# FEDERAL WILDLAND FIRE MANAGEMENT

## POLICY & PROGRAM REVIEW

**DRAFT REPORT · JUNE 9, 1995**

**U.S. DEPARTMENT OF THE INTERIOR**
**U.S. DEPARTMENT OF AGRICULTURE**

United States Department of the Interior

NATIONAL PARK SERVICE
P.O. Box 37127
Washington, D.C. 20013-7127

IN REPLY REFER TO

JUN – 2 1995

Y14(650)

To: Field Directorates
Attention: Field Systems Support Fire Management Officers, and National Park Superintendents

From: Associate Director, Park Operations and Education

Subject: Federal Wildland Fire Management Policy and Program Review
**REPLY DUE:** **July 24, 1995**

Wildland fire management has the greatest potential of any Federal program to impact public and private resources, and it inherently exposes the largest number of employees to high-risk situations. The Federal fire community has historically done an excellent job of critiquing itself and initiating improvements in training, equipment, and tactics to make fire management safer and more efficient. However, the events of the 1994 wildfire season created a renewed awareness and concern among all of us about the dangers and impacts of wildfire.

The Federal Wildland Fire Management Policy and Program Review is one of many reviews and studies under way to recommend actions that will resolve or mitigate some of those issues. This interdepartmental review is being conducted principally by the Departments of Agriculture and the Interior and includes participation by the U.S. Fire Administration, the National Oceanic and Atmospheric Administration (National Weather Service), the Federal Emergency Management Agency, and the Environmental Protection Agency. The review is being led by an interagency Steering Group co-chaired by Claudia Schechter for the Department of the Interior and Dr. Charles Philpot for the Department of Agriculture.

The draft report covers a full range of fire management activities but focuses on five specific program areas: 1) Coordinated Policy and Program Management, 2) Role of Fire in Resource Management, 3) Use of Prescribed Fire and Fuels Management, 4) Preparedness and Suppression, and 5) Wildland/Urban Interface Protection.. It contains proposals to expand the use of wildfire to meet land-use objectives, clarify employee and agency administrator fire program responsibilities, clarify the role of the Federal fire force in the wildland urban interface, expand the use of prescribed fire, and emphasize that safety comes first in all aspects of our fire program.

The draft report is attached for your review. Comments may be sent either individually or through official channels to: Federal Wildland Fire Policy and Program Review, Department of the Interior, 18th & C Streets NW, Mail Stop 7355, Washington, D.C. 20240, or by FAX to (202) 208-5078. Comments must be received by **July 24, 1995.**

Employee and public input is critical to this process, and we encourage you and your employees to review the draft report and give the Steering Group your constructive feedback. The report is also being mailed to an extensive list of external constituents for comment and is being published in the June 22, 1995, Federal Register.

The final report is scheduled to be submitted to the Secretaries of the Interior and Agriculture on September 30, 1995.

If you have questions about the report or the process, please call either Tim Hartzell, Bureau of Land Management (202-208-5633), or Dave Morton, Forest Service (208-387-1505). For additional copies of the report, please call Dorla Kubitschek at 208-387-5200.

Attachment: Draft Report

# NOTICE

*This draft report is being distributed by the*
*Interagency Steering Group*
*for public and employee review and comment.*
*Comments may be sent to:*

**FEDERAL WILDLAND FIRE POLICY AND PROGRAM REVIEW**
*Department of the Interior*
*18th & C Streets NW, Mail Stop 7355*
*Washington, D.C. 20240*

*or by FAX to:*

*(202) 208-5078*

***Comments must be received by***
***July 24, 1995***

*Questions may be directed to:*

*Tim Hartzell, Bureau of Land Management, (202) 208-5472*
*or*
*Dave Morton, Forest Service, (208) 387-5633*

*Additional copies of the report may be requested from Pat Moore at*
*the Bureau of Land Management's National Office of Fire and Aviation,*
*(208) 387-5150*

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# EXECUTIVE SUMMARY

The Department of the Interior and the Department of Agriculture, together with Tribes, States, and other jurisdictions, are responsible for the suppression and use of wildland fire in the management and protection of natural resources. Although these organizations have traditionally cooperated in carrying out their fire management responsibilities, it is more important than ever, as resources become increasingly scarce, to explore ways in which cooperation can be improved and made more effective. Because fire respects no boundaries, uniform Federal policies and programs must lead to more productive cooperation and efficient operations.

The Federal Wildland Fire Management Policy and Program Review was chartered by the Secretaries of the Interior and Agriculture to examine the need for modification of and addition to Federal fire policy. The review recommends a set of consistent policies for all Federal wildland fire management agencies. The resulting analysis/report is organized around five major fire management program components: 1) Coordinated Policy and Program Management, 2) Role of Fire in Resource Management, 3) Use of Prescribed Fire and Fuels Management, 4) Preparedness and Suppression, and 5) Wildland/Urban Interface Protection.

Two very fundamental principles are recognized as being basic to all other findings and recommendations in this report: 1) safety is paramount; and 2) wildland fire is a natural occurrence that plays a fundamental role in natural resource management. We must recognize that wildfire has historically been a major force in the evolution of our wildlands, and it must be allowed to continue to play its natural role wherever possible.

The report recommends thirteen new or revised fire management policies consistent across all Federal wildland firefighting agencies. The first policy recommendation says that public and firefighter safety is the first priority. Other policies deal with integrating fire considerations into resource planning, the use of prescribed fire, capability to suppress fires, economic efficiency, protection priority, interagency actions, consistent standards, and the Federal role in the wildland/urban interface.

A set of fire management principles has been identified to address interagency collaboration in the fire management business. We recommend adoption of these principles by the Federal resource agencies. They include guidance on safety, planning, standardization, coordination, use of science, risk management, and economic efficiency.

The report recommends that some very critical processes continue to explore what role States, local governments, and insurance companies should take in addressing the growing fire problems in the wildland/urban interface. We will recommend that the Secretaries require all agencies to develop an implementation plan describing the actions and time frame required to implement the recommendations of this report.

In addition to the specific analysis that was done for this effort, the review team also relied heavily on previous fire management reviews and the work completed by the Interagency Management Review Team that was chartered following the 1994 fatalities on the South Canyon fire.

Many organizations and individuals participated in the development of this report. Special emphasis was given to communication with key national stakeholders, representatives of public and private resource interests, and employees. Public review was facilitated by publishing a scoping notice in the *Federal Register* and analyzing the resulting feedback. It is our hope that the other Federal agencies who have joined us in this review can give their support and concurrence to the final policies that evolve from this and future public involvement.

# INTRODUCTION

The Federal fire management community has, for many years, been a leader in interagency communication and cooperation to achieve mutual objectives. While many policies and procedures are similar among the agencies, some significant differences may hinder efficient interagency cooperation. Because it is prudent to manage consistently across agency boundaries, uniform cooperative programs are critical to efficient and effective fire management. Policies and programs must incorporate the wisdom and experience of the past, reflect today's values, and be able to adapt to the challenges of the future. They must be based on science and sound ecological and economic principles and, above all, must form the basis for fighting and using fire safely.

While continual improvements are inherent in the fire program, the events of the 1994 wildfire season created a renewed awareness and concern among the Federal land management agencies and our constituents about the impacts of wildfire. As a result of those concerns and in response to specific recommendations in the report of the South Canyon Fire Interagency Management Review Team (IMRT), the Federal Wildland Fire Management Policy and Program Review was chartered to examine the possible need for new Federal fire policy. The review was directed by an interagency Steering Group whose members represented the Departments of Agriculture and the Interior, the U.S. Fire Administration, the National Weather Service, the Federal Emergency Management Agency, and the Environmental Protection Agency (see Appendix III). The Steering Group received staff support from a core team representing the Departments of Agriculture and the Interior.

The five Federal fire/land management agencies referenced throughout this report are the Forest Service (FS) in the Department of Agriculture and the Bureau of Land Management (BLM), National Park Service (NPS), Fish and Wildlife Service (FWS), and Bureau of Indian Affairs (BIA) in the Department of the Interior. The term "Federal wildland" as used in this report recognizes that Indian trust lands are private lands held in trust by the government and that Tribes possess a Nationhood status and retain inherent powers of self government. Indian trust resource protection will be provided in a knowledgeable, sensitive manner respectful of Tribal sovereignty.

Early in this review process, internal and external ideas were sought and broad program management issues were identified. The review was announced and input was requested in the *Federal Register* on January 3, 1995. At the same time, letters were sent to approximately 300 individuals and organizations across the nation and employee input was sought through internal communications within the Departments of the Interior and Agriculture. Since that time, Steering Group members have met with national stakeholders, the Western Governors' Association, and employees to get additional, more focused input; they have received and incorporated input resulting from the Environmental Regulation and Prescribed Fire conference held in Tampa, Florida, in March 1995; and they have individually continued to network with their constituents. The results of that process are reflected in this draft report.

Throughout the report, the term "fire" refers to wildland fire unless otherwise specified. Other terms that may not be clear to all readers are defined for the purposes of this report in Appendix I.

A number of related reviews and studies form a broad foundation of technical, professional, and scientific assessment upon which the recommended goals, actions, and policies contained in this report are founded, including:

- Final Report on Fire Management Policy – May 1989.
- Rural Fire Protection in America: A Challenge for the Future; National Association of State Foresters – 1991.
- Oversight Hearing; Fire Suppression, Fire Prevention, and Forest Health Issues and Programs;

Committee on Agriculture and the Committee on Natural Resources, House of Representatives – October 4, 1994.

- National Commission on Wildfire Disasters; Sampson, Chair – 1994.

- Western Forest Health Initiative Report, USDA-Forest Service – 1994.

- Fire Management Strategic Assessment Report, USDA-Forest Service – 1994.

- Report of the Interagency Management Review Team, South Canyon Fire – October 1994.

- Bureau of Land Management Fire and Aviation Programwide Management Review Report – April 1995.

These reviews and studies include extensive input from affected interests, agency employees, and the general public. The recommendations that have resulted from these efforts shall, as part of this review, be implemented if they are consistent with this report and have demonstrated interagency consensus.

## GUIDING PRINCIPLES

Guiding principles represent those broad, overarching procedural tenets that apply to all fire management activities. They have their basis in current manuals, handbooks, and written program instruction. The following guiding principles are fundamental to the success of the Federal wildland fire management program and will be inherent in all Federal agency programs:

- *Public and firefighter safety is the first priority in every fire management activity.*

- *The role of fire as an essential ecological process and natural change agent will be incorporated into the planning process.* Fire management activities support the achievement of those plans.

- *Fire management plans, programs, and activities are integral components of land and resource management plans and their implementation.* Federal agency land and resource management plans set the objectives for the use and desired future condition of the various public lands.

- *Sound risk management is a foundation for all fire management activities.* Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing the activity. Net gains to the public benefit will be an important component of decisions.

- *Fire management programs and activities are economically viable, based upon values at risk, costs, and land and resource management objectives.* Federal agency administrators are adjusting and reorganizing programs to reduce costs and increase efficiencies. As part of this process, investments in fire management activities must be evaluated against all agency programs in order to effectively accomplish the overall mission, set short- and long-term priorities, and clarify management accountability.

- *Fire management plans and activities are based upon the best available science.* Knowledge and experience are developed among all wildland fire management agencies. An active fire research program combined with interagency collaboration provides the means to make this available to all fire managers.

- *Federal, State, Tribal, and local interagency coordination and cooperation is essential.* Increasing costs and smaller work forces require that public agencies pool their human resources to successfully deal with the ever-increasing and more complex fire management tasks. Full collaboration among Federal agencies and between the Federal agencies and State, local, and private entities results in a mobile fire management work force available to the full range of public needs.

- *Standardization of policies and procedures among Federal agencies is an ongoing objective.* Consistency of plans and operations provides the fundamental platform upon which Federal agencies can cooperate and integrate fire activities across agency boundaries and provide leadership for cooperation with State and local fire management organizations.

