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

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

1 • **NPS -** *The NPS manages the Working Capital Fund (WCF) Fire*
2 *Equipment Program through the Fire Management Program Center. The*
3 *working capital funding for the program is administered through an*
4 *interagency agreement with the BLM. The NPS's WCF fire equipment*
5 *program acquires specialized equipment, cabs, chassis, utility bodies, and*
6 *pump packages to meet the NPS's annual fire engine replacement and fire*
7 *suppression requirements. Fire engine design is accomplished through the*
8 *analysis of performance needs identified, and survey of new technologies.*
9 *Acquisition of these components is done through contracting with venders*
10 *identified on GSA contracts.*
11

Standards and Specifications

13 • **BLM -** *Standardization of our mobile fire equipment fleet aides in the*
14 *ability to produce equipment that effectively meets the user's needs at the*
15 *lowest possible cost, and with the least impact on the BLM work force.*
16

Fire Equipment Development

18 • **BLM -** *The BLM maintains a Fire Equipment Development Unit located at*
19 *NIFC. This unit is responsible for the ordering, receiving, inspection,*
20 *distribution, and development of new fire equipment that will meet or*
21 *exceed the minimum performance standards established by the BLM*
22 *National Fire Equipment Committee.*
23 • **NPS -** *The Fire Equipment and Facilities Specialist, located at NIFC, is*
24 *responsible for ordering, receiving, inspection, and distribution of new fire*
25 *equipment.*
26

Equipment Development Process

28 • **BLM -** *The BLM has established a fire equipment development process to*
29 *ensure that any new fire equipment, engine models, or technologies meet*
30 *or exceed established performance standards. All new fire engines, new*
31 *equipment models, vehicle chassis, and major components will follow this*
32 *development process, and are tested and evaluated under actual field*
33 *conditions prior to being made available for general ordering. While it*
34 *may take only a few weeks to complete the development and evaluation*
35 *process for a minor component, it takes several years to develop a new*
36 *chassis, fire engine model, or major component.*
37

Management of Standards

39 • **BLM -** *BLM's specifications and standards are maintained by the Fire*
40 *Equipment Development Unit at NIFC. Equipment standards and options*
41 *are managed under a "sealed pattern" concept. Major changes to*
42 *equipment are made once a year during the BLM National Fire Equipment*
43 *Committees fall meeting. This is done through a formal documented*
44 *process.*

- **BLM -** *Minor changes to blueprints and specifications are the responsibility of the Fire Equipment Development Unit to ensure that equipment in production is not delayed. Major changes must be addressed through the BLM fire equipment development process.*
- **BLM -** *Procurement of nonstandard equipment with fire management funds, when standard equipment is available, has to have written approval by the Director, Office of Fire and Aviation. The BLM Fire Equipment Committee has the responsibility to approve and establish the minimum performance standards of all BLM/WCF mobile fire equipment.*

Classes of Standard Units

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

Equipment Deficiencies and Improvements

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

Funding Accessories and Upgrades

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

Valid/Invalid Expenditures of WCF Funds

Travel on WCF Funds

- **BLM -** *Travel using WCF funds is allowed only for NIFC Fire Equipment Development Unit and National Business Center personnel attending pre-work conferences, serving as contracting officers, contracting officer representatives, or project inspectors on fire vehicle related contracts, and for other personnel associated with the delivery of a new fire engine or support vehicle.*

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

Vehicle Repairs, Maintenance

- *BLM - The cost of all vehicle repairs and maintenance should where possible be charged to the benefiting activity unless this cannot be established.*
- *NPS - The cost of WCF vehicle repairs and maintenance is the responsibility of the individual parks.*

Mid-Cycle Maintenance

- *BLM - Mid-cycle maintenance on fire engines may be required to help ensure that the vehicles reliability, integrity, safety, and cosmetic value are up to minimum standards. It is known that some wear and tear cannot be resolved through a regular maintenance schedule; and it is necessary to perform special maintenance on the vehicle. These costs are chargeable to the WCF but, before this mid-life maintenance can be initiated, required repairs must be identified. Estimates of the maintenance and repair cost must be completed prior to having the work completed. A copy of the estimate and approval shall be forwarded to the Fire Equipment Development Unit at NIFC so it can be placed in the vehicles history file.*
- *BLM - Mid-cycle maintenance does not include the cost of any item that should have been corrected at the time the damage occurred or repairs to equipment, which was not standard at the time of original purchase.*

Fixed Ownership Rates (FOR's)

These are the fees that are charged monthly for each fire vehicle in service. These fees continue to accumulate over the life of a vehicle, and are used to replace each vehicle at the end of its life cycle. The FOR rates are adjusted annually by the WCF manager to reflect changes in replacement costs due to inflation and/or changes in performance. The collection period is from May to October to allow the benefiting activities to be charged.

Use Rates

- *BLM - Use rates are independent of the FOR rates, and are adjusted annually to reflect all WCF costs associated with the administration, delivery, maintenance, and repair of vehicles in each vehicle class. These*

use rates may vary significantly from year to year, particularly in those
vehicle classes, which have low number of vehicles. (To aid in keeping
these rates low where possible benefiting activities should be responsible
and charged for any repairs and maintenance.)

Fire Equipment Committees

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

Property Transfer/Replacement

- **BLM -** *Surplus, early turn-ins, and transfer fire vehicles may be transferred to another area for continued service with the approval of the State Director and 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 there is no accrued credit from the FOR collected on that unit prior to disposal. Field offices acquiring this type of equipment continue payment of the FOR and use rates.*
- **BLM -** *Conversions - Offices in possession of fire engine equipment due for replacement have the option of replacing that equipment with vehicle(s) of another class. The change in NUS must be consistent with the approved FMP (conversion of two light engines to one heavy engine). State Director*

and Property Manager approval and sufficient contributions through the FOR or other funds to make up any difference in cost are required.

- **NPS -** *Surplus vehicles for NPS will be excessed through the BLM Working Capital Fund Program. An SF-126 form will be submitted to the NPS Fire Equipment and Facilities Specialist upon receipt of new vehicle. After review, the form will be transferred to the BLM. BLM will manage the disposal of all surplused WCF equipment. Residual value of sold excessed fire vehicles is returned back into the NPS WCF. Parks should not excess WCF fire equipment through normal GSA channels.*

Fitness Equipment and Facilities

- **NPS -** *BDO-57 Occupational Medical Standards, Health and Fitness defines the minimum equipment needed to meet physical fitness goals. The following guidance will be used to specifically determine FIREPRO allocations for equipment purchase:*
- **NPS -** *The FIREPRO funding allocation will represent the percentage of mandatory fitness participants in a park. For example, park AX may have 20 total mandatory fitness participants in its health and fitness program, five (5) of whom are wildland firefighters. FIREPRO would pay 25 percent of the cost of equipment purchase.*
- **NPS -** *The regional fire management officer's approval is required for any anticipated purchases requiring FIREPRO contributions in excess of $1,200.*
- **NPS -** *Where all of a park's mandatory fitness participants are wildland firefighters; FIREPRO will fund up to a maximum of $1,200 per park for equipment purchase. The regional fire management officer's approval is required for purchases in excess of that amount.*
- **NPS -** *DO-57 indicates that health club costs must be borne by park management for mandatory fitness participants. However, in-park exercise facility development is the preferred option. Where this is not possible, health club costs, not to exceed $360 per year, may be paid from FIREPRO funds for each wildland firefighter mandatory program participant. Approval from the regional fire management officer is required for annual fees that exceed $360.*

Wildland Fire Uniform Standards

- **NPS -** *The Servicewide Uniform Program Guideline (DO-43) sets forth the Servicewide policies and associated legal mandates for wearing the National Park Service (NPS) uniform and for authorizing allowances to employees.*
- **NPS -** *The guideline states that superintendents administer the uniform program within their areas, and are responsible for developing and communicating local uniform and appearance standards in accordance with DO-43, determining who will wear the uniform and what uniform will*

be worn, and enforcing uniform and appearance standards. Three options exist for uniforms for wildland fire personnel:

- ***NPS -*** *Within the context of the uniform standards, if the conventional NPS uniform is identified at the local level as required for specified fire management staff, FIREPRO program management funds may be used to support uniform purchases in accordance with allowance limits identified in DO-43.*

- ***NPS -*** *While Nomex outerwear (i.e., shirts, trousers, brush-coats), routinely issued as personal protective equipment, has become recognized as the uniform of the wildland firefighter as a matter of necessity, these apparel also have justifiable utility as a uniform standard at the park level for certain FIREPRO and/or ONPS base-funded wildland fire staff.*

