

History of the U.S. Department of Agriculture 1993-2000

Archival Documents

Chapter 2. Conservation

Forest Service

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Glickman, Dan and Bruce Babbitt. 2000. Managing the Impact of Wildfire on Communities and the Environment: A Report to the President in Response to the Wildfires of 2000. September 8, 2000.

Lyons, James R. Mike Dombeck. March 1, 2000. Letter to U.S. Forest Service National Leadership Team.

Lyons, James R. Mike Dombeck. March 1, 2000. Memorandum to National Leadership Team, Forest Planning Rule Advisory Team, and Forest Planning Rule Writing Team. Subject: Final Guidance for Forest Planning Rules.

Notes from Chief Jack Ward Thomas regarding his appointment as Chief and his retirement. They also discuss his priorities as chief.

Notes and articles about Chief Dale Robertson and his resignation.



United States
Department of
Agriculture

<http://www.usda.gov>

United States
Department of
the Interior



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September 8, 2000

Dear Mr. President:

Enclosed is the report that we have prepared at your request: "Managing the Impact of Wildfires on Communities and the Environment." The report sets forth a series of recommendations that the Department of Agriculture and the Department of the Interior propose for your adoption. We believe that implementation of these recommendations will reconfirm our strong commitment to our nation's forests and communities.

Sincerely,

Dan Glickman
Secretary
Department of Agriculture

Bruce Babbitt
Secretary
Department of the Interior

Managing the Impact of Wildfires on Communities and the Environment

*A Report to the President
In Response to the Wildfires
of 2000*

*Submitted September 8, 2000, by
Secretary Dan Glickman,
U.S. Department of Agriculture*

*Secretary Bruce Babbitt,
U.S. Department of the Interior*



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Managing the Impact of Wildfires on Communities and the Environment

*A Report to the President
In Response to the Wildfires of 2000
September 8, 2000*

I. Executive Summary

On August 8, 2000, President Clinton asked Secretaries Babbitt and Glickman to prepare a report that recommends how best to respond to this year's severe fires, reduce the impacts of these wildland fires on rural communities, and ensure sufficient firefighting resources in the future.

The President also asked for short-term actions that Federal agencies, in cooperation with States, local communities and Tribes, can take to reduce immediate hazards to communities in the wildland-urban interface and to ensure that land managers and firefighter personnel are prepared for extreme fire conditions in the future.

This report recommends a Fiscal Year (FY) 2001 budget for the wildland fire programs of the Departments of Agriculture and the Interior of \$2.8 billion. Included within this total is an increase of nearly \$1.6 billion above the President's FY 2001 budget request in support of the report's recommendations. This includes additional funding of about \$340 million for fire preparedness resources, new funding of \$88 million to increase cooperative programs in support of local communities, and approximately \$390 million for fuels treatment and burned area restoration. The increase also includes about \$770 million to replenish and enhance the Departments' fire suppression accounts, which have been depleted by this year's extraordinary costs, and to repay FY 2000 emergency transfers from other appropriations accounts.

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A summary of the key points discussed in the body of the report:

1. Continue to Make All Necessary Firefighting Resources Available. The wildfires of the summer of 2000 continue to burn. As conditions change, new fires will start as others are controlled or die out. As a first priority, the Departments will continue to provide all necessary resources to ensure that firefighting efforts protect life and property. The Nation's wildland firefighting organization is the finest in the world and deserves our strong support.

2. Restore Landscapes and Rebuild Communities. The Departments will invest in restoration of communities and landscapes impacted by the 2000 fires. Some communities already have suffered considerable economic losses as a result of the fires. These losses will likely grow unless immediate, emergency action is taken to reduce further resource damage to soils, watersheds, and burned over landscapes. Key actions include:

- Rebuilding communities and assessing economic needs.** Assess the economic needs of communities and, consistent with current authorities, commit the financial resources necessary to assist individuals and communities in rebuilding their homes, businesses, and neighborhoods. Existing loan and grant programs administered by the Federal Emergency Management Agency (FEMA), the Small Business Administration (SBA), and USDA's Forest Service and rural development programs should provide this assistance.
- Restoring damaged landscapes.** Invest in landscape restoration efforts such as tree planting, watershed restoration, and soil stabilization and revegetation. In so doing, priority should focus on efforts to protect:
 - Public health and safety (e.g. municipal watersheds);
 - Unique natural and cultural resources (e.g. salmon and bulltrout habitat) and burned-over lands that are susceptible to the introduction of non-native invasive species; and
 - Other environmentally sensitive areas where economic hardship may result from a lack of re-investment in restoring damaged landscapes (e.g. water quality impacts on recreation and tourism).

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3. Invest in Projects to Reduce Fire Risk. Addressing the brush, small trees, and downed material that have accumulated in many forests because of past management activities, especially a century of suppressing wildland fires, will require significant investments to treat landscapes through thinning and prescribed fire. Since 1994, the Forest Service and the Bureau of Land Management have increased the number of acres treated to reduce fuel build-up from fewer than 500,000 acres in 1994 to more than 2.4 million acres this year. Building on the forest policies of the past eight years, the wildland fire policy, and the concepts of ecosystem management, the Departments should establish a collaborative effort to expedite and expand landscape-level fuel treatments. Important dimensions of this effort include:

- **Developing a locally led, coordinated effort between the Departments of Agriculture, the Interior, and Commerce, and other appropriate agencies through the establishment of integrated fuels treatment teams at the regional and field levels.** The role of each team would be to identify and prioritize projects targeted at communities most at risk, coordinate environmental reviews and consultations, facilitate and encourage public participation, and monitor and evaluate project implementation. Each team will work closely with local communities to identify the best fit for each community.
- **Utilizing small diameter material and other biomass.** Develop and expand markets for traditionally underutilized small diameter wood and other biomass as a value added outlet for excessive fuels that have been removed.
- **Allocating necessary project funds.** Commit resources to support planning, assessments, and project reviews to ensure that hazardous fuels management is accomplished expeditiously and in an environmentally sound manner.

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4. Work Directly with Communities. Working with local communities is a critical element in restoring damaged landscapes and reducing fire hazards near homes and communities. To accomplish this, the Departments recommend:

- ❑ **Expanding community participation.** Expand the participation of local communities in efforts to reduce fire hazards and the use of local labor for fuels treatment and restoration work.
- ❑ **Increasing local capacity.** Improve local fire protection capabilities through financial and technical assistance to State, local, and volunteer firefighting efforts.
- ❑ **Learning from the public.** Encourage grass roots ideas and solutions best suited to local communities for reducing wildfire risk. Expand outreach and education to homeowners and communities about fire prevention through use of programs such as Firewise.

5. Be Accountable. Establish a Cabinet-level coordinating team to ensure that the actions recommended by the Departments receive the highest priority. The Secretaries of Agriculture and the Interior should co-chair this team. Integrated management teams in the region should take primary responsibility for implementing the fuels treatment, restoration, and preparedness program. The Secretaries should assess the progress made in implementing these action items and provide periodic reports to the President.

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II. Background

The 2000 fire season is undoubtedly one of the most challenging on record. Wildfires are on pace to break decades-old records. As of early September, more than 6.5 million acres -- more than two times the ten-year national average -- have burned. The intensity of this year's fires is the result of two primary factors: a severe drought, accompanied by a series of storms that produced millions of lightning strikes and windy conditions; and the long-term effects of more than a century of aggressively suppressing all wildfires, which has led to an unnatural buildup of brush and small trees in our forests and rangelands.

This season has stretched the capabilities of the wildland firefighting system -- stretched, but not broken. Such a season tests our firefighters' training and the fire management infrastructure, and we have found that both are sound. This is a credit to the Nation's firefighters, support personnel, military and international partners, managers, and local communities who provide crucial help and resources.

More than 29,000 people have been involved in firefighting efforts, including about 2,500 Army soldiers and Marines and fire managers from Canada, Australia, Mexico and New Zealand. Our partners, both military and international, are assisting under pre-existing agreements with the National Interagency Fire Center in Boise, Idaho. In addition, 1,200 fire engines, 240 helicopters, and 50 airtankers are in use this season.

As challenging as this fire season has been, our firefighters have been successful in extinguishing more than 95 percent of wildfires before they become large fires (i.e., 100 acres or more). In all, they have extinguished more than 75,000 wildfire starts this season.

Weather

The weather phenomenon known as La Nina, characterized by unusually cold Pacific Ocean temperatures, changed normal weather patterns when it formed two years ago. It caused severe, long-lasting drought across much of the country, drying out our forests and rangelands. The situation was exacerbated by the fact that the drought followed several seasons of higher-than-normal rain, which fueled the growth of grasses and other plants that quickly dried when the rains stopped. This left millions of acres susceptible to fires. To make matters worse, this weather pattern also spawned a series of mostly dry thunderstorms with heavy lightning across the West. Because of the drought conditions, lightning strikes have ignited more new fires than would normally be associated with such storms.

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The current season corresponds to a historical pattern of extensive wildfires during similar unusual weather conditions. The result has been an extended, severe fire season, with wildfires burning simultaneously across the western United States.

Historic wildfires

This year's fires also reflect a longer-term disruption in the natural fire cycle that has increased the risk of catastrophic fires in our forests and rangelands.

Natural fire patterns were first disrupted on a large scale with settlement activity during the second half of the 19th century when millions of acres of forests and wildlands were cleared to make way for farm crops and livestock pastures. During this time, timber companies, responding to a growing country's need for lumber and fuel, often took the biggest trees, leaving behind slash, undergrowth and smaller trees. These activities set the stage for disastrous fires.¹

One of the most significant examples of this phenomenon occurred in 1871 in Peshtigo, Wisconsin, near the Great Lakes. The area around Peshtigo, mostly private land, had been extensively logged. Merchantable timber was removed; slash and dense undergrowth were left behind. On October 8, 1871, a brush fire quickly erupted into an inferno, consuming Peshtigo in an hour and damaging 16 other towns and more than 1.2 million acres. The human toll -- more than 1,200 people killed -- stands as the worst wildfire disaster in U.S. history.²

The Peshtigo tragedy served as a deadly warning about what can happen when forest health is badly compromised -- in this case, by logging activities. In fact, Peshtigo represented the beginning of new fire cycle throughout the Great Lakes region that would not be broken for more than 50 years.

In the West, a similar pattern erupted in August 1910 with the "Big Blowup" -- the Great Idaho fire. As in the 2000 fire season, a severe drought plagued the region when dry storms, accompanied by hurricane-force wind, produced thousands of lightning strikes and ignited hundreds of small fires. These fires converged to create a monster fire that was virtually unstoppable given the limited firefighting capability of the times. It consumed 3 million acres in northern Idaho and western Montana, killed 85 people, and destroyed the property and livelihoods of many others.

¹ Stephen J. Pyne, *Fire in America: Cultural History of Wildland and Rural Fire*, Princeton University Press, 1982.

² Green Bay Press-Gazette, from Peshtigo, Wisconsin Web Page

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Speaking about the Big Blowup, Stephen Pyne, a professor at Arizona State University and a leading authority on the history of fire, said, "August of 1910 was the single most important moment in American fire history" because it radically changed the way the country viewed wildfires.³

The ferocity of the Big Blowup, which came on the heels of other devastating fires on both private and government land, triggered a call for a systemic policy change. Less than a year later, the national Forest Service firefighting program was born. A war on all wildfires was declared. From that point on, all wildfires were extinguished as soon as possible.

Results of suppression policy

As a result of the all-out effort to suppress fires, the annual acreage consumed by wildfires in the lower 48 states dropped from 40 to 50 million acres a year in the early 1930s to about 5 million acres in the 1970s. During this time, firefighting budgets rose dramatically and firefighting tactics and equipment became increasingly more sophisticated and effective.

While the policy of aggressive fire suppression appeared to be successful, it set the stage for the intense fires that we see today. Full suppression of all wildfires initially gave our forests and wildlands a chance to heal, creating a false sense of security. However, after many years of suppressing fires, thus disrupting normal ecological cycles, changes in the structure and make-up of forests began to occur. Species of trees that ordinarily would have been eliminated from forests by periodic, low-intensity fires began to become a dominant part of the forest canopy. Over time, these trees became susceptible to insects and disease. Standing dead and dying trees in conjunction with other brush and downed material began to fill the forest floor. The resulting accumulation of these materials, when dried by extended periods of drought, created the fuels that promote the type of wildfires that we have seen this year.

The problems of unnaturally heavy undergrowth have been exacerbated by the introduction in the 1800s of non-native invasive weeds and grasses. These plants corrupt a region's ecological processes, robbing the soil and native plants of vital nutrients and water. Invasive species such as cheatgrass, which is pervasive on today's Western landscape, is one of the first plants to establish after a fire. It grows earlier, quicker, and higher than native grasses. Then it dies, dries, and becomes fuel.⁴

³ Stephen J. Pyne, *Fire in America: Cultural History of Wildland and Rural Fire*, Princeton University Press, 1982.

⁴ David A. Pyke, *Invasive Exotic Plants In Sagebrush Ecosystems of The Intermountain West*. Proceedings: Sagebrush Steppe Ecosystems. Boise State University, Boise, Idaho.

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In short, decades of aggressive fire suppression have drastically changed the look and fire behavior of Western forests and rangelands. Forests a century ago were less dense and had larger, more fire-resistant trees. For example, in northern Arizona, some lower elevation stands of ponderosa pine that once held 50 trees per acre, now contain 200 or more trees per acre. In addition, the composition of our forests have changed from more fire-resistant tree species to non-fire resistant species such as grand fir, Douglas-fir, and subalpine fir. As a result, studies show that today's wildfires typically burn hotter, faster, and higher than those of the past.⁵

The Changing West

In addition to the unnatural fuel buildup developing in our forests and rangelands, wildland firefighting has become more complex in the last two decades due to dramatic increases in the West's population.

Of the 10 fastest-growing states in the U.S., eight are in the interior West. While the national average annual population growth is about one percent, the West has growth rates ranging from 2.5 to 13 percent.⁶

As a result, new development is occurring in fire-prone areas, often adjacent to Federal land, creating a "wildland-urban interface" -- an area where structures and other human development meet or intermingle with undeveloped wildland. This relatively new phenomenon means that more communities and structures are threatened by fire. Wildland firefighters today often spend a great deal more time and effort protecting structures than in earlier years. Consequently, firefighting has become more complicated, expensive, and dangerous.

Current Fire Management Policy

This Administration has sought to increase efforts to reduce risks associated with the buildup of fuels in forests and rangelands through a variety of approaches, including controlled burns, the physical removal of undergrowth and other unnatural concentrations of fuel, and the prevention and eradication of invasive plants. Implicit in the Administration's policy is the understanding that reversing the effects of a century of aggressive fire suppression will be an evolutionary process, and not one that can be completed in a few short years.

⁵ J.P. Sloan 1998. *Interruption of the Natural Fire Cycle in a Grand Fir Forest of Central Idaho: Changes in Stand Structure and Composition*. Tall Timbers Fire Ecology Proceedings, No. 20. Tall Timbers Research Station, Tallahassee, Fl.

⁶ William E. Riebsame, Ed. *Atlas of the New West*, p. 96, W.W. Norton & Co., 1997.

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As the composition and structure of our Nation's forests have changed over time, conditions that increase the likelihood of catastrophic fire have grown. Periodic, severe wildfires have occurred when weather conditions have produced drought, dry lightning, and high winds. This was illustrated in 1988, the year of the Yellowstone fires, and in 1994, when fires claimed the lives of 34 firefighters, including 14 of our country's most elite firefighters in one inferno on Storm King Mountain in Colorado. This pattern has repeated itself in the year 2000.

After evaluating the 1988 and 1994 fires, foresters, fire ecologists, biologists, and others cautioned that the century-old policy of excluding all fires from the forests rangelands had brought about ecological changes that were increasing the likelihood of catastrophic wildfire. This was confirmed by the 1999 General Accounting Office Report, *Federal Wildfire Activities*, which noted "[F]ederal acreage is susceptible to catastrophic wildfires, particularly where the natural vegetation has been altered by past uses of the land and a century of fire suppression."⁷

Given the experiences of the 1988 and 1994 fire seasons and the recommendations of scientific experts, the Clinton/Gore Administration initiated the first-ever, comprehensive interagency review of wildland fire policy. Based on this review, which was summarized in the 1995 Federal Wildland Fire Policy Statement, the Departments of Agriculture and the Interior predicted serious and potentially permanent environmental destruction and loss of private and public resource values from large wildfires. The policy statement recognized the important function that fire plays in many ecosystems and identified the critical role fire can play in the management of forests and watersheds. The policy noted that, "[C]onditions on millions of acres of wildlands increase the probability of large, intense fires beyond any scale yet 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."⁸

As three of the country's leading wildland fire ecologists recently said, "Fires will inevitably occur when we have ignitions in hot, dry, windy conditions. . . . It is one of the great paradoxes of fire suppression that the more effective we are at fire suppression, the more fuels accumulate and the more intense the next fire will be."⁹

⁷ General Accounting Office Report, *Federal Wildfire Activities*, Aug. 1999, p. 3

⁸ U.S. Department of Agriculture and U.S. Department of the Interior, *Federal Wildland Fire Management Policy & Program Review*, 1995 (Wildland Fire Policy)

⁹ Dr. Leon Nuenschwander, et al, Testimony before the Subcommittee on Forests and Forest Health, August 2000.

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After the policy was put in place, the Departments dramatically increased the number of acres treated to reduce fire risks. In 1995, Federal agencies treated fewer than 500,000 acres. This year, the Departments will remove brush, small trees, and downed material from more than 2.4 million acres using small, intentionally set, "prescribed" fires and mechanical thinning techniques.

Across the country, the Departments have been working to assess the important roles that fire plays in different ecosystems and to integrate this knowledge into management practices. They also began the Joint Fire Science Project to provide a scientific basis for helping the Departments prioritize their fire prevention activities on the ground. In 1999, this project developed maps, with state-level resolution, that identify forests most at risk from large, catastrophic fires. Work continues to improve the resolution of the maps so that they can be used to help assist with strategic planning, prioritizing resources and identifying specific projects on the ground.

The Departments have been moving quickly to incorporate this new information in their budget requests and other policy documents, but the severity of this year's fire season has added extra impetus to move these recommendations forward.

III. Key Elements Of The Administration's Wildland Fire Management Policy

The new wildland fire policy that the Administration has developed in recent years acknowledges the dangers posed by the long-term building of excessive fuel levels in our forests and rangelands. It seeks to reduce those risks through a variety of approaches, including controlled burns, the physical removal of undergrowth and other unnatural concentration of fuel, and attacks on invasive plants. Implicit in the Administration's policy is the understanding that reversing the effects a century of aggressive fire suppression has had on our nation's public lands will be an evolutionary process, not one that can be completed in a few short years.

The key elements of the Administration's wildland fire management policy are set forth below. They include: (1) integrated firefighting management and preparedness; (2) reducing hazardous fuel accumulations; and (3) local community coordination and outreach.

Notably, the Administration's wildland fire policy does not rely on commercial logging or new road building to reduce fire risks and can be implemented under its current forest and land management policies. The removal of large, merchantable trees from forests does not reduce fire risk and may, in fact, increase such risk. Fire ecologists note that large trees are "insurance for the future – they are critical to ecosystem resilience."¹⁰ Targeting smaller trees and leaving both large trees and snags standing addresses the core of the fuels problem.¹¹

The Congressional Research Service (CRS) recently addressed the effect of logging on wildfires in an August 2000 report and found that the current wave of forest fires is not related to a decline in timber harvest on Federal lands. From a quantitative perspective, the CRS study indicates a very weak relationship between acres logged and the extent and severity of forest fires. To the contrary, in the most recent period (1980 through 1999) the data indicate that fewer acres burned in areas where logging activity was limited.