# CURRENT AND PROPOSED FEDERAL FIRE POLICIES

Following the initial comments by employees and the public in January 1995, subject-matter experts from the Federal agencies, State and local governments, and the private sector reviewed the issues that were raised and the policies that relate to those issues. These working groups focused on policies needing change. They are displayed as "current" policies in the following table. The groups then developed proposals for revised or new policies. The results of that effort, refined by the Federal Wildland Fire Management Policy and Program Review Steering Group, are displayed in the table as "proposed" policies.

**FEDERAL WILDLAND FIRE POLICIES**

| | CURRENT DEPARTMENT OF THE INTERIOR[1] | CURRENT FOREST SERVICE[2] | PROPOSED FEDERAL |
|---|---|---|---|
| **SAFETY** | No wildfire situation, with the possible exception of threat to human survival, requires the exposure of firefighters to life-threatening situations. | Conduct fire suppression in a timely, effective, and efficient manner with a high regard for public and firefighter safety. Forest officers responsible for planning and implementing suppression action shall not knowingly or carelessly subordinate human lives to other values. | Public and firefighter safety is the first priority. No resource or property values are worth endangering people. All suppression actions and prescribed fire plans must reflect this commitment. |
| **PLANNING** | Fire will be used to achieve responsible and definable land-use benefits through the integration of fire suppression and prescribed fire as a management tool. | Integrate consideration of fire protection and use into the formulation and evaluation of land and resource management objectives, prescriptions, and practices. | Fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale, across agency boundaries, and will be based upon best available science. |
| **PRESCRIBED FIRE** | Prescribed fire may be utilized to accomplish land-use or resource-management objectives only when defined in prescribed fire plans. | Use prescribed fires, from either management ignitions or natural ignitions, in a safe, carefully controlled, cost-effective manner as a means of achieving management objectives defined in Forest Plans. Prepare a burn plan for all prescribed fire projects | Prescribed fire will be used to protect, maintain, and enhance resources, and prescribed natural fire will be allowed to function, as nearly as possible, in its natural ecological role. All prescribed fire must be consistent with land and resource management plans, public health considerations, and approved prescribed burn plans. |
| **PRESCRIBED NATURAL FIRE** | Prescribed fire, designed to accomplish the management objective of allowing naturally occurring fire to play its role in the ecosystem, will be allowed to burn if provided for in a fire management plan, a valid prescription exists, and the fire is monitored. | Allow lightning-caused fires to play, as nearly as possible, their natural ecological role in Wilderness. | |
| **WILDFIRE** | Fires are classified as either wildfire or prescribed fire. All wildfires will be suppressed. Wildfire may not be used to accomplish land-use and resource-management objectives. Only prescribed fire may be used for this purpose. | Wildland fires are defined as either a wildfire or a prescribed fire. Respond to a fire burning on National Forest System land based on whether it is a wildfire or a prescribed fire; implement an appropriate suppression response to a wildfire. | Wildland fire is defined as either a wildfire or a prescribed fire. Management actions taken will be consistent with firefighter and public safety, land-use plan objectives, resource benefits, and values at risk. Wildfire that does not meet land-use plan objectives will be suppressed. |
| **PREPAREDNESS** | Bureaus will maintain an adequate state of preparedness and adequate resources for wildland fire suppression. Preparedness plans will include considerations for cost-effective training and equipping of suppression forces, maintenance of facilities and equipment, positioning of resources, and criteria for analyzing, prioritizing, and responding to various levels of fire situations. | Plan, train, equip, and make available an organization that ensures cost-efficient wildfire protection in support of land and resource management direction as stated in Fire Management Action Plans. Base presuppression planning on the National Fire Management Analysis System. | Agencies will ensure their capability to provide safe, cost-effective fire protection in accordance with land management plans through appropriate planning, staffing, training, and equipment. |

## FEDERAL WILDLAND FIRE POLICIES

| | CURRENT DEPARTMENT OF THE INTERIOR[1] | CURRENT FOREST SERVICE[2] | PROPOSED FEDERAL |
|---|---|---|---|
| **SUPPRESSION** | Wildfire losses will be held to the minimum possible through timely and effective suppression action consistent with values at risk and within the framework of land-use objectives and plans. | Conduct fire suppression in a timely, effective, and efficient manner with a high regard for public and firefighter safety. | Fires are suppressed at minimum costs, considering benefits and values at risk and consistent with resource objectives. |
| **ADMINISTRATOR AND EMPLOYEE RESPONSIBILITY** | Wildfires are considered emergencies, and their suppression will be given priority over normal Departmental programs. | Every Forest Service employee has the responsibility to support and participate in wildfire suppression activities as the situation demands. | Employees who are trained and certified will participate in the wildland fire program as the situation demands; non-certified employees with operational, administrative, or other skills will support the wildland fire program as needed; and administrators will be responsible, accountable, and make employees available. |
| **PROTECTION PRIORITIES** | The standard criterion to be used in establishing protection priorities is the potential to destroy: (1) Human Life, (2) Property, and (3) Resource Values (National Interagency Mobilization Guide, March 1995, NFES 2092.) | The standard criterion to be used in establishing protection priorities is the potential to destroy: (1) Human Life, (2) Property, and (3) Resource Values. (National Interagency Mobilization Guide, March 1995, NFES 2092.) | Protection priorities are (1) life and (2) property or natural resources, based on relative values at risk, commensurate with suppression costs. |
| **INTERAGENCY COOPERATION** | Bureaus will coordinate and cooperate with each other and with other protection agencies for greater efficiency and effeectiveness. | Develop and implement mutually beneficial fire management agreements with other Federal agencies and countries. Cooperate, participate, and consult with the States on fire protection for non-Federal wildlands. | Fire planning, prescription, preparedness, suppression, monitoring, and research will be conducted on an interagency basis with the involvement of all partners. |
| **STANDARDIZATION** | The National Wildfire Coordinating Group (NWCG) provides a formalized system to agree upon standards of training, equipment, aircraft, suppression priorities, and other operational areas. (Memorandum of Understanding, NWCG; II, Function and Purpose.) | The National Wildfire Coordinating Group (NWCG) provides a formalized system to agree upon standards of training, equipment, aircraft, suppression priorities, and other operational areas. (Memorandum of Understanding, NWCG; II, Function and Purpose.) | Agencies will use consistent planning processes, funding mechanisms, training and qualification requirements, operational procedures, values-at-risk methodologies, and public education programs for all fire management activities. |
| **WILDLAND / URBAN INTERFACE** | Emergency assistance may be provided *to properties in the vicinity of public* and Indian lands so long as Departmental lands or the public's interest is not jeopardized. Bureaus will develop and participate in interagency fire prevention cooperatives. | Structural fire suppression, which includes *exterior and interior actions on burning* structures, is the responsibility of State and local government. Structural fire protection from advancing wildfire within the National Forest protection boundary is the responsibility of State and local fire departments and the Forest Service. | The operational role of Federal agencies, as a partner in the wildland/urban interface, is wildland firefighting, hazard fuels reduction, cooperative prevention and education, and technical assistance. Structural fire protection is the responsibility of State and local governments. Federal agencies may assist with exterior structural suppression activities under formal agreements that state the mutual responsibilities of the partners, including funding. (The National Park Service and Bureau of Indian Affairs have full structural protection authority for their facilities on their land and may also enter into formal agreements to assist State and local governments with full structural protection.) |
| **ECONOMIC EFFICIENCY** | Bureaus will ensure that all fire management activities are planned and based upon sound considerations, including economic concerns. Bureaus will coordinate and cooperate with each other and with other protection agencies for greater efficiency and effectiveness. Wildfire damage will be held to the minimum possible, giving full consideration to minimizing expenditure of public funds for effective suppression. | Provide a cost-efficient level of wildfire protection on National Forest lands commensurate with the threat to life and property and commensurate with the potential for resource and environmental damage based on hazard, risk values, and management objectives. | Fire management and fire program activities will be based on economic efficiencies developed by using sound economic analysis methodologies that incorporate commodity, non-commodity, and social values. |

[1] *From current Department of the Interior Manual*
[2] *From current USDA-Forest Service Manual*

# TOPIC AREA DISCUSSION: COORDINATED POLICY AND PROGRAM MANAGEMENT

In analyzing fire policy and programs, several broad components of fire management were identified as needing improvement. These issues are grouped in this section to show the need for consistency across all aspects of fire management. They include accountability, measurement of program efficiency, organization, fire management data, weather support, and legal review and policy analysis of programs, authorities, responsibilities, and liabilities.

The five Federal wildland fire management agencies have worked together for many years to improve many aspects of the fire management program. However, in order to accomplish a more unified approach to fire management, provide the maximum opportunity for reinvention of processes, and improve results, they must take this approach even further.

## SITUATION PROGRAM ACCOUNTABILITY

Current mechanisms to ensure management accountability in the fire program are ineffective. Policy and guidance are unclear about agency administrators' and fire program managers' responsibilities, and their position descriptions and performance standards are vague in that regard. As a result, there is little incentive for managers to adhere to established policy and direction or to provide oversight to the program. In addition, this lack of performance criteria does not portray expectations to inexperienced administrators or fire program managers.

Most employees and many fire managers don't believe that fire accomplishments or failures, especially in suppression activities, can be measured. There is a widely held view that line officers are not held accountable for failures or rewarded for accomplishments. This aggravates the perception that line officers can give fire activities a low priority without being held responsible for the consequences.

Furthermore, there is a perception by employees that only political or public pressure affects the line officer's dealings with fire.

This perception of a lack of accountability is increased by managers not speaking out in support of the fire program, not motivating employees to become certified and be available for fire suppression duties, limiting forces available for regional or national mobilization, or de-emphasizing fire priorities. This perception is also exacerbated by line officers' broad interpretations and varying levels of implementation of policies requiring support of fire suppression activities.

### GOAL

Achieve an appropriate recognition of fire management program requirements and successfully fulfill managerial and technical responsibilities.

### ACTIONS

Federal agencies will:

- develop and utilize consistent fire management qualification standards and specific selection criteria for fire program managers.

- establish job performance standards for agency administrators and fire managers that clearly reflect the complexity and scope of the fire management responsibilities.

- provide consistent and adequate training for agency administrators commensurate with their role and responsibility in fire management.

- ensure that agency administrators and fire program managers are held accountable for conducting the fire program in accordance with established policies, procedures, standards, and direction.

- ensure that employees who are trained and certified participate in the wildland fire program as the situation demands; noncertified employees with operational, administrative, or other skills support the wildland fire program as needed; and administrators are responsible, accountable, and make employees available.

## SITUATION PROGRAM EFFICIENCY

Services provided by Federal agencies are being critically scrutinized, both internally and externally, to determine the relative priority of every program and its contribution to the agency mission and the public good. As part of that scrutiny, the returns on investments in the fire program must be compared with the returns in other programs. Subsequently, every activity within the fire management program must be analyzed according to its economic efficiency. For example, presuppression activities such as prevention and preparedness must be able to display their contribution to reduced suppression costs, and prescribed fire programs must show a return in improved or restored ecosystems or reduced suppression costs.

Agency managers must be able to analyze program economic efficiency in order to establish the priority and scope of the fire management program. Current information on fire program benefits and costs are neither reliable nor consistent, and present program analysis methodologies are inadequate and inconsistent among Federal agencies. One dilemma is the question of what values should be included in such an analysis of diverse Federal wildlands; however, commodity, non-commodity, and social values all must be considered.

A growing concern shared by Members of Congress, agency administrators, and the public is focused on the cost of fighting large wildfires. Recently, the General Accounting Office has been directed to review 1994 fire suppression expenditures in some agencies.

Some critics believe expenditures are excessive and that the crisis nature of wildfire has led to imprudent use of personnel, equipment, and supplies. Others believe that firefighting practices are not as effective as some natural forces in bringing wildfires under control and that fire suppression efforts should take better advantage of weather, terrain, fuel, and other natural conditions. In the future there is likely to be less tolerance for excessive expenditures on large-fire suppression. This type of fire activity must be analyzed for costs versus benefits. Present analysis methods have not resulted in improved practices or reinforced confidence in current suppression strategies.