- ***NPS -*** *When the conventional NPS uniform or the full Nomex outerwear is not appropriate or justified, local management with regional director approval may establish a predetermined dress code for fire staff. The goals of the NPS uniform program can appropriately be applied (with common sense) to this departure from the norm.*

- ***NPS -*** *Where appropriate and justified, FIREPRO funds may be applied to the purchase of 100 percent cotton tee shirts and sweatshirts, and ball caps, with appropriate logo and color scheme, to augment the Nomex outerwear worn in conjunction with project or wildland fire management incidents. Nomex outerwear will usually be returned to the park's fire cache based on the tour of duty (end of season, transfer to another park, etc.).*

- ***NPS -*** *The fire management officer is responsible for establishing a reasonable allotment schedule for new or returning employees, commensurate with supplies provided in previous seasons. A suggested per person issuance is three to four tee shirts, one ball cap, and one sweatshirt (where appropriate). $75 would normally be adequate to cover costs of this issuance.*

- ***NPS -*** *Just as with uniform allowance discussed in DO-43, the intent of FIREPRO-funded purchases is to defray the cost of the appropriate apparel, not necessarily to cover the cost of all items. This will not only be factored into the quantities deemed necessary for the individual, but would also preclude FIREPRO-funded purchases of fleece jackets, rain gear, and other personal items generally considered the responsibility of those employees not covered by the NPS uniform program.*

Fire Management Credentials

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

Professional Liability Insurance

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

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

Sample Questions
For Fire Site Visits
By Agency Administrators

Management Direction

_____Who is the incident commander? If the fire is being managed under Unified Command, are all commanders present? Is the incident operating smoothly?

_____What is the incident organization?

_____What is the current situation? What has been damaged or is at risk?

_____Have you received adequate direction for the management of the incident? Is a Wildland Fire Situation Analysis required/still valid?

_____What are the incident management objectives? Constraints? Probability of success?

_____Are the tactics in the Incident Action Plan realistic and achievable with current resources?

_____Is a resource advisor needed?

_____What are your estimates of suppression costs?

_____What are the incident commander's concerns?

_____What are the local social, economic, and political issues?

_____Are there rehabilitation needs?

_____What can I, as the agency administrator, do to help?

Safety

_____What are your safety concerns?

_____Are these concerns resolved? If not, what needs to be done?

_____What is the general safety attitude and emphasis?

_____Have you assessed the potential hazardous situations and determined if the fire can be fought safely?

_____Have you applied the Fire Orders, Watchout Situations, and Lookout, Communication, Escape Routes, Safety Zones (LCES) process in selecting safe and effective strategies and tactics?

_____Have you effectively briefed firefighters on hazards, safety zones, escape routes, and current and expected weather and fire behavior?

_____Is the safety officer position filled? If not, how is this function being addressed?

_____Are you monitoring work schedules to ensure adequate rest? Are you meeting the standard work/rest guidelines?

_____Have you provided for adequate rest, food, water, and health services for all personnel?

_____Are all the fire personnel qualified for the positions they hold, and are they physically able to perform?

_____Have you had any injuries or accidents?

Fire Suppression Operations

_____What is the fire weather forecast (present and extended)?

_____What is the fire behavior potential?

_____Are fire personnel briefed on incident objectives, strategies, tactics, organization, communications, hazards, and safety principles?

_____Are the strategy and tactics based on current and forecasted weather?

_____Are strategy and tactics safe, effective, and consistent with management's objectives and accepted fire policies and procedures?

_____Do you have effective communication on the incident and with dispatch?

_____Are you monitoring weather and fire behavior to make needed adjustments to strategy and tactics?

_____Are you using tactical aircraft? Do you have an assigned air tactical group supervisor?

_____Is aircraft use safe, effective, and efficient?

_____If the fire escapes initial attack, what will your role be in developing the Wildland Fire Situation Analysis?

Administration

_____Do you have any administrative concerns?

_____What arrangements have you made to complete time reports, accident forms, fire report, etc.?

_____Did all orders and procurement go through dispatch?

_____Do you have any outstanding obligations?

_____Are all rental agreements and use records properly completed?

_____How did the fire start? If human-caused, has an investigation been initiated to determine the cause and develop a trespass case?

_____Do you know of any current or potential claims?

Dispatch Office

_____Is the incident receiving fire weather and fire behavior information?

_____Is the incident getting the resources ordered in a timely manner?

_____Is dispatch adequately staffed?

_____What are the local, area, and national Preparedness Levels? How do they affect this fire?

_____Are the elements identified at the various Preparedness Levels being considered?

_____What are the current local, area and national fire situations?

_____What is the priority of existing fires and how are the priorities being determined.

Manager's Supplement for Post Incident Review

Incident Commander_____
Fire Name and No._____
Start Date and Duration of Incident _____
Date of Incident Debriefing_____

List of Debriefing Attendees:

Brief synopsis of fire behavior and narrative of the incident:

Fire Size-up:
- Gave an accurate sizeup of the fire to dispatch upon arrival? (Appendix I)
- Managed fire suppression resources in accordance with the management objectives for the area and availability of resources?
- Did the unit support organization provide timely response and feedback to your needs? (Appendix A)
- Were there any radio communication issues?

Provide for the Safety and Welfare of Assigned Personnel:
- Gave operation briefing prior to firefighters being assigned to incident operations. (Appendix F)
- How were incoming resources debriefed; via radio, personal contact?
- Were agency work/rest guidelines followed? Was adequate food and water provided to firefighters?

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

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

Delegation for Field Office Fire Management Officers

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

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

2. Coordinate all prescribed fire activities in the _____
    and suspending all prescribed fire and issuance of burning permits when conditions
    warrant.

3. Ensure that only fully qualified personnel are used in wildland fire operations.

4. Coordinate, preposition, send and order fire and aviation resources in response to
    current and anticipated zone fire conditions.

5. Oversee and coordinate the _____ Interagency
    Dispatch Center on behalf of the BLM.

6. Request and oversee distribution of Severity funding for Field Office Fire and
    Aviation.

7. Approve Fire Program requests of overtime, hazard pay, and other premium pay.

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

9. Coordinate and provide all fire and prevention information needs to inform internal
    and external costumers with necessary information.

10. Coordinate all fire funding accounts with the Budget Officer to assure Field Office
    fiscal guidelines are adhered to and targets are met.

11. Approve and sign aviation request forms.

12. Approve Red Cards in accordance with State Office guidance.

13. Authorized to hire Emergency Firefighters in accordance with the Department of
    Interior Pay Plan for Emergency Workers.

_____   _____
Field Manager   Date

Agency Administrator's Briefing to Incident Management Team

General Information
Name of Incident:
Type of Incident:
Incident Start Date:
Approximate Size of Incident:
Location:
Time:
Cause:
General Weather Conditions:
Local Weather or Behavioral Conditions:
Land Status:
Local Incident Policy:
Resource Values Threatened:
Private Property or Structures Threatened:
Capability of Unit to Support Team (Suppression and Support Resources):
Command Information/Written Delegation of Authority
Agency:
Agency Administrator's Representative:
Transition
Name of Current Incident Commander:
Timeframe for Team to Assume Command: Date: Time:

Recommended Local Participation in IMT Organization:
Current IC and Staff Roles Desired after Transition:
Other Incidents in Area:
Other Command Organizations (Unified/Area/MAC):
Local Emergency Operations Center (EOC) Established:
Trainees Authorized:
Legal Considerations (Investigations in Progress):
Known Political Considerations:
Sensitive Residential and Commercial Developments, Resource Values, Archeology Sites, Roadless, Wilderness, and Unique Suppression Requirements:
Local Social/Economic Considerations:
Private Representatives such as timber, utility, railroads, and environmental groups:
Incident Review Team Assigned (FAST, Audit, Other):
Incident Commander:
Agency Administrator:
Local Public Affairs:
Other:
Unit FMO:
Expanded Dispatch:
Local Public Affairs:
Other:

Safety Information
Accidents and Injuries to Date:
Condition of Local Personnel:
Known Hazards:
Injury and Accident Reporting Procedures:

Planning Section/General Information
Access to Fax and Copy Machines:
Access to Computers and Printers:
Existing Pre-Attack Plans:
Other Nearby Incidents Influencing Strategy/Tactics/Resources:
Training Specialist Assigned or Ordered:
Training Considerations:

Situation Unit
General Weather Conditions/Forecasts:
Fire Behavior:
Local Unusual Fire Behavior and Fire History in Area of Fire:
Fuel Type(s) at Fire:
Fuel Type(s) Ahead of Fire:

Resources Unit /Refer to Attached Resource Orders
Personnel on Incident (General):
Equipment on Incident (General):
Resources on Order (General):
Incident Demobilization Procedures:

Operations Section
Priorities for Control, Wildland Fire Situation Analysis Approved:

Current Tactics:
Incident Accessibility by Engines and Ground Support:

Air Operations
Air Tactical Group Supervisor:
Airtankers Assigned:
Effectiveness of Airtankers:
Air Base(s):   Telephone:

Logistics Section/ Facilities Unit		
ICP/Base Pre-Plans: Yes No		
ICP/Base Location:		
Catering Service/Meals Provided:		
Shower Facilities:		
Security Considerations:		
Incident Recycling:		

Supply Unit
Duty Officer or Coordinator Phone Number:
Expanded Dispatch Organization:
Supply System to be Used (Local Supply Cache):
Single Point Ordering:

Logistics Section /Communications			
NFRC System on Order: Yes No Type:			
Local Network Available: Yes No			
Temporary:			
Cell Phone Cache Available: Yes No			

Landline Access to ICP:	Yes	No
Local Telecom Technical Support:		

Ground Support Unit

Route to ICP/Base:
Route From ICP/Base to Fire:
Medical Unit:
Nearest Hospital or Desired Hospital:
Nearest Burn Center, Trauma Center:
Nearest Air Ambulance:

Finance Section

Name of Incident Agency Administrative Representative:
Name of Incident Business Advisor (If Assigned):
Agreements and Annual Operating Plans in Place:
Jurisdictional Agencies Involved:
Need for Cost Share Agreement:

Cost Unit

Fiscal Considerations:
Cost Collection or Trespass:
Management Codes in Use:

Procurement Unit

Buying Team in Place or Ordered:
Contracting Officer Assigned:
Copy of Local Service and Supply Plan Provided:
Is All Equipment Inspected and Under Agreement:

Emergency Equipment Rental Agreements
Compensation/Claims Unit
Potential Claims:
Status of Claims/Accident Reports:
Time Unit
Payroll Procedure Established for T&A Transmittal:

Risk Management Process

Step 1 Situation Awareness
      Gather Information
          ☐ Objective(s)   ☐ Previous Fire Behavior
          ☐ Communication   ☐ Weather Forecast
          ☐ Who's in Charge   ☐ 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?

Briefing Checklist

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

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

Communications
- ☐ Communication plan
    Tactical, command, air-to-ground frequencies
    Cell phone numbers
- ☐ Medivac plan

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

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

Questions or Concerns?

How to Properly Refuse Risk

Every individual has the right and obligation to report safety problems and contribute ideas regarding their safety. Supervisors are expected to give these concerns and ideas serious consideration. When an individual feels an assignment is unsafe they also have the obligation to identify, to the degree possible, safe alternatives for completing that assignment. Turning down an assignment is one possible outcome of management risk.

A "turn down" is a situation where an individual has determined they cannot undertake an assignment as given and they are unable to negotiate an alternative solution. The turn down of an assignment must be based on an assessment of risks and the ability of the individual or organization to control those risks. Individuals may turn down as unsafe when:
- There is a violation of safe work practices.
- Environmental conditions make the work unsafe.
- They lack the necessary qualification or experience.
- Defective equipment is being used.

Individual will directly inform their supervisor that they are turning down the assignment as given. The most appropriate means to document the turn down is using the criteria (10 Fire Orders, 18 Watch out Situations, Principles of LCES, etc.) outlined in the Risk Management Process.

Supervisor will notify the Safety Officer immediately upon being informed of the turn down. If there is no Safety Officer, notification shall go to the appropriate section chief or to the Incident Commander. This provides accountability for decisions and initiates communication of safety concerns with in the incident organization.

If the supervisor asks another resource to perform the assignment, they are responsible to inform the new resource that the assignment has been turned down and the reasons it has been turned down.

If an unresolved safety hazard exists or an unsafe act was committed, the individual should also document the turn down by submitting a SAFENET (ground hazard) or SAFECOM (aviation hazard) form in a timely manner.

These actions do not stop an operation from being carried out. This protocol is integral to the effective management of risk as it provides timely identification of hazards to the chain of command, raises risk awareness for both leaders and subordinates, and promotes accountability.

S A F E N E T
Wildland Fire Safety and Health Network

REPORTED BY

Name (optional)_____   Phone_____

Agency/Organization_____   Date Reported_____

EVENT

Date and Time_____   Jurisdiction/Local Unit_____

Incident Name & Number_____   State_____

Incident Type	**Incident Activity**	**Stage of Incident**
☐ Wildland	☐ Line	☐ Initial Attack
☐ Prescribed	☐ Support	☐ Extended Attack
☐ Wildland Fire Use	☐ Transport to/from	☐ Transition
☐ All Risk	☐ Readiness/Preparedness	☐ Mop Up
☐ Training		☐ Demob
☐ Fuel Treatment		☐ Non-Incident
☐ Work Capacity Test		☐ Other

Position Title_____

Task_____

Management Level_____

Resources Involved_____

CONTRIBUTING FACTORS

☐ Fire Behavior   ☐ Environmental   ☐ Communications
☐ Human Factors   ☐ Equipment   ☐ Other (Explain Below)

Other:

NARRATIVE

Describe in detail what happened including the concern or potential issue, the environment (weather, terrain, fire behavior, etc), and the resulting safety/health issue. If more room is required, write on a separate piece of paper and include it with this form.

SN
SAFENET

BUSINESS REPLY MAIL

FIRST-CLASS MAIL   PERMIT NO. 253   BOISE, ID

SAFENET
PO BOX 16645
BOISE ID 83715-9750

....
Fold on dotted line

S A F E N E T

Wildland Fire Safety and Health Network

SN
SAFENET   The purpose of SAFENET is:

1. To provide reporting and documentation of unsafe situations or close calls.
2. To provide a means of sharing safety information throughout the fire community.
3. To provide long-term data that will result in identifying trends.
   Submitting a SAFENET is not a substitute for on the spot corrections!

When filing a SAFENET:
You have the option of submitting SAFENET at any level of the organization, but are encouraged to submit it to your supervisor for immediate corrective action.
If you submit SAFENET directly to the national center, you are encouraged to provide a copy to your supervisor.
You have the right to report unsafe conditions anonymously, in accordance with 29 CFR 1960.

File a SAFENET by Phone
1-888-670-3938

....
Fold on dotted line

CORRECTIVE ACTION

Please document how you tried to resolve the problem and list anything that, if changed, would prevent this safety issue in the future.

PMS 405-2 (3/00)   **NFES 2633**

Size Up Report

☐   **Incident Name** – All incidents

☐   **Incident Commander** – All incidents

☐   **Incident Type** – Wildland fire, vehicle accident, hazardous materials (HazMat), search and rescue, etc.

☐   **Incident Status** – Fire-creeping, running, spotting, crowning: Vehicle-blocking road, over side, etc.

☐   **Location** – Use landmarks, legal, or lat/long.

☐   **Jurisdiction** – Agency with jurisdiction

☐   **Radio Frequencies** – All incidents

☐   **Incident Size** – Fire and HazMat

☐   **Fuel Type** – Fire incidents only

☐   **Wind Speed and Direction** – All incidents

☐   **Slope and Aspect** – Fire and HazMat

☐   **Best Access** – All incidents

☐   **Special Hazards or Concerns** – For air and ground units

☐   **Additional Resource Needs** – Personnel and equipment

ROADSIDE INCIDENT RESPONSE

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

Upon Arrival at the Scene
- Size up of the incident- see *Incident Response Pocket Guide(IRPG)*
  - ➢ What has happened?
  - ➢ What is happening?
  - ➢ What will or could happen?
  - ➢ Is this a HazMat situation?

Risk Management Process-
- Decision Point, Go/No Go. See the *IRPG*, page1.

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

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

Release Date: January 2005

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	°F _____ ☐ 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	°F _____ ☐ 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	°F _____ ☐ High ☐ Low ☐ Range	_____% ☐ Maximum ☐ Minimum ☐ Range	☐ Upslope ☐ Downslope Direction_____ Velocity____mph Gusts_____mph	☐ Upslope ☐ Downslope Direction_____ Velocity____mph Gusts_____mph	Haines: LAL: BI: CI:

Name of Fire Weather Forecaster:	Fire Weather Office Issuing Forecast:

14. Forecast Received by (Name):	Date:	Time:	Forecast Received at (Location) Via:

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

1) Analyze each element and check the response, Yes or No.
2) If positive responses exceed, or are equal to, negative responses within any primary factor (A through G), the primary factor should be considered as a positive response.
3) If any three of the primary factors (A through G) are positive responses, this indicates the fire situation is or is predicted to be of Type 1 complexity.
4) Factor H should be considered after numbers 1–3 are completed. If more than two of the items in factor H are answered yes, and three or more of the other primary factors are positive responses, a Type 1 team should be considered. If the composites of H are negative, and there are fewer than three positive responses in the primary factors (A-G), a Type 2 team should be considered. If the answers to all questions in H are negative, it may be advisable to allow the existing overhead to continue action on the fire.