Since 1945, the fluctuation pattern of acres burned in the 11 Western States has shown a steady rise with some of the worst fire seasons in the late 1980's, when timber harvest peaked at 12 billion board feet. In fact, the 10-year average annual number of acres

¹⁰ Ibid.

¹¹ Ibid.

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burned nationwide in the 1980's when logging activity was heaviest was higher (4.2 million acres) than in both the 1970's (3.2 million acres) and the 1990's (3.6 million acres).

Qualitative analysis by CRS supports the same conclusion. The CRS stated: "[T]imber harvesting removes the relatively large diameter wood that can be converted into wood products, but leaves behind the small material, especially twigs and needles. The concentration of these fine fuels on the forest floor increases the rate of spread of wildfires."¹²

Similarly, the National Research Council found that logging and clearcutting can cause rapid regeneration of shrubs and trees that can create highly flammable fuel conditions within a few years of cutting. Without adequate treatment of small woody material, logging may exacerbate fire risk rather than lower it.¹³

The President has proposed to protect more than 43 million acres of remaining National Forest roadless areas. These areas have tremendous ecological value and serve as important watersheds, areas for recreation, and important habitat for fish and wildlife.

Some critics have expressed concern that the Administration's proposed roadless area policy could increase wildfire risks. The facts do not support this conclusion. To the contrary, all available evidence suggests that fire starts may be fewer in unroaded than in previously roaded forests. Fires are almost twice as likely to occur in roaded areas as they are in roadless areas.

The proposed roadless area protection policy would not affect the Federal agencies' ability to control wildland fires. The agencies' success rate in extinguishing wildfires on initial attack is the same in roadless, wilderness, and roaded areas. Approximately 98 per cent of all fires are extinguished before they grow large and out of control. In addition, the proposed roadless policy would allow road construction if a wildland fire threatened public health and safety.

The Forest Service has identified 89 million acres of National Forest System land that have a moderate to high risk of catastrophic fire. Of these acres, less than 16 per cent are in inventoried roadless areas. Moreover, the Forest Service would prioritize efforts to reduce fuels in areas that have already been roaded because these areas tend to be much closer to communities and have higher fire risks. Indeed, given current funding levels

¹² Congressional Research Service, Memorandum to Senator Ron Wyden, "Timber Harvesting and Forest Fires," August 22, 2000.

¹³ Ibid.

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and the scope of the fuels issue; the Forest Service would do fuels reduction work for 15 years in roaded areas.

A. Firefighting Management and Preparedness

The Administration's review of wildland fire policy validated the importance of maintaining an integrated firefighting management structure that can deliver first-class firefighting resources to the front lines of wildfires.

The Departments operate under a model interagency framework that has been developed over two decades. Program management and coordination takes place through a national-level group, the National Wildfire Coordination Group, which includes representatives from the States. It determines training, equipment, and other standards to ensure that all Federal, State, and local agencies can easily operate together.

The fire program operates under a command structure called Incident Command System to respond to and manage wildfires on an intergovernmental basis. The system includes local fire operations that are supported by a national network of coordination centers and supply bases. The National Interagency Fire Center in Boise, Idaho, oversees national wildfire operations.

The Administration has provided full support to the interagency firefighting effort (see attachment A) and has implemented a series of budget and management improvements.

Based on lessons of recent fire seasons, especially 1999 and 2000, the Departments have reassessed the assumptions and variables used in planning models to determine the resources needed to fight fires. They recommend funding 100 percent of this revised estimate of full preparedness.

In addition, the Departments have devoted special attention to firefighting training and coordination. As part of this emphasis, the Departments have added training courses, modified current classes, and, in some cases, raised the qualifications for certain positions. In 1999, the Departments issued a revised qualifications system for firefighting and prescribed fire positions in order to ensure that the U.S. continues to field the finest firefighting and prescribed fire force in the world.

B. Reducing Hazardous Fuel Accumulations

Implicit in the Administration's efforts to reduce wildfire risk through the elimination of brush, small diameter trees, and other fuels and the reintroduction of fire to forest and rangeland ecosystems is the understanding that reversing the effects a century of

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aggressive fire suppression will be an evolutionary process, not one that can be completed in a few short years.

The Administration's forest policies have emphasized the importance of reducing hazardous fuel accumulations in our forests and rangelands and restoring the health and natural processes of forest and rangeland ecosystems. Reduction of fuels can be achieved in a variety of ways -- by mechanical, chemical, biological and manual methods. The prudent use of fire, either alone or in combination with other means, can be one of the most effective means of reducing such hazardous fuel. In addition, early research has demonstrated that the selective removal of undergrowth and non-native plant species, can significantly reduce fire risks. The Administration is testing the effectiveness of these strategies' pilot projects.

By way of example, in a report published in *Proceedings from the Joint Fire Science Conference and Workshop, 1991*,¹⁴ researchers studied four large wildfires in Montana, Washington, California, and Arizona to determine if previous fuel treatment and thinning activities had any impact on fire severity. The sites selected for study underwent treatment within ten years prior to being burned in wildland fires. The findings indicated that fuel treatments mitigate fire severity. "Although topography and weather may play a more important role in fuels in governing fire behavior, topography and weather cannot be realistically manipulated to reduce fire severity. Fuels are the leg of the fire environment triangle that land managers can change to achieve desired post-fire condition."

The General Accounting Office (GAO Report GAO/RCED-99-65) also has emphasized the need for fuels management, concluding that "the most extensive and serious problem related to the health of forests in the interior West is the over-accumulation of vegetation, which has caused an increasing number of large, intense, uncontrollable, and catastrophically destructive wildfires."

The Departments have moved forward with an aggressive program to thin forest stands to reduce small diameter trees, underbrush and accumulated fuels

Between 1994 and this year, the Departments increased their efforts to reduce fire risks through prescribed fire and thinning by close to 500 percent (see attachment B). In 1999, the Departments treated 2.2 million acres. At the same time, the Departments have increased the use of prescribed fires to begin steering our forests and rangelands back toward more healthy conditions.

¹⁴ J. Polet and P. Omi, *The Effects of Thinning and Prescribed Burning on Wildland Fire Severity in Ponderosa Pini Forests*, 1999.

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Presently, both Departments are developing strategies to address aggressive fuel management. These call for a targeted approach to removing excessive fuel through mechanical treatments and prescribed fire in order to protect communities at risk, help prevent insect and disease damage, and generally improve overall ecosystem health and sustainability. Obviously, large-scale improvements will take several years to occur against the backdrop of a century-long suppression policy. Nonetheless, this year's fire season is providing some evidence that the controlled reintroduction of fire is beginning to bear fruit.

An example involves a wildfire in South Dakota's Black Hills. The Jasper fire, more than 82,000 acres, is the largest fire in the history of the Black Hills. It has displayed the most severe fire behavior in the history of the area, burning 50,000 acres in only a few hours. During the course of a fierce crown -- fire run -- where flames roar through the forest through the tops of the trees -- the fire burned into a section of the Jewel Cave National Park where a prescribed fire had been conducted near the Park's visitor center and housing area. When it hit the prescribed burn area, the fire changed from a crown-fire to a ground-based fire where it could be effectively fought. Fire crews were able to remain in the area only because of the defensible space and barriers created. As a result, none of the Park's major structures burned.

As dramatic as this example is, an equally dramatic example illustrates the risks that are inherent in prescribed fires if they are not implemented in a careful and well-managed manner.

Specifically, the Cerro Grande fire near New Mexico's Los Alamos National Laboratory, which began as a prescribed fire in Bandelier National Park in New Mexico in May, is a terrible reminder of the costs if prescribed fires are not well-planned and executed. Nearly 300 homes were damaged or destroyed, 18,000 people were evacuated, and 48,000 acres were burned. The Administration fully supported a compensation program enacted by Congress for the victims of the fire. The Administration is also fully committed to implementing changes in prescribed fire policy and procedures as a result of investigations and reviews of the Cerro Grande fire.

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C. Local Community Coordination and Outreach

The Administration's wildland fire policy recognizes that effective fire management requires close coordination with local communities, particularly those communities that are in the wildland-urban interface. As the management of private lands has become a key factor in the fire-risk equation, the Departments have recognized the importance of providing outreach, education, and support for local communities who must play a primary role in reducing fire hazards in and near their communities.

As discussed above, the changing demographics are expanding the wildland-urban interface and creating new challenges for fighting wildland fires. Increasingly, many homes on private land in and around new communities are at risk. Indeed, the National Fire Protection Association (NFPA) estimates that wildfires destroyed more than 9,000 homes between 1985 and 1995. Officials further believe that the number of homes damaged by wildfires in the 1990s is six times that of the previous decade. More than 1,000 homes have been destroyed during this summer alone.

Safe and effective protection in these areas demands close coordination between local, State, Federal and Tribal firefighting resources. Typically, the primary burden for wildland-urban interface fire protection falls to property owners and State and local governments. Rural and volunteer fire departments provide the front line of defense, or initial attack, on up to 90 percent of these high-risk and costly fires. While they have a good record in rapidly suppressing traditional wildland fires, these local resources often struggle to effectively address the complex demands of fighting fire in the wildland-urban interface.

The Departments also have taken steps to assist communities in developing their own firefighting capabilities. The Forest Service's State and Volunteer Fire Assistance Programs, for example, provide technical and financial assistance to local firefighting resources to help promote effective and coordinated integrated fire management response. Through the Volunteer Fire Assistance Program, the Forest Service has been successful in providing firefighting equipment to rural fire departments and in training their firefighters to meet Federal interagency standards.

The Departments have made available the training facilities at the National Interagency Training Center in Boise, Idaho, to community-based firefighters. By way of example, the BLM Boise District in Idaho has trained more than 1,500 firefighters from 57 different fire departments from both urban (e.g. Boise) and rural areas within the last five years. Training opportunities recently have been extended to ranchers who are interested in fire proofing their properties and understanding basic fire suppression tactics. The Boise District also has formalized an agreement with Ada County, Idaho, to train and

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integrate county employees into certain firefighting operations and promote an effective and coordinated integrated fire management response.

The problem of fires in the wildland-urban interface is multifaceted and will not be solved overnight. Nevertheless, there are a number of short-term actions that the Federal government, in cooperation with State, tribal and local governments, can take to reduce the future risk to communities and resources.

A top priority for reducing risk is to reduce fuels in forests and rangelands adjacent to, and within communities. Particular emphasis should be placed on projects where fuel treatment can also be accomplished on adjoining State, private, or other nonfederal land so as to extend greater protection across the landscape. This provides protection from catastrophic fires that develop on public lands. This can be accomplished by making available adequate incentives and technical assistance to communities and private landowners to encourage the reduction of hazardous fuels around homeowner properties. These individual actions will not only provide greater personal protection but will also increase the safety and effectiveness of firefighting personnel. When done on a large scale, fuel reduction around individual homes can result in greater overall protection for an entire landscape or watershed.

The Departments have been implementing a number of programs to educate communities and homeowners in recently burned areas and high-risk urban-wildland interface areas about fire hazards. The Forest Service's Firewise program, for example, is a very successful program designed to educate rural homeowners about precautions they can take to make their homes more fire resistant and more easily defensible by local fire departments. Firewise specifically helps communities and homeowners recognize fire hazards, design Firewise homes and landscapes, and make wise planning, zoning, and building material choices. These efforts play an important role in reducing the loss of lives and property -- as well as tremendous government expense -- in the wildland-urban interface.

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III. Consequences of the 2000 Wildfire Season

Economic Impacts

Although the data needed for a thorough assessment of economic impacts on areas affected by this year's wildfires are not yet available, preliminary reports indicate that the losses from the 2000 wildfires will be substantial and widespread. Montana Governor Racicot estimated that businesses were losing about \$3 million a day because of fire. Idaho Governor Kempthorne estimated losses in Idaho at \$54.1 million overall, of which \$15 million comes from about 500 small businesses. He estimated another \$12.5 million in agricultural losses and \$12 million in watershed restoration costs.

Economic impacts arise both directly from fire damage and indirectly from changes in local economic activity, such as a drop in tourism. Both direct and indirect effects of the wildfires have exacted a heavy economic toll on many local, often rural communities.

In Hamilton, Montana, the loss of more than 300,000 acres to fire prompted officials to close much of the public land essential to Montana's tourism economy. As a result, the Chamber of Commerce reports that seven chamber members alone had reported losses totaling \$500,000. A local fishing guide who relies on tourists told reporters that he had lost 76 percent of his normal business in one month alone.¹⁵

In Idaho, two ranchers lost more than 700 cattle during a 20,000-acre fire near Dietrich, with a value of at least half a million dollars. Insurance will cover about 25 percent for one of the ranchers. The other rancher had no insurance on his herds.¹⁶

President Clinton responded to requests from the Governors of Idaho and Montana and declared the two states as disaster areas, making them eligible for Federal relief. One-stop centers are being established so that citizens can obtain service and financial assistance from all relevant agencies.

Damage to Natural Resources

In addition to these types of direct, out-of-pocket impacts on citizens, it is likely that losses in resource values will total billions of dollars.

¹⁵ CNN News, September 3, 2000

¹⁶ *Idaho Statesman*, August 24, 2000

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The consequences of this year's wildfires on our country's natural resources are as vast as they are varied. The wildland fires of 2000 have burned both public and private lands over a broad spectrum of semi-arid rangeland and forested ecosystems, often encompassing entire watersheds critical to community water supplies. Compared to historic fire events, recent fires have burned with such intensity that the ecosystems of many of these extensively burned areas have been drastically changed. Without intervention, these burned lands will recover slowly and be susceptible to undesirable changes in vegetation composition. For example, plant species such as cheatgrass often become established in burned areas, creating additional fire risks and disrupting natural systems.

The immediate problems associated with the severity of fire will extend well into winter. With a lack of vegetation on hillsides, for example, the likelihood that rain and snowfall will create flooding and mudslides increases. In turn, the water quality of streams and rivers is damaged, which can kill native fish. Many wildlife populations also have been killed or disrupted.

Non-native invasive plant species -- weeds -- thrive on both public and private lands in the wake of wildland fires, presenting several problems. These opportunistic plants compete with and can overtake native plant communities. In addition, their proliferation provides powerful fuel for wildfires, increasing the likelihood of and severity of future wildfires. Cheatgrass, in particular, has spread throughout the West on degraded rangelands, increasing in density on burned areas. In the Great Basin ecosystem alone, one out of every three acres is either dominated or threatened by cheatgrass.

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Harvesting Burned Trees

The appropriate harvest of fire-damaged timber can provide a means of recovering some of the economic value of forest stands and improving landscape health, but it is not a panacea for reducing wildfire risk. Removal activities that do not comply with environmental requirements can add to the damage associated with fire-impacted landscapes.

The Departments will continue to consider the option of harvesting fire-damaged trees when appropriate, with priority placed on those areas where roads already exist and where risks to communities from future wildfire are greatest. However, as has been the Departments' practice, such timber sales should proceed only after all environmental laws and procedures are followed and the affected communities are afforded the opportunity to participate in the process.

In the past, some Congressionally mandated salvage logging resulted in the harvest of green, healthy trees in addition to dead and dying timber. Congressional direction contained in the 1995 Rescissions Act -- known as the "Salvage Rider" -- placed priority on salvage logging over environmental protection. This is not an acceptable approach to harvesting fire-damaged trees.

IV. Key Points and Recommendations

1. Continue to Make All Necessary Firefighting Resources Available.

As a first priority, the Departments will continue to provide all necessary resources to ensure that fire suppression efforts are at maximum efficiency in order to protect life and property. The United States' wildland firefighting organization is the finest in the world and deserves our strong support. To ensure continued readiness of the firefighting force, the Departments recommend providing additional resources for firefighting activities.

Wildland firefighting is a difficult and dangerous job, and it is essential that our firefighters continue to be well trained, with the appropriate equipment and resources they need to do their job. Safety of our firefighters and members of the public is, and always will be, the Administration's number one priority. We will continue to provide all necessary resources that our firefighting force need to continue the battle against this year's fires in as safe a manner as possible.

To fully fund the fire management preparedness programs, the Departments recommend additional resources in FY 2001 of about \$337 million, including \$204 million for the Forest Service and \$133 million for the Department of the Interior over the President's request. This continuing funding would provide the Departments' fire management organizations with the capability to prevent, detect, and take prompt, effective action to control wildfires. These funds also would support the personnel, equipment, and technology necessary to conduct proper planning, prevention, detection, information, education, and training.

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2. Restore Damaged Landscapes and Rebuild Communities.

After ensuring that suppression resources are sufficient, invest in the restoration of communities and landscapes impacted by the year 2000 fires. The Departments also recommend that investments in the treatment of landscapes through thinning and the restoration of fire be continued and expanded to help reduce the risk of catastrophic fires.

Providing Economic Assistance to Hard-Hit Communities

As discussed above, the year 2000 fires have hit many communities hard. Both the Federal Emergency Management Agency (FEMA) and the Small Business Administration (SBA) are responding to the immediate need for assistance. FEMA anticipates that more than 10,000 citizens from Idaho and Montana may qualify for disaster unemployment assistance, and it is anticipated that the SBA may offer more than \$50 million in small business loans to assist affected businessmen. The USDA's Forest Service and rural development program also are preparing to provide immediate economic assistance, using existing resources. In receiving grant or loan applications under these programs, the Department of Agriculture will fully consider the impact of the season's wildfires on communities seeking assistance, giving such communities a competitive advantage in the USDA grant-making and loan-making.

In addition to these short-term actions, the Departments recommend that stabilization and restoration investments be made in areas that have been damaged by fire and which are at risk of erosion, invasive species germination or water supply contamination. These investments should be made in a manner that provides maximum benefit to hard-hit communities with local contractors and the local workforce being utilized to maximum extent possible.

In a similar vein, the Departments also are recommending below that forest treatment activities be stepped up in intensity. These activities can be labor intensive and, once again, the Departments intend to involve local communities and the local workforce in implementing these activities.

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Key aspects of these programs are set forth below.

Burned Area Stabilization and Restoration

Stabilization

Stabilization activities include short-term actions to remove hazards and stabilize soils and slopes. Examples of specific actions or "treatments" might include the removal of hazards; seeding by helicopter, plane, or by hand; constructing dams or other structures to hold soil on the slope; placing bundles of straw on the ground, parallel to the slope to slow the movement of soil down hill; contour furrowing or trenching (ditches cut into the mountain or hillsides to catch soil moving down hill); correcting road drainage by realigning poorly designed roads and culvert replacement to manage water and soil movement after the fire; and temporarily fencing cattle and people out of burned areas.

Priorities for stabilization activities include protecting human life and property; protecting public health and safety; stabilizing municipal watersheds; stabilizing steep slopes and unstable terrain; protecting archeological resources; and replacing culverts.

Restoration

Restoration activities include longer-term actions to repair or improve lands that are unlikely to recover naturally from severe fire damage. Examples of specific actions or "treatments" might include planting or seeding native species; reforesting desired tree species; chemical or mechanical treatment to reduce competition; and other efforts to limit the spread of invasive species.

Priorities for restoration activities include preventing introduction of non-native invasive species; promoting restoration of ecosystem structure and composition; rehabilitating threatened and endangered species habitat; and improving water quality.

Because of the large amount of acreage affected by this year's fires, the Departments propose to develop a stabilization and restoration plan that is coordinated with all affected agencies, including appropriate state and local agencies.

Responsibility for implementation of individual projects lies at the field-level. Projects covering multiple jurisdictions will be planned and implemented on an interagency basis. The Departments recognize that the scope of this effort will require additional resources. Three specific aspects of the program may require special support:

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- (1) *Native plant/seed sources:* Availability of native seeds and plant materials is limited. Significant effort will be needed to encourage the production of seeds and plant materials by the private sector and develop agency seed storage capabilities to support restoration activities.
- (2) *Science and research:* Significant information collection, research, and data analysis is required to assess the effectiveness of restoration techniques and develop improved techniques. Current technologies and techniques are largely based on experiences from agricultural practices in the early part of the 20th Century. Special attention will be focused on techniques applicable to non-agricultural lands and to treatments using native seeds and plants.
- (3) *Capital equipment:* The current post-fire program relies on a limited amount of capital equipment (e.g., drill-seeders), much of which is not dedicated to this program. Additional equipment will be needed to support the expanded requirements, especially in the application of native seeds.