### GOAL

A means is developed with which to demonstrate overall fire management economic efficiency as well as to analyze the relative efficiency of specific activities within the fire management program.

### ACTIONS

Federal agencies will:

- jointly develop a standard methodology for measuring and reporting fire management economic efficiency that includes commodity, non-commodity, and social values. This methodology should specifically address, among other considerations, the cost of large-fire suppression.

- base fire management and fire program activities on economic efficiencies developed by using sound economic analysis methodologies.

## SITUATION ORGANIZATIONAL ALTERNATIVES

The current focus on reinvention of the Federal government is stimulating new approaches to accomplishing agency missions. As part of this effort, Federal agencies must evaluate their fire management organizations and methods of accomplishing their total fire management program. These analyses must consider the movement to reduce the Federal role in public service, the implications of a continued reduction in work force and skills, and the effectiveness and efficiency of fire management organizations

and methods, while at the same time retaining strong principles of public service. Any change in organizations or responsibilities must bring the same or better fire management service to the public and meet the goals and objectives of the agencies' land use plans.

Each Federal agency currently maintains its own separate fire management organization, with qualified employees from other programs available as the fire situation dictates. This is commonly termed the fire militia. Federal agencies and cooperators also share resources nationally, and in some cases local interagency fire organizations exist, contract services are used, or other innovative approaches, such as the National Interagency Fire Center, the National Wildfire Coordinating Group, and the Alaska Fire Service, are being developed or used to accomplish the fire management mission. The Federal fire work force is currently decreasing at an uncomfortable rate, particularly in key specialized skills. An anticipated increase in retirements of fire managers and specialists over the next five years raises a serious question about how agencies will conduct their fire management missions. More aggressive examination and implementation of organizational alternatives are hampered by the inability to measure relative efficiencies among these alternatives as well as by strong traditions that create a resistance to change.

**GOAL**

The most efficient and effective fire management program for Federal resources is developed, using an appropriate analysis procedure.

**ACTION**

Federal agencies will conduct a comprehensive, cooperative analysis of their fire management programs and consider a broad range of alternatives, including non-Federal fire management services provided by Tribes, State or local governments, or private interests. The agencies will focus on developing a consistent analytical approach and evaluate alternatives against well-founded criteria. This analysis will be directed toward achieving the same or improved level of service, and at a minimum each alternative will explore funding mechanisms, specific wildfire suppression activities, and fire management in the wildland/urban interface. Each alternative will include the variables of funding the total program and funding by the benefitting party.

## SITUATION DATA MANAGEMENT

Accurate, organized, and accessible information about natural resources and fire activities is the basis for coordinated agency program decisions and is critical to effective and efficient program management.

There is currently no consistency among agencies in compiling, managing, and accessing fire data, which prevents a reliable, holistic view of the Federal fire program. Although some data, such as historical fire patterns, response to past management actions, resource values, prescribed fire statistics, and hazard mapping, have been collected, it is incomplete and is not managed and portrayed consistently. In some cases, e.g., the wildland/urban interface, the need for data is only now being identified.

**GOAL**

Federal agencies adhere to sound data management principles and achieve a coordinated Federal fire statistical database.

**ACTIONS**

Federal agencies will:

- standardize fire statistics and develop an easily accessible common database.

- jointly identify, develop, and use tools needed for ecosystem-based fire management programs with mechanisms to integrate fire-related databases with other systems. These tools will include:

    - the collection of ecosystem-related data such as disturbance regimes, historical fire patterns, response to management actions, and others.

- consistent methods to track and access fire information, e.g., fire-use statistics, and administrative costs.

- mechanisms to transfer and exchange information such as fire effects databases (e.g., Fire Effects Information System), expert systems (e.g., Fire Monitoring Navigator), Internet access, National Biological Information Infrastructure, National Wildfire Coordinating Group (NWCG) Publications Management System documents, multimedia training and educational material, and public/private partnership information.

- direct the collection of a common set of prescribed fire data for use in risk assessment.

- cooperate with the Tribes, States, and local governments to establish a data-collection mechanism, which includes involvement by the insurance industry, National Fire Protection Association, Federal Emergency Management Agency, and other Federal agencies, to better assess the nature and scope of the wildland/urban interface fire problem.

- play a lead role in the adoption of the National Fire Incident Reporting System standards for all fire agencies that operate in the wildland/urban interface and modify existing fire reports (Interior's DI-1202 and Forest Service's 5100-29) to reflect wildland/urban interface data.

## SITUATION WEATHER SUPPORT

Fire-weather forecasting is a sophisticated and long-standing tool used by fire managers. As fire behavior prediction techniques have improved and become paramount in fire suppression, weather support has become a critical factor. In addition, longer-term fires are demanding forecasts beyond the six- to ten-day reliable range.

Currently, fire weather services are provided, on request, by the National Weather Service as a special program in that agency; however, demands for weather support have begun to exceed the existing capability. In recent severe fire years, requests for on-the-fire units could not always be filled.

The need for nontraditional weather support is dramatically increasing. Pre-fire-season predictions are being demanded by managers in order to prioritize work loads. Long-range fire severity forecasts are commonly needed for pre-positioning suppression forces, but they are either not available or unreliable. Finally, current and future demands for prescribed-fire weather forecasts, both long-range and on-site, are far exceeding present weather-support capability. To date, evaluation of alternatives for providing weather support to the fire management program have not resulted in substantive change in the methods available to fire managers.

### GOAL

Appropriate options are implemented for fulfilling fire managers' current and future needs for weather services.

### ACTIONS

The Secretaries of the Interior and Agriculture, together with the Secretary of Commerce, will evaluate alternative methods, including non-Federal sources, to provide weather service to the agencies' fire management programs.

The Secretaries of the Interior and Agriculture will seek commitment from the Secretary of Commerce to research and develop technology to provide accurate, long-range weather forecasts.

## SITUATION LEGAL REVIEW AND POLICY ANALYSIS

New and innovative fire program activities and the increasing interconnection between fire activities and existing environmental, public health, and tort laws require legal review and policy analysis to ensure coordination and compliance. Consequences of

prescribed fire activities, where fire is allowed to play a natural role or is introduced into the wildlands, may conflict with some interpretations of existing laws or regulations. Currently, these differences are identified independently by each agency and resolved on a case-by-case basis. Many of these issues are emerging in the wildland/urban interface zone (see Wildland/Urban Interface Protection section).

In order to make the best possible decisions, agencies must have sound, consistent legal interpretation of laws and regulations and/or in-depth systematic analysis of policy. Furthermore, wildland fire management agencies must, early in the process, involve public-health and environmental regulators in developing the most workable application of policies and regulations.

**GOAL**

Agencies have a consistent interpretation of laws and resulting policies to eliminate inconsistencies in agency fire management programs and decisions.

**ACTIONS**

Federal agencies will:

- identify the legal context for reintroducing fire into wildlands and develop options for accomplishment, including modifying regulations to address ecological processes where appropriate, exercising broader interpretations of policy, using the waiver process, or resolving obstacles at regional and local levels.

- jointly obtain legal interpretation of current policy and law regarding interagency implementation activities related to fire management, including those on non-Federal lands. Based on this interpretation, agencies can develop standardized agreements or new agreements that permit these activities.

- clarify and differentiate between agency liability and personal liability resulting from prescribed fire, based on legal review and interpretation of tort law.

The Secretaries of the Interior and Agriculture will direct the Office of the Solicitor and the Office of the General Counsel, in coordination with the Department of Justice, to conduct and publish, by January 1, 1996, a comprehensive legal review on wildland/urban interface fire protection to provide the legal foundation for Federal actions. This review will address:

- current authority under Federal laws such as the Organic Act, National Forest Management Act, Stafford Act, and the Federal Land Policy and Management Act.

- the subjects of tort liability, budget authorities, cooperative agreements, mitigation activities, and natural resource protection/environmental laws.

# TOPIC AREA DISCUSSION: ROLE OF FIRE IN RESOURCE MANAGEMENT

## SITUATION

Long before humans arrived in North America, there was fire. It came with the first lightning strike and will remain forever. Wildfire is inherently neither good nor bad. As an inevitable natural force, it is simply unpredictable and potentially destructive and, along with human activities, has altered ecosystems throughout time.

Early ecologists recognized the presence of disturbance but focused on the principle that the land continued to move toward a stable or equilibrium condition. Through the years, however, scientists have acknowledged that equilibrium conditions are largely the exception and disturbance is generally the rule. Natural forces have affected and defined landscapes throughout time. Inasmuch as humans cannot completely control or eliminate these disturbances, ecosystems will continue to change.

Human activities have also influenced ecosystem change. American Indian Tribes actively used fire in prehistoric and historic times to alter vegetation patterns. In short, people and fire and ecosystems evolved together. This human influence shifted after European settlement in North America, when it was believed that fire, unlike other natural disturbance phenomena, could and should be controlled. For many years fire was aggressively excluded to prevent what was considered the destruction of forests and other vegetation. While the destructive, potentially deadly side of fire was obvious and immediate, changes and risks resulting from these fire exclusion efforts were difficult to recognize and mounted slowly and inconspicuously over many decades.

Recently, however, there has been a growing recognition that past land-use practices such as logging and grazing, combined with the effects of fire exclusion, have resulted in heavy accumulations of dead vegetation, altered fuel arrangement, and changes in vegetative structure and composition. As dead fallen material (including tree boles, tree and shrub branches, leaves, and decaying organic matter) accumulates on the ground, it increases fuel quantity and creates a continuous arrangement of fuel. These conditions allow surface fires to ignite more quickly, burn with greater intensity, and spread more rapidly and extensively than in the past.

The arrangement of live vegetation also affects the way fires burn. For example, an increase in the density of small trees creates a multi-storied forest structure with a continuous vertical fuel arrangement. This arrangement may allow a fire normally restricted to the ground to spread into the trees and become a crown fire. In addition to structural changes, vegetation modification resulting from fire exclusion causes a shift toward species that are not adapted to fire (some of which are not native) and are therefore more susceptible to damage from fire. Fire exclusion also favors non-native species in some fire-dependent areas, while in other areas fires may encourage non–native species. Fires in areas of altered vegetation and fuels affect other important forces within the ecosystem, such as insects and diseases, wildlife populations, hydrologic processes, and nutrient cycling, which influence the long-term sustainability of the land.

Paradoxically, rather than eliminating fire, exclusion efforts have instead dramatically altered fire regimes so that today's fires tend to be larger and more severe. No longer a matter of slow accumulation of fuels, today's conditions confront us with the likelihood of more rapid, extensive ecological changes beyond any we have experienced in the past. To address these changes and the challenge they present, we must first understand and accept the role of fire and adopt land management practices that integrate fire as an essential ecosystem process.

Although ecological knowledge and theories have changed relatively quickly, the scope and process of land management have had difficulty keeping pace. Ecological processes, including fire and other disturbance, and changing landscape conditions are often not integrated into land management planning and decisions. With few exceptions, existing land management planning is confined to individual agency boundaries and single-function goals that are driven by differing agency missions and policies. This type of planning results in an inefficient, fragmented, short-term approach to management that tends to ignore interdisciplinary-based, long-term, broad-scale resource issues that cross agency boundaries. Land management agencies now recognize the need to break down these barriers and seek cooperative, ecologically sound approaches to land management.

The process used in land management planning also hinders the broad-scale approach. One way to break down this barrier is to involve all interests, including the public, scientists, resource specialists, and regulators, throughout the planning process. Another is to establish a clear link for communication and information transfer between scientists and managers. These measures will help to ensure that management needs are met and that current science is used in land management planning at all levels.