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

5. Unique natural resources, special-designation areas, wilderness.		
6. Other special resources.		
Total		
D. Safety		
1. Unusually hazardous fireline construction.		
2. Serious accidents or fatalities.		
3. Threat to safety of visitors from fire and related operations.		
4. Restrictions and/or closures in effect or being considered.		
5. No night operations in place for safety reasons.		
Total		
E. Ownership		
1. Fire burning or threatening more than one jurisdiction.		
2. Potential for claims (damages).		
3. Different or conflicting management objectives.		
4. Disputes over suppression responsibility.		
5. Potential for unified command.		
Total		
F. External Influences		
1. Controversial fire policy.		
2. Pre-existing controversies/relationships.		
3. Sensitive media relationships.		
4. Smoke management problems.		
5. Sensitive political interests.		
6. Other external influences.		
Total		
G. Change in Strategy		
1. Change in strategy to control from confine or contain		
2. Large amounts of unburned fuel within planned perimeter.		
3. WFSA invalid or requires updating.		
Total		

H. Existing Overhead		
1. Worked two operational periods without achieving initial objectives.		
2. Existing management organization ineffective.		
3. Overhead overextended mentally and/or physically.		
4. Incident action plans, briefings, etc. missing or poorly prepared.		
Total		

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

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

Release Date: January 2005   **APPENDIX M**-1

Wildland/Urban Interface Watch Outs

Wooden construction and wood shake roofs.

Poor access and narrow one-way canyons.

Observe bridge weight and size limits when using heavy equipment.

Inadequate water supply.

Natural fuels 30 feet or closer to structure.

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

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

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

Local citizens are attempting suppression actions.

Coordination with multiple agencies.

Structure Triage

Address/Property Name
- Numerical street address, ranch name, etc.
- Residents on site?

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

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

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

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

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

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

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

Structure Go-No/Go Protection Reference

Factors that may make a structure too dangerous to protect:
If you answer, "yes" to any of the below, don't attempt to protect that structure, move on to the next.

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

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

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

Firefighter safety and survival are the number one priority.

Release Date: January 2005   **APPENDIX P**-1

HazMat IC Checklist

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

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

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

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

1-800-424-9300 - CHEMTREC (Chemical Transportation Emergency Center)
For immediate information about a chemical or to seek assistance from a manufacturer.

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

Sample Delegation of Authority:
Delegation of Authority
Colorado State Office
Montrose Field Office

As of 1800, May 20, 2005, I have delegated authority to manage the Crystal River Fire, Number E353, San Juan Resource Area, to Incident Commander Bill Jones and his Incident Management Team.

The fire, which originated as four separate lightning strikes occurring on May 17, 2005, is burning in the Crystal River Drainage. My considerations for management of this fire are:
1. Provide for firefighter and public safety.
2. Manage the fire with as little environmental damage as possible. The guide to minimum impact suppression tactics (MIST) is attached.
3. Key cultural features requiring priority protection are: Escalante Cabin, and overlook boardwalks along the south rim.
4. Key resources considerations are: protecting endangered species by avoiding retardant and foams from entering the stream; if the ponderosa pine timber sale is threatened, conduct a low intensity under burn and clear fuels along road 312.
5. Restrictions for suppression actions include: no tracked vehicles on slopes greater than 20 percent on meadow soils, except where roads exist and are identified for use. No retardant will be used within 100 feet of water.
6. Minimum tools for use are Type 2/3 helicopters, chainsaws, hand tools, and portable pumps.
7. My agency Resource Advisor will be Eric Johnson (wildlife biologist).
8. The NE flank of the fire borders private property and must be protected if threatened. John Dennison of the Big Pine Fire Department will be the local representative.
9. Manage the fire cost-effectively for the values at risk.
10. Provide training opportunities for the resources area personnel to strengthen our organizational capabilities.
11. Minimum disruption of residential access to private property, and visitor use consistent with public safety.

_____   _____
(Signature and Title of Agency Administrator)   (Date)

Amendment to Delegation of Authority

The Delegation of Authority dated May 20, 2005, issued to Incident Commander Bill Jones for the management of the Crystal River Fire, number E353, is hereby amended as follows. This will be effective at 1800, May 22, 2005.

3. Key cultural features requiring priority protection are: Escalante Cabin, overlook boardwalks along the south rim, and the Ute Mountain study site.
12. Use of tracked vehicles authorized to protect Escalante Cabin.

_____   _____
(Signature and Title of Agency Administrator)   (Date)

Release Date: January 2005   **APPENDIX R**-1

Local Incident Commander Briefing

The Incident Briefing, ICS-201 form provides the basis for the local incident commander to brief the incoming team.

Briefing Information

Forms Available or Attached:		Other Attachments:
☐ ICS 201	☐ ICS 215	☐ Map of Fire
☐ ICS 207	☐ ICS 220	☐ Aerial Photos
☐ ICS 209	☐	☐ Weather Forecast

Fire Start Date:
Time:
Fire Cause:
Fuels Ahead of Fire:
Fuels at Fire:
Fire Behavior:
Fire Spread:
Natural Barriers:
Anchor Points:
Perimeter Secured, Control/Mitigation Efforts Taken, and Containment Status:

Release Date: January 2005   **APPENDIX S**-1

Life, Improvements, Resources and Environmental Issues:

Weather Forecast:

	Established	Possible	Copy Machine Available	
ICP:	☐	☐	☐ Yes	☐ No
Base:	☐	☐	☐ Yes	☐ No
Camp(s):	☐	☐		
Staging Area(s):	☐	☐		

Safety Issues: EMS in Place: ☐ Yes ☐ No

Air Operations Effectiveness to Date:

Air Related Issues and Restrictions:

Hazards (Aircraft and People):

Access from Base to Line:

Personnel and Equipment on Incident (Status and Condition):

Personnel and Equipment Ordered:

Cooperating and Assisting Agencies on Scene:

Helibase/Helispot Location:

Crash Fire Protection at Helibase:
Medivac Arrangement:
Communication System in Use: ☐ **Radio**　☐ **Telephone**　☐ **Mobile Phone**
Water Availability:
Review of Existing Plans for Control in Effect; Copy of Approved WFSA:
Smoke Conditions:
Local Political Issues:
Damage Assessment Needs:
Security Problems:

M.I.S.T. GUIDELINES
MINIMUM IMPACT SUPPRESSION TACTICS

A.   Safety
Safety is of utmost importance. Constantly review and apply the "Watch Out Situations" and "Fire Orders." Be particularly cautious with:
- Unburned fuel between you and the fire.
- Burning snags allowed to burn.
- Burning or partially burned live and dead trees.

Be constantly aware of surroundings; anticipate fire behavior and possible fire perimeter 1 or 2 days hence.

B.   Fire Line Phase
Select procedures, tools, equipment that least impact the environment. Seriously consider use water as a fireline tactic. Fireline constructed with nozzle pressure, wetlining.

In light fuels, consider:
- Coldtrail line.
- Allowing fire to burn to natural barrier.
- Burning out and use of "gunny" sack or swatter.
- Constantly rechecking coldtrailed fireline.
- If constructed fireline is necessary, using minimum width and depth to check fire spread.

In medium/heavy fuels, consider:
- Using natural barriers and coldtrailing.
- Cooling with dirt and water, and coldtrailing.
- If constructed fireline is necessary, using minimum width and depth to check fire spread.
- Minimizing bucking to establish fireline. Preferably move or roll downed material out of the intended constructed fireline area. If moving or rolling out is not possible, or the downed bole is already on fire, build line around and let material be consumed.

In aerial fuels—brush, trees, snags:
- Adjacent to fireline: limb only enough to prevent additional fire spread.
- Inside fireline: remove or limb only those that if ignited would have potential to spread fire outside the fireline.
- Brush or small trees that are necessary to cut during fireline construction will be cut flush with the ground.