3. Investments in Projects to Reduce Fire Risk

As discussed above, the Departments have been implementing new approaches to address the long-term buildup of hazardous fuels in our forests and rangelands. The fires of 2000 have underscored the importance of pursuing an aggressive program to address the fuels problem with the help of local communities, particularly those in wildland-urban interface areas, where threats to lives and property are greater and the complexity and costs of treatments higher.

The Departments recommend continuing current fuel reduction strategies and seeking additional budgetary resources to treat additional acreage. The Departments are requesting \$257 million for fuels reduction activities in FY 2001, over the President's request including \$115 million for the Forest Service and \$142 million for the Department of the Interior. These funds will cover accelerated treatments, especially in the wildland-urban interface area and will work to support additional research and eradication of invasive species. Funding will be available to support Endangered Species Act consultation work by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service.

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Implementation of Fuels Reduction Program

The most significant implementation challenge for the Departments is to substantially increase the number of acres of forestlands that receive fuels treatment. Both Departments are utilizing one aspect of fuels treatments, prescribed fires, increasingly. That program will continue to play a key role, although the lessons from the Cerro Grande fire demand that this strategy be implemented with great care. In that regard, the Departments will implement recommendations from the independent review of the Cerro Grande fire.

In addition to prescribed burns, the physical removal of undergrowth and other fuels needs to be stepped up in intensity in order to have a more significant impact on dangerous fuels buildup. Because of the importance of this activity, the Departments recommend that experienced personnel be dedicated full time to this activity, with direct chains of command to the Secretaries of Agriculture and the Interior. The Secretaries, in turn, should meet periodically to assess the progress of these efforts.

Markets for Removed Materials

Because much of the hazardous fuels in forests are excessive levels of forest-based biomass -- dead, diseased and down trees -- and small diameter trees, there are several benefits of finding economical uses for this material, including helping offset forest restoration cost; providing economic opportunities for rural, forest-dependent communities; reducing the risks from catastrophic wildfires; protecting watersheds; helping restore forest resiliency, and protecting the environment.

USDA Forest Service research teams are working to develop new uses for small trees and new ways to process them. A need exists to transfer and commercialize new technology as it comes on line and to develop and expand local markets for these products. Both Departments propose to partner with communities, universities, and businesses to conduct additional research on the stimulation of small diameter and other vegetative products industries.

Small diameter logs, for example, can be used for housing material such as trim, siding, and sub-flooring. Recent technology now makes it possible for wood composites - fibers, flakes and strands - from lower quality species of trees such as juniper, pinyon pine, and insect-killed white fir to be used successfully for particleboard and replacement filler for thermoplastic composites that make up a wide range of consumer products such as highway signs. Similar uses are being expanded for pulp chips. The woody residues that make up a forest's undergrowth has historically been burned or allowed to

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accumulate in huge piles on the forest floor. This material could potentially be economically used as compost and mulch material.

Research Needs

Given the severity of this year's fires and the additional fuels management and restoration activities recommended by this report, the Departments have a number of additional research needs. They recommend research on the relationship between invasive species and fires and the effectiveness of various treatment efforts. They also recommend research based on recent fire seasons regarding relationships between land management practices and the occurrence and intensity of fires.

Budget

The two Departments request additional resources of \$130 million in FY 2001 over the President's request to fully fund a burned area restoration program as described above, including \$45 million for the Forest Service and \$85 million for the Department of the Interior.

4. Work Directly with Local Communities.

Working with local communities is a critical element in restoring damaged landscapes and reducing fire hazards proximate to homes and communities. To accomplish this, the Departments recommend:

- a. Expanding the participation of local communities in efforts to reduce fire hazards and the use of local labor for fuels treatment and restoration work.**
- b. Improving local fire protection capabilities through financial and technical assistance to state, local, and volunteer firefighting efforts.**
- c. Assisting in the development of markets for traditionally underutilized small diameter wood as a value added outlet for removed fuels.**
- d. Encouraging a dialogue within and among communities regarding opportunities for reducing wildfire risk and expanding outreach and education to homeowners and communities about fire prevention through use of programs such as Firewise.**

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As discussed above, the Departments have been working with communities on fire-related activities through a variety of programs. On the operational side, the National Interagency Fire Center provides training opportunities for local firefighters, and the Fire Center has developed cooperative arrangements with many local and state entities to facilitate coordinated firefighting efforts. The Departments also work with local communities to assist in fire protection activities through the Firewise program and other outreach efforts. In addition, the Departments currently work with local communities on fuels treatment and post-fire restoration projects.

Although Federal agencies are engaged in these activities on an on-going basis, the Departments recommend that a significant new initiative be undertaken to coordinate appropriate investments and outreach activities with affected communities. The proposed initiative would focus on three major arenas: (1) improving community-based firefighting capabilities and coordination with state and Federal firefighting efforts; (2) working closely with communities-at-risk in implementing post-fire restoration activities and fuels reduction activities; and (3) expanding joint education and outreach efforts regarding fire prevention and mitigation in the wildlife-urban interface.

Rural and volunteer fire departments provide the front line of defense, or initial attack, on up to 90 percent of the communities. Volunteer fire departments are the backbone of fire protection in America. County, State, and Federal agencies provide immediate backup to local fire departments when a wildland-urban interface fire gets out of control. Strong readiness capability at the state and local levels go hand-in-hand with optimal efficiency at the Federal level. The level of funding being proposed will provide a more optimum efficiency level for the states and local fire departments in the impacted areas.

Budget

To support this initiative for community involvement and participation, additional funding of \$88 million in FY 2001 is required. The USDA Forest Service proposes increases of \$53.8 million for state and volunteer fire assistance, as well as an additional \$12.5 million for economic action programs and \$12 million for forest health activity. The Department of the Interior proposes a new program to support rural fire districts, particularly those intermingled with Bureau of Land Management lands. Funding of \$10 million is proposed for FY 2001.

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5. Be Accountable

A Cabinet-level management structure should be established to ensure that the actions recommended by the Departments receive the highest priority. The Secretaries of Agriculture and the Interior should co-chair this effort. Regional integrated management teams should be accountable for fuels treatment, restoration, and fire preparedness. Local teams, working closely with communities and other agency partners, would manage projects on the ground.

Wildland fires know no jurisdictional boundaries. It is for that reason that the five primary Federal agencies that have operational responsibility for preparing for, and responding to, wildfires, formed the National Interagency Fire Center. The Fire Center is a model of cross-agency cooperation and accountability, and it provides a key focal point for coordination with state and local firefighting efforts.

As with fighting fires, Federal, State and local governments will have to cooperate to restore damaged lands, invest in protecting affected communities, and reduce hazardous fuel loads.

A number of existing, regional integrated management teams are in place to assist in the setting of regional priorities for land restoration, fuels treatment, and community cooperation and outreach. The Departments recommend that these regional structures be utilized and/or retooled, as appropriate, to provide a focal point for these initiatives.

The Departments would also establish locally led teams with the Department of Commerce and other appropriate agencies. These integrated teams would identify specific land restoration, fuels treatment, and preparedness projects; coordinate environmental reviews and consultations; facilitate and encourage public participation; and monitor and evaluate project implementation.

Because of the critical importance of these matters, the Departments recommend Cabinet-level oversight of the implementation of these initiatives, co-chaired by the Secretaries of Agriculture and the Interior. Among other things, the new management team would be responsible for ensuring that appropriate performance objectives are established and met, ensuring that adequate financial and other resources are made available, establishing a system for identifying and addressing implementation issues promptly, and ensuring that the environmental reviews required by the National Environmental Policy Act, and all other environmental requirements, are undertaken and completed on a timely basis.

The Departments recommend that the Cabinet-level group assess the progress towards implementing these tasks, and provide periodic reports to the President.

Appendix: Funding Summary

Nearly \$1.6 billion in additional resources over the President's FY2001 Budget requests for the USDA Forest Service and the US Department of the Interior will be required in FY 2001 to meet the objectives of this report. This includes \$897 million more for the USDA Forest Service, and \$682 million more for the US Department of the Interior.

To continue the momentum gained by the additional FY 2001 resources, future funding for fiscal year 2002 and the out years will need to be maintained for these same program components. Tables 1 through 3 summarize these needs for FY2001, by totals and by each Department.

Table 1
FY 2001 Funding Summary, USDA Forest Service and the US Department of the Interior

USDA Forest Service and the US DOI	FY 2000 Final	FY 2001 President's Budget	FY 2001 Additional Needs	FY 2001 Total Needs	FY 2001 House Action	FY 2001 Senate Action
			<i>...Dollars in thousands...</i>			
Fire Preparedness	\$584,618	\$586,433	\$336,381	\$922,814	\$586,433	\$586,683
Fire Operations	323,995	331,136	677,711	1,008,847	320,107	579,394
Emergency Fire Contingency	290,000	150,000	476,000	626,000	200,000	150,000
State Fire Assistance	23,929	30,006	42,994	73,000	25,000	28,042
Volunteer Fire Assistance	3,240	2,510	10,790	13,300	5,000	5,000
Rural Fire Assistance	0	0	10,000	10,000	0	0
Forest Health Management	62,075	62,842	12,000	74,842	63,794	63,383
Economic Action Programs	20,198	17,267	12,500	29,767	14,246	23,486
TOTAL	\$1,308,055	\$1,180,194	\$1,578,376	\$2,758,570	\$1,214,580	\$1,435,988

Table 2.
FY 2001 Funding Summary, USDA Forest Service

USDA Forest Service	FY 2000 Final	FY 2001 President's Budget	FY 2001 Additional Needs	FY 2001 Total Needs	FY 2001 House Action	FY 2001 Senate Action
<i>...Dollars in thousands...</i>						
Fire Preparedness	\$408,768	\$404,343	\$203,547	\$607,890	\$404,343	\$404,593
Fire Operations	208,888	216,029	338,971	555,000	210,000	333,300
Emergency Fire Contingency	90,000	150,000	276,000	426,000	0	150,000
State Fire Assistance	23,929	30,006	42,994	73,000	25,000	28,042
Volunteer Fire Assistance	3,240	2,510	10,790	13,300	5,000	5,000
Rural Fire Assistance	0	0	0	0	0	0
Forest Health Management	62,075	62,842	12,000	74,842	63,794	63,383
Economic Action Programs	20,198	17,267	12,500	29,767	14,246	23,486
TOTAL	\$817,098	\$882,997	\$896,802	\$1,779,799	\$722,383	\$1,007,804

Table 3
FY 2001 Funding Summary, US Department of the Interior

US Department of the Interior	FY 2000 Final	FY 2001 President's Budget	FY 2001 Additional Needs	FY 2001 Total Needs	FY 2001 House Action	FY 2001 Senate Action
<i>...Dollars in thousands...</i>						
Fire Preparedness	\$175,850	\$182,090	\$132,834	\$314,924	\$182,090	\$182,090
Fire Operations	115,107	115,107	338,740	453,847	110,107	246,094
Emergency Fire Contingency	200,000	0	200,000	200,000	200,000	0
State Fire Assistance**	0	0	0	0	0	0
Volunteer Fire Assistance**	0	0	0	0	0	0
Rural Fire Assistance*	0	0	10,000	10,000	0	0
Forest Health Management**	0	0	0	0	0	0
Economic Action Programs**	0	0	0	0	0	0
TOTAL	\$490,957	\$297,197	\$681,574	\$978,771	\$492,197	\$428,184

*New program proposed in the Report to the President

** No DOI equivalent to these USDA Forest Service programs

The following briefly describes each program component, including total funding requirements for FY 2001 (President's request plus additional resources now being requested):

Fire Preparedness

Provides the fire management organization with the capability to prevent, detect, or take prompt, effective initial attack suppression action on wildfires. Preparedness activities include planning, prevention, detection, information and education, pre-incident training, equipment and supply purchase and replacement, and other preparedness activities.

Funding estimates are based on prediction models that determine a cost-effective level of preparedness for initial and extended attack:

- For the USDA Forest Service \$608 million for recurring readiness and program management costs, including fire science and research.
- For the US Department of the Interior \$315 million for recurring readiness and program management costs; one-time readiness and program management costs; fire science and research; and fire management facilities repair.

Fire Operations - Suppression

Provides costs directly associated with fire suppression activities (personnel costs, contracts, aviation, supplies, and so on)

- For the USDA Forest Service \$320 million.
- For US Department of the Interior \$153 million.

Fire Operations – Fuels Management

Use of prescribed fire, mechanical removal, and other techniques to remove/reduce hazardous levels of fuels in order to reduce risks to communities and to restore natural fire regimes to wildlands. Includes funding to support non-fire disciplines (biology, wildlife, hydrologists, etc.) necessary to conduct planning and assessment activities.

- For the USDA Forest Service \$190 million including \$20 million for research and \$11.5 million to support environmental clearances.
- For US Department of the Interior \$195 million, including at least \$20 million to support environmental clearances.

Fire Operations – Burned Area Rehabilitation

Provides for post-fire stabilization and restoration of burned lands. Short-term stabilization efforts remove hazards and address erosion, flooding, and mudslide problems. Longer-term rehabilitation are targeted on those portions of fires that burned severely, thus less likely to revegetate naturally. Special attention focused on lands subject to non-native, invasive species.

- For the USDA Forest Service \$45 million.
- For US Department of the Interior \$105 million.
- Both Departments will have flexibility to increase these levels if estimated needs in other fire-related activities are less than currently projected.

Emergency Fire Contingency

Provides additional emergency funds for Fire Suppression activities that are only released to the agency upon Presidential declaration that regular suppression funds are insufficient. These funds ensure that funding is always available to fight wildfires.

- For the USDA Forest Service \$426 million, of which \$276 is to repay the Knutsen-Vandenberg (K-V) Fund.
- For US Department of the Interior \$200 million, including estimated \$75 million to repay a September 2000 Section 102 transfer.

State and Volunteer Fire Assistance

State fire assistance in the USDA Forest Service provides technical training, financial

assistance, and equipment to States to ensure that Federal, State, and local agencies can deliver a uniform and coordinated suppression response to wildfire. Special emphasis will be placed on a Wildland-Urban Interface component.

- For the USDA Forest Service \$86 million including \$20 million for incentives for high priority forest management practices on their lands to reduce fire risk and fuel loads and \$4 million for high priority fire education and prevention programs in the wildland-urban interface.
- US Department of the Interior has no equivalent program; see Rural Fire Assistance program below.

Rural Fire Assistance

Rural fire district assistance in the Department of the Interior is a new program to provide technical and financial support to volunteer fire departments that protect communities with populations of less than 10,000. Emphasis is on areas intermingled with lands managed by the Interior Department (especially the Bureau of Land Management).

- USDA Forest Service has no equivalent program; see State and Volunteer Fire Assistance above.
- For US Department of the Interior \$10 million.

Forest Health Management

Provides forest health technical and financial assistance to all Federal agencies, Tribal governments, and States in carrying out a coordinated nationwide program of detecting, monitoring, evaluating, preventing and suppressing invasive forest insects and diseases.

- For the USDA Forest Service \$75 million, including funding for the management and control of invasive species as a result of the fires and are based on estimates of detection, evaluation, and high priority management and control treatments.
- US Department of the Interior has no equivalent program.

Economic Action Program

Provides technical and financial assistance to address the long-term health of rural areas, by helping communities develop opportunities and enterprises through diversified uses of forest resources.

- For the USDA Forest Service \$30 million, including funding for rural community assistance, forest products conservation and recycling, and market development and expansion.
- US Department of the Interior has no equivalent program.

Attachment A

Wildland Preparedness Funding History

Department of the Interior and USDA Forest Service

(BA in millions)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
Department of the Interior	\$157	\$176	\$182
USDA Forest Service	<u>325</u>	<u>360</u>	<u>404 *</u>
Total	\$482	\$536	\$586

* BA reflects the revised USDA Forest Service budget structure in FY 2001

**FEDERAL WILDLAND
FIRE MANAGEMENT**

POLICY & PROGRAM REVIEW

FINAL REPORT • DECEMBER 18, 1995

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



Additional copies of this report may be obtained from
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at the

National Interagency Fire Center

Attn: External Affairs Office

3833 South Development Avenue

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or

(208) 387-5457



WASHINGTON



THE SECRETARY OF AGRICULTURE

THE SECRETARY OF THE INTERIOR

MEMORANDUM

To: Acting Director, Bureau of Land Management
Chief, USDA Forest Service
Director, National Park Service
Director, U.S. Fish and Wildlife Service
Deputy Commissioner, Bureau of Indian Affairs
Director, National Biological Service

Subject: Federal Wildland Fire Policy

We are pleased to accept and endorse the principles, policies, and recommendations in the attached Federal Wildland Fire Management Policy and Program Review Report. These principles and policies provide a common approach to wildland fire by our two Departments. We look forward to the endorsement of these principles and policies by our Federal partner agencies, including the Federal Emergency Management Agency, the Environmental Protection Agency, the National Oceanic and Atmospheric Administration, and the Department of Defense, so that we have a truly Federal approach to wildland fire. We invite our partners in Tribal, State, and local governments to endorse these principles and policies in order to promote an integrated, intergovernmental approach to the management of wildland fire.

The principles and policies of the Report reiterate the commitment all of us have made to firefighter and public safety. No resource or property value is worth endangering people; all of our actions and our plans must reflect this commitment. Our second priority is to protect resources and property, based on the relative values to be protected. We must be realistic about our abilities to fight severe wildfire. As natural resource managers we must make prudent decisions based on sound assessments of all the risks. Good management reduces the likelihood of catastrophic fire by investing in risk-reduction measures; good management also recognizes when nature must take its course. The principles and policies of the Report, along with the recommended actions, will improve our collective ability to be better wildland fire risk managers.

The philosophy, as well as the specific policies and recommendations, of the Report continues to move our approach to wildland fire management beyond the traditional realms of fire suppression by further integrating fire into the management of our lands and resources in an ongoing and systematic manner, consistent with public health and environmental quality considerations. We strongly support the integration of wildland fire into our land management planning and implementation activities. Managers must learn to use fire as one of the basic tools for accomplishing their resource management objectives.

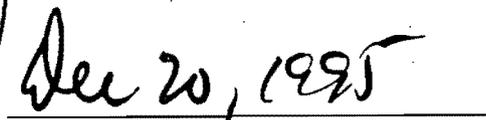
By this memorandum we are directing that you assume the responsibility for the implementation of the principles, policies, and recommendations in the Report. Implementation should be a matter of high priority within your bureaus and should:

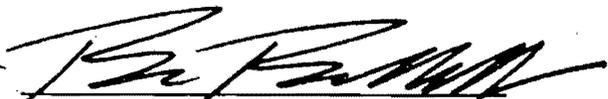
- Be consistent with the nine Guiding Principles contained in the Report.
- Occur on a joint, interagency basis wherever possible to ensure the consistent application of policy.
- Involve a broad spectrum of program areas, including resource managers, agency administrators, scientists, and planners, as well as the wildland fire management staffs.
- Address local, interagency, integrated planning as a critical means of ensuring that on-the-ground implementation is as effective as possible.
- Coordinate with other Federal agencies, including the Federal Emergency Management Agency, the Environmental Protection Agency, the National Oceanic and Atmospheric Administration, and the Department of Defense.
- Ensure coordination with Tribal, State, and local partners.
- Recognize the results of the wildland-urban interface project sponsored by the Western Governors Association.