Planning must also consider the risks, probabilities, and consequences of various management strategies, e.g., wildfire versus prescribed fire versus fire exclusion. For a responsive planning process, management decisions must be monitored, integrated and supported at each step. And to carry out critical and effective "adaptive management" (a feedback approach to management that uses monitoring results to plan future actions), planners and managers need a nationwide baseline measure of ecological condition and a standardized method of assessing long-term ecological health.

Not only must we understand and accept the need to integrate fire into land management, but this integration must be reconciled with other societal goals (e.g., maintaining species habitat, maximizing commodity production, and protecting air quality, water quality, and human health). Laws and regulations must consistently address long-term ecosystem processes and must guide agencies toward a common goal. Information about the consequences of various management strategies is not currently available to assist in working toward simultaneous goals. Land management and regulatory agencies must interact and collaborate to achieve a balance of ecosystem and other societal goals.

A major obstacle is that many people do not understand the ecological and scientific concepts behind fire. For many, fire remains a fearsome, destructive force that can and should be controlled at all costs. Smokey Bear's simple, time-honored "only you" fire prevention message has been so successful that any complex talk about the healthy, natural role of fire gets lost, ignored or denied by broad internal and external audiences.

The ecological and societal risks of using and excluding fire have not been adequately clarified and quantified to allow open and thorough discussions among managers and the public. Few understand that integrating fire into land management is not a one-time, immediate fix but a continual, long-term process. It is not an end in itself but rather a means to a healthy end. Full agency commitment to internal and external information and education regarding fire and other ecological processes is needed. When agency employees as well as the public misunderstand or remain skeptical about the role of fire, it severely limits adaptive and innovative fire and land management. Conversely, informed constituents and well-educated employees are essential to honestly address the concerns of society.

Several roadblocks keep us from reintroducing fire on an ecologically significant scale. Even now it sometimes takes years to reach agreement about appropriate treatments and to take action. Land managers often feel the need to wait for scientific certainty before acting. This favors the status quo, impedes progress, and deters investigation of new techniques. In many ecosystems, there is little or no information about disturbance regimes, historical fire

patterns, inventory data, response to past management actions, and likely future responses. This calls for a consistent, well-planned, and large-scale scientific assessment of current ecosystem conditions and consequences of various management strategies. Also, increasing human settlement near wildlands divides and fragments resource lands, making it difficult to apply new ecosystem-based management strategies. This increases the risk of escaped fires and generates more complaints about smoke and altered scenic values. A further roadblock is the current policy that calls for the suppression of all wildfires. This precludes the use of wildfire as a cost-effective means of accomplishing the objectives contained in agency land-use plans.

Fire is the most powerful natural force that mankind has learned to use. Unlike an earthquake, it can be harnessed; unlike a tornado, it can be channeled; unlike wind, it depends on complex chemical and biological relationships. And, unlike water and ice, fire is not an element; it is an event, a catalyst, and therefore a unique tool that land managers everywhere can use.

But in order to successfully integrate fire into natural resource management, informed managers, partners, and the public must build upon sound scientific principles and social values. Research programs must be developed to create this foundation of sound scientific principles. All parties must work together in the land management planning and implementation process according to agreed-upon goals for public welfare and the health of the land.

The task before us – reintroducing fire – is both urgent and enormous. We have created conditions on millions of acres of wildlands that increase the probability of large, intense wildfires beyond any scale we have witnessed. These severe fires will in turn increase the risk to humans, to property, and to the land upon which our social and economic well-being is so intimately intertwined.

In the first decade of this century, a new policy was established that systematically excluded the natural flame across the entire nation. In recent years we have begun to understand the full extent of the risks that policy has wrought. Now, in the last decade of this century, it is our responsibility, for the health of the land and for our citizens, to carefully, systematically, and collectively bring fire back to its rightful place.

## GOALS PLANNING

Ecological processes, including fire, are actively incorporated into land management planning to restore and maintain sustainable ecosystems. Planning is a collaborative effort, with all interested partners working tgether to develop and implement management objectives that cross jurisdictional boundaries.

- The use of fire to sustain ecosystem health is based on sound scientific principles and is balanced with other societal concerns.

## ACTIONS

Federal agencies will:

- jointly develop consistent, compatible, ecosystem-based interagency land management planning processes that facilitate adaptive management, including effective implementation, continual monitoring, and appropriate feedback to management. This process will:

    - fully integrate ecological concepts that consider the long-term view and cross agency boundaries.

    - involve all parties, including managers, scientists, resource specialists, regulators, Tribes, State and local governments, and the public. (The ongoing interagency Columbia River Basin Assessment Project may provide a model.)

    - quickly and effectively incorporate current information, including scientific knowledge, risk assessment, social and economic concerns, and public-health considerations.

- include multiple scales of planning, assessment, and monitoring to address specific actions such as fire management prescriptions for resource management on a local scale and ecosystem health on a broader scale.

- set performance requirements and provide rewards for interdisciplinary planning and successful implementation so that team members are responsible for ecosystem health rather than single, specific targets.

- require consistent and integrated ecosystem monitoring across agency boundaries.

- include a mechanism to revise existing land management plans to address the above actions. develop research programs that provide a sound scientific basis for the integration of fire as a positive force in resource management.

- use a consistent fire management planning system that ensures adequate fire suppression capabilities to support fire reintroduction efforts and recognizes fire management (both fire use and fire protection) as an inherent part of natural resource management.

- create a system for coordination and cooperation among land managers and regulators to allow for the use of fire to achieve goals of ecosystem health while at the same time protecting individual components of the environment and human health and safety. This system will:

  - allow for early collaboration during the process of developing new land management plans.

  - provide a mechanism for achieving balanced goals in existing land management plans.

  - encourage land management agencies to proactively incorporate the intent of environmental laws and regulations into their management practices to achieve a balance among societal goals (e.g., adopt consistent, state-of-the-art smoke management techniques, including smoke modeling).

## GOALS — REINTRODUCTION OF FIRE

- Based upon sound scientific information and management objectives, fire is used to restore and maintain healthy ecosystems and to minimize undesirable fire effects, including effects on humans.

- Clearly defined management goals and objectives that include the role of prescribed fire and wildfire are developed. Resulting fire management practices and terminology are consistent for areas with similar management objectives, regardless of jurisdiction.

### ACTIONS

Federal agencies will:

- expedite the decision-making process by developing a uniform set of criteria for evaluating ecosystem condition and prioritizing areas for the reintroduction of fire to meet resource objectives and reduce hazards. This process will identify those ecosystems:

  - that will function without fire (fire is not a significant natural component or the fire regime has not been altered).

  - where fire is unlikely to succeed (fire would be adverse, such as areas significantly altered by fuel accumulations and species changes).

  - where treatment is essential or potentially effective (fire is needed to improve resource conditions or reduce risk and hazard).

- jointly conduct research, expand fire management demonstration areas, and coordinate and implement ecosystem-based fire management programs. These programs will:

- address today's more fragmented landscapes.

- address the highest-priority needs in ecosystem assessment, monitoring, and management.

- use existing tools and develop new ones to assist in understanding and managing for prescribed fires of greater size and intensity consistent with historic fire regimes.

- determine the appropriate scope of prescribed fire use, including urgency, extent, timing, and risks and consequences.

- be an integral part of the long-term, comprehensive land management program. revise policy to allow wildfire to be used to accomplish resource or landscape management goals when consistent with land-use plan objectives.

## GOAL EDUCATION

Clear and consistent information is provided to internal and external audiences about existing conditions, management goals and objectives, the role of fire in achieving these objectives, and alternatives and consequences of various fire management strategies.

### ACTIONS

Federal agencies will:

- establish an interdisciplinary team that includes all agencies and regulators to design a consistent fire-role and -use message for decision makers and the public. This message will:

  - describe and clearly explain issues such ecosystem condition, risks, consequences (including public health impacts), and costs in open dialogue with internal and external constituents through media campaigns, public meetings, employee training, etc.

  - be designed to maximize open communications and reduce polarization among conflicting interests regarding prescribed fire.

- build on existing efforts of the Interior Interagency Wildland Fire Education Initiative to develop and implement a strategic plan that includes education of the general public and agency personnel about the role of fire. As part of this effort, agencies will:

  - develop and transmit a clear message about the role of fire and the consequences of its use and exclusion.

  - integrate this message into existing agency communication systems.

  - tie the role-of-fire message to other agency initiatives such as forest health, ecosystem management, etc.

  - broaden the Initiative to include all interests.

  - incorporate risk assessments into the Initiative.

  - encourage, create, and coordinate partnerships to achieve consistency in messages, build public trust, and obtain public opinion.

  - recognize and use educable moments (where the attention of the public is focused on fire, e.g., fire emergencies and visible prescribed fire operations) to facilitate high-impact information and education.

  - develop mandatory national and regional interagency training programs to instill in all employees an understanding of the role of fire in natural systems.

  - commit funding and support to public information.

# TOPIC AREA DISCUSSION: USE OF PRESCRIBED FIRE AND FUELS MANAGEMENT

## SITUATION

Since the early 1900's, our national fire policy of aggressively limiting and excluding fire has unwittingly turned many wildlands into altered, high-risk fire zones. As stated in the preceding chapter, this exclusion policy has modified the living landscape, changing plant species composition as well as diversity. In many cases it has transformed a landscape of diffuse, native, fire-adapted plant species into a dense, solid, and often vulnerable fuel load of standing vegetation and ground litter. When lightning inevitably strikes, fires ignite faster, burn hotter, and spread faster and farther. These high-intensity fires are more likely to result in unacceptable environmental conditions such as sterilized or water-repellent soils, accelerated erosion, and displacement of native vegetation by less desirable species.

Recent fire tragedies in the West have helped focus that understanding and, along with it, a consideration of how risk might be mitigated. Some areas will need immediate management intervention to prevent high-intensity fire and to maintain their sustainability as healthy ecosystems.

Prescribed fire or burning is often mentioned by land managers, fire practitioners, and scientists as a potential tool to mitigate fuels and hazards. Prescribed burning is the deliberate application of fire to wildlands to achieve specific resource management objectives. Prescribed fires may be ignited either by resource managers or by natural events such as lightning. They may be used for a number of resource management purposes, from simple fuel reduction to achieving specific responses from fire-dependent species, such as the regeneration of aspen.

When the purpose of a prescribed fire is simply to reduce the amount of fuel, alternative treatments are available. Physical removal or substantial alteration of both dead and living vegetation may be accomplished by mechanical means in areas where heavy equipment can operate. Fuel loads can also be treated by hand but at a relatively high cost. Other land management activities, such as grazing and logging, may also serve to accomplish fuel reduction. But when a land management objective is more complex, the number of acceptable treatment alternatives becomes limited. For instance, there is no alternative to the use of fire as a natural process in Wilderness.

Prescribed burning is a well-established practice utilized by most Federal, Tribal and State land management agencies as well as some private individuals and organizations. In order to use prescribed fire, land managers must prepare burn plans. Each plan specifies desired effects, weather conditions that will result in acceptable fire behavior, and the forces needed to ignite, hold, monitor, and eventually extinguish the fire. In the past, the practice of prescribed burning has been used on a relatively small scale and confined to single land ownerships or jurisdictions. Success has been built around qualified and experienced people, their understanding of vegetative types and terrain conducive to fire, adequate funding, a supportive public, and a willingness on the part of agency administrators to assume a reasonable amount of risk to achieve desired results.

Because of its potential for undesirable results, prescribed fire is one of the highest-risk activities Federal land management agencies engage in. Escaped prescribed fires can result from poorly designed or poorly executed projects, but they can also result from events beyond the control of those conducting the project, such as unpredicted winds or equipment failure. Currently, the stigma associated with an escaped prescribed fire does not distinguish between poor performance and bad luck.

Although prescribed fire is used in many areas of the United States, it is rarely used enough to significantly improve ecosystem health or reduce hazards. One reason for this is lack of commitment to the concept. While land management agencies as a whole generally recognize the role of fire as a natural process, not all individual disciplines and managers fully understand or support this role. Some managers are unwilling to accept the potential negative consequences associated with prescribed fire. Differences of opinion concerning the effect of fire on specific resources, such as cultural values, water quality, air quality, and certain flora and fauna, can also impede the process.