In trees, burned trees, and snags:
- Minimize cutting of trees, burned trees and snags.
- Live trees will not be cut, unless determined they will cause fire spread across the fireline or endanger workers. If tree cutting occurs, cut the stumps flush with the ground.
- Scrape around tree bases near fireline if hot and likely to cause fire spread.
- Identify hazardous trees with an observer, flagging, and/or glow sticks.

When using indirect attack:
- Do not fall snags on the intended unburned side of the constructed fireline, unless they are safety hazard to crews.
- On the unintended burn-out side of the line, fall only those snags that would reach the fireline should they burn and fall over.
- Consider alternative means to falling, i.e., fireline explosives, bucket drops.
- Review items listed above (aerial fuels, brush, trees, and snags).

C. Mop-up Phase
Consider using "hot-spot" detection devices along perimeter (aerial or hand-held).

Light fuels:
- Coldtrail areas adjacent to unburned fuels.
- Do minimal spading; restrict spading to hot areas near fireline.
- Use extensive coldtrailing to detect hot areas.

Medium and heavy fuels:
- Coldtrail charred logs near fireline; do minimal scraping or tool scarring.
- Minimize bucking of logs to check for hot spots or extinguish the fire.
- Return logs to original position after checking or ground is cool.
- Refrain from making boneyards; burned/partially burned fuels that were moved should be arranged in natural position as much as possible.
- Consider allowing larger logs near the fireline to burnout instead of bucking into manageable lengths. Use lever, etc., to move large logs.

Aerial fuels- brush, small trees, and limbs.
- Remove or limb only those fuels that if ignited, have potential to spread outside the fireline.

Burning trees and snags.
- See Section B.

☐ Initial Rating
☐ Final Rating   **Incident Management Team Evaluation**

Team IC:_____   Type:_____
Incident:_____   Fire Number:_____

1. Did the Team accomplish the objectives described in the Wildland Fire Situation Analysis (WFSA), the Delegation of Authority, and the Agency Administrator Briefing (if available)?
                                                                Yes   No

2. Was the Team cost effective in their management of the incident?   Yes   No

3. Was the Team sensitive to resource limits and environmental concerns? Yes   No

4. Was the Team sensitive to political and social concerns?   Yes   No

5. Was the Team professional in the manner in which they assumed management of the incident, managed the total incident, and returned it to the hosting agency?   Yes   No

6. Did the Team anticipate and respond to changing conditions in a timely and effective manner?
                                                                Yes   No

7. Did the Team place the proper emphasis on safety?   Yes   No

8. Did the Team activate and manage the demobilization in a timely, cost-effective manner?
                                                                Yes   No

9. Did the Team attempt to use local resources and trainees, and closest available forces to the extent practical?   Yes   No

10. Was the IC an effective manager of the Team and its activities?   Yes   No

11. Was the IC obviously in charge of the Team and incident? Was the IC performing a leadership role?   Yes   No

12. Was the IC aggressive in assuming responsibility for the incident and initiating action?
                                                                Yes   No

13. Did the IC express a sincere concern and empathy for the hosting unit and local conditions?
                                                                Yes   No

14. Other comments:

_____   _____
Agency Administrator or Agency Representative   Date

_____   _____
Incident Commander   Date

Release Date: January 2005   **APPENDIX U**-1

Fire Management Organization Assessment

This Appendix is a checklist to assist line managers in evaluating operational fire program needs and complexities in fire situations. A number of factors can occur which increase the complexity and workload for the local fire staff, and depending upon staff size and availability, could overload the organization. Managers should use this checklist to evaluate the current management structure and staffing levels to determine whether or not additional staff assistance is necessary. It is recommended that the checklist be utilized early during complex situations and reviewed periodically.

Safety	Yes	No
Accidents/injuries have occurred.	____	____
Multiple fixed/rotor wing operations are involved or planned.	____	____
Fire Management Staff is in compliance with work rest guidelines.	____	____
The current situation is expected to continue.	____	____

External Factors		
Multiple jurisdictions involved.	____	____
Larger than normal fires are occurring.	____	____
The unit has an approved severity request.	____	____
Severe weather conditions are occurring or forecasted.	____	____

Management		
Current organization is operating at full capacity.	____	____
IMT ordered or in place.	____	____
Local MAC group has been activated.	____	____
A number of critical fire positions are vacant or filled with actings.	____	____

Resource Issues		
Sensitive public/media relations are apparent.	____	____
Large loss of resources expected.	____	____
High value resources are threatened.	____	____

Personnel		
Heavy commitment of local resources.	____	____
Multiple support operations activated to assist in fire suppression effort.	____	____
A large number of resources from outside the local area are staged or involved in suppression operations.	____	____

Form 9213-1
(January 2004)

Wildland Firefighter
HEALTH SCREEN QUESTIONNAIRE

The purpose is to identify individuals who may be at risk in taking the Work Capacity Test (WCT) and recommend an exercise program and/or medical examination prior to taking the WCT.

Employees are required to answer the following questions. The questions were designed, in consultation with occupational health physicians, to identify individuals who may be at risk when taking a WCT. The HSQ is not a medical examination. Any medical concerns you have that place you or your health at risk should be reviewed with your personal physician prior to participating in the WCT.

The information on this form may be disclosed as permitted by the Privacy Act (5USC552a(b)) to meet employment requirements.

Circle the appropriate Yes or No response to the following questions:
<u>Yes</u> <u>No</u>

Y   N   1)   During the past 12 months have you at any time (during physical activity or while resting) experienced pain, discomfort or pressure in your chest.

Y   N   2)   During the past 12 months have you experienced difficulty breathing or shortness of breath, dizziness, fainting, or blackout?

Y   N   3)   Do you have a blood pressure with systolic (top #) greater than 140 or diastolic (bottom #) greater than 90?

Y   N   4)   Have you ever been diagnosed or treated for any heart disease, heart murmur, chest pain (angina), palpitations (irregular beat), or heart attack?

Y   N   5)   Have you ever had heart surgery, angioplasty, or a pace maker, valve replacement, or heart transplant?

Y   N   6)   Do you have a resting pulse greater than 100 beats per minute?

Y   N   7)   Do you have any arthritis, back trouble, hip /knee/joint /pain, or any other bone or joint condition that could be aggravated or made worse by the Work Capacity Test?

Y   N   8)   Do you have personal experience or doctor's advice of any other medical or physical reason that would prohibit you from taking the Work Capacity Test?

Y   N   9)   Has your personal physician recommended against taking the Work Capacity Test because of asthma, diabetes, epilepsy or elevated cholesterol or a hernia?

Regardless whether you are taking the Work Capacity test at the Arduous, Moderate or Light duty level, a "Yes" answer requires a determination from your personal physician stating that you are able to participate. For Arduous Duty Employees, if you do not have a personal physician determination allowing you to take the Work Capacity Test, the FMO may request an Annual Form examination through the Interagency Wildland Firefighter Medical Standards Program.
I understand that if I need to be evaluated, it will be based on the fitness requirements of the position(s) for which I am qualified.

Participant:_____ Administrator:_____ Date:_____

Release Date: January 2005   **APPENDIX W**-1

U.S. Department of the Interior Bureau of Land Management **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	1. Provide prospective test subjects information about the test and describe how to prepare for it.
		2. Test subjects complete the Health Screen Questionnaire. Only appropriate responses of the prospective subjects to the Health Screen will result in administering the Work Capacity Test.
		3. Brief test subjects about the test just prior to the test – answer questions concerning the test. Make them understand they are to quit and get help from one of the Test Administrators on the course if they begin to feel ill during the test.
		4. Test Administrators monitor subjects for distress during test. Test Administrator is to terminate test if indicated by level of subject distress.
		5. Provide prospective test subjects official time for fitness training where policy permits.
		6. Schedule tests when environmental conditions are most favorable.
		7. Have a person currently qualified in first aid and CPR (with first aid supplies and equipment) onsite when testing is done.
		8. Have unit medivac plan and make sure Test Administrators know how to activate it.
		9. Make sure test subjects do not exceed a walking pace.
		10. Ensure test subjects are properly hydrated.
Work Capacity Testing	Strains and Sprains	1. Provide information to prospective subjects describing how to get into shape for the tests.
		2. Provide prospective subjects official time for fitness training where policy permits.
		3. Brief subjects about the test just prior to beginning.
		4. Monitor subjects for indications of distress and terminate the test for them.
		5. Ensure test subjects have comfortable footwear that provides adequate support and protection to feet and ankles.
		6. Give subjects time to adjust packs for comfort prior to beginning the test.