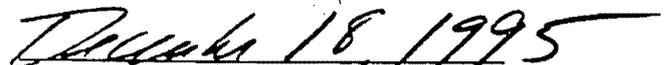
We request that you prepare a joint, integrated strategy for implementing the Report by no later than March 1, 1996. At a minimum this strategy should describe the priorities, timeframes, responsibilities, leadership, and the participation of other Federal agencies and non-Federal partners and cooperators. Each of you should designate a senior official, with the authority to ensure implementation, to work in concert with the two Departments to guide overall implementation of the Report.

We recognize that complete implementation of all of the recommendations will take some time. Priority should be placed on educating and informing employees of the philosophy, principles, and policies of the Report and on examining how quickly and efficiently we can update resource and land management plans to incorporate wildland fire considerations.


Secretary of Agriculture


Date

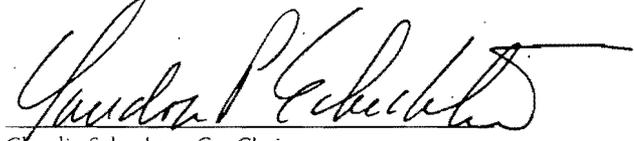

Secretary of the Interior


Date

REPORT RECOMMENDED FOR ACCEPTANCE BY THE SECRETARIES:



Dr. Charles Philpot, Co-Chair
Director, Pacific Northwest Research Station
USDA Forest Service



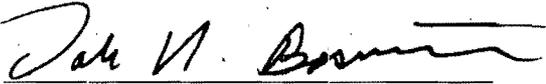
Claudia Schechter, Co-Chair
Director, Operations - Policy, Management & Budget
DOI / Office of the Secretary



Dr. Ann Bartuska
Director, Forest Pest Management
USDA Forest Service



Keith Beartusk
Assistant Area Director, Billings Area Office
DOI / Bureau of Indian Affairs



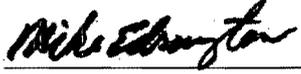
Dale Bosworth
Regional Forester, Intermountain Region
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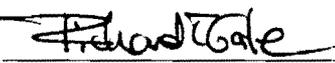
Stan Coloff
Physical Scientist
DOI / National Biological Service



Jim Douglas
Director, Office of Hazard & Fire Programs Coord.
DOI / Office of the Secretary



Mike Edrington
Director, Aviation & Fire Management
Pacific Northwest Region
USDA Forest Service



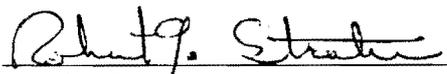
Rick Gale
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DOI / National Park Service



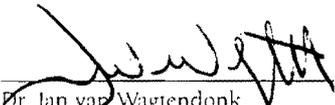
Dr. Mary Jo Lavin
Director, Fire & Aviation Management
USDA Forest Service



Lester K. Rosenkrance
Director, National Office of Fire & Aviation
DOI / Bureau of Land Management

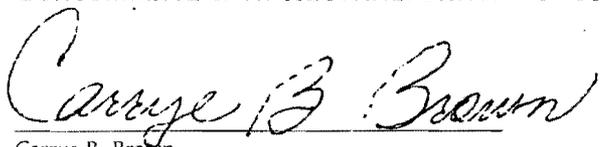


Dr. Robert Streeter
Assistant Director, Refuges & Wildlife
DOI / U. S. Fish & Wildlife Service

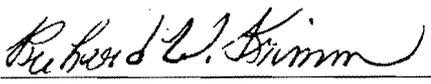


Dr. Jan van Wagtenonk
Station Leader, Yosemite Field Station
DOI / National Biological Service

CONCURRENCE WITH RECOMMENDATION FOR ACCEPTANCE:



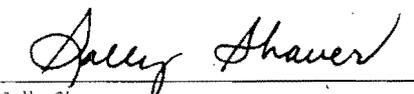
Carve B. Brown
Administrator
U. S. Fire Administration



Richard Krimm
Assistant Director, Response & Recovery
Federal Emergency Management Agency



Rich Przywarty
Chief, Operations Division, Office of Meteorology
Department of Commerce / National Weather Service



Sally Shaver
Director, Air Quality Strategies & Standards Division
U. S. Environmental Protection Agency

FEDERAL WILDLAND FIRE MANAGEMENT

POLICY & PROGRAM REVIEW

FINAL REPORT

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EXECUTIVE SUMMARY

The challenge of managing wildland fire in the United States is increasing in complexity and magnitude. Catastrophic wildfire now threatens millions of wildland acres, particularly where vegetation patterns have been altered by past land-use practices and a century of fire suppression. Serious and potentially permanent ecological deterioration is possible where fuel loads exceed historical conditions. Enormous public and private values are at high risk, and our nation's capability to respond to this threat is becoming overextended. The goals and actions presented in this report encourage a more proactive approach to wildland fire to reduce this threat.

The Departments of the Interior and Agriculture, together with Tribal governments, States, and other jurisdictions, are responsible for the protection and management of natural resources on lands they administer. Because wildland fire respects no boundaries, uniform Federal policies and programs are essential. And, as firefighting resources become increasingly scarce, it is more important than ever to strengthen cooperative relationships.

The Federal Wildland Fire Management Policy and Program Review was chartered by the Secretaries of the Interior and Agriculture to ensure that Federal policies are uniform and programs are cooperative and cohesive. This report addresses five major topic areas, presents nine guiding principles that are fundamental to wildland fire management, and recommends a set of thirteen Federal wildland fire policies. While unique agency missions may result in minor operational differences, having, for the first time, one set of "umbrella" Federal fire policies will enhance effective and efficient operations across administrative boundaries and improve our capability to meet the challenges posed by current wildland fire conditions.

Public input and employee review have provided the foundation upon which many of the policy and program goals and actions contained in this report are based. Initially, broad policy and program issues were presented for comment. These initial comments sharpened the focus and were used in preparing a draft report. The draft was then made available for both internal and external comment. More than 300 comments were received and used in preparing these final policy and program conclusions.

Following are some of the key points made in this report:

- Protection of human life is reaffirmed as the first priority in wildland fire management. Property and natural/cultural resources jointly become the second priority, with protection decisions based on values to be protected and other considerations.
- Wildland fire, as a critical natural process, must be reintroduced into the ecosystem. This will be accomplished across agency boundaries and will be based upon the best available science.
- Agencies will create an organizational climate that supports employees who implement a properly planned program to reintroduce wildland fire.
- Where wildland fire cannot be safely reintroduced because of hazardous fuel build-ups, some form of pretreatment must be considered, particularly in wildland/urban interface areas.
- Every area with burnable vegetation will have an approved Fire Management Plan.
- Wildland fire management decisions and resource management decisions go hand in hand and are based on approved Fire Management and land and resource management plans. At the same time, agency administrators must have the ability to choose from the full spectrum of fire management actions — from prompt suppression to allowing fire to function in its natural ecological role.
- All aspects of wildland fire management will be conducted with the involvement of all partners; programs, activities, and processes will be compatible.
- The role of Federal agencies in the wildland/urban interface includes wildland firefighting, hazard fuels reduction, cooperative prevention and education, and technical assistance. No one entity can resolve and manage all interface issues; it must be a cooperative effort. Ultimately, however, the primary responsibility rests at the State and local levels.
- Structural fire protection in the wildland/urban interface is the responsibility of Tribal, State, and local governments.

- The Western Governors' Association will serve as a catalyst to involve State and local agencies and private stakeholders in achieving a cooperative approach to fire prevention and protection in the wildland/urban interface.
- Federal agencies must place more emphasis on educating internal and external audiences about how and why we use and manage wildland fire.
- Trained and certified employees will participate in the wildland fire program; others will support the program as needed. Administrators are responsible and will be accountable for making employees available.
- Good data and statistics are needed to support fire management decisions. Agencies must jointly establish an accurate, compatible, and accessible database of fire- and ecosystem-related data.

The success of the actions recommended in this report depends upon four things: Every agency administrator must ensure that these policies are incorporated into all actions. Fire professionals must work with agency administrators to make the policies work on the ground. Managers and staffs must actively implement the recommendations and work with their constituents to ensure success. And every employee of every agency must be committed to follow through on the ground.

Finally, agencies and the public must change their expectation that all wildfires can be controlled or suppressed. No organization, technology, or equipment can provide absolute protection when unusual fuel build-ups, extreme weather conditions, multiple ignitions, and extreme fire behavior come together to form a catastrophic event.

To effect the recommended changes and to achieve the consistent Federal policies reflected in this report, the Steering Group recommends that all agencies be directed to develop implementation plans that include actions, assignments, and time frames.

INTRODUCTION

The Federal wildland 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 and policies 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 suppressing 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 ensure that uniform Federal policies and cohesive interagency and intergovernmental fire management programs exist. The review process 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. The Steering Group received staff support from a core team representing the Departments of Agriculture and the Interior. During the review process, the core team gathered input from teams of internal and external subject-matter experts (see Appendix II).

The Federal agencies referenced throughout this report are the five principal fire/land management agencies, including the Forest Service (FS) under 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) under 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. It is also recognized that, in addition to the five principal Federal land management agencies that have participated in this review, the Department of Defense and other Federal entities also manage a significant amount of wildland and may choose to adopt the fire management strategies and policies contained in this report.

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. Subsequently, Steering Group members met with national stakeholders, the Western Governors' Association, and employees to get additional, more focused input; they incorporated input resulting from the Environmental Regulation and Prescribed Fire conference held in Tampa, Florida, in March 1995; and they individually continued to network with their constituents.

The draft report was published in its entirety in the *Federal Register* on June 22, 1995, and a 30-day public comment period was announced. Copies of the report were mailed to a greatly expanded audience, including those who commented early in the review process. The full report was also available on Internet. At the end of the 30-day comment period, the Steering Group had received a significant number of requests to allow additional time for comments. In response to those requests, the comment period was reopened, closing for a second time on September 25, 1995. In total, 308 comments were received on the draft report. An independent contractor completed a content analysis of the comments; the resulting report and individual responses were used in the preparation of this report.

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

- Final Report on Fire Management Policy; USDA/USDI – 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.
- Report of the 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.
- Fire Management and Ecosystem Health in the National Park System; USDI National Park Service – September 1994.
- Report of the Interagency Management Review Team. South Canyon Fire; USDI/USDA – October 1994.
- Bureau of Land Management Fire and Aviation Programwide Management Review Report; USDI BLM – April 1995.

Communication and collaboration are highlighted throughout this report. The planning, implementation, and monitoring of wildland fire management actions will be done on an interagency basis with the involvement of all partners. The term "partners," as used in this report, is all encompassing, including the Federal land management and regulatory agencies; Tribal governments; Department of Defense; State, county, and local governments; the private sector; and the public. We believe there is no option to this renewed emphasis on public participation. Although initially time consuming, this approach will lead to a long-term payoff, including an increase in public safety, reduced costs and losses, and a wider acceptance of the important role that wildland fire plays in the management of our public lands.



Wildland fire at Warm Lake, Idaho. (Photo courtesy of National Interagency Fire Center.)

GUIDING PRINCIPLES & POLICIES

The following guiding principles are fundamental to the success of the Federal wildland fire management program and the implementation of review recommendations. The proposed Federal policies shown on the following pages were developed as a part of this review. These "umbrella" Federal policies do not replace existing agency-specific policies but will compel each agency to review its policies to ensure compatibility. Individual agency policies will be reflected through the land and fire management planning processes.

GUIDING PRINCIPLES

- A. *Firefighter and public safety is the first priority in every fire management activity.*
- B. *The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process. Federal agency land and resource management plans set the objectives for the use and desired future condition of the various public lands.*
- C. *Fire management plans, programs, and activities support land and resource management plans and their implementation.*
- D. *Sound risk management is a foundation for all fire management activities. Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing an activity. Net gains to the public benefit will be an important component of decisions.*
- E. *Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives. Federal agency administrators are adjusting and reorganizing programs to reduce costs and increase efficiencies. As part of this process, investments in fire management activities must be evaluated against other agency programs in order to effectively accomplish the overall mission, set short- and long-term priorities, and clarify management accountability.*
- F. *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.*
- G. *Fire management plans and activities incorporate public health and environmental quality considerations.*
- H. *Federal, State, Tribal, and local interagency coordination and cooperation are essential. Increasing costs and smaller work forces require that public agencies pool their human resources to successfully deal with the ever-increasing and more complex fire management tasks. Full collaboration among Federal agencies and between the Federal agencies and State, local, and private entities results in a mobile fire management work force available to the full range of public needs.*
- I. *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.*

F E D E R A L W I L D L A N D F I R E P O L I C I E S

	DEPARTMENT OF THE INTERIOR	USDA FOREST SERVICE	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.	Firefighter and public safety is the first priority. All Fire Management Plans and activities 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.	Every area with burnable vegetation must have an approved Fire Management Plan. Fire Management Plans must be consistent with firefighter and public safety, values to be protected, and land and resource management plans and must address public health issues. Fire Management Plans must also address all potential wildland fire occurrences and include the full range of fire management actions.
WILDLAND FIRE			Fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale, across agency boundaries, and will be based upon best available science. All use of fire for resource management requires a formal prescription. Management actions taken on wildland fires will be consistent with approved Fire Management Plans.
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.	
USE OF FIRE			Wildland fire will be used to protect, maintain, and enhance resources and, as nearly as possible, be allowed to function in its natural ecological role.
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 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.	
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 management programs in support of land and resource management plans through appropriate planning, staffing, training, and equipment.
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 cost, considering firefighter and public safety, benefits, and values to be protected; consistent with resource objectives.
PREVENTION	Wildfire prevention is an integral part of the total suppression program and ranges from public education to hazard reduction activities. Bureaus will develop and participate in interagency fire prevention cooperatives.	The objective of wildfire prevention is the cost-efficient reduction of fire suppression expenditures and damages from human-caused fires to levels commensurate with resource management objectives and fire management direction.	Agencies will work together and with other affected groups and individuals to prevent unauthorized ignition of wildland fires.

F E D E R A L W I L D L A N D F I R E P O L I C I E S ²⁹

	DEPARTMENT OF THE INTERIOR	USDA FOREST SERVICE	PROPOSED FEDERAL
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) human life and (2) property and natural/cultural resources. If it becomes necessary to prioritize between property and natural/cultural resources, this is done based on relative values to be protected, commensurate with fire management costs. Once people have been committed to an incident, these resources become the highest value to be protected.
INTERAGENCY COOPERATION	Bureaus will coordinate and cooperate with each other and with other protection agencies for greater efficiency and effectiveness.	Develop and implement mutually beneficial fire management agreements with other Federal agencies and adjoining countries. Cooperate, participate, and consult with the States on fire protection for non-Federal wildlands.	Fire management planning, preparedness, suppression, fire use, 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 compatible planning processes, funding mechanisms, training and qualification requirements, operational procedures, values-to-be-protected methodologies, and public education programs for all fire management activities.
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 programs and activities will be based on economic analyses that incorporate commodity, non-commodity, and social values.
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 Tribal, State, and local governments. Federal agencies may assist with exterior structural suppression activities under formal Fire Protection Agreements that specify the mutual responsibilities of the partners, including funding. (Some Federal agencies have full structural protection authority for their facilities on lands they administer and may also enter into formal agreements to assist State and local governments with full structural protection.)
ADMINISTRATOR AND EMPLOYEE ROLES	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; employees with operational, administrative, or other skills will support the wildland fire program as needed. Administrators are responsible and will be accountable for making employees available.

ROLE OF WILDLAND FIRE IN RESOURCE MANAGEMENT



Understory burning in ponderosa pine on the Malheur National Forest in Oregon reduces competition from grass, brush, and small trees, allowing ponderosa pine to prosper. Wildland fire plays an important role in maintaining healthy forests. (Photo courtesy of Mike Apicello, Forest Service, NIFC.)

SITUATION

HISTORICAL PERSPECTIVE

Long before humans arrived in North America, there was fire. It came with the first lightning strike and will remain forever. Unlike earthquakes, tornados, and wind, fire is a disturbance that depends upon complex physical, chemical, and biological relationships. Wildland fire is inherently neither good nor bad, but it is the most powerful natural force that people have learned to use. As an inevitable natural force, it is sometimes unpredictable and potentially destructive and, along with human activities, has shaped 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 also influence ecosystem change. American Indian Tribes actively used fire in prehistoric and historic times to alter vegetation patterns. In short, people and ecosystems evolved with the presence of fire. 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 protect both public and private investments and to prevent what was considered the destruction of forests, savannahs, shrublands, and grasslands. 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.

CURRENT PERSPECTIVE

There is growing recognition that past land-use practices, combined with the effects of fire exclusion, can result in heavy accumulations of dead vegetation, altered fuel arrangement, and changes in vegetative structure and composition. When 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. When this occurs, surface fires may ignite more quickly, burn with greater intensity, and spread more rapidly and extensively than in the past. On the other hand, uses such as grazing can sometimes reduce fine fuels, precluding periodic surface fires that would typically burn in these areas. Without fire, encroachment of woody species may occur in some savannah and grassland ecosystems.

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 surface to spread into the trees and become a crown fire. In addition to structural changes, vegetation modification resulting from fire exclusion can cause 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 sometimes 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 can adversely affect other important forces within the ecosystem, such as insects and diseases, wildlife populations, hydrologic processes, soil structure and mineralogy, and nutrient cycling. Any of these components, if altered greatly by unusually severe fire, can seriously diminish the long-term sustainability of the land. In addition, effective protection from, and control of, these large fire events will likely be much more difficult.

Paradoxically, rather than eliminating fire, exclusion efforts, combined with other land-use practices, have in many places dramatically altered fire regimes (circumstances of fires, including frequency, intensity, and spatial extent) 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 wildland fire and adopt land management practices that integrate fire as an essential ecosystem process.

While other techniques, such as mechanical removal, may be used to reduce heavy fuels, they cannot always replace the ecological role that fire plays. Fire not only reduces the build-up of dead and downed fuel, it performs many other critical ecosystem functions. Fire can recycle nutrients that might otherwise be trapped for long periods of time in the dead organic matter that exists in many environments with slow rates of decay. It can also stimulate the production of nutrients and provide the specific conditions, including seed release, soil, light, and nutrients, that are critical for the reproduction of fire-dependent species. For more extensive information about the ecological role of fire and current ecosystem conditions, refer to the documents listed in Appendix I.

PLANNING

Although ecological knowledge and theories have evolved 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 within individual agency boundaries and is based on single-program goals that are driven by agency missions and policies. Separate, incompatible planning systems can also preclude the ecosystem perspective in land management planning. This type of planning can result in an inefficient, fragmented, short-term approach to management that tends to ignore broad, interdisciplinary-based, long-term 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 on a landscape scale. One way to break down these barriers 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., fire use versus fire exclusion. In a responsive planning process, management decisions must be monitored, integrated, and supported at each step. In order 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 compatible method of assessing long-term ecological health by ecosystem type.

We must understand and accept the need to integrate wildland fire into land management plans and activities, and this integration must be reconciled with other societal goals, e.g., maintaining species habitat, producing commodities, 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 and prioritizing simultaneous goals. Land management and regulatory agencies must interact and collaborate and must rely upon a continuous process of public involvement and feedback to achieve a balance of ecosystem and other societal goals.

REINTRODUCTION OF FIRE

Several factors hinder the reintroduction of wildland 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 some ecosystems, little or no information is available about disturbance regimes, historical fire patterns, response to past management actions, and likely future responses. Information needed to reintroduce fire includes a well-planned, large-scale scientific assessment of current ecosystem conditions and the consequences of various management strategies.

Another constraint is that Fire Management Plans are not in place in all areas, thus precluding managers from taking advantage of the management options presented by wildland fires. Planning should consider all wildland fires, regardless of ignition source, as opportunities to meet management objectives. In areas where planning has determined a range of appropriate management actions for the use of wildland fire, there will be more opportunities to safely and cost-effectively reintroduce fire. This approach will also make suppression resources available for the highest-priority situations. All wildland fire management actions will continue to be based on values to be protected, fire and land management objectives, and environmental conditions. In many situations, such as fires occurring in highly developed areas or during particularly severe weather, immediate initial attack and prompt suppression will still be required.