Another shortcoming is lack of access to qualified people. In the current atmosphere of downsizing and reduced budgets, agencies may not be able to maintain sufficient skills to accomplish broad-scale prescribed fire programs. Many of the employees who are most experienced in the application of prescribed fire are the same ones who are responsible for wildfire suppression. This can lead to potential competition for their time during the fire season. Administrative procedures also inhibit temporary hiring of personnel needed to conduct on-the-ground prescribed burning.

The direction in the Interagency Fire Business Management Handbook on hazard-duty pay also tends to limit the number of prescribed fire professionals. This guidance restricts fire-related hazard pay to activity within or adjacent to the perimeter of an uncontrolled wildfire, even though prescribed fire practitioners are exposed to as much risk if not more than firefighters engaged in suppressing wildfire.

Retirement benefits have also been a factor in career choices involving prescribed fire. However, the BLM has now recognized that, based on 5 CFR 831.900 and 842.800, prescribed fire activity qualifies for primary coverage under special firefighter retirement. In some agencies, however, it is still considered to qualify only for secondary coverage.

To provide optimal biological benefit to forests and rangelands, the timing and intensity of prescribed fire should resemble natural occurrence. Historically, fires were often very large; however, current land-ownership patterns and the process of funding prescribed fire are not conducive to replicating this process. For example, it is difficult to have a landscape-size project without involving lands of another ownership, and there are barriers to spending agency funds on non-agency lands. And the system does not encourage managers to plan large projects with multiple benefits located entirely on agency lands, because participation is generally limited to those program areas that will provide support and funding.

Currently, there is no consistent method to determine the potential for a prescribed fire to escape, nor is there a mechanism to compare the values at risk from an escaped fire versus those at risk by continuing to exclude fire. When a prescribed fire does escape, the only way a private property owner can be compensated more than $2,500 is to pursue a tort claim against the Federal government. To prevail, the damaged party must prove negligence on the part of the agency. This cumbersome process leads to ill will between the managing agency and neighboring landowners and adversely affects cooperation.

Managing for landscape health requires expansion of interagency prescribed fire programs. Agencies must make a commitment with highly qualified people, from leader to practitioner, and provide funding mechanisms to conduct the program. Federal agencies must foster a work force that understands the role of fire and, at the same time, raise the level of public understanding. Public opinion and perception may limit increases in interagency prescribed fire programs. Therefore, continued Federal efforts to work collaboratively with and educate private landowners, interest groups, and the media is paramount. Education efforts should focus on exposing the public to accurate information on the social and economic benefits that result when prescribed fire is used, how natural resources may be maintained, and the risks involved, including those associated with not taking any action. Total implementation may

require that the public tolerate some smoke and accept a certain amount of fire in their environment as an investment in the long-term health of the land.

## GOAL IMPLEMENTATION

Fire is accepted as a critical process in a fully integrated program to improve forest and rangeland health. Long-term public safety and healthy ecosystems are maintained through the use of fire on all ownerships. Through funding and staffing, agencies support a significant increase in the use of fire as a resource management tool where consistent with integrated land management plans and maintenance of public health.

### ACTIONS

Federal agencies will:

- jointly develop programs to fund and implement an expanded program of prescribed fire in fire-dependent ecosystems.

- facilitate the planning and implementation of landscape-scale prescribed burns across agency boundaries and seek opportunities to enter into partnerships with Tribal, State and private land managers where appropriate.

- conduct all prescribed fire projects consistent with land and resource management plans, public health considerations, and approved prescribed burn plans.

- implement the National Wildfire Coordinating Group (NWCG) interagency prescribed fire qualification and certification system.

- aggressively pursue the development of employee attitudes that support long-range, multi-resource management viewpoints through the use of training, performance elements, and experience.

- seek authority to eliminate internal barriers to the transfer and use of funds for prescribed fire on non-Federal lands and among Federal agencies.

- seek authority or provide administrative direction to eliminate barriers to carrying over from one year to the next all funds designated for prescribed fire.

## GOAL CAPABILITY

Agencies collectively and cooperatively maintain an organization that can effectively plan and implement prescribed fire to meet resource management objectives.

### ACTIONS

Federal agencies will:

- train and maintain a qualified and adequate work force to implement interagency prescribed fire projects and make them available when needed.

- jointly develop simple, consistent hiring and contracting procedures for prescribed fire activities.

- work with the Office of Personnel Management to acquire authority for hazard-differential pay to compensate employees exposed to hazards while engaged in large-scale or complex prescribed fire activities.

- clarify that prescribed fire positions qualify for primary coverage under special firefighter retirement and issue appropriate guidance to field offices.

- make optimum use of available skills to ensure adequate focus, oversight, and safety for the prescribed fire program. Methods may include:

    - sharing personnel among agencies.

    - organizationally consolidating key fire skills within and among agencies.

- minimizing collateral-duty assignments that compromise focus, oversight, and safety in the prescribed fire program.

- jointly manage prescribed fire and suppression resources to ensure accomplishment of both activities concurrently.

- explore old and new technologies that may reduce the labor-intensive nature of fire activities.

## GOAL RISK MANAGEMENT/ SUPPORT

Agencies within the Departments of Agriculture and the Interior support employees when properly planned and conducted prescribed fire projects have unfavorable outcomes.

### ACTIONS

Federal agencies will:

- jointly develop an assessment process that estimates the probability of success and/or failure associated with the use of prescribed fire and evaluates the potential positive and negative consequences. As a part of this process, the effects of not conducting the project will also be evaluated. Research will support this effort.

- jointly establish partnerships and develop tools to assess, disclose, and mitigate risk from prescribed fires.

- create an organizational climate that supports employees who implement a properly planned prescribed fire program.

- relax current cumbersome, nonproductive requirements such as daily written management certification that a prescribed fire is burning within its prescription.

Secretaries of the Interior and Agriculture will seek legislation allowing rapid reimbursement for non-Federal losses resulting from prescribed fires.

# TOPIC AREA DISCUSSION: PREPAREDNESS AND SUPPRESSION

## SITUATION

The business of fighting wildfires is costly, time-consuming, and often dangerous to firefighters and the public. Wildfires occur unexpectedly and create an emergency in which firefighters race to minimize harm to valuable resources or property. Firefighters can contain and limit the spread of wildfires only by preparing well ahead of time, thoroughly examining various possibilities of fire numbers and sizes, and developing contingency plans to cope with them. And only by having adequate, thoroughly trained, well-equipped firefighters can fire suppression be carried out safely. For the past ten years, an average of 67,043 fires have started each year on Federally protected wildlands, burning an average of 2,749,029 acres, an area slightly smaller than the State of Connecticut. When an exceptionally severe fire year occurs, the combined fire protection forces of Federal, Tribal, State, and local governments are challenged. In the past ten years, 1988, 1990, and 1994 were considered extreme in the number of acres burned.

In 1994, the Federal agencies with wildfire responsibilities estimate that 95 percent of wildfires were suppressed during initial attack action. Nevertheless, nearly $1 billion was spent on the fires that escaped initial attack, and the nation experienced an enormous loss of natural resources, private property. With the loss of 34 firefighters, it was a tragic year for wildland fire; and even more sobering is that without the commitment to safety demonstrated by firefighting personnel throughout the nation, our losses could have been even greater. Important lessons were learned, including an affirmation that agency personnel at all levels, and not just those directly involved in fire suppression, must be committed to safety.

It is estimated that presently in the 11 western states there are 20 to 30 million acres of Federal lands where conditions are ripe for extremely intense, destructive wildfires. This high risk brings with it the potential for danger to human health and safety and for enormous costs and economic loss as well as severe damage to soils, watersheds, wildlife, and flora. Federal wildland fire protection agencies must continue to provide resources and new technology for early detection and quick suppression of fires. To not do so would be to put significant public and private values, as well as human lives, at unacceptable risk.

The purpose of wildfire suppression is to minimize damage to resources, property, and the environment; to minimize expenditures of public funds for effective suppression, based on values at risk; and to provide for the safety of firefighters and the public.

Following the tragic loss of lives in the past fire season, the USDA-Forest Service and the Bureau of Land Management chartered an Interagency Management Review Team (IMRT) that focused on three key areas:

- Creating a "passion for safety" within all wildland fire suppression organizations that goes beyond traditional implementation.

- Emphasizing the importance of agency administrator duties and responsibilities in the implementation of safe fire management policies, programs, and practices.

- Monitoring performance and accountability of all personnel involved in fire and aviation management activities. This includes ensuring appropriate skills and training are acquired by administrators, program managers and staff, and all firefighting personnel.

The IMRT report includes 35 recommendations for follow-up. Many have been completed; several are more complex and are ongoing. The IMRT will complete its work June 30, 1995, but individual

work groups will continue with ongoing projects until they are completed. A significant outcome of this focus on firefighting safety was a joint statement by the Secretaries of Agriculture and the Interior in May of 1995:

> *We are committed to 'Zero Tolerance' of carelessness and unsafe actions. The commitment to and accountability for safety is a joint responsibility of firefighters, managers, and administrators. No resource or property values are worth endangering people. All land management plans and all suppression plans and actions must reflect this commitment. Individuals must be personally committed and responsible for their own performance and accountability.*

The task of preparing for and suppressing fires has been accomplished through the excellent cooperation of all fire suppression organizations. With shrinking budgets and work forces and more challenging fire situations, this cooperation and coordination among Federal and non-Federal fire protection organizations becomes even more essential to provide the fire protection capability the public expects.

The Interagency Management Review Team's findings included the following:

> *The five Federal wildland fire agencies have each adopted separate fire management planning systems. These systems fall into two basic categories: (1) optimization models (used by FS, BLM, and BIA) and (2) allocation models (used by NPS and FWS). Each approach has strengths and weaknesses. Three major weaknesses shared by both approaches are the focus on single-agency initial attack, the inability to adequately assess the role of non-market or non-commodity values at risk, and the inability to adequately address "non-normal" conditions. Nevertheless, the systems currently provide the principal source of information for budget planning and for organizational configurations in each agency.*
>
> *The single-agency focus and contrasting approaches of the various systems have precluded effective interagency planning, for both initial- and extended-attack situations and for geographic-area and national-level resources. The lack of capability to address non-market values has hampered the ability of the fire management programs to provide an organization that accounts for all resources and inhibits cross-agency comparisons.*
>
> *While each agency has been making modifications and improvements to their own systems over the years, discussion has begun within the interagency fire community to commission a new-generation system that can be used by all agencies (including States) and that addresses the full range of fire management planning issues. In November 1993 the National Wildfire Coordinating Group (NWCG) initiated an exploratory study of developing such a system.*
>
> *A next-generation fire management planning system, usable by all agencies and States, would greatly enhance the ability to analyze the full range of planning issues and provide a more efficient and effective interagency fire protection organization. Fire management planning systems must address the role that fuels management and protection of adjacent lands and structures plan in fire protection planning. Efforts to develop such a system should move forward as a priority effort in the interagency community through the NWCG.*
>
> — Taken from the report of the Interagency Management Review Team, October 1994.

This action will facilitate the interchange of forces for suppression and create a totally mobile Federal fire force.

In addition to the need for standardization, there are a number of existing policies and procedures that hinder all agencies' efforts to become more effective

in preparedness and suppression. Some of those are operational and some, such as budgeting and personnel practices, are administrative. In some cases, agencies are individually attempting to solve these problems or at least temporarily fix them season to season. However, it is critical that Federal wildland fire management agencies work together to arrive at common solutions.