BASIC JOB STEPS	POTENTIAL HAZARDS	SAFE JOB PROCEDURES
		7. Provide time prior to starting the test for subjects to warm up and stretch.
		8. Have subjects cool down and stretch after the test.
		9. Make sure the test subjects do not exceed a walking pace.
Work Capacity Testing	Heat Stress	1. Make sure Test Administrators understand the effects of exercising in heat, can recognize the symptoms of heat stress, and how to treat it.
		2. 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.
		3. Inform prospective test subjects on how to dress for the conditions and include the information in the pre-test briefing.
		4. Make sure test subjects are aware of the need for acclimatization. Provide time for employees to become acclimatized if conditions of their employment permit.
		5. Test Administrators include heat stress information in the test briefing if appropriate.
		6. Provide water at key point along the test course if conditions dictate.
		7. Test Administrators monitor all test subjects for signs of heat stress, terminate test if stress is indicated, and are prepared to provide treatment needed.
Work Capacity Testing	Cold Temperature	1. Make sure Test Administrators know symptoms of cold-related physical effects and are prepared to treat them.
		2. Inform prospective test subjects on how to dress for the conditions and include information in the pre-test briefing.
		3. Locate an indoor facility suitable for testing if conditions warrant.
		4. Postpone testing if conditions warrant.
Work Capacity Testing	Slippery Course Conditions (ice, snow, mud)	1. Locate a suitable test surface. Consider indoor facility, plowed airport, plowed road or other safe area.
		2. Postpone testing if conditions warrant.
		3. Test subjects wear footwear with good traction.
Work Capacity Testing	Traffic	1. Select test course without traffic.
		2. Arrange for traffic control to eliminate traffic hazard.
		3. Make sure test subjects are briefed about traffic hazard and controls implemented prior to the test.
Work Capacity Testing	Pack Rubbing, Chafing, or Straining Subjects	1. Make sure test subjects have practiced with a pack and have become work hardened to carry a pack.

BASIC JOB STEPS	POTENTIAL HAZARDS	SAFE JOB PROCEDURES
		2. Recommend upper body clothing that protects from pack rubbing.
		3. Make sure subjects have an opportunity prior to testing to adjust and try out pack.
		4. Terminate testing for subjects struggling to carry the pack or maintain a pace adequate to complete the test successfully.
		5. Permit subjects to use a self-provided pack that meets the applicable weight requirement.

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.

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 Bureau guidelines.

_____   _____   _____
(Signature of Test Administrator)   (Title)   (Date)

MINIMUM CREW STANDARDS FOR NATIONAL MOBILIZATION
(Revised 11/2003)

Minimum Standards	Type I[1]	Type 2 with IA Capability	Type 2	Type 3
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 to include burnout	Fireline construction, Fireline improvement, mop-up and rehab
Crew Size	18-20			
Leadership Qualifications	Permanent Supervision Supt: TFLD, ICT4 Asst Supt: STCR, ICT4 3 Squad Bosses: CRWB(T), ICT5	CRWB 3 ICT5	CRWB 3 FFT1	
Bilingual Requirement	CRWB and FFT1's must be bilingual (able to read and interpret) in language of crew.			
Experience	80% 1 season	60% 1 season	40% 1 season	20% 1 season
Full Time Organized Crew	Yes	No		
Communications	5 programmable radios	4 programmable radios		
Sawyers	3 agency qualified		None	
Training	80 hours annual training	Basic firefighter training and/or annual firefighter safety refresher		
Fitness	Arduous			
Logistics	Self-sufficient	Not self-sufficient		
Maximum Weight	5100 lbs			
Dispatch Availability	1 hour	Variable		
Production Factor	1.0	.08		N/A
Transportation	Own transportation	Transportation needed		
Tools & Equipment	Fully equipped	Not equipped		
Personal Gear	Arrives with: Crew First Aid kit, personal first aid kit, headlamp, 1 qt canteen, web gear, sleeping bag			
PPE	Arrives with: Hardhat, fire resistant shirt/ pants, 8" leather boots, leather gloves, fire shelter, hearing/ eye protection			

Notes:[1] Interagency Hotshot Crews (IHC) is a Type I crew that exceeds the Type I standards as required by the National IHC Operations Guide (2001) in the following categories:

- Permanent Supervision with 7 career appointments (Superintendent, Assistant Superintendent, 3 Squad Bosses)
- IHC's work and train as a unit 40 hours per week.
- IHC's are a national resource.

The following chart shows the NUS minimum stocking levels required for agency engines.

Category	Item Description	NFES #	Type 3, 4, & 5	6
Fire Tools & Equip	McLeod	0296	1	
	Combination Tool	1180	1	1
	Shovel	0171	3	2
	Pulaski	0146	3	2
	Backpack Pump	1149	3	2
	Fusees (case)	0105	1	½
	Foam, concentrate, Class A (5-gallon)	1145	1	1
	Chainsaw (and chaps)		1	1
	Chainsaw Tool Kit	0342	1	1
	Drip Torch	0241	2	1
	Portable Pump		*	*
Medical	First Aid Kit, 10-person	0068	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		*	*

Release Date: January 2005   **Appendix AA-**1

Category	Item Description	NFES #	Type 3, 4, & 5	Type 6
Safety	Fire Extinguisher (5 lb)	2143	1	1
	Flagging, Pink (roll)	0566	*	*
	Flagging, Yellow w/Black Stripes (roll)	0267	*	*
	Fuel Safety Can (Type 2 OSHA, metal, 5-gallon)	1291	*	*
	Reflector Set		*	*
Vehicle & Pump Support	General Took Kit (5180-00-177-7033/GSA)		1	1
	Oil, automotive, quart		4	2
	Oil, penetrating, can		1	1
	Oil, automatic transmission, quart		1	1
	Brake Fluid, pint		1	1
	Filter, gas		1	1
	Fan Belts		1	1
	Spark Plugs		1	1
	Hose, air compressor w/adapters		1	0
	Fuses (set)		1	1
	Tire Pressure Gauge		1	1
	Jumper Cables		1	1
	Battery Terminal Cleaner		*	*
	Tape, electrical, plastic	0619	1	1
	Tape, Teflon		1	1
Personal Gear (Extra Supply)	File, mill, bastard	0060	*	*
	Head Lamp	0713	1	1
	Hard Hat	0109	1	1
	Goggles	1024	2	2
	Gloves		*	*
	First Aid Kit, individual	0067	1	1
	Fire Shirt		*	*
	Fire Shelter w/case & liner	0169	2	1
	Packsack	0744	2	1
	Batteries, headlamp (pkg)	0030	6	4
	Ear Plugs (pair)	1027	3	3
Radio	Portable		1	1
	Mobile		1	1
	Batteries (for portable radio)		2	2
Hose	Booster (feet/reel)	1220	100	100
	Suction (length, 8' or 10')		2	2
	1" NPSH (feet)	0966	300	300
	1 ½" NH (feet)	0967	300	300
	¾" NH, garden (feet)	1016	300	300
	1 ½" NH, engine protection (feet)		20	20

Category	Item Description	NFES #	Type	
			3, 4, & 5	6
	1 ½" NH, refill (feet)		15	15
Nozzle	Forester, 1" NPSH	0024	3	2
	Adjustable, 1" NPSH	0138	4	2
	Adjustable, 1 ½" NH	0137	5	3
	Adjustable, ¾" NH	0136	4	2
	Foam, ¾" NH	0627	1	1
	Foam 1 ½" NH	0628	1	1
	Mopup Wand	0720	2	1
	Tip, Mopup Wand	0735	4	2
	Tip, Forester, Nozzle, fog	0903	*	*
	Tip, Forester Nozzle, straight stream	0638	*	*
Wye	1" NPSH, Two-Way, Gated	0259	2	1
	1 ½" NH, Two-Way, Gated	0231	4	2
	¾" NH w/Ball Valve, Gated	0739	6	4
Adapter	1" NPSH-F to 1" HN-M	0003	*	*
	1" NH-F to 1" NPSH-M	0004	1	1
	1 ½" NPSH-F to 1 ½" NH-M	0007	1	1
	1 ½" NH-F to 1 ½" NPSH-M	0006	*	*
Increaser	¾" NH-F to 1" NPSH-M	2235	1	1
	1" NPSH-F to 1 ½" NH-M	0416	2	1
Coupling	1" NPSH, Double Female	0710	1	1
	1" NPSH, Double Male	0916	1	1
	1 ½" NH, Double Female	0857	2	2
	1 ½" NH, Double Male	0856	1	1
Reducer/ Adapter	1" NPSH-F to ¾" NH-M	0733	3	3
	1 ½" NH-F to 1 NPSH-M	0010	6	4
	2" NPSH-F to 1 ½" NH-M	0417	*	*
	2 ½" NPSH-F to 1 ½" NH-M	2229	*	*
Reducer	1 ½" NH-F to 1" NH-M	0009	1	1
	2 ½" NH-F to 1 ½" NH-M	2230	1	1
Tee	1" NPSH-F x 1" NPSH-M x 1" NPSH-M, w/cap	2240	2	2
	1 ½" NH-F x 1 ½" NH-M x 1" NPSH-M w/cap	0731	2	2
	1 ½" NH-F x 1 ½" NH-M x 1" NPSH-M w/valve	0230	2	2
Valve	1 ½" NH-F, Automatic Check and Bleeder	0228	1	1
	¾" NH, Shut Off	0738	5	5
	1" Shut Off	1201	1	1
	1 ½" Shut Off	1207	1	1
	Foot, w/strainer		1	1
Injector	1" NPSH x 1/12" NH, Jet Refill	7429	*	*
Wrench	Hydrant, adjustable, 8"	0688	1	1