An additional contributing factor is the increasing human settlement that encroaches upon wildlands (wildland/urban interface). Such development divides and fragments wildlands, making it difficult to apply ecosystem-based management strategies. This increases the risk of escaped fires and generates complaints about

smoke and altered scenic values. In these areas, the use of fire may be limited in spatial extent and, even where fire introduction is desirable, progress may be slow.

Smoke is perceived as a factor that may affect land managers' ability to use larger and more frequent wildland fire for restoration and maintenance of fire-dependent ecosystems. Several Federal air quality programs under the Clean Air Act (CAA) regulate wildland fire emissions. The Environmental Protection Agency (EPA) is required to set air quality standards for pollutants that affect public health. States are then required to submit plans to ensure measures will be taken to meet those air quality standards. Local areas may also develop plans that may be more (but not less) restrictive than State and national standards.

In areas where air quality standards are violated, measures must be taken to reduce emissions. Emission control measures for fires that are used to meet management objectives include smoke management techniques that minimize and disperse smoke away from smoke-sensitive areas. Smoke from fires may also cause standards to be exceeded in communities miles away from the source. Currently, prescribed fires are not considered to be a significant cause of nonattainment, but with increased burning to reduce fuels and restore or maintain ecosystem health, this may change. In many areas, fire managers and local air quality authorities have successfully worked together to accomplish fire and land management objectives, resolve conflicts with smoke emissions, and avoid violation of air quality standards. With guidance from the national level to provide consistent interpretation, further cooperation at the local level will help to achieve a balance of air quality and other ecosystem goals.

Fire is a unique tool that land managers can use to complement agency missions and land management objectives. 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. Before fire is applied on an ecosystem-scale, an understanding of historical fire regimes, as well as a knowledge of the current conditions of each system, is needed. Then 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.

EDUCATION

For many people, 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 and the scientific concepts that support it are often lost by internal and external audiences. A comprehensive message is needed that clearly conveys the desired balance of avoiding fires with adverse effects while simultaneously increasing ecologically beneficial fire.

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 more healthy end. Full agency commitment to internal and external information and education regarding fire and other ecological processes is needed. Adaptive and innovative fire and land management is severely limited when agency employees and the public misunderstand or remain skeptical about the role of fire.

THE TASK

The task before us — reintroducing fire — is both urgent and enormous. Conditions on millions of acres of wildlands increase the probability of large, intense fires beyond any scale yet 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.

RECOMMENDATIONS: PLANNING

GOALS

- Fire management goals and objectives, including the reintroduction of fire, are incorporated into land management planning to restore and maintain sustainable ecosystems. Planning is a collaborative effort, with all interested partners working together to develop and implement management objectives that cross jurisdictional boundaries.
- Clearly defined fire management goals, objectives, and actions are developed and updated in comprehensive Fire Management Plans. The use of fire to sustain

ecosystem health is based on sound scientific principles and information and is balanced with other societal goals, including public health and safety, air quality, and other specific environmental concerns.

ACTIONS

Federal agencies will:

- use a compatible fire management planning system that recognizes both fire use and fire protection as inherent parts of natural resource management; this system will ensure adequate fire suppression capabilities and support fire reintroduction efforts.
- develop Fire Management Plans for all areas subject to wildland fires. These plans will:
 - use information about fire regimes, current conditions, and land management objectives as a basis to develop fire management goals and objectives.
 - address all potential wildland fire occurrences and include a full range of fire management actions.
 - use new knowledge and monitoring results to revise fire management goals, objectives, and actions.
 - be linked closely to land and resource management plans.
- develop research programs that provide a sound scientific basis for the integration of wildland fire into land-use and resource management.
- create a system for coordination and cooperation among land managers and regulators that explores options within existing laws to allow for the use of fire to achieve goals of ecosystem health while at the same time protecting individual components of the environment, human health, and safety. This system will:
 - allow for early collaboration during the process of developing new land management plans and provide a mechanism for incorporating input as existing plans are implemented or revised.

- encourage land managers and regulators to enter into agreements that set forth the actions each will take before and during the time fire is reintroduced in their area of responsibility.
- continue ongoing efforts to jointly develop compatible, ecosystem-based, multiple-scale, interagency land management plans that involve all interested parties and facilitate adaptive management. This process will:
 - fully integrate ecological concepts that consider long-term dynamics and cross agency boundaries.
 - effectively incorporate current fire-related information, including scientific knowledge, risk assessment, social and economic concerns, and public health considerations.
 - ensure that existing land management plans are revised or updated to address the above actions.

**RECOMMENDATIONS:
REINTRODUCTION OF FIRE**

GOAL

- Based upon sound scientific information and land, resource, and fire management objectives, wildland fire is used to restore and maintain healthy ecosystems and to minimize undesirable fire effects. Fire management practices are consistent for areas with similar management objectives, regardless of jurisdiction.

ACTIONS

Federal agencies will:

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

- where fire does not need to be reintroduced (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); determine appropriate, ecologically sound alternatives for these areas.
- where treatment with fire is essential or potentially effective (fire is needed to improve resource conditions or reduce risk and hazard).
- jointly implement ecosystem-based fire management programs to accomplish resource or landscape management objectives when consistent with land management plans. These programs will:
 - strive to maintain the long-term integrity of the natural resources and minimize the undesirable effects of fire.
 - address the highest-priority needs in ecosystem assessment, monitoring, and management and determine the appropriate scope of fire use, consistent with historical fire regimes, including extent, timing, and risks and consequences.
 - use existing tools and develop new ones to address today's more fragmented landscapes and to enhance our ability to manage wildland fires of varying size and intensity.
 - illustrate the management actions and their results by establishing or expanding fire management demonstration areas.
- conduct a collaborative fire research program to improve the predictive understanding of wildland fire and its relationship to ecosystem dynamics and to strengthen the technological capabilities and organizational framework necessary to sustain the role of fire in natural ecosystems.

RECOMMENDATIONS: EDUCATION

GOAL

- 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. As a result, informed audiences participate fully in the land and fire management planning processes.

ACTIONS

Federal agencies will:

- establish an interdisciplinary team that includes all agencies, regulators, and other partners to design a consistent fire-role and -use message for decision makers and the public. This message will:
 - describe and clearly explain issues such as ecosystem condition, risks, consequences (including public health impacts), and costs in open dialogue with internal and external constituents.
 - be designed to maximize open communications and reduce polarization among conflicting interests regarding the use of fire.

- build on existing interagency efforts to develop and implement a strategic plan that educates the general public and agency personnel about the role of fire. As part of this effort, agencies will:

- develop and widely transmit a clear message about the important role of fire as a natural process and the risks and consequences of its use and exclusion.

- integrate this message into existing agency communication systems, agency and partner initiatives (such as forest health, ecosystem management, etc.); and all external outreach efforts, including television, magazines, newspapers, and public meetings.

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

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

USE OF WILDLAND FIRE



Igniting a wildland fire using drip torches is an effective resource management tool. Here, fire is being used to restore critical wildlife habitat. (Photo courtesy of National Interagency Fire Center.)

SITUATION

BACKGROUND

The use of wildland fire to accomplish land and resource management objectives is referred to as prescribed fire, 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. Wildland fire may be used to accomplish a number of resource management purposes, from the reduction of fuel hazards to achieving specific responses from fire-dependent plant species, such as the regeneration of aspen. Often, multiple fire protection and resource management benefits are achieved concurrently.

Prescribed burning is a well-established practice utilized by public and private land managers. In order to effectively use prescribed fire, land managers must prepare comprehensive burn plans. Each plan specifies desired fire effects; weather conditions that will result in

acceptable fire behavior; and the forces needed to ignite, hold, monitor, and extinguish the fire. Generally, 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 plant communities and terrain conducive to the use of 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.

Recent fire tragedies in the West have helped to focus attention on the need to reduce hazardous fuel accumulations. Many areas are in need of immediate treatment of both live and dead vegetation to prevent large-scale, high-intensity fires and to maintain their sustainability as healthy ecosystems. Fuel treatment may be achieved by mechanical, chemical, biological, and manual methods, including the use of fire. Strategic landscape-scale fuel management and fire-use planning, often integrating a variety of treatment methods, will be necessary to cost-effectively reduce fuel hazards to acceptable levels and to achieve both ecosystem health and resource benefits. Both naturally occurring fuels and hazardous fuel accumulations resulting from resource management and land-use activities must be addressed.

IMPLEMENTATION

Managing for landscape health requires expansion of cooperative 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 if this is not achieved. 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 environmental, 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. Increased use of

wildland fire may also increase public exposure to smoke and reduced visibility. Understanding of the trade-offs involved is an important educational objective.

Recent concerns about potential climate change caused by increased carbon dioxide in the atmosphere have also raised questions about the potential impacts of increasing the use of fire. Current analysis suggests that the carbon dioxide released from prescribed fires is ultimately removed by the subsequent regrowth of vegetation. Lower-intensity prescribed fires emit far less carbon dioxide than high-intensity fires. Therefore, if the occurrence of high-intensity fires is reduced through an increase in prescribed burning, a net reduction in carbon dioxide emissions will be achieved. On the other hand, the effects of global warming and increased carbon dioxide on fire occurrence are still being determined. Possibilities include higher rates of fuel accumulation and a warmer climate with more days that favor the occurrence of wildland fire. This may mean it is even more important to increase the use of fire for ecosystem management and hazard fuel reduction. The policies described in this report are consistent with current concerns about climate change. In any case, information about changes in the atmosphere should be incorporated into the preplanning required by these policies.

ADMINISTRATIVE BARRIERS

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

Current direction on hazard-duty pay also tends to limit the number of prescribed fire professionals. This direction restricts fire-related hazard pay to fire suppression 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, from smoke and other environmental factors than firefighters engaged in suppressing wildfire.

Retirement benefits have also been a factor in career choices involving prescribed fire. Recently, the BLM 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, prescribed fire activity qualifies only for secondary coverage, resulting in a career choice limitation.

To provide optimal biological benefit to forests and rangelands, the timing and intensity of prescribed fire used for ecosystem maintenance should resemble a natural occurrence. Historically, fires were often very large; however, current land-ownership patterns, development, and the processes of funding and conducting 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. Further, planning, budgeting, and accomplishment-reporting processes do not encourage managers to plan large projects with multiple benefits, even when located entirely on agency-administered lands.

Lastly, 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 for more than \$2,500 in damages 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, adversely affecting cooperation.

RISK MANAGEMENT

Because of the potential for unintended consequences, prescribed fire is one of the highest-risk activities that Federal land management agencies engage in. Escaped prescribed fires can result from poorly designed or poorly executed projects; 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 an unfortunate consequence of unplanned events.

Although fire is used to accomplish resource objectives in many areas of the United States, other than in the South it is rarely used enough to improve ecosystem health or to reduce fuel hazards on a landscape scale. One reason for this is a lack of commitment to the use of fire. 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 risk of potential negative consequences associated with prescribed fire. Differences of opinion concerning the effect of fire on specific resources, such as cultural resources, water quality, air quality, and certain flora and fauna, can also impede the use of fire as a management tool.

**RECOMMENDATIONS:
IMPLEMENTATION**

GOALS

- The use of wildland fire is accepted as an essential process in a fully integrated program to improve forest and rangeland health and to maintain wildland ecosystems.
- Wildland fuels are managed at levels consistent with wildland fire protection and resource management objectives identified in land and resource management plans.
- Agencies collectively and cooperatively develop and maintain an organization that can effectively plan and safely implement prescribed fire and fuel management programs.

ACTIONS

Federal agencies will:

- jointly develop programs to plan, 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. Seek opportunities to enter into partnerships with Tribal, State, and private land managers to achieve this objective where appropriate.
- require appropriate treatment of fuel hazards created by resource-management and land-use activities.

- 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 standards.
- train and maintain a qualified and adequate work force to plan and implement interagency prescribed fire projects safely and effectively, and make these personnel available when needed.
- jointly develop simple, consistent hiring and contracting procedures for prescribed fire activities.
- Conduct research and development on fuel treatment alternatives and techniques.

**RECOMMENDATIONS:
ADMINISTRATIVE BARRIERS**

GOAL

- Administrative procedures support the accomplishment of prescribed burning programs and objectives.

ACTIONS

Federal agencies will:

- 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.
- work with the Office of Personnel Management to acquire authority for hazard pay to compensate employees exposed to hazards while engaged in prescribed burning activities.
- clarify that prescribed fire positions qualify for primary coverage under special firefighter retirement and issue appropriate guidance to field offices.

**RECOMMENDATIONS: RISK
MANAGEMENT / SUPPORT**

GOALS

- Risk of escaped prescribed fire is minimized through sound planning and execution.
- 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 for determining the probability of success and/or failure associated with the use of prescribed fire and evaluating potential positive and negative consequences. As a part of this process, the effects of not conducting the project will also be evaluated.

- jointly develop tools to identify, assess, and mitigate risks from prescribed fires.

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

- reevaluate prescribed burn planning and execution requirements to ensure adequacy of direction without unnecessary constraint.

Secretaries of the Interior and Agriculture will seek legislation providing for prompt reimbursement to private landowners for damages resulting from escaped prescribed fires originating on Federal lands.

PREPAREDNESS AND SUPPRESSION



Helicopter with bucket fighting a wildland fire. Aircraft and other mechanized equipment are important tools in suppressing and managing wildland fire. (Photo courtesy of National Interagency Fire Center.)

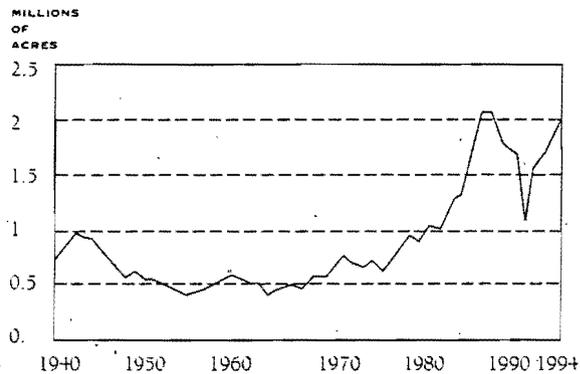
SITUATION

The business of suppressing wildland fires is costly, time-consuming, and often dangerous to firefighters and the public. Wildland fires occur unexpectedly and create an emergency in which firefighters race to minimize harm to valuable resources or property. Despite public expectations, when the combination of excessive fuel build-up, topography, extreme weather conditions, multiple ignitions, and extreme fire behavior occurs, it is impossible to immediately suppress every wildland fire. Firefighters' safety and their ability to contain and limit the spread of fires can only be ensured by preparing well ahead of time, thoroughly examining various possibilities of fire numbers and sizes, and developing contingency plans to cope with them.

Our ability to plan for and suppress fires is negatively impacted by successes in the past. Almost one hundred years of fire suppression, coupled with

other resource management activities, has altered the landscape and resulted in millions of acres of forests and rangelands at extremely high risk for devastating fires to occur. Already we are seeing the effects through an increase in the number of fires and acres burned, as shown in the table below. This trend, combined with a number of existing policies and procedures, impacts all aspects of interagency preparedness and suppression, including safety, planning, priority setting, and organizational response capability. In some cases, agencies are individually attempting to solve these problems. However, in light of diminishing work forces and funding, it is critical that Federal wildland fire management agencies work together and with cooperators to arrive at common solutions and successful strategies.

WILDFIRE TRENDS - ELEVEN WESTERN STATES
AVERAGE ACRES BURNED, 1940-1994



SAFETY LEADERSHIP

The environment of numerous and complex wildland fires and overextended firefighting resources has led to increased potential for compromising firefighter safety. Agency administrators and fire managers struggle to get the job accomplished, and while they focus on suppressing fires, sufficient attention may not be paid to safety. They may not provide adequate oversight to make sure employees are in good physical condition and adequately rested so they are mentally and physically prepared for the challenge of firefighting. As suppression actions increase, it becomes more difficult to ensure that all the necessary information to make good firefighting strategic decisions is shared.

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 rarely 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 and safety failures. When fires become emergencies, public and political pressures may take precedence over suppression plans that are based on values to be protected and the best use of available firefighting resources.

VALUES TO BE PROTECTED AND PREPAREDNESS PLANNING

Values at risk, or more clearly, values to be protected are a primary consideration when determining strategies for large-fire suppression. Only anticipated fire suppression costs and losses in values have been considered in these calculations, because in suppression operations, the objective as predetermined in land management plans and Congressional budget appropriation language is to suppress wildfires at the least total cost. While fire benefits have been considered in planning the fire suppression resources for budget allocations, positive benefits of fires have not been factored into the formulation or choice of suppression strategies.

Use of values-to-be-protected criteria in fire suppression has not been consistent across agencies, and the definition is too narrow without considering fire benefits as well. These practices contribute, sometimes significantly, to inflated fire suppression costs. The values-to-be-protected concept should be revised to reflect current recognition of the positive benefits of fire as compatible with agency land management 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.

Preparedness planning is critical to ensure that imminent fire situations are recognized, that 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. Another critical aspect of preparedness planning is development and implementation of wildland fire prevention plans. The objective of these plans, as demonstrated by the message of Smokey Bear over the past 50 years, is to prevent unauthorized ignition of wildland fire.

PROTECTION PRIORITIES

Standard criteria have been established to guide fire suppression priorities. These have been 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, the second priority of property over natural or cultural resource values is being questioned by fire managers and others. It limits managers' flexibility to consider low-value properties relative to higher-valued natural or cultural resources. Property protection 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 in assessing the relative values of property and natural/cultural resources in order to achieve economic efficiency.

PROTECTION CAPABILITY

Differences in budget processes among agencies inhibit full cooperation. 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. This requires shifting funds from emergency suppression to pre-positioning resources. Differences in the use of emergency firefighting appropriations among agencies also inhibit cooperation on prescribed fire actions. Standardization of budget processes and solution of some of these budget barriers will help to incrementally improve fire suppression capabilities.

**RECOMMENDATIONS:
SAFETY LEADERSHIP**

GOAL

- Every firefighter, every fireline supervisor, every fire manager, and every agency administrator takes positive action to ensure compliance with established safe firefighting practices

ACTIONS

Federal agencies will:

- establish fire management qualifications based on program complexity, and staff existing and future agency administrator and fire management vacancies with individuals who meet these qualifications and who are committed to accomplishing the total fire management program.
- develop appropriate tools (training, handbooks, job performance guidelines, planning documents) necessary to assist administrators and fire management personnel to develop and manage a safe and effective fire management program.
- through training, job details, or other methods, increase experience and fire qualifications of agency administrators and fire management personnel.
- enforce a system of accountability to manage a safe and efficient fire management program based on standard job performance requirements. These requirements should include items specifically related to safety and will recognize and reward success and provide disciplinary action for failure.
- establish partnerships with contractors: cooperators, such as rural and volunteer fire departments; and others, which encourage and assist them to adopt and implement Federal standards for training, qualifications, firefighting equipment, personal protective equipment, etc.

**RECOMMENDATIONS:
VALUES TO BE PROTECTED
& PREPAREDNESS PLANNING**

GOAL

- Federal agencies maintain preparedness planning and suppression programs to prevent unacceptable loss from fire. Agencies implement consistent strategies based on estimates of suppression costs commensurate with values to be protected.

ACTIONS

Federal agencies will:

- define values to be protected, working in cooperation with State, local, and Tribal governments; permittees; and public users. Criteria will include environmental, commodity, social, economic, political, public-health, and other values.
- develop long-range interagency wildland fire management objectives, based on values to be protected, across geographic and agency boundaries.
- develop interagency preparedness planning based on established interagency wildland fire management objectives.
- develop interagency strategies to implement preparedness plans. These strategies must consider both initial-attack and extended-attack capability and should include the full range of available cooperator and contractor resources.
- develop consistent language to be included in budget appropriations, enabling the full spectrum of fire management actions on wildland fires.
- work together and with other affected cooperators, groups, and individuals to develop and implement fire prevention plans to prevent unauthorized ignition of wildland fire.