Some minor differences in budget processes among agencies inhibit full cooperation. Perhaps the most important issue is the separate funding requests for seasonal severity funding, where coordinated planning and funding for pre-positioning resources on a local basis is a critical part of preparedness. Differences in the use of emergency firefighting appropriations among agencies also inhibit cooperation on prescribed fire actions. In addition, a budget problem common among Federal agencies and a barrier to full effectiveness in fire suppression is that fire organizations are often funded at less than the Most Efficient Level (MEL) for preparedness. This requires shifting funds from emergency suppression to pre-positioning resources. Standardization of budget processes and solution of some of these budget barriers would help to incrementally improve fire suppression.

A few current personnel policies have an adverse effect on Federal employees' pay while on a fire. As a result, employees are not always interested in supporting the fire suppression mission of the agencies. In some geographic areas, primarily California, the annual wage of entry-level Federal firefighters is lower than State and local firefighter salaries. Federal agencies are training firefighters only to lose qualified people to other fire-service agencies. And the Fair Labor Standards Act creates disparity in pay between exempt and nonexempt employees. In addition, the policy for hiring temporary employees is cumbersome and time consuming; these short-term employees have a restricted work year and in many geographic areas are not on the rolls long enough for the agencies to provide necessary training prior to the fire season.

Preparedness planning is critical to ensure that imminent fire situations are recognized, an appropriate level of fire protection is provided in support of land and resource management goals and objectives, and that appropriate priorities are established and actions taken. The absence of carefully developed and specific preparedness plans frequently results in poor decisions that lead to costly operational mistakes or unsafe practices during emergency situations. In contrast, well-prepared fire suppression plans generally result in smaller fires that are less costly to suppress and cause minimal damage to property and natural resources.

Reorganization and downsizing efforts are compelling Federal agencies to look at new ways to accomplish their programs, including firefighting. Retirements and organizational changes have changed the demographics and experience levels within the fire program. In some cases, agency administrators and fire management officers do not have the same level of experience in fire management oversight as did their predecessors. Managers are often not rewarded for success or given incentives to improve. Further, the demands created by more complex natural resource issues and multiple program priorities have diverted administrators' attention away from the fire management program. Lack of oversight and attention to preparedness can result in crisis decision making. When fires become emergencies, public and political pressures may take precedence over suppression plans that are based on values at risk.

Values-at-risk estimates have been commonly used to determine strategies for large-fire suppression. Only losses in values have been considered in these calculations, because in the suppression operations, the objective as predetermined in land use plans is to put the fire out at the least total cost, which is the value of the resources (values at risk) plus suppression costs. While fire benefits have been considered in planning the fire forces for budget allocations, positive benefits of fires have not been factored into the formulation, or choice, of suppression strategies.

Use of values at risk in fire suppression has not been consistent across agencies, and the definition is too narrow without considering fire benefits as well. As mentioned above, in some cases it has been disregarded entirely. These practices contribute, sometimes significantly, to inflated fire suppression costs. The values-at-risk concept needs to be revised to reflect present recognition of the positive benefits of fire as compatible with agency land use objectives, as well as the need for a broader range of strategic suppression alternatives for large fires to hold costs in check and recognize limits of firefighting resources.

Standard criteria have been established to guide fire suppression priorities. These are based on the potential for the fire to destroy: (1) human life, (2) property, and (3) resource values. Human life remains the first priority; however, a rigid second priority of property over natural resource values is being questioned by fire managers. It does not allow for flexibility to consider low-value properties relative to higher-valued natural resources. And property protection as a rigid priority is a significant contributor to inflated suppression costs as well as increased size of wildfires when limited suppression resources are concentrated to protect property. More flexibility is needed to assess the relative values between property and natural resources in order to achieve economic efficiency.

The need for better advance preparation and more effective suppression has never been greater. The overall efficiency and effectiveness of the Federal wildland fire protection effort can be improved through consistency and better coordination. Policies and practices that have been tested and found to be inadequate can be improved through some very specific actions.

## GOAL SAFETY

Federal employees are committed to "Zero Tolerance" of carelessness and unsafe actions.

### ACTIONS

Federal agencies will support and enforce direction by the Secretaries of the Interior and Agriculture that:

- Safety comes first on every fire, every time.
- The Ten Standard Fire Orders are firm. We don't break them; we don't bend them.
- *All firefighters have the right to a safe assignment.*
- Every firefighter, every fireline supervisor, every fire manager, and every agency administrator has the responsibility to ensure compliance with established safe firefighting practices.

Federal agencies will adopt a policy that is consistent with the Secretaries' direction for fire management safety.

## GOAL VALUES AT RISK

Federal agencies maintain preparedness planning and suppression programs that prevent unacceptable loss from fire by implementing consistent strategies based on estimates of suppression costs and damages together with benefits that may result from wildfire.

### ACTIONS

Federal agencies will:

- jointly redefine values at risk and clarify measures of damage and benefits that may result from fire. This will be incorporated into mobilization guides and action plans and inserted into all national training.
- include risk assessment in preparedness planning, with firefighter safety as a primary component.
- complete fire preparedness plans utilizing an interagency approach that incorporates values at risk and benefits to resources, consistent with land and resource management plans.

- consider a full range of suppression strategies that incorporates estimated damage and benefits to resources, consistent with land and resource management plans.

- document values at risk and benefits to resources in the Escaped Fire Situation Analyses to determine the most appropriate suppression strategy, based on the availability of suppression forces.

- renegotiate State and local cooperative fire agreements in the wildland/urban interface to clarify protection responsibilities.

- establish protection priorities that allow an evaluation of relative values at risk for property and natural resources.

## GOAL PREPAREDNESS

Federal agencies maintain preparedness and suppression programs that ensure appropriate protection from fire. Agencies take special preparedness actions on a case-by-case basis in local geographic areas that have unusually severe fire danger.

### ACTIONS

Federal agencies will:

- emphasize case-by-case special preparedness actions to ensure timely, safe, and cost-effective response to unusually severe fire potential.

- clearly establish the organization's mission and clarify managerial and employee responsibilities in fire suppression and support activities.

- pre-position resources on an interagency basis as needed.

- develop interagency preparedness plans that specifically include:

  - systems for gathering information necessary to make timely fire management decisions, including fuel conditions and weather.

  - analysis and decision-making processes that consider, on an interagency basis, existing and potential fire severity; suppression resource commitment and availability; prescribed fire activity; environmental, social and political concerns; and other pertinent factors.

  - actions to be taken at each level of preparedness.

  - actions to provide increased suppression capability as the fire season develops, including accessing additional resources, pre-positioning resources, and training emergency firefighters.

  - a process for delineating actions to be taken when increased suppression capability is not an option.

  - a process for identifying the appropriate level of prescribed fire activity, taking into account the potential impact on suppression resources.

  - a process for coordinating actions among cooperating agencies and promptly transmitting decisions to all affected parties, including adjacent units and cooperators.

  - a process for preparedness reviews and follow-up evaluation of decisions and results.

## GOAL PROTECTION CAPABILITY

Federal agencies maintain sufficient capability for suppression through interagency staffing and by removing administrative barriers to hiring and retaining qualified personnel.

### ACTIONS

Federal agencies will:

- examine and ensure, on an interagency basis, employee availability at each organizational level, based on fire qualifications and other skills necessary for incident management.

- develop and utilize to the maximum extent possible the concept of closest initial attack forces and interagency staffing for fire suppression to optimize the use of the Federal and non-Federal work force.

- Federal agencies will collaborate with the Office of Personnel Management and Congress to effect changes to:

    - the Fair Labor Standards Act to remove exempt/nonexempt status of Federal employees during emergency incident management assignments.

    - the hiring practices for temporary employees, which currently limit opportunities to hire and retain a highly qualified seasonal work force.

## GOAL STANDARDIZATION

Federal agencies improve upon existing preparedness and suppression programs by further integration of firefighting operations and by standardizing budget planning processes, budget management, and fire training.

### ACTIONS

Federal agencies will:

- Develop a standard interagency budget and staffing process which will result in the most economically efficient organization (Most Efficient Level).

- Implement adequate wildland fire suppression qualification standards, criteria, and certification procedures, utilizing the National Wildfire Coordinating Group (NWCG) to facilitate acceptance and adherence to the standards by all incident management personnel in the fire service.

- Staff existing and future fire management vacancies with people who possess the requisite knowledge, skill, ability, and commitment to accomplish the total fire management mission.

- Recognize and reward success in interagency preparedness.

# TOPIC AREA DISCUSSION: WILDLAND/URBAN INTERFACE PROTECTION

## SITUATION

Each time someone moves a mobile home into the forest or builds a house with a cedar-shingle roof in the foothills, a wildland/urban interface is created and a potentially dangerous situation grows even larger. That seemingly simple interface puts complex demands on Federal fire resources unlike anywhere else on the American landscape.

Wildland/urban interface protection is important to the Federal government because Federally managed lands are often located adjacent to private lands. In these areas, Federal wildland firefighters are often called upon to assist local agencies. In some cases, Federal agencies are the only source of fire protection. If Federal fire resources were unlimited, this would not be a problem. But with limited amounts of money, time, equipment and people, a fire burning in the interface demands that America protect its scattered structures at the huge sacrifice of natural resources elsewhere. Ultimately, the Federal government pays the bills when fire events exceed local capability, either as disaster assistance or relief through the Federal Emergency Management Agency (FEMA). This represents a significant fiscal liability to the Federal treasury and to State and local coffers as well. In addition, Federal response in the interface "spreads Federal firefighters thin" and places them in situations for which they may not be adequately trained or equipped.

Recent fires such as the 1994 Tyee fire in Washington, the 1994 Chicken and Blackwell complexes in Idaho, the southern California fire siege of 1993, and the 1991 Oakland Hills fire are clear examples of the complexity of protecting the wildland/urban interface. Although recent events occurred in the West, nearly every State has experienced wildland/urban interface fire losses.

The interface has become a major fire problem that will escalate as the nation moves into the 21st century. People continue to move from urban areas to rural areas. These new wildland/urban immigrants give little thought to the wildfire hazard and bring with them their expectations for continuation of urban emergency services. The National Fire Protection Association (NFPA) estimates that since 1985 more than 9,000 homes have been destroyed by wildfire and many people have died. In 1994 it is estimated that 30-50% of all Federal wildland fire suppression dollars were spent in protecting the wildland/urban interface.

Reports such as the National Commission on Wildfire Disasters Report (1993) and Fire In Rural America (1992) document the changing demographics from urban areas to rural areas. There is limited data to quantify the extent of the current or projected growth in the wildland/urban interface; however, it is clear from recent episodes that losses will continue to increase in the future.

The fire protection problems in the wildland/urban interface are very complex, and many barriers must be overcome to address them. These barriers include legal mandates, zoning regulations, building codes, basic fire protection infrastructure, insurance/fire protection rating systems, and offset or local mutual-aid agreements. Political, social and psychological factors further complicate the problems. Obviously, there is no one simple solution.

The autonomy of Federal agencies contributes to inconsistent and sometimes conflicting policies and practices. Federal, Tribal, State, and local agencies, as well as the private sector, are all attempting to tackle the wildland/urban interface protection issue. They have created numerous reports, reviews, and mitigation plans. So far these have only revealed how fragmented and sometimes inconsistent the various

approaches are, and few have had the corporate and political will to carry out solutions.

The ability of the Federal agencies to provide centralized leadership for solving the interface problem is complicated because responsibilities extend beyond the Departments of the Interior and Agriculture. The Federal Emergency Management Agency (FEMA) and U.S. Fire Administration (USFA) are also directly responsible for post-disaster assistance and training, respectively, and the Environmental Protection Agency (EPA) has regulatory responsibility concerning air quality, smoke management and other environmental issues.

But there is no central coordination, and there is no single policy that clearly defines the Federal land manager's role or requires agencies to take consistent actions in the wildland/urban interface. Only the National Park Service and Bureau of Indian Affairs have specific structure protection responsibility, and only for their facilities on their lands. Current Federal agency mission statements and operational policies vary and generally restrict activity within these areas. As a result, Federal land managers and fire personnel are confused about their role and are inadequately trained and equipped, but in practice they are expected to provide assistance.