Release Date: January 2005   **Appendix AA-3**

Category	Item Description	NFES #	Type 3, 4, & 5	Type 6
	Spanner, 5", 1" to 1 ½" hose size	0234	4	1
	Spanner, 11", 1 ½" to 2 ½" hose size	0235	2	2
	Pipe, 14"	0934	1	1
	Pipe, 20"		1	1
Engine	Fireline Handbook	0065	1	1
	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		*	*
	Dust Mask	0131	6	4
	Hose Clamp	0046	2	2
Safety	Reflector Set		1	1
Vehicle & Pump Support	Oil, automotive, quart		2	1
	Power steering Fluid		1	1
	Antifreeze (seasonal)		*	*
	Filter, air for engine and pump		*	*
	Filter, oil w/ wrench		*	*
Personal Gear (Extra Supply)	File, mill, bastard	0060	*	*
	Fire Shelter w/case & liner	0169	1	1
	Packsack	0744	2	1
	Dust Mask	0131	4	*
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

Appendix AA-4   **Release Date: January 2005**

Category	Item Description	NFES #	Type	
			3, 4, & 5	6
Reducer / Adapter	1" NPSH-F to ¾" NH-M	0733	3	2
	1 ½" NH-F to 1 NPSH-M	0010	6	3
Tee	1" NPSH-F x 1" NPSH-M x 1" NPSH-M, w/cap	2240	2	*
Valve	1 ½" NH-F, Automatic Check and Bleeder	0228	1	*
	¾" NH, Shut Off	0738	4	2
Wrench	Pipe, 20"		1	*
Engine	Accident Forms (Vehicle & Personnel)		1	1
	Compass		1	1

[1] A minimum of eight tools for type 3, 4, 5 engines and a minimum of five tools for type 6 engines is required. The listed numbers of tools in each box are required to be on the engine. Beyond that, the tools listed as optional or additional required tools can make up the rest of the minimum number required for engines.

* No minimums – carried by engines as an option, within weight limitations

Delegation of Authority - Template
_____ **Geographic Area**
Fire & Aviation Safety Team (FAST)

Situation Summary (Issues and Concerns/ Reason for ordering the FAST)

Objectives (Measurable)

Team Skills Required (Per Objectives listed above.)

The final team composition will be determined at time of dispatch and members named on the resource order.

Mission
The FAST is to conduct an independent assessment and evaluation of operational and managerial activities (related to the specific objectives stated above) at the following locations (mission segments):

The team may determine visits to other incidents/organizations/operations as appropriate, and may do so after coordination with the GMAC.
The FAST will contact the GMAC Coordinator (describe frequency of contact):

The FAST is to provide technical or managerial assistance when requested and where necessary to immediately correct an identified, critical problem. The FAST may also provide short-term assistance in managing situations or incidents when requested by the incident, organization, or operation.

Protocols
The FAST will organize and conduct an entry briefing with the appropriate managers of the locations/incidents identified previously. The entry briefing will provide the objectives and operational parameters of the mission.

Once the mission segment is completed, the FAST will organize and conduct an exit briefing with the same officials or their designees, during which a draft of the mission-segment report will be presented and discussed. Components of this report will include:
- Purpose and Objectives
- Findings, Commendations, and Recommendations
- Follow-up Actions Needed
- Immediate
- Long-term
- Scope [local, area, national]
- Copy of the DoA

The FAST will contact the GMAC Coordinator_____.

FAST will provide a final written report to the GMAC Coordinator upon completion of all mission segments. This report will include:
- FAST Final Report Outline
- Executive Summary
  - ➢ Purpose and Objectives
  - ➢ Summary (Findings, Recommendations, Commendations, Assistance Provided)
  - ➢ Critical and Immediate Follow-up Actions Required
- Introduction
- Methods and Procedures
- Mission Segments (Summary of Incidents, Organizations, Operations Reviewed. Include copies of Mission Segment Reports).
- Analysis
- Findings and Trends, Commendations, and Recommendations
- Follow-up Actions Needed
  - ➢ Immediate
  - ➢ Long-term
- Scope [local, area, national]
- A copy of the DoA

The _____ Multi-Agency Coordination Group hereby charters and delegates the preceding authority to _____, FAST Leader, effective on _____.

/s/
Chair, _____ Coordinating Group

Date: _____

Annual Local Cache Inventory

NFES #	Description	QTY	Unit of Issue
Fireline Tools			
0146	Pulaski, w/plastic sheath		EA
0159	Saw, Chain, 16" to 24" bar		EA
0340	Kit, Chain saw		KT
0171	Shovel, w/plastic sheath, size #1		EA
Water Handling			
0966	Hose, CSJRL, 1" NPSH x 100'		LG
0967	Hose, CSJRL, 1½" NH x 100'		LG
1016	Hose, Garden collapsible synthetic ¾" x 50'		LG
1238	Hose, synthetic, lined 1" NPSH x 100'		LG
1239	Hose, synthetic, lined 1½" NH x 100'		LG
0870	Kit, pump, portable		KT
0670	Kit, pump, portable lightweight		KT
0024	Nozzle, twin tip comb. 1" NPSH-F Forester		EA
1081	Nozzle, combination, barrel, 1" NPSH		EA
1082	Nozzle, combination, barrel, 1½" NH		EA
1149	Pump, backpack outfit		EA
0148	Pump, fire portable, (Mark III)		EA
0124	Pump, lightweight, 45 GPM		EA
0010	Reducer, hose, 1½" NH-F to 1" NPSH-M		EA
0661	Tank, folding, 1000 GL capacity		EA
0664	Tank, folding, 1500 GL capacity		EA
0568	Tank, collapsible, 3000 GL capacity		EA
6030	Tank, collapsible, 4800 GL capacity		EA
6031	Tank, collapsible, 6000 GL capacity		EA
0731	Tee, hoseline, w/cap & chain, 1½" NH		EA
0230	Tee, hoseline, w/valve, 1½" NH		EA
0231	Valve, wye, gated, 1½" NH		EA
PPE / Safety/ Miscellaneous			
0925	Shelter, fire, w/case		EA
0022	Bag, sleeping, cloth, washable 3 lb fill		EA
1309	Longline kit, w/remote hook		KT

Release Date: January 2005

Annual Operating Plan Elements

Organization
Chain-of-command/table of organization for local agencies and cooperators
Notification process/procedures; Roles/responsibilities, etc.

Dispatch Operations
General information; Dispatcher roles and responsibilities; Dispatcher training
and qualifications; Procedures for dispatch of resources off unit.

Daily Duties
Check-in/out of administrative/fire personnel; Intelligence; Weather/briefings;
Verify initial attack response levels; Status suppression resources; Preparedness
level establishment and verification.

Initial Attack Response Plan Elements
Preplanned dispatch plans, Run-cards, Dispatch procedures
Notification of a reported fire ; Procedures for identifying preparedness levels ;
Fire weather; Identification of fire danger; Process for assessing the appropriate
response; Identification and notification of resources to respond (Local units will
establish standard response times for all initial attack resources); Appropriate
management notification; Cooperator support and planned response;
Communications procedures; Procedures to follow when activity exceeds the
initial attack plan; Aviation procedures.

Emergency Operations (Fire/Non-fire)
Notification of a reported incident; Jurisdiction verification; Response plan
activation; Agency and area notification; Move-up and cover procedures; Call-
back procedures; Evacuation of incident area; Closing public/private roads;
Ordering additional personnel, equipment, and aircraft; Fire Weather Watch and
Red Flag Warning notification; Temporary Flight Restrictions (TFRs) ; Agency
duty officers (roles and responsibilities) ; Aircraft pre-accident plan; Utility
company notification (power and gas) ; Law enforcement dispatching
procedures/requirements; HazMat/spill response notification procedures; Local
government requesting all-risk assistance; Search and Rescue; Identify the
incident commander.