**RECOMMENDATIONS:
PROTECTION PRIORITIES**

GOAL

• Firefighter and public safety is the first priority when managing wildland fire. Federal agencies have established protection priorities that recognize the relative values of property and natural/cultural resources to be protected.

ACTIONS

Federal agencies will:

- provide first for firefighter and public safety. Once people are committed to an incident, those resources become the highest value to be protected and receive the highest management considerations.
- protect property and natural/cultural resources secondary to firefighter and public safety.
- base the second protection priority on the relative values of property and natural/cultural resources when firefighting personnel and equipment are limited.

**RECOMMENDATIONS:
PROTECTION CAPABILITY**

GOAL

• Federal agencies maintain sufficient fire suppression and support capability.

ACTIONS

Federal agencies will:

- use standard criteria to assess overall suppression and support requirements.

- examine and identify, on an interagency basis, employee availability at each organizational level, based on fire qualifications and other necessary skills to provide needed suppression and support. This will include planning for both initial attack and extended attack at the local level.
- develop and utilize, to the maximum extent possible, the concept of closest initial attack forces and interagency staffing for wildland fire suppression and support, optimizing the use of the Federal and non-Federal work force. Qualified contractors are a component to be considered in suppression and support planning.
- use an analysis and decision making process that considers, 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.
- develop interagency severity plans to provide increased fire suppression capability in emergency situations, including accessing additional resources, pre-positioning resources, and training emergency firefighters.
- develop a standard interagency planning, budgeting, and staffing process.

WILDLAND/URBAN INTERFACE PROTECTION



Fire threatening homes in the wildland/urban interface. Flammable building materials and homes surrounded by dense vegetation create a dangerous fuel source and hazardous conditions. (Photo courtesy of National Interagency Fire Center.)

must take action on these issues now. To do anything less is to guarantee another review process in the aftermath of future catastrophic fires.

CURRENT STATUS

Wildland/urban interface protection is important to the Federal government because Federally managed lands are located adjacent to or among State lands and developed private lands. Past fire management practices have contributed to a build-up of highly flammable, decadent fuels on those Federal lands that are adjacent to private residential developments. The result is that fire hazards and risks, as well as the population, are increasing in the wildland/urban

interface adjacent to many Federal 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. Federal firefighting resources may also be asked to provide assistance where there is no direct threat to Federal lands, such as occurred on Long Island, New York, in August 1995. However, with limited amounts of money, time, equipment, and people, a fire burning in the interface currently demands the protection of scattered structures at the sacrifice of natural resources elsewhere. This represents a significant fiscal liability to the Federal treasury, State and local governments, and insurance carriers. There are often large unreimbursed costs to property owners as well. In addition, Federal response in the interface creates a safety concern, "spreading Federal firefighters thin" and placing them in situations for which they may not be adequately trained or equipped.

Recent fires such as the 1994 Tye fire in Washington, the 1994 Chicken and Blackwell/Corral 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.

SITUATION

BACKGROUND

The wildland/urban interface is defined as the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels (SAE July 1990). It is synonymous with the term "intermix."

In reviewing current conditions, it is evident that wildland/urban interface fire protection and prevention is not a new problem, nor are the recommended solutions newly conceived. Many of the reports and recommendations generated in the aftermath of the wildfires that destroyed homes are very similar in content and substance. For example, documents created as early as 1960 and through the 1970's and 1980's all contain the same goals, i.e., "create a uniform hazard rating system" or "wildland fuels must be managed near structures."

The problem is not one of finding new solutions to an old problem but of implementing known solutions. Deferred decision making is as much a problem as the fires themselves. If history is to serve us in the resolution of the wildland/urban interface problem, we

Nearly every State has experienced wildland/urban interface fire losses, including the Pine Barrens in New Jersey, Piedmont in North and South Carolina, Palmetto in Florida, and Jack Pine in the Lake States.

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 wildfire destroyed more than 9,000 homes and resulted in the deaths of many firefighters and private citizens. It is estimated that in 1994 \$250 - \$300 million of Federal wildland fire suppression dollars were spent in protecting the wildland/urban interface. Since fiscal year 1970, the Federal Emergency Management Agency (FEMA) has provided approximately \$64 million in fire suppression assistance grants to States for the suppression of fires on publicly or privately owned forests or grasslands that have threatened destruction that would constitute a major disaster.

Recent reports such as the National Commission on Wildfire Disasters Report (1993) and Fire In Rural America (1992) document the continued expansion 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.

Fire protection problems in the wildland/urban interface are very complex. Complicated barriers must be overcome to address them. These barriers include legal mandates, zoning regulations, fire and building codes, basic fire protection infrastructure, insurance/fire protection grading and rating systems, environmental concerns, and Fire Protection Agreements. Political, social, and psychological factors further complicate the problems. There is no one simple solution. Leadership and cooperation are essential.

The autonomy and multiple mandates of Federal agencies contribute to inconsistent and sometimes conflicting policies and procedures. Federal, Tribal, State, and local agencies, as well as the private sector, are all facing the wildland/urban interface protection issue. Even though past reports, reviews, and mitigation plans have articulated the problems and recommended solutions, many of the problems still have not

been solved. We can no longer continue to study, but must have a commitment to carry out solutions.

The ability of the Federal agencies to provide leadership for solving interface protection problems is complicated because responsibilities extend beyond the Departments of the Interior and Agriculture. FEMA is directly responsible for providing Fire Suppression Assistance Grants and, in certain cases, major disaster assistance and hazard mitigation grants in response to fires. Fire Suppression Assistance Grants are provided to a State for the suppression of a forest or grassland fire on public or private lands that threatens to become a major disaster. The grants are provided to protect life and improved property and may include funds for equipment, supplies, and personnel. A Fire Suppression Assistance Grant is the form of assistance most often provided by FEMA to a State for a fire. The grants are cost-shared with States. FEMA's U.S. Fire Administration (USFA) provides public education material addressing wildland/urban interface issues, and the USFA's National Fire Academy provides training, primarily for structural fire service organizations. The Environmental Protection Agency (EPA) has regulatory responsibility concerning air quality, smoke management, and other environmental issues. The Department of Defense has direct suppression responsibility on military reservations and may also be tasked to provide suppression assistance.

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 compatible actions in the wildland/urban interface. Only the National Park Service has 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 uncertain about their role. Further, personnel are often inadequately trained and equipped, but in practice they are expected to provide assistance.

Uncertainty over the role of Federal land management agencies in the wildland/urban interface is a barrier to effective fire protection. This was validated by public comments received during the public scoping process and from the comments received during the Draft Report comment period for this policy review. It is also apparent in current policies of the Federal land management agencies. There is a dichotomy between Federal policy

and expectations. 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." This causes confusion and operational inconsistency both before and during suppression efforts.

Current Federal agency wildland/urban interface policies are limited to providing emergency assistance and training and cooperating in prevention efforts. But property owners and elected officials generally have a broader perception of Federal responsibility and consequently oppose Federal government withdrawal from wildland/urban interface fire protection.

Current Federal policy that protection priorities are (1) life, (2) property, and (3) resources limits flexibility in decision making when a wildfire occurs. 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. Federal agencies' capability to fulfill 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 when they are placed in a position of operating beyond their training, experience, and equipment capabilities. In addition, after-action reports indicate that fire suppression resources are often "over-mobilized," which results in inefficient use and under-utilization. Generally, in emergency situations, protection agencies respond with more suppression forces than can be effectively managed in the interface.

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. 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 Tribal governments. Performance qualifications in the wildland/urban interface are divided between the structural and wildland fire certification systems, resulting in inconsistencies.

Primary responsibility for wildland/urban interface fire prevention and protection lies with property owners and State and local governments. Property owners have responsibility for compliance with State statutes and local regulations where they exist. These primary responsibilities should be carried out in partnership with the Federal government and private sector.

PUBLIC PERCEPTION OF RISK AND FIRE PREVENTION

In general, the public does not perceive a risk from fire in the wildland/urban interface. Further, 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 (Beebe and Omi, 1993). 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.

Local incentives to property owners, State and local organizations, and the private sector are an effective way to reduce the overall involvement of the Federal government in the wildland/urban interface. The Federal government itself has few mechanisms to encourage incentives to resolve the problems in these areas. There are two programs delivered through the USDA Forest Service: Rural Fire Prevention and Control (RFPC) and Rural Community Fire Protection (RCFP) that provide cost-share grants to Rural Fire Districts. The annual Federal share of these programs has remained relatively stable, totaling approximately \$16 million and \$3 million, respectively. Renewed focus of these programs, emphasizing local solutions, is encouraged.

Effective fire prevention in the wildland/urban interface is critical because of the values at risk. Traditional fire prevention campaigns have not recognized the beneficial role of fire in the environment. However, wildland agencies are beginning to incorporate this message, while structural fire prevention activities generally exclude wildland fire and thus depict all fire as undesirable. This sends conflicting messages to the public, particularly where prescribed fire is a desirable fuels management tool in wildland/urban interface protection.

It has been suggested that adjustments to insurance company premiums are the key to providing mitigation activities or to reducing wildland/urban interface hazards. Insurance companies are not in a

position to provide large economic incentives to address issues locally through a change in the existing grading and rating criteria or by supporting prevention or hazard mitigation activities. There is poor communication within and among 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. Currently, Insurance Service Offices/Commercial Risk Services (ISO/CRS) grading and rating criteria do not reflect wildland/urban interface hazards or protection needs at specific risk locations. Because fire risk constitutes only a relatively small portion of the homeowner's insurance cost, premium-reduction incentives 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.

It has also been suggested that Federal costs could be reduced by billing property owners for suppression costs. While Federal agencies may have authority to seek reimbursement for fire suppression services in the wildland/urban interface, the probability of successful collection is extremely low. This is due to broad tort laws related to responsibility and negligence, existing State fire laws regarding point of fire origin and determination of suppression responsibility, and what constitutes reasonable action and appropriate hazard mitigation. The corollary is that the government can be sued for fires that originate on Federal land and burn onto private property.

The current fire protection infrastructure, such as roads and water-delivery systems, is often inadequate for property and resource protection during fast-moving wildfires. The cost of improving the existing infrastructure would be staggering. During major fire operations in the wildland/urban interface, most structure loss occurs in the first few hours of an incident. This is often due to a lack of fire-safe vegetation management practices. These losses will continue until appropriate access, landscaping, and construction standards are implemented and enforced.

HAZARD AND RISK ASSESSMENT PROCESS

Without a consistent process that assesses wildland/urban interface hazard and risk, values, and loss experience, it is difficult to prescribe appropriate mitigation measures. State and local communities perceive determination of hazard and risk – as well as regulation in response to these issues – as a local prerogative. Further, that regulation, through ordinances, is also determined by local governments. A nationally adopted hazard assessment model would likely lead to the implementation of options and alternatives that can be utilized in fire and building codes for new and existing construction. Developers, builders, and property owners generally oppose standards because they fear potential building restrictions and higher costs. Wildland/urban interface maps could be developed based on this uniform criteria.

MODEL PROGRAMS

Some areas of the country are facing wildland/urban issues collaboratively. These are model programs that include local solutions. Summit County, Colorado, has developed a hazard and risk assessment process that mitigates hazards through zoning requirements. In California, the Los Angeles County Fire Department has retrofitted more than 100 fire engines with fire retardant foam capability, and Orange County is evaluating a pilot insurance grading and rating schedule specific to the wildland/urban interface. All are examples of successful programs that demonstrate the value of presuppression and prevention efforts when combined with property-owner support to mitigate hazards within the wildland/urban interface. The International Fire Code Institute (IFCI) is developing an "urban-wildland" fire code.

FIRE PROTECTION AGREEMENTS

Current Federal agency wildland/urban interface protection policies do not lay out a clear, compatible, and unified role for the Federal land managing agencies. Consequently, some Federal agencies perceive they bear the heaviest burden in Fire Protection Agreements. Some administrators enter into agreements committing Federal firefighters, equipment, and money without understanding the implications of their actions. Still others are confused about the differences among Federal mutual-aid assistance, Fire Protection Agreements, and FEMA fire suppression assistance grants to States for declared fires.

PARTNERSHIPS

The key to solving the total wildland/urban interface problem rests with development of a unified, collaborative partnership among Federal agencies; Tribal, State, and local governments; and the private sector. This partnership should identify risks, hazards, values, and responsibilities. To be successful, the emphasis must be at the local level, supported by the States and coordinated with the Federal agencies. This fire protection and prevention issue cannot be solved by any one entity acting independently. Meanwhile, these long-term issues do not preclude Federal agencies from developing a compatible policy for wildland/urban protection on the lands they administer.

PROPOSED ROLE OF FEDERAL AGENCIES

The proposed role of the Federal land managing agencies in the wildland/urban interface is reducing fuel hazards on the lands they administer; cooperating in prevention and education programs; providing technical and financial assistance; and developing agreements, partnerships, and relationships with property owners, local protection agencies, States, and other stakeholders in wildland/urban interface areas. These relationships focus on activities before a fire occurs, which render structures and communities safer and better able to survive a fire occurrence.

The following protection priorities proposed in this report will guide fire planning and operations in the wildland/urban interface: 1) life and 2) property and natural/cultural resources based on relative values to be protected, commensurate with suppression costs.

Under the proposed policy, in emergency responses, the primary role of the Federal government is wildland firefighting. The Federal agencies may assist local protection agencies within the scope of Federal firefighters' training and experience. Often this involves working among structures. In these cases, attempting to protect the exterior of structures from fire is inevitable. Agreements should clarify respective roles and responsibilities regarding fire suppression in the wildland/urban interface. Federal, State, Tribal, and local agencies must share in the cost and allocation of suppression resources. The Federal government does not bear this responsibility alone.

In order to fulfill this proposed role, there must be training, qualifications, and equipment performance

standards. Standards must be institutionalized within existing training curricula, qualifications systems, and equipment performance criteria.

In support of others, the role of FEMA in the wildland/urban interface is to encourage comprehensive disaster preparedness plans and programs, increase the capability of State and local governments, and provide for a greater understanding of FEMA's programs at the Federal, State, and local levels. FEMA provides Fire Suppression Assistance to States in response to fires on public or private land that threaten to become a major disaster, encourages the development and implementation of viable multi-hazard mitigation measures, and provides training to clarify FEMA's programs.

FEMA administers the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), which may provide assistance in response to a fire. First, a major disaster may be declared by the President when any natural catastrophe causes damage of sufficient severity and magnitude to warrant major disaster assistance. Such assistance supplements the efforts and available resources of States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused by the event. Second, Fire Suppression Assistance Grants may be provided to a State for the suppression of a forest or grassland fire that threatens to become a major disaster on public or private lands. These grants are provided to protect life and improved property and may include funds for equipment, supplies, and personnel. Third, following a major disaster declaration, the FEMA Hazard Mitigation Grant Program provides for long-term hazard mitigation projects and activities to reduce the possibility of damages from all future fire hazards and to reduce the costs to the nation for responding to and recovering from the disaster. States must have an approved hazard mitigation plan in place to receive either a Fire Suppression Assistance Grant or a Hazard Mitigation Grant.

The USFA serves to provide information to the public and training and standardization for structural fire service organizations. It is a member of the National Wildfire Coordinating Group's (NWCG) Wildland/Urban Interface Steering Committee and provides impetus to continue programs that address the wildland/urban interface issue.

**RECOMMENDATIONS:
RESPONSIBILITY**

GOALS

- Wildland/urban interface fire protection policies are compatible among Federal agencies and promote partnerships with Tribal, State, and local governments and the private sector.
- Federal agencies address wildland/urban interface protection needs occurring on and adjacent to Federal lands through collaborative planning, analysis, and cooperative action across agency boundaries.

ACTIONS

Federal agencies will:

- adopt an operational role in the wildland/urban interface that includes wildland firefighting, hazard fuels reduction, cooperative prevention and education, and technical assistance.
- identify and fund, on a cost-share basis, high-priority fuels management activities on Federal lands adjacent to wildland/urban interface areas identified through a fire protection assessment process that considers relative values to be protected. These activities may involve adjacent non-Federal lands.
- lead by example in utilizing fire-safe standards at Federal facilities.

**RECOMMENDATIONS:
PREPAREDNESS**

GOALS

- Fire Protection Agreements and partnerships are developed, approved, and promoted to clarify responsibilities and to provide for pre-fire hazard and risk mitigation activities and suppression preparedness.
- Firefighters are properly trained and equipped to ensure firefighter safety during wildland/urban interface operations.

ACTIONS

Federal agencies will:

- ensure that all wildland/urban interface areas are covered by Fire Protection Agreements; renegotiate existing agreements as needed to reflect a Federal

responsibility that is compatible with Federal policy and to ensure that State and local responsibilities are apportioned appropriately. Agreements will address all partners in these areas.

- incorporate wildland/urban interface considerations into agreements, operating plans, land management plans, and agency Fire Management Plans.

- charge the National Wildfire Coordinating Group with:

- identifying specialized skills and training that are needed by both wildland and structural fire agencies in the interface and incorporating those requirements into the Wildland Fire Qualification System to provide for safe and efficient operations in the wildland/urban interface.

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

- implementing training through inter-agency systems and joint training activities and augmenting fire training not available at the State and local levels.

- identifying and implementing equipment standards for wildland/urban interface operation.

- identifying and establishing a data-collection mechanism, in coordination with Tribal, State, and local governments; insurance industry; National Fire Protection Association; and others, to better assess the nature and scope of the wildland/urban interface fire problem.

- increase emphasis on cost-share program assistance in the wildland/urban interface through the Forest Service State and Private Cooperative Fire Program, 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.

- educate agency personnel on Federal cost-share and grant programs, Fire Protection Agreements, and other related Federal programs so the full array of assistance available to States and local agencies is understood.
- participate in the development and execution of a national wildland/urban interface fire hazard mapping scoping study in cooperation with Tribal, State, and local governments and the private sector.

RECOMMENDATIONS: PUBLIC EDUCATION

GOAL

- An informed public understands the hazards and risks from fire in the wildland/urban interface and the prevention methods available to mitigate these hazards.

ACTIONS

Federal agencies will:

- increase communication with wildland/urban interface property owners, planners, elected officials, and others through education and awareness messages about the role of fire in wildland ecosystem health, inherent risks in wildland/urban interface areas, available prevention/protection measures, and Federal disaster assistance programs.
- expand programs, curricula, and distribution systems for wildland/urban interface educational materials in cooperation with structural protection agencies.
- support and participate in public education efforts in cooperation with the Insurance Institute for Property Loss Reduction (IIPLR) and fire and building code organizations.

RECOMMENDATIONS: PARTNERSHIPS

GOALS

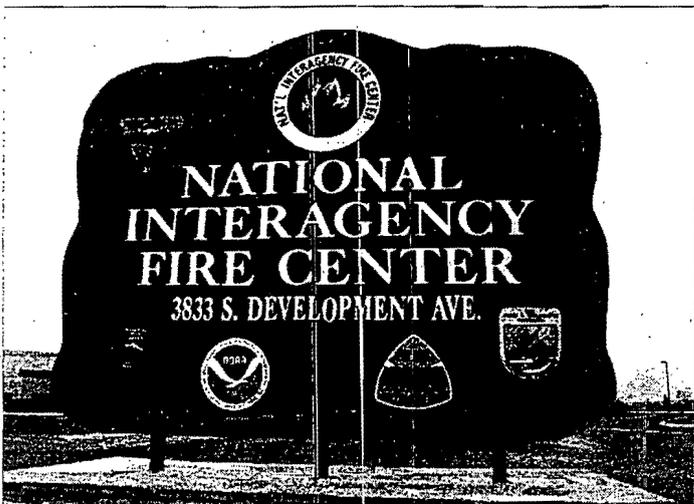
- Public fire protection roles, responsibilities, and activities within the wildland/urban interface are identified through a partnership among Federal, Tribal, State, local, and private entities.
- Responsibility is focused on individual property owners and local, county, and State governments, in cooperation with Federal agencies, to reduce losses within the wildland/urban interface.