Confusion and debate over the role of Federal land management agencies in the wildland/urban interface is a barrier to effective fire protection and hampers solution. This was validated by public comments received during the public scoping process for this policy review and is apparent in current policies of the Federal land management agencies. Agency administrators' views on this issue cover the entire spectrum from "the Federal government has no business in the urban interface" to "Federal involvement is essential in the interface." While the debate is rhetorical, this causes confusion and operational inconsistency both before and during suppression efforts.

The current Federal wildland/urban interface policy is unclear and is limited to providing emergency assistance and cooperating in prevention efforts. But the public, homeowners, and elected officials generally have a broader perception of Federal responsibility and would oppose Federal government withdrawal from the wildland/urban interface.

Federal policy that protection priorities are (1) life, (2) property, and (3) resources limits flexibility in decision making when a wildfire occurs. Federal agencies' capability to address their resource-protection responsibilities outside of the interface is weakened by commitment of firefighting resources before and during wildland/urban interface fires. Firefighter safety is threatened as training and equipment capabilities are exceeded. In addition, after-action reports and post-incident debriefings indicate fire suppression resources assigned to wildland/urban interface fires are often "over-mobilized" and underutilized.

The Federal land management agencies consider themselves to be the premier fire suppression organization in the world (Forest Service Strategic Assessment, 1994). This is demonstrated through development of training material and public fire prevention activities related to the wildland/urban interface and results in delivery of a conflicting message about Federal protection responsibilities as compared with the responsibilities of State and local governments. Federal fire forces in the wildland/urban interface often operate beyond the role of wildfire perimeter control. Also, operations in the wildland/urban interface are not always well organized and safe due to inconsistent qualifications, performance standards, and experience among local, State, and Federal agencies and Tribes.

Concerns over home rule and States' rights dictate that the primary responsibility for wildland/urban interface fire prevention and protection must lie with homeowners and State and local governments. This primary responsibility would be carried out in partnership with the Federal government and private sector. However, there are few State and local incentives to address the mounting risks and increasing hazards in the interface. And providing incentives, such as tax credits for mitigating fire hazards, to

those who choose to live in the wildland/urban interface sends a mixed message to the public. This double-edged message is that while we discourage development in the wildland/urban interface we are willing, through mitigation tax credits, to pay homeowners to take care of their problem.

Local incentives to property owners, State and local organizations, and the private sector do appear to be an effective way to reduce the overall exposure of the Federal government in the wildland/urban interface. But the Federal government has few mechanisms to encourage incentives to resolve the problems in these areas. Current Federal grants are effective as far as they go. For example, approximately $10 million is provided annually, primarily through the Forest Service State and Private Forestry Programs to State and local fire organizations to improve basic services, equip engines, and enhance communication systems. However, the amount is too small to address the magnitude of the problem, and Federal funding is not consistently distributed to State and local agencies with operational responsibilities in the wildland/urban interface.

While the Federal agencies have authority to seek reimbursement for fire suppression services in the wildland/urban interface, the probability of successful collection is extremely low because of a myriad of broad tort laws related to responsibility and negligence, existing State fire laws regarding point of fire origin and determination of suppression responsibility, and other legal issues such as what constitutes reasonable action and appropriate hazard mitigation.

In general, the public does not perceive a risk from fire in the wildland/urban interface. Property owners believe that insurance companies or disaster assistance will always be there to cover losses. When people believe the government will protect them from natural hazards, the damage potential of a catastrophic event increases. Fire prevention efforts, official pronouncements, and media depictions of imminent risk have been shown to have little effect on those in danger. The effects of public education efforts have not been significant when compared to the need. Unless a catastrophic event occurs, wildland/urban interface protection issues generate little interest. There is a widespread misconception by elected officials, agency managers, and the public that wildland/urban interface protection is solely a fire-service concern.

Insurance companies may be in a position to provide the largest economic incentive to address issues locally through a change in the existing rating criteria and by supporting prevention or hazard mitigation activities. The follow-up evaluation and report on the 1991 Oakland Hills Fire suggested that a combination of fire protection infrastructure and insurance rating criteria contributed to the disaster.

There is poor communication within and between the insurance industry and fire service organizations. The insurance industry does not fully understand wildland/urban interface problems, and the public and the fire service do not understand the role of the insurance industry in the interface. Insurance Service Offices/Commercial Risk Services (ISO/CRS) rating criteria do not reflect wildland/urban interface hazards or protection needs at specific risk locations. However, there is simply no reason for structural fire departments to change protection standards from small-scale, single-incident fires to large-scale, area-based fires.

The current fire protection infrastructure, such as roads and water-delivery systems, is inadequate to protect property and resources during fast-moving wildfires, but the cost of changing the existing infrastructure would be staggering. State and local fire protection organizations are not adequately funded to provide the level of protection necessary on private lands. Most structure loss occurs in the first few hours of an incident, attributable to a lack of mitigation such as the use of combustible building materials and having trees and grass growing right up to buildings.

Because fire risk constitutes only a portion of the homeowner's insurance cost, premium reductions are not necessarily the answer. Insurance companies can, however, help with education, improvements in building-code rating systems, and revised protection criteria in the wildland/urban interface. Antitrust laws prohibit insurance companies from working together to establish minimum insurance requirements, and in some States, laws such as the Fair Access to Insurance Requirements Plan (FAIR) give homeowners access to insurance coverage generally without regard to the wildland/urban interface.

Current organized data (including hazard mapping) does not reflect wildland/urban interface loss exposure. Without a consistent process that assesses wildland/urban interface hazard and risk, it is difficult to identify appropriate mitigation measures. State and local communities perceive determination of risk as a local issue. Because lost homes/structures are replaced by national insurance companies and Federal Disaster Assistance comes regardless of whether appropriate mitigation measures were taken to offset risk, there is no incentive to improve protection in the wildland/urban interface. What's more, developers, builders, and property owners generally oppose standards because they fear potential building restrictions and higher costs.

Current protection programs and policies do not include all urban and wildland fire protection entities with statutory responsibility, which has led to inefficiencies in training and operations. Wildland suppression resources are often diverted to protect property with less value than adjacent or intermixed natural resources, and the safety of wildland fire personnel is compromised. Performance qualifications in the wildland/urban interface are divided between the structural and wildland certification systems, resulting in inconsistencies.

Partially because of fire prevention campaigns like Smokey Bear, the public generally views all fire as bad. Structural fire prevention activities do not reflect the beneficial role of fire in the ecosystem and send conflicting messages to the public. However, there are excellent examples of successful programs, such as the Sierra Front Cooperative, which demonstrate the value of prevention efforts when combined with property-owner support to mitigate hazards within the wildland/urban interface.

Current Federal wildland/urban interface fire policy does not lay out a clear, consistent, and unified role for the Federal land managing agencies. Consequently, some Federal agencies perceive they bear the heaviest burden in mutual-aid relationships. Some administrators enter into agreements committing Federal firefighters, equipment, and money without understanding the implications of their actions. Still others are confused about the difference between Federal mutual-aid assistance, offset-protection agreements, and Federal Emergency Management Agency (FEMA) financial assistance to States on declared major fire disasters.

The key to solving the total wildland/urban interface problem rests with development of a unified, collaborative partnership among Federal agencies, Tribes, States, local governments, and private industry. This fire protection and prevention issue cannot be solved by any one entity acting independently. This partnership should identify and map hazards and fuels, conduct a national fire insurance feasibility review, and establish mitigation grant mechanisms for local communities. Meanwhile, these long-term issues do not preclude Federal agencies from developing a consistent policy for wildland/urban protection on the lands that they administer.

## GOALS RESPONSIBILITY

- Wildland/urban interface policies are consistent among Federal agencies.

- Federal agencies address wildland/urban interface protection needs occurring on Federal lands through interagency planning and analysis across agency boundaries.

- Uniform Federal wildland/urban interface fire protection policy promotes partnerships with Tribes, State and local agencies, and the private sector.

**ACTIONS**

Federal agencies will:

- adopt a policy that establishes the operational role of Federal agencies in the wildland/urban interface.

- identify and fund fuels management and prescribed fire programs on Federal lands adjacent to wildland/urban interface areas.

- reassess the proper forum for addressing wildland/urban interface issues upon completion of the Stakeholder Input, Consensus, and Action Process. This may include:

    - expanding representation on the current wildland/urban task group that reports to the National Wildfire Coordinating Group (NWCG).

    - revising membership in NWCG itself to include a representative of entities involved with wildland/urban interface issues (e.g., professional organizations such as the International Association of Fire Chiefs, International Association of Fire Fighters, International Society of Fire Service Instructors, National Volunteer Fire Council, Insurance Institute for Property Loss Reduction, et al.).

**GOALS** **PREPAREDNESS**

- Agreements (mutual-aid, reciprocal, offset, etc.) are developed and promoted to provide for pre-fire mitigation activities as well as appropriate suppression operations.

- Structural and wildland fire agency roles in the wildland/urban interface are clarified for both day-to-day mutual aid and large-fire scenarios.

- Federal agencies properly train and equip personnel to ensure firefighter safety during wildland/urban interface operations.

- Cooperative partnerships are established with Tribes and State and local agencies for emergency preparedness and operations in the wildland/urban interface.

**ACTIONS**

Federal agencies will:

- inform agency administrators of mutual-aid and FEMA disaster-assistance programs.

- complete a review of existing protection agreements for wildland/urban interface areas and renegotiate as needed to ensure that Federal responsibility is consistent with policy and that State and local responsibility is apportioned appropriately.

- acknowledge their role in the wildland/urban interface, consistent with policy, and incorporate the appropriate role into agreements, operating plans, land management plans, and agency fire plans.

- charge the National Wildfire Coordinating Group with:

    - developing operational curricula, in cooperation with the National Fire Academy, for protection in the wildland/urban interface;

    - identifying specialized skills and training that are needed by both wildland and structural fire agencies;

    - implementing training through interagency systems and joint training activities; and

    - working with the National Fire Academy to augment and enhance fire training not available at the State and local levels.

- incorporate into the Wildland Fire Qualification System the skills and training requirements necessary to operate safely and efficiently in the wildland/urban interface.

- increase emphasis on cost-share grant funding through the Forest Service State and Private Cooperative Fire Program and strengthen that program's emphasis on wildland/urban interface issues, including training and equipping of State and local agencies. Assess and revise, as needed, other mechanisms to ensure funding is directed to agencies with wildland/urban interface responsibilities. Emphasize funding and grants to the United States Fire Administration for similar purposes.

- support research and development activities through the National Fire Protection Association for effective management of the wildland/urban interface.

## GOAL EDUCATION

Identify and initiate programs to communicate the role of fire in natural systems, with special focus on risk in wildland/urban interface areas.

### ACTIONS

Federal agencies will:

- continue to cooperate with wildland/urban interface property owners through education and awareness messages about the role of fire in natural ecosystems and inherent risks in wildland/urban interface areas.

- develop programs, curricula, and distribution systems, in cooperation with structural protection agencies, for wildland/urban interface educational material.

- promote Federally funded education efforts via a consortium of the United States Fire Administration and the insurance industry.

- work with the United States Fire Administration to update and distribute to the fire service their primer on the insurance industry.

- involve the Congressional Fire Services Institute in distributing information regarding wildland/urban interface issues and actions.

## GOALS STAKEHOLDER INPUT, CONSENSUS, & ACTION PROCESS

- Future policy/program requirements for public fire protection within the wildland/urban interface are identified through a partnership among Federal, Tribal, State, local, and private entities.

- Infrastructure protection is based on characteristics of structural and wildland fuels within the wildland setting.

- Responsibility is focused on individual property owners and State and local governments to reduce losses within the wildland urban interface.

### ACTIONS

Federal agencies will:

- form a partnership with the Western Governors' Association (WGA) to conduct a consensus-building and action process that involves the western governors as a catalyst and other appropriate States, as well as local and private stakeholders, in establishing recommendations and an action plan to achieve a uniform, integrated approach to fire protection in the wildland/urban interface.