Local Agreements
Copies of all interagency or inter-unit agreements and associated annual
operating plans that govern the use of fire management resources. Maps
delineating areas of responsibility for fire suppression coverage.

Communications
Procedures for assigning/managing local radio frequencies; Procedures for
obtaining additional frequencies; maps of repeater sites; instructions for using
local dispatch radio consoles, phones, computers, fax machines, paging systems,
etc.

Weather
Processing of weather observations via Weather Information Management System (WIMS); Daily posting and briefing procedures; Broadcasts of fire weather forecasts to local fire suppression personnel; Procedures for processing spot weather forecast requests and disseminating spot forecasts to the field; Procedures for immediate notification to fire suppression personnel of Fire; Weather Watches and Red Flag Warnings.

Fire Danger
Remain aware of locally significant fire danger indices and record those values daily; Update and post monthly the seasonal trends of those values versus seasonal averages.

Information to be provided by Dispatch for Suppression/Support
Resource availability/shortages radio frequencies to be used; burning conditions/fuel types; weather forecast updates; local fire activity; agency policies, etc. For management: fire activity, incident updates, weather updates, resource status.

Briefings
Time frames and frequencies/locations for daily briefings must be clearly specified in the local dispatch SOP. A method should also be identified for documenting briefings (time given, content of briefing, and person(s) conducting and receiving briefing).

Preparedness Levels
General information relating to the local preparedness plan
- procedures for identifying level
- notification to management
- dispatching roles and responsibilities at each preparedness level, etc.

Trigger Points
Specific triggers should be incorporated into preparedness plans that cause the preparedness level to move up or down. These triggers could be related to number/size of fires, amount and type of resources available/committed, regional/national fire situation, condition of local fuels, observed fire behavior, human-caused risk or predicted lightning activity level, etc. Specific actions should also be tied to each preparedness level, such as prepositioning of suppression resources (crews, engines, airtankers, smokejumpers, etc.), the activation of local Multi-Agency Coordination (MAC) groups, making contact with other agencies, and hiring of call when needed (CWN) aircraft, emergency equipment rental agreements (EERA), or administratively determined (AD) pay plan crews.

Aviation
Ordering/scheduling requirements and procedures; special use airspace; Special use mission requirements; Incident/accident reporting and documentation procedures; flight management/tracking procedures.

Dispatch Center Staffing Plan
Call-out procedures for additional personnel in emergency situations; designation of duty officer for dispatch center; shift limitations and day off/EFF hiring, etc.

Expanded Dispatch Plan
Indicators for considering establishment of expanded dispatch; recommended organization and points of contact; overhead positions to order; location/facilities; equipment/supplies; support needs; procurement or buying unit team considerations; service and supply plan, etc.

Administrative Items
Funding; travel; time sheets; fire reports, etc.

Accident/Incident
Criteria/definitions; agency notification and documentation requirements; procedures for mobilization of critical incident stress debriefing teams, etc.

Medical Plan
Activation/evacuation information; medical facility locations and phone numbers; air and ground transport (Medivac) capability; burn center information, etc.

Media Plan
General procedures; notification requirements to agency external affairs personnel; routing for media calls.

WFSA Element Descriptions

Current Situation

This portion of the analysis provides basic information describing the fire situation at the time the analysis was conducted. It is important to clearly describe the situation that occurred at the time the decision was made. Elements to be addressed are:

- **Fire name and number**
- **Date of analysis**
  This is the date on which the current analysis was made. Enter the month, day, and year.
- **Time**
  Enter the time of day the analysis was completed. Enter the 24-hour clock time.
- **Location**
  Use local terminology for point of origin. Include a legal description and latitude and longitude.
- **Fire weather and behavior**
  - ➤ **Current** - Briefly discuss the fire weather in terms of temperature, wind, and daily patterns. Describe the fire in non-technical terms, such as creeping, spotting crowning, etc. Discuss the flame lengths, rates of spread, size, etc.
  - ➤ **Predicted** - Describe the predicted weather patterns, and fire behavior predictions based on weather, fuels, topography, and the potential size.
- **Resource availability**
  Briefly discuss the availability of suppression resources to control the fire and fire activity at the local and geographic level.
- **Management objectives and constraints**
  The management objectives and constraints should be summarized to assist in the decision process.
- **Social or external considerations**
  Discuss any issues that would contribute to making good suppression decisions.
- **Evaluation Criteria**
  Document the criteria used to evaluate suppression alternatives: Safety (firefighter/public); land and resource management objectives; environmental considerations; social, political, economic considerations; resources availability; local, geographic, and national fire activities; and reinforcement capabilities.
- **Alternatives**
  Produce WFSA alternatives that display a full range of appropriate management response options. All alternatives must be developed with strong emphasis on cost accountability based on the values to be protected, with due consideration given to a minimum cost alternative.

Release Date: January 2005   **APPENDIX EE**-1

- **Strategy**
  Briefly state the alternative strategies for management of the incident. Use geographic names, locations, etc. Roughly designate each strategy on a map.
- **Management Forces Required**
  Make general estimates with enough detail to help in estimation of costs, determine if resources are available, etc.
- **Estimate Date of Control**
  Estimates for each alternative should be made based on predicted weather and behavior factors, barriers, fuels etc., and the effects of suppression efforts.
- **Estimated Size at Containment**
  Estimates for acreage burned under each alternative should be recorded and displayed on a map.
- **Estimated Cost**
  Estimate total cost of suppression alternative. Include suppression costs and rehabilitation needs. The WFSA will include the least suppression cost option.   This option will serve as a way to describe the values to protect and the context surrounding a suppression decision. If the least-cost alternative is not chosen the WFSA will include a written rational for not choosing it. Agency administrators are responsible for financial oversight. This responsibility cannot be delegated.
- **Estimated Probability of Success**
  Based on estimates from 0-100 for each alternative.
- **Analysis of Effects**
  Apply the above evaluation criteria to the alternatives. The results of the analysis will be the basis for selecting the appropriate alternative. The analysis of effects is based on the best estimates on the unit, resource, and fire management. The situation will determine the level of detail required. You may display the effects in dollars, or as positive or negatives, as demonstrated on the example forms. The important thing is to document your decision. Ensure that estimates of potential fire consequences are consistent with resource objectives, values, fire effects, and policy.
- **Record of Decision**
  Agency administrators select an alternative that best implements the objectives and constraints for the management of the area. Agency administrators select the level of management required to successfully implement the selected alternative (Type 1, Type 2, or Type 3 Incident Management Team). Briefly provide rationale for decisions. The WFSA shall become a permanent part of the final fire record. Agency Administrators are responsible for financial oversight. This responsibility cannot be delegated. See the Table following this section for approval thresholds.

- **Monitoring/Evaluation/Update**
  The WFSA must be reviewed prior to each operational period to determine if the alternative is still valid. The responsible Agency Administrator must sign the WFSA to document the review.

DOI-Signature authorities for WFSA are as follows:

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

18 Watch Out Situations

- Fire not scouted and sized up.
- In country not seen in daylight.
- Safety zones and escape routes not identified.
- Unfamiliar with weather and local factors influencing fire behavior.
- Uninformed on strategy, tactics, and hazards.
- Instructions and assignments not clear.
- No communication link with crew members/supervisor.
- Constructing fireline without safe anchor point.
- Building fireline downhill with fire below.
- Attempting frontal assault on fire.
- Unburned fuel between you and fire.
- Cannot see main fire, not in contact with anyone who can.
- On a hillside where rolling material can ignite fuel below.
- Weather is getting hotter and drier.
- Wind increases and/or changes direction.
- Getting frequent spot fires across line.
- Terrain and fuels make escape to safety zones difficult.
- Taking nap near fireline.

TEN STANDARD FIREFIGHTING ORDERS

- Keep informed on fire weather conditions and forecasts.
- Know what your fire is doing at all times.
- Base all actions on current and expected behavior of the fire.
- Identify escape routes and safety zones and make them known.
- Post lookouts when there is possible danger.
- Be alert. Keep calm. Think clearly. Act decisively.
- Maintain prompt communications with your forces, your supervisor and adjoining forces.
- Give clear instructions and insure they are understood.
- Maintain control of your forces at all times.
- Fight fire aggressively, having provided for safety first.

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?