ACTIONS

Federal agencies will:

- utilize the recently rechartered National Wildland/Urban Interface Fire Protection Program, which includes the Department of the Interior, Department of Agriculture, FEMA's U.S. Fire Administration, National Association of State Foresters, National Association of State Fire Marshals, and National Fire Protection Association, to focus on wildland/urban interface fire protection issues and actions.
- utilize the Western Governors' Association (WGA) as a catalyst for involving State agencies, as well as local and private stakeholders, with the objective of developing an implementation plan to achieve a uniform, integrated national approach to hazard and risk assessment and fire prevention and protection in the wildland/urban interface.
- work with the States to develop viable and comprehensive wildland fire hazard mitigation plans and performance-based partnerships.

COORDINATED PROGRAM MANAGEMENT



The National Interagency Fire Center in Boise, Idaho, provides national-level wildland fire operational guidance and program coordination. (Photo courtesy of National Interagency Fire Center.)

ception is also exacerbated by agency administrators' broad interpretations and varying levels of implementation of policies requiring support of fire suppression activities.

EFFICIENCY

A growing concern shared by Members of Congress, agency administrators, and the public is the cost of fighting large wildfires. 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 will be

less tolerance for excessive expenditures on large-fire suppression. The costs and benefits of fire suppression activities must be analyzed. Analyses done so far have not resulted in improved practices or reinforced confidence in current suppression strategies.

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, returns on investments in the fire program must be compared with returns in other programs. 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 contribute to reduced suppression costs, and prescribed fire programs must show a return in improved or restored ecosystems or reduced suppression costs.

Agency administrators 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.

SITUATION

The issues grouped in this section reflect the need for consistency across all aspects of fire management. They include accountability; measurement of program efficiency; organization; legal and policy analysis of programs; authorities, responsibilities, and liabilities; weather support; and data management.

ACCOUNTABILITY

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 agency administrators are neither held accountable for failures nor rewarded for accomplishments. This aggravates the perception that agency administrators can give fire management planning, fire suppression, and fire-use 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 agency administrators' involvement 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 to be available for fire-suppression and fire-use duties, limiting forces available for regional or national mobilization, or de-emphasizing fire priorities. This per-

ORGANIZATIONAL ALTERNATIVES

Each Federal agency currently maintains its own separate fire management organization, with qualified employees from other programs available as the fire situation dictates. 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 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. More aggressive examination and implementation of organizational alternatives are hampered by the inability to measure relative efficiencies among these alternatives.

LEGAL AND POLICY ANALYSIS

Fire program activities and the increasing interconnection between fire activities and existing environmental, public health, and tort laws require inter-Departmental legal 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.

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 wildland fire management, weather support has become a critical factor. Fire weather support is critical to firefighter and public safety and protection of public health. Maintaining the current capability as well as enhancing future services is essential to managing a safe and effective fire management program. In addition, longer-term fires demand forecasts beyond the six- to ten-day reliable range.

Fire weather services are provided on request by the National Weather Service (NWS) as a special program in that agency; however, increasing demands for weather support, especially spot fire weather forecasts, coupled with diminished resources in the NWS, have caused demands to exceed the existing capability. Pre-fire season predictions are often requested by managers in order to prioritize workloads. Long-range severity forecasts are commonly needed for

pre-positioning suppression forces, but they are either not available or are unreliable. As agencies seek to increase the use of fire as a management tool, demands for spot fire weather forecasts and other services could far exceed present weather support capability.

DATA MANAGEMENT

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

Agencies have not achieved complete consistency in compiling, managing, and accessing fire information, which prevents a reliable, holistic view of the Federal fire program. Although some data, such as historical wildland fire patterns, response to past management actions, resource values, prescribed fire statistics, and hazard mapping have been collected, it is incomplete, difficult to use, and not portrayed consistently. In some cases, such as the wildland/urban interface, the types of data needed are only now being identified.

RECOMMENDATIONS: ACCOUNTABILITY

GOAL

- Agency administrators and fire program managers conduct the fire management program in accordance with established policies, procedures, standards, and direction.

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 fire management responsibilities.
- provide consistent and adequate training for agency administrators commensurate with their roles and responsibilities 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 trained and certified employees participate in the wildland fire program as the situation demands; employees with operational, administrative, or other skills support the wildland fire program as needed; and administrators are responsible, accountable, and make employees available.

- jointly manage fire use and suppression resources and activities to achieve accomplishment of both programs concurrently.

**RECOMMENDATIONS:
EFFICIENCY**

GOAL

- A system is developed and used to analyze the relative efficiency of specific activities of the fire management program.

ACTION

Federal agencies will:

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

**RECOMMENDATIONS:
ORGANIZATIONAL
ALTERNATIVES**

GOAL

- The wildland fire program is managed through the most efficient and effective organization available.

ACTION

Federal agencies will:

- develop criteria to be used in evaluating alternative fire management organizations. Some examples of criteria include: meeting land management objectives; reintroducing fire in the ecosystem, ensuring cost effectiveness, effectively dealing with wildland/urban interface fire protection, and using partnerships and cooperative relationships.

- use these criteria to analyze, with cooperators, a broad range of organizational alternatives on a national, regional, and local basis. Examples of alternatives include: a single Federal fire organization; contracts with States, private sector, Tribal governments, military, or combinations thereof; and status quo.

**RECOMMENDATIONS:
LEGAL & POLICY ANALYSIS**

GOAL

- Federal agencies have a clear legal foundation for the various fire management policies and programs.

ACTIONS

Federal agencies will:

- jointly identify the legal context for reintroducing fire into wildlands and develop options for accomplishment. Options may include modifying regulations to address ecological processes where appropriate; exercising broader interpretations of policy; or resolving obstacles at regional and local levels, including those on non-Federal lands. Based on this interpretation, 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.
- early in the process, involve public health and environmental regulators in developing the most workable application of policies and regulations.

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 and other appropriate Federal agencies, to conduct and publish 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, Robert T. Stafford Disaster Relief and Emergency Assistance 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.

RECOMMENDATIONS: WEATHER SUPPORT

GOAL

- Sufficient fire weather resources are provided to meet the total wildland fire management program needs.

ACTIONS

- The Secretaries of the Interior and Agriculture, together with the Secretary of Commerce, will assess current and projected requirements for fire weather products necessary to support total wildland fire management program needs.
- 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.

RECOMMENDATIONS: DATA MANAGEMENT

GOAL

- Federal agencies achieve a coordinated Federal fire information database that supports critical decisions related to the fire management program.

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-use statistics and administrative costs.
 - mechanisms to transfer and exchange fire management systems information.
- cooperate with Tribal, State, and local governments to establish a data-collection mechanism to better assess the nature and scope of the wildland/urban interface fire problem.
- take 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 reports to reflect wildland/urban interface fire protection data.
- complete a national wildland/urban interface fire-hazard scoping and mapping study in partnership with the Western Governors' Association; Tribal, State, and local governments; and the private sector.

APPENDICES

APPENDIX I: REFERENCES

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APPENDIX II: WORK GROUPS

FEDERAL WILDLAND FIRE MANAGEMENT POLICY AND PROGRAM REVIEW

STEERING GROUP

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- Rick Gale DOI / National Park Service
- Dr. Robert Streeter DOI / U. S. Fish & Wildlife Service
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- Carrye B. Brown U. S. Fire Administration
- Rich Przywarty NOAA / National Weather Service
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CORE TEAM

Tim Hartzell, Co-Chair	DOI / Bureau of Land Management	Washington, DC
John Chambers, Co-Chair	USDA Forest Service	Washington, DC
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Joe Stutler <i>Preparedness and Suppression Coordinated Program Management</i>	USDA Forest Service	Inyo National Forest Bishop, CA
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Pat Entwistle <i>Public Involvement/Support</i>	Bureau of Land Management	National Interagency Fire Center Boise, ID
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ROLE OF WILDLAND FIRE IN RESOURCE MANAGEMENT

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THE FOREST PLAN

FOR A SUSTAINABLE ECONOMY AND A SUSTAINABLE ENVIRONMENT



PRESIDENT WILLIAM J. CLINTON
VICE PRESIDENT ALBERT GORE, JR.

July 1, 1993
Washington, D.C.

THE FOREST PLAN:

FOR A SUSTAINABLE ECONOMY AND A SUSTAINABLE ENVIRONMENT

President Clinton's Forest Plan for a Sustainable Economy and a Sustainable Environment is a comprehensive and innovative blueprint for forest management, economic development, and agency coordination aimed at strengthening the long-term economic and environmental health of the region. For too long, contradictory policies from feuding agencies have blocked progress, creating uncertainty, confusion, controversy and pain throughout the region. President Clinton's plan reflects his commitment to break the gridlock with a courageous, new approach that balances economic and environmental concerns.

The Forest Plan provides:

- o A sustainable harvest that will allow timber sales and logging based on a scientifically-sound and legally-responsible plan, improving forest management and ending the confusion and uncertainty of past policies;
- o New economic assistance to help local workers, businesses and communities to strengthen the region's economy, create family-wage jobs, offer new economic opportunities and ensure the region's long-term economic health, confronting economic issues ignored by past Administrations;
- o An innovative, new approach to environmental protection focusing on key water supplies and valuable old growth forests, that will once again base forest management on science and a respect for existing law;
- o A comprehensive system of old growth reserves to protect old growth ecosystems;
- o New opportunities for people in the region to participate in decisions regarding management of the nation's forests for the economic and environmental benefits they provide and to help plan for their future;
- o Improved coordination among federal agencies responsible for managing federal lands, ensuring that federal agencies will work together, with state and local officials, with tribes, and with private landowners for the best interests of the people and communities in the region, instead of working against each other, undermining the law and creating gridlock.

BACKGROUND

On April 2 in Portland, Oregon, President Clinton convened the Forest Conference as the first step toward a balanced and comprehensive policy that would recognize the importance of the forests and timber to the economy and jobs in the region and recognize the importance of America's old

growth forests, and the rivers and streams and wildlife that are so much a part of America's national heritage and the region's natural treasures.

The Forest Conference fulfilled a commitment President Clinton made to the people of the Pacific Northwest and Northern California to break the gridlock that has blocked progress on these issues with a comprehensive, innovative, and balanced plan for the region's long-term economic and environmental health.

"The most important thing we can do," President Clinton said in opening the conference, "is to admit, all of us to each other, that there are no simple or easy answers. This is not about choosing between jobs and the environment, but about recognizing the importance of both and recognizing that virtually everyone here and everyone in this region cares about both."

At the Forest Conference, the President, the Vice President, key members of the Cabinet and other top Administration officials talked with people from throughout the region representing a broad range of views and perspectives -- many of them adversaries who had spent more time fighting each other than working together. The Forest Conference provided a first-hand understanding of these issues and how the people in the region have been and will be affected.

At the close of the Forest Conference, President Clinton directed his Cabinet to action with five fundamental principles to guide them. President Clinton said:

- o "First, we must never forget the human and economic dimensions of these problems. Where sound management policies can preserve the health of forest lands, sales should go forward. Where this requirement cannot be met, we need to do our best to offer new economic opportunities for year-round, high-wage, high-skill jobs.

- o Second, as we craft a plan, we need to protect the long-term health of our forests, our wildlife, and our waterways. They are ... a gift from God and we hold them in trust for future generations.

- o Third, our efforts must be, insofar as we are wise enough to know it, scientifically sound, ecologically credible, and legally responsible.

- o Fourth, the plan should produce a predictable and sustainable level of timber sales and non-timber resources that will not degrade or destroy our forest environment.

- o Fifth, to achieve these goals, we will do our best to make the federal government work together and work for you. We may make mistakes but we will try to end the gridlock within the federal government and we will insist on collaboration, not confrontation."

Three working groups were established immediately after the Forest Conference: 1) Ecosystem Management Assessment to focus on forest management; 2) Labor and Community Assistance to focus on economic development; and 3) Agency Coordination to focus on how federal agencies work together. These working groups were comprised of scientists and experts from across the agencies involved (the Departments of Agriculture, Interior, Commerce, and Labor, as well as the Environmental Protection Agency, the White House Office on Environmental Policy, the National Economic Council, the Office of Science and Technology Policy, the Office of the U.S. Trade

Representative, the Council of Economic Advisors, the Office of Management and Budget, and the Domestic Policy Council). They conducted exhaustive research and analysis and met with a wide range of groups and individuals from a broad range of perspectives before issuing their reports to the White House on June 2. It is their work, and the ideas and opinions of the scores of people they consulted that provides the foundation for the President's Forest Plan for a Sustainable Economy and a Sustainable Environment.

FOREST MANAGEMENT

The President's Forest Management Plan offers an innovative new approach which uses key watersheds as its basic building blocks and offers new possibilities for environmental and scientific research through the creation of Adaptive Management Areas.

Recently, forest management proposals have been driven either by an approach based on protecting areas inhabited by specific species, such as the spotted owl or marbled murrelet, or, by an approach based on protecting a specific type of forest.

The President's plan offers a different approach, based on sound science and a commitment to existing law, which is built around identifying and protecting key watersheds and old-growth forests. Such an approach takes great steps to protect the region's drinking water and represents an obvious and essential step toward restoring a healthy salmon industry. It protects threatened species, such as the northern spotted owl and the marbled murrelet, scores of other species (including fish now considered "at risk" under the law), as well as the most valuable old growth forests.

Ten Adaptive Management Areas provide opportunities for federal, state and local officials, industry, community, and environmental organizations, tribes, and others to work together to develop innovative management approaches, such as the Applegate Project and the Douglas Project in Oregon and the Hayfork Adaptive Management Area in Northern California. These areas provide for intensive experimentation and innovation to demonstrate new ways to achieve ecological, economic, and social objectives and allow for local involvement. A rigorous monitoring and research program will ensure the development and analysis of scientific data to assess the effectiveness and impact of these approaches.

Key elements of the President's plan include:

- o Watersheds as the fundamental building block;
- o Reserve areas based on watersheds and old growth that include the most valuable old growth forests and designated conservation areas to protect specific species. Only very limited activities would be permitted in the reserves, including salvage and thinning where the primary objective of that salvage and thinning is to accelerate the development of old growth conditions.

- o Ten Adaptive Management Areas of 78,000 - 380,000 acres each for intensive ecological experimentation and social innovation to develop and demonstrate new ways to integrate ecological and economic objectives and allow for local involvement in defining the future;
- o The development of a new rule from the Fish and Wildlife Service to ease restrictions on timber harvest from certain non-federal lands (modifying what have been known as "owl circles"), possible because the President's plan improves management of federal lands; and, encouraging private companies to commit the timber released by these changes to processing in domestic mills;
- o Federal assistance to bring to market backlogged timber sales from Indian reservations.

The President will submit his forest management plan to the court and will do everything possible to resolve the legal challenges and lift the injunctions that have stopped timber sales so that both the Forest Service and the Bureau of Land Management can implement a sale planning and preparation program as quickly as possible. He is asking the Secretaries of Agriculture and Interior to take any other available actions consistent with our legal obligations to revive the timber sale program.

And, because the President believes the workers, businesses, and communities in the region need help as quickly as possible, the President is directing his Cabinet to work with all those who share his determination to resolve these issues in a fair and balanced way to develop the most effective means to implement this plan and move timber sales forward as quickly as possible.

Harvest levels in the President's plan take into account the fact that previous Forest Service management plans have significantly overestimated the amount of timber available for harvest every year, presenting unrealistically high harvest levels that cannot be sustained even under existing forest management plans. The President's plan provides for a sustainable timber harvest of 1.2 billion board feet annually on the spotted owl forests. In addition, the expected release of sales stopped by injunction, steps to move timber from Indian lands, and other measures are expected to increase that figure as the program is implemented.

The President's Forest Plan focuses on management strategies to resolve the long-standing court challenges over management of the spotted owl and old growth forests on the west side of the Cascade Mountains. Management of east side forests will need to focus on restoring the health of forest ecosystems impacted by poor management practices of the past.

The President is directing the Forest Service to develop a scientifically sound and ecosystem-based strategy for management of the east side forests. This strategy should be based on the forest health study recently completed by agency scientists as well as other studies. Consistent with this strategy, the President also is directing the agency to accelerate efforts to prepare timber sales to harvest dead and dying timber on the east side.

ECONOMIC DEVELOPMENT

Unlike his predecessors, President Clinton recognizes that the Northwest forest crisis involves important economic and social as well as environmental concerns. Recognizing the importance of timber and forests to the economy and jobs in the region is central to the President's Forest Plan for a Sustainable Economy and a Sustainable Environment.

The President's plan will provide immediate and critical support for economic adjustment and diversification in the region, including expanded funding for business development, economic planning, infrastructure development and worker retraining to help build a foundation for long-term economic strength and environmental health. The President's plan will help existing companies grow and attract new businesses. It will add more jobs for the timber harvested by encouraging value-added manufacturing and help those workers and those communities who rely on a future in wood.

The plan will provide \$270 million in new funding for FY 1994 -- \$1.2 billion over five years -- including a new Northwest Economic Adjustment Fund. While estimates indicate that the forest plan will directly impact 6,000 jobs, in 1994, the plan would create more than 8,000 jobs and fund 5,400 additional retraining opportunities.

Key elements of the President's plan include:

- o For workers and families, increased funding under the Job Training Partnership Act for job search assistance, retraining, and relocation; overall, a 110 percent increase in funding from \$20.2 million to \$42 million;
- o A three-part strategy for business development in the Pacific Northwest and Northern California, including improved access to capital, expanded technical assistance, and enhanced access to domestic and international markets; overall a 47 percent increase in funding from \$163 million to \$239.7 million;
- o For communities, established levels of financial assistance to timber counties, replacing the roller coaster of payments tied to timber harvests with a reliable schedule of payments, creating a sound fiscal environment for county governments, businesses, and financial institutions; strengthening community capacity to plan for economic development and diversification, and improving the infrastructure needed for such development through Community Development Block Grant lending, Rural Development Administration community facilities, and the RDA water/wastewater program; overall a 25 percent increase in funding from \$298.6 million to \$373.6 million;
- o To protect the environment and create jobs, investments in watershed maintenance, ecosystem restoration and research, environmental monitoring and forest stewardship, all of which will also improve water quality and increase salmon stocks to avoid listing of salmon species under the Endangered Species Act and to improve commercial fishing; in addition, forest stewardship will be expanded to help small landowners manage their forests; overall, a 19 percent increase in funding

from \$438.2 million to \$519.8 million.

- o Support for the elimination of tax incentives for the export of raw logs; and, the President is directing his cabinet to study effective ways to make it more difficult for companies to avoid export limitations on raw logs.

- o Directing his Cabinet to identify and implement, in a priority manner, the best ways to strengthen small businesses and secondary manufacturing in the wood products industry, including a review of increasing the supply of federal timber set aside for small businesses and possible preferences for bidders who contract for domestic secondary processing. The President also is directing his administration to encourage improved and effective community partnerships to bring together those with different perspectives on forest management. (Secondary manufacturing generates from four times to 25 times more jobs per billion board feet than primary manufacturing)

The Northwest Economic Adjustment Initiative would be implemented through an innovative partnership among state, local, and federal agencies, as well as community and business leaders, to help local families and workers caught in the middle of this crisis. The President is directing that federal agencies implement this innovative approach to economic adjustment by creating a unified management system that will bring the various agency efforts in each state together into a single team. This will coordinate the related activities of federal, state, and local agencies and provide a unified point of contact and procedures for workers, firms, and local communities.

The President's proposal, supported by Governor Barbara Roberts of Oregon and Governor Mike Lowry of Washington, represents a comprehensive experiment in "reinventing government" -- improving the way the government works to make it more responsive, more effective, and more efficient. The plan calls for replacing restrictions on the use of federal funds with performance-based measures, making new use of leveraged private resources, and creating new processes and institutions responsive to local needs and priorities.