- recharter the current interagency wildland/urban interface project among the Department of the Interior, Department of Agriculture, and U.S. Fire Administration to focus on issues surfaced through this policy review.

The objective of the partnership with the WGA is to:

- identify and involve all stakeholders within the wildland/urban interface.

- define appropriate State and local roles.

- clarify and synthesize issues; build consensus.

- develop implementing actions and monitoring processes.

The issues/areas to be addressed by the WGA include but are not limited to:

- the need for coordinated leadership among Federal, Tribal, State, and local entities concerning the wildland/urban interface.

- development of a consistent wildland/urban interface hazard and risk assessment model that, as a minimum, includes common terminology, rating criteria, and a classification system.

- model zoning and building code standards within identified fire hazard areas.

- the need for State, local, insurance-industry, and Federal data to analyze and manage the wildland/urban interface, which includes:

    - all fires in the wildland/urban interface.

    - the National Fire Incident Reporting System (NFIRS) as an information collection point for fire incidents in the wildland/urban interface.

    - establishment of incentives to individuals and local governments to mitigate hazards.

    - recommendations relating to the role and membership of the National Wildfire Coordinating Group. Consider all entities involved with wildland/urban interface issues, including professional organizations such as the International Association of Fire Chiefs, International Association of Fire Fighters, International Society of Fire Service Instructors, National Volunteer Fire Council, Insurance Institute for Property Loss Reduction, et al.

    - involvement with the insurance industry through the Insurance Institute for Property Loss Reduction (IIPLR) and other insurance trade associations to cooperatively address the wildland/urban interface issue. Attention should be given to:

        - recommendations for including hazards and risks associated with the wildland/urban interface into the fire protection grading system of the Insurance Service Office (ISO).

        - recommendations on a strategy to promote an awareness of wildland/urban interface issues, highlighting insurance industry/policyholder/homeowner success stories.

        - proposals to strengthen Southern Standard Building Code, Uniform Building Code, and National Building Code provisions for structures built in the wildland/urban interface.

    - development of model mutual-aid agreements among Federal fire agencies, the International Association of Fire Chiefs, National Association of State Foresters, and local/regional agencies, addressing local and regional mitigation and suppression requirements in the wildland/urban interface.

    - establishment of a monitoring plan that includes yearly reporting requirements for the Federal agencies and States and establishment of pilot areas as a tool to test and model policy and program changes within the wildland/urban interface.

The WGA report will independently develop recommendations and an action plan, based on input and consensus, proposing resolution of problems within the wildland/urban interface.

While the WGA will conduct the assessment in cooperation with the Federal government, WGA will remain an independent contributor to the broader Federal Wildland Fire Policy and Program Review. This will ensure that the various State, local and private interests can fully express their views and not feel compromised through a Federal process.

# APPENDIX ONE: GLOSSARY

**ADAPTIVE MANAGEMENT** - A feedback approach to management that uses monitoring results to plan future actions.

**AGENCY ADMINISTRATOR** - Those positions within an agency which have direct line authority, i.e., District Manager (Bureau of Land Management), Park Superintendent (National Park Service), Agency Superintendent (Bureau of Indian Affairs), Forest Supervisor (USDA Forest Service), Refuge Manager (Fish & Wildlife Service), etc.

**CROWN FIRE** - A fire that advances from top to top of trees or shrubs more or less independent of a surface fire.

**ECOSYSTEM** - An interacting natural system including all the component organisms together with the abiotic environment and processes affecting them. (Hanson, 1962)

**ESCAPED FIRE SITUATION ANALYSIS** - A decision-making process that evaluates alternative suppression strategies against selected environmental, social, political, and economic criteria. Provides a record of decisions.

**EXEMPT / NONEXEMPT** - Categories of employees as defined in the Fair Labor Standards Act of 1938, who are either covered or exempted from coverage under the Act; for example, nonexempt employees are paid for overtime and time spent in training or travel status, etc.

**EXTERIOR FIRE PROTECTION** - The protection of structures from the exterior, with no interior access or activity.

**FIRE BEHAVIOR** - A manner in which fire reacts to the influences of fuel, weather, and topography.

**FIRE EFFECTS** - The physical, biological, and ecological impacts of fire on the environment.

**FIRE MANAGEMENT** - Activities required for the protection of wildland values from fire and the use of prescribed fire to meet land management objectives.

**FIRE MANAGEMENT PLAN** - A specific area plan covering fire policy and objectives.

**FIRE REGIME** - Periodicity and pattern of naturally occurring fires in a particular area or vegetative type, described in terms of frequency, biological severity, and areal extent (Tande 1980).

**FIRE RESOURCES** - All personnel and major items of equipment available or potentially available for assignment to incidents.

**FIRE RISK** - (1) The chance of fire starting as determined by the presence and activity of causative agents. (2) A causative agent. (3) A number related to the potential number of firebrands to which a given area will be exposed during the rating day (National Fire Danger Rating System).

**SEVERITY FUNDING** - Funds provided to increase wildland fire suppression response capability necessitated by abnormal weather patterns, extended drought, or other events causing an abnormal increase in the fire potential and/or danger.

**SMOKE MANAGEMENT** - Application of fire intensities and meteorological processes to minimize degradation of air quality during prescribed fires.

**STRUCTURAL FIRE PROTECTION** - The protection of homes or other structures from wildland fire.

**SUPPRESSION** - All the work of extinguishing or confining a fire.

**SURFACE FIRE** - Fire that burns loose debris of the surface, which includes dead branches, leaves, and low vegetation.

**VALUES AT RISK** - Natural resources, improvements, or other values that may be jeopardized or lost if a fire occurs; estimated damages and benefits that may result from fires in a particular presuppression or suppression situation.

**VERTICAL FUEL ARRANGEMENT** - Fuels above the ground and their vertical continuity, which influences fire reaching various vegetation strata.

**WILDERNESS** - An area established by the Federal government and administered either by the USDA-Forest Service or the National Park Service, Fish and Wildlife Service, or Bureau of Land Management in order to conserve its primeval character and influence for public enjoyment, under primitive conditions, in perpetuity.

**WILDFIRE** - A fire occurring on wildland that is not meeting management objectives and thus requires a suppression response.

**WILDLAND** - An area in which development is essentially non-existent, except for roads, railroads, power lines, and similar transportation facilities. Structures, if any, are widely scattered and are primarily for recreation purposes.

**WILDLAND / URBAN INTERFACE** - The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. (SAF, July 1990.)

**MOST EFFICIENT LEVEL (MEL)** - The fire management program budget level that results in the minimum cost plus net value change.

**MUTUAL-AID AGREEMENTS** - Agreements between local, State, and/or national agencies to reduce duplication and increase effectiveness and efficiencies in wildland fire management.

**NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)** - A nonprofit educational and technical association formed in 1896, headquartered in Quincy, Massachusetts, and devoted to the protection of life and property from fire through development of standards of fire protection and public education.

**NATIONAL WILDFIRE COORDINATIING GROUP (NWCG)** - A group formed under the direction of the Secretaries of Agriculture and the Interior and composed of representatives of the USDA Forest Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs, Fish and Wildlife Service, the Association of State Foresters, and the United States Fire Administration. The group's purpose is to facilitate the coordination and effectiveness of wildland fire activities and provide a forum to discuss, recommend action, or resolve issues and problems of a substantive nature.

**PREPAREDNESS** - (1) Condition or degree of being completely ready to cope with a potential fire situation. (2) Mental readiness to recognize changes in fire danger and act promptly when action is appropriate.

**PREPAREDNESS PLAN** - A written plan providing for timely recognition of approaching critical fire situations, priority setting, the deployment of forces, and other actions to respond to those situations.

**PRESCRIBED FIRE** - An intentionally or naturally ignited fire that burns under specified conditions that allow the fire to be confined to a predetermined area and produce the fire behavior and fire characteristics to attain planned fire treatment and resource management objectives.

**PRESCRIBED NATURAL FIRE** - Naturally ignited fire that burns under specified conditions that allow the fire to be confined to a predetermined area and produce the fire behavior and fire characteristics to attain planned fire treatment and resource management objectives.

**PRESCRIPTION** - A written statement defining the conditions required (i.e., temperature, humidity, wind direction and speed, fuel moisture, and soil moisture) under which a fire will meet the objectives. A prescription is generally expressed in terms of acceptable ranges of the prescription elements and the limit of the geographic area to be covered.

**PRESUPPRESSION** - Activities in advance of fire occurrence to provide efficient and effective suppression response. Includes planning the organization, recruiting and training, procuring equipment and supplies, and maintaining fire equipment and fire control improvements.

**PREVENTION** - All activities concerned with minimizing the incidence of fires.

**PROTECTION** - The actions taken to limit the adverse environmental, social, political, and economical effects of fire.

**FUEL** - Combustible plant material, both living and dead, that is capable of burning in a wildland situation.

**FUEL ARRANGEMENT** - A general term referring to the spatial distribution and orientation of fuel particles within a natural setting.

**FUEL REDUCTION** - Manipulation, including combustion, or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control.

**FUEL TREATMENT** - Manipulation or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control (e.g., lopping, chipping, crushing, piling, and burning).

**FUNCTIONAL AREA** - Pertaining to a single resource, e.g., watershed, wildlife, timber, etc.

**HAZARD** - A fuel complex defined by kind, arrangement, volume, condition, and location that forms a special threat of ignition and resistance to control.

**HAZARDOUS AREAS** - Those wildland areas where the combination of vegetation, topography, weather, and the threat of fire to life and property create difficult and dangerous problems.

**HAZARD PAY** - A salary differential that compensates employees for exposure to hazards in the course of their duties.

**INITIAL ATTACK** - The wildfire control efforts taken by resources that are first to arrive at a wildfire.

**INSURANCE RATING CRITERIA** - Criteria established to evaluate the risk of damage and the resulting claim value.

**JURISDICTION** - Geographical area for which a single agency or administrative unit of an agency has management responsibility or is responsible for providing fire protection.

**LANDSCAPE** - Refers to areas that are generally very large, often cross administrative boundaries, and include vegetative mosaics, multiple ecosystems, and repeating patterns.

**LINE OFFICER** - Agency administrator.

**LITTER** - The top layer of forest floor, composed of loose debris of leaves or needles, dead sticks, branches, and twigs, altered little in structure by decomposition.

**MOBILIZATION GUIDE** - A written description of procedures used by Federal, State, and local organizations for activating, assembling, and transporting resources that have been requested to respond to or support an incident.

**MONITORING** - Periodic or continuous surveillance or testing to determine the level of compliance with statutory requirements and/or pollutant levels in various media or in humans, animals, and other living things.

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# APPENDIX THREE: FEDERAL WILDLAND FIRE MANAGEMENT POLICY AND PROGRAM REVIEW STEERING GROUP

*Dr. Charles Philpot, Co–Chair* ..... USDA / U. S. Forest Service

*Claudia Schechter, Co–Chair* ..... DOI / Office of the Secretary

*Dale Bosworth* ..... USDA / U. S. Forest Service

*Dr. Mary Jo Lavin* ..... USDA / U. S. Forest Service

*Mike Edrington* ..... USDA / U. S. Forest Service

*Dr. Ann Bartuska* ..... USDA / U. S. Forest Service

*Les Rosenkrance* ..... DOI / Bureau of Land Management

*Rick Gale* ..... DOI / National Park Service

*Dr. Robert Streeter* ..... DOI / U. S. Fish & Wildlife Service

*Keith Beartusk* ..... DOI / Bureau of Indian Affairs

*Stan Coloff* ..... DOI / National Biological Service

*Jim Douglas* ..... DOI / Office of the Secretary

*Carrye B. Brown* ..... U. S. Fire Administration

*James Travers* ..... NOAA / National Weather Service

*Richard Krimm* ..... Federal Emergency Management Administration

*Sally Shaver* ..... U. S. Environmental Protection Agency