The President's plan provides a substantial infusion of new federal assistance through innovative programs to both provide economic relief to timber communities as soon as possible and to encourage long-term economic development and diversification.

AGENCY COORDINATION

Too often in the past, different federal agencies have acted in isolation or even at cross purposes in managing federal forest lands in the Pacific Northwest and Northern California. Instead of working to confront existing problems, they have contributed to them, creating confusion and controversy. At the Forest Conference, President Clinton made clear "we will insist on collaboration, not confrontation."

Because of the President's clear direction to improve inter-agency coordination, an entire working group was created to focus on these issues. In addition, throughout this process, an inter-agency approach, involving the key federal agencies involved, has been in use. The implementation

of a new forest management strategy provides the ideal opportunity to correct past practices and improve inter-agency cooperation and, in the process, forest management.

The President's plan will improve inter-agency coordination by:

- o Creating a new focus for forest planning based on watersheds and "physiographic provinces" that base management on the unique ecology of each region;
- o Immediately creating a new inter-agency Geographic Information System data base to allow land management and resource agencies to coordinate their efforts in the collection and development of research and data;
- o Creating provincial-level teams that would develop analyses for physiographic provinces and particular watersheds. These teams would include the relevant federal agencies, state officials and tribes and, when individual watersheds are analyzed, the objective would be to involve all affected parties in discussions on biological, timber, community, and other needs. An Inter-agency Executive Committee would coordinate and provide direction for the work of the provincial teams;
- o Revising the consultation process under the Endangered Species Act to emphasize an integrated ecosystem approach. This would include the Fish and Wildlife Service and the National Marine Fisheries Service early in the process so that the views of these agencies can be made known when the land management agencies begin to develop their plans for a particular area, instead of later in the planning process as is now the case. It would also involve the use, where appropriate, of regional consultations.

CONCLUSION

The President's Forest Plan for a Sustainable Economy and a Sustainable Environment represents a comprehensive, innovative and balanced approach to the economic and environmental challenges facing the region. It is the result of extensive research, analysis, and cooperation among federal agencies and extensive discussions with a wide range of individuals and groups including business, labor, environmentalists, tribes, community groups, and Members of Congress. The President and his entire Administration intend to continue to seek the support and opinions of these groups to implement this plan and break the gridlock that has blocked progress on these issues.

As the President said at the close of the Forest Conference: "If we don't give up or give in to deadlock or divisiveness or despair, I think we can build a more prosperous and a more secure future for our communities and for our children." This Forest Plan is an important step toward that future.

##

APPENDIX

Background

Forests of the Pacific Northwest and Northern California

The issue is how best to manage and protect federal forest lands in the Pacific Northwest and Northern California. Years of short-sighted and contradictory policy-making by previous Administrations have fueled a region-wide battle that has polarized communities, totally blocked any rational policy making, and left decision-making in the courts.

What has been needed and what President Clinton provides today is an innovative, comprehensive, and balanced blueprint for forest management, economic development, and agency coordination aimed at strengthening the long-term economic and environmental health of the region. The President's plan provides for a sustainable harvest based on scientifically-sound and legally-responsible forest management, new job-creating investments in the region's environment, innovative protections for valuable old growth forests, and new economic assistance to help workers, businesses and communities to provide long-term, family- wage jobs and long-term economic development.

THE PROBLEM:

The debate centers on how all public forest lands should be managed to recognize the need to protect and preserve old growth forests, fish, wildlife, and water as well as the needs of the workers, businesses, and communities dependent on timber sales. Old growth forests are those at least 200 years old or older. Most remaining old growth forests are on federal lands. Nearly 90 percent of the region's old growth forests already have been logged. An estimated 8 to 9 million acres of old growth forest remain today.

Throughout the Bush Administration, key agencies responsible for managing federal forest lands (Forest Service in the Department of Agriculture and the Bureau of Land Management in the Department of Interior) simultaneously pursued not only contradictory policies, but policies the courts have ruled were in violation of federal laws (principally the Endangered Species Act [ESA], the National Environmental Policy Act [NEPA], and the National Forest Management Act [NFMA]). The debate was polarized, and gridlock ensued. As a result, court injunctions have stopped most Forest Service and some BLM timber sales, with serious economic consequences for the region.

FEDERAL FOREST LANDS:

Federal land managers historically, and through the Bush Administration, emphasized commodity uses of federal lands, e.g. logging, mining, and grazing, over conservation of natural ecosystems. Easily accessible old growth forests on federal and private lands were extensively logged long ago, creating increasingly heavy reliance on the remaining old growth forests on federal lands. These old growth forests are in demand because of the size and quality of the trees

to the timber industry. Second growth forests on most private lands are still 15 to 20 years away from harvestable age.

The old growth forests support a broad range of plants and animals and the health of these forests impacts further on the area's rivers and streams -- meaning that fish also are affected by the state of these forests. For example, the region's salmon industry, which employs an estimated 60,000 people, has already been affected by reduced fish harvests due, in part, to habitat degradation of rivers and streams in logged areas. Destroying the old growth forests has a domino effect on entire communities --reducing jobs in tourism and fishing, recreational opportunities, hunting and fishing, and endangering water supplies. Old growth forests also contain a number of known and unknown species which offer promise, such as the Pacific yew tree, whose bark yields taxol, a possible cure for breast cancer.

THREATENED SPECIES

The law requires protections for the spotted owl, the marbled murrelet, and certain species of fish. In the past, legal action has centered on the spotted owl, the first species to be listed as threatened.

The northern spotted owl range is located in the forests west of the Cascade Mountains in Washington, Oregon, and Northern California. Within that range, the owls preferred habitat is old growth forests.

The Department of Agriculture's Forest Service manages 23 million acres in spotted owl range. The Department of the Interior's Bureau of Land Management (BLM) manages 2.4 million acres in spotted owl range in Oregon and Northern California.

The debate has focused on the environmental and economic benefits and costs of protecting the northern spotted owl. From 1984, when the Forest Service adopted guidelines for managing the owl's habitat on national forests in Washington and Oregon through today, this debate has been marked by contradictory and sloppy policy-making that has forced the issue into the courts.

The debate intensified over the past five years, particularly since the Fish and Wildlife Service listed the northern spotted owl as threatened in July 1990. The courts during this time repeatedly concluded that the Bush Administration was acting in violation of existing laws and issued injunctions stopping major timber sales. The Bush Administration, for example, agreed to list the owl as threatened but refused to act to protect the areas where the owl lives. Later, unhappy with the findings of the Interagency Scientific Committee, which was charged with examining the issues, the Bush Administration convened its own task force that produced a 1-1/2 page press release asking Congress to pass legislation enabling certain Forest Service and BLM timber sales to proceed and be insulated from forest management laws.

Using the Endangered Species Act (ESA) and the National Forest Management Act, environmental groups have challenged Forest Service and BLM plans to sell timber in spotted owl habitat. The ESA prohibits agencies from taking actions which will "jeopardize the continued existence" of an endangered or threatened species, a determination which the Fish and Wildlife Service makes.

A series of injunctions by the Seattle District Court and the Ninth Circuit Court of Appeals have stalled almost all timber sales in spotted owl habitat in Washington, Oregon, and Northern California since 1989.

Almost routinely, the courts said the Bush Administration abused its discretion, acted arbitrarily and capriciously and violated the law. For example, in May 1991, Judge William Dwyer in Seattle District Court ruled that, "...a deliberate and systematic refusal by the Forest Service and the Fish and Wildlife Service to comply with the laws protecting wildlife ...[demonstrates] a remarkable series of violations of the environmental laws."

SCIENTIFIC REPORTS

The scientific understanding of the old growth forest ecosystem has evolved significantly in the past five years. Scientists have conducted three key independent assessments:

- 1) The Interagency Scientific Committee (ISC) in 1990
- 2) The Scientific Panel on Late Successional Forest Ecosystems in 1991
- 3) The Scientific Analysis Team (SAT) of the Forest Service in 1993

All three have confirmed the need to set aside larger areas of habitat to protect species which depend on old growth forest ecosystems, such as northern spotted owls, marbled murrelets, and several species of salmon.

ECONOMIC ISSUES

The forests of the Pacific Northwest and Northern California have provided the foundation for the region's economy for the past century. Though historically important as a source of employment in the northwest, the timber industry has been declining in importance as other sectors of the economy have grown. In 1970, timber-related jobs accounted for about 10 percent of total regional employment. By 1989, timber employment was at about 140,000 jobs or about 4 percent of total regional employment. However, some rural areas depend almost totally on forest industries.

In the northwest region, economic growth in the past two decades has diversified a regional economy that was once much more heavily dependent on manufacturing and timber. While many rural counties are vulnerable, overall economic conditions and trends in the northwest show substantial strength. After many years of somewhat sluggish economic growth,

the Pacific Northwest economy has shown strong growth since 1986. The rate of employment growth in Oregon and Washington exceeded the U.S. average in every year since 1986.

About 43 percent of the timber land in the affected region is owned by the federal government, with the remainder in state or private hands. Federal timber sales provide local communities receipts of between \$200 and \$500 million dollars annually.

During the 1980s, the northern spotted owl region (public and private lands) accounted for more than 30 percent of the lumber produced in the United States. Because about one-third of recent timber harvests in the owl region occur on federal lands, about 10 percent of domestic timber supply potentially is affected by spotted owl protection.

Increased harvest levels have failed to increase jobs proportionately. Increased mechanization in harvesting, transporting, and milling has lowered the labor required for producing lumber. During the 1980s, for example, the number of jobs in the lumber and wood products sectors declined from 10 jobs per million board feet of harvest to below 8 jobs per million board feet. From 1981 to 1989, while harvest levels increased by 44 percent in Oregon and Washington, there was no increase in employment in forest products.

Mill closings follow a similar trend. In 1968, Oregon had 300 sawmills; by 1988 the state had 165 mills. In Washington, the number of mills fell from 182 in 1978 to 118 mills in 1988, while the total number of wood processing establishments (including veneer and plywood, pulp, shake and shingle plants and other operations) fell from 764 in 1978 to 351 in 1988.

These trends preceded the old-growth controversy. While the spotted owl often is blamed for weak employment, the long term projections indicate steady declines in employment for any given level of timber harvest.

It is important to note that by law, logs from federal lands cannot be exported and log exports from state-owned lands will be prohibited by legislation President Clinton is signing today. However, substantial volumes of timber cut from private lands in the northwest are exported to Japan, Korea, and China with minimal domestic processing.

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THE WHITE HOUSE
Office of the Press Secretary

Friday, May 7, 1993

** MEDIA ADVISORY **

MISSION STATEMENT FOR FOREST CONFERENCE WORKING GROUPS

The mission statement that follows has been provided to members of the three inter-agency working groups created to help meet the President's mandate to his cabinet to craft a plan to break the gridlock over forest management in the Pacific Northwest and northern California. It reflects guidance given to the working groups when they were created and sets the parameters for their recommendations.

The three working groups are:

- o Ecosystem Management Assessment to identify alternative strategies for a scientifically sound, ecologically credible, legally responsible basis for managing the federal forests of the Pacific Northwest and northern California;
- o Labor and Community Assistance to identify alternatives for assisting individuals and communities affected by changes in federal timber sales programs and policies in the region;
- o Agency Coordination to identify opportunities to improve the working relationships among federal and state agencies in the region to reduce impediments to stronger cooperative, working relationships among all parties.

The names of working groups members also follow here.

##

May 7, 1993

TO: **FOREST CONFERENCE INTER-AGENCY WORKING GROUPS**
Ecosystem Management Assessment
Labor and Community Assistance
Agency Coordination

FROM: **FOREST CONFERENCE EXECUTIVE COMMITTEE**
Department of Agriculture
Department of Interior
Department of Labor
Department of Commerce
Environmental Protection Agency
Office on Environmental Policy
Office of Science and Technology Policy
National Economic Council
Council of Economic Advisors
Office of Management and Budget

RE: **STATEMENT OF MISSION**

Together, we are working to fulfill President Clinton's mandate to produce a plan to break the gridlock over federal forest management that has created so much confusion and controversy in the Pacific Northwest and northern California. As well, that mandate means providing for economic diversification and new economic opportunities in the region. As you enter into the critical phase of your work reviewing options and policy, this mission statement should be used to focus and coordinate your efforts. It includes overall guidance and specific guidance for each team.

BACKGROUND

President Clinton posed the fundamental question we face when he opened the Forest Conference in Portland:

"How can we achieve a balanced and comprehensive policy that recognizes the importance of the forests and timber to the economy and jobs of this region, and how can we preserve our precious old-growth forests, which are part of our national heritage and that, once destroyed, can never be replaced?"

And, he said, "the most important thing we can do is to admit, all of us to each other, that there are no simple or easy answers. This is not about choosing between jobs and the environment, but about recognizing the importance of both and recognizing that virtually everyone here and everyone in this region cares about both."

The President said five principles should guide our work:

"First, we must never forget the human and the economic dimensions of these problems. Where sound management policies can preserve the health of forest lands, sales should go forward. Where this requirement cannot be met, we need to do our best to offer new economic opportunities for year-round, high-wage, high-skill jobs.

"Second, as we craft a plan, we need to protect the long-term health of our forests, our wildlife, and our waterways. They are, as the last speaker said, a gift from God; and we hold them in trust for future generations.

"Third, our efforts must be, insofar as we are wise enough to know it, scientifically sound, ecologically credible, and legally responsible.

"Fourth, the plan should produce a predictable and sustainable level of timber sales and non-timber resources that will not degrade or destroy the environment.

"Fifth, to achieve these goals, we will do our best, as I said, to make the federal government work together and work for you. We may make mistakes but we will try to end the gridlock within the federal government and we will insist on collaboration not confrontation."

ECOSYSTEM MANAGEMENT ASSESSMENT

Our objectives based on the President's mandate and principles are to identify management alternatives that attain the greatest economic and social contribution from the forests of the region and meet the requirements of the applicable laws and regulations, including the Endangered Species Act, the National Forest Management Act, the Federal Land Policy Management Act, and the National Environmental Policy Act. The Ecosystem Management Assessment working group should explore adaptive management and silvicultural techniques and base its work on the best technical and scientific information currently available.

Your assessment should take an ecosystem approach to forest management and should particularly address maintenance and restoration of biological diversity, particularly that of the late-successional and old growth forest ecosystems; maintenance of long-term site productivity of forest ecosystems; maintenance of sustainable levels of renewable natural resources, including timber, other forest products, and other facets of forest values; and maintenance of rural economies and communities.

Given the biological requirements of each alternative, you should suggest the patterns of protection, investment, and use that will provide the greatest possible economic and social contributions from the region's forests. In particular, we encourage you to suggest innovative

ways federal forests can contribute to economic and social well-being.

You should address a range of alternatives in a way that allows us to distinguish the different costs and benefits of various approaches (including marginal cost/benefit assessments), and in doing so, at least the following should be considered:

- timber sales, short and long term;
- production of other commodities;
- effects on public uses and values, including scenic quality, recreation, subsistence, and tourism;
- effect on environmental and ecological values, including air and water quality, habitat conservation, sustainability, threatened and endangered species, biodiversity and long-term productivity;
- jobs attributable to timber harvest and timber processing; and, to the extent feasible, jobs attributable to other commodity production, fish habitat protection, and public uses of forests; as well as jobs attributable to investment and restoration associated with each alternative;
- economic and social effects on local communities; and effects on revenues to counties and the national treasury;
- economic and social policies associated with the protection and use of forest resources that might aid in the transitions of the region's industries and communities;
- economic and social benefits from the ecological services you consider;
- regional, national, and international effects as they relate to timber supply, wood product prices, and other key economic and social variables.

As well, when locating reserves, your assessment also should consider both the benefits to the whole array of forest values and the potential cost to rural communities.

The impact of protection and recovery of threatened and endangered species on non-federal lands within the region of concern should be minimized. However, you should note specific non-federal contributions that are essential to or could significantly help accomplish the conservation and timber supply objectives of your assessment.

In addition, your assessment should include suggestions for adaptive management that would identify high priority inventory, research and monitoring needed to assess success over time, and essential or allowable modifications in approach as new information becomes available. You should also suggest a mechanism for a coordinated inter-agency approach to the needed assessments, monitoring, and research as well as any changes needed in decision-making procedures required to support adaptive management.

You should carefully examine silvicultural management of forest stands -- particularly young stands -- especially in the context of adaptive management. The use of silviculture to achieve those ends, or tests of silviculture, should be judged in an ecosystem context and not solely on the basis of single species or several species response.

Your conservation and management assessment should cover those lands managed by the Forest Service, the Bureau of Land Management, and the National Park Service that are within the current range of the northern spotted owl, drawing as you have on personnel from those agencies and assistance from the Fish and Wildlife Service, the National Marine Fisheries Service and the Environmental Protection Agency. To achieve similar treatment on all federal lands involved here, you should apply the "viability standard" to the BLM lands.

In addressing biological diversity you should not limit your consideration to any one species and, to the extent possible, you should develop alternatives for long-term management that meet the following objectives:

- maintenance and/or restoration of habitat conditions for the northern spotted owl and the marbled murrelet that will provide for viability of each species -- for the owl, well distributed along its current range on federal lands and for the murrelet so far as nesting habitat is concerned;
- maintenance and/or restoration of habitat conditions to support viable populations, well-distributed across their current ranges, of species known (or reasonably expected) to be associated with old-growth forest conditions;
- maintenance and/or restoration of spawning and rearing habitat on Forest Service, Bureau of Land Management, and National Park Service lands to support recovery and maintenance of viable populations of anadromous fish species and stocks and other fish species and stocks considered "sensitive" or "at risk" by land management agencies, or listed under the Endangered Species Act; and,
- maintenance and/or creation of a connected or interactive old-growth forest ecosystem on the federal lands within the region under consideration.

Your assessment should include alternatives that range from a medium to a very high probability of insuring the viability of species. The analysis should include an assessment of current agency programs based on Forest Service plans (including the final draft recovery plan for the northern spotted owl) for the National Forests and the BLM's revised preferred alternative for its lands.

In your assessment, you should also carefully consider the suggestions for forest management from the recent Forest Conference in Portland. Although we know that it will be difficult to move beyond the possibilities considered in recent analysis, you should apply your most creative abilities to suggest policies that might move us forward on these difficult issues. You also should address short-term timber sale possibilities as well as longer term options.

Finally, your assessment should be subject to peer review by appropriately credentialed reviewers.

LABOR AND COMMUNITY ASSISTANCE WORKING GROUP

Resolving the forest management issues confronting this region must involve addressing related economic and community issues. The forests of the Pacific Northwest and northern California have provided a foundation for the region's economy for the past century. And, while economic growth has diversified a region that was once much more heavily dependent on timber manufacturing, some rural areas depend almost totally on forest industries not just for jobs but for revenues from timber sales. The work of the Labor and Community Assistance Working Group should proceed from the following:

- o The economic development and assistance plan should be far-sighted and comprehensive. As noted at the Forest Conference, many species are at risk in old-growth forests. Just as the Ecosystem Management Assessment working group must focus on an 'ecosystem' approach that takes into account the region's vast and varied natural resources, the economic plan must focus on the regional economy and take into account its resources and needs. The plan must be long-term and address not just temporary efforts but economic development and diversification over time.

- o Government policy should accommodate properly functioning markets and facilitate the transitions inevitable in the modern global economy. The American economy is more dynamic than ever before. The federal government may be able to play a role in directing the development of the economy but it cannot overcome large-scale market forces. Economy policy here should encourage necessary adjustments and ease inevitable transitions.

- o Some region-specific community and worker assistance will be necessary because of the unique circumstance surrounding this issue. However, the economic plan must be consistent with national policies. The Labor and Community Assistance working group should develop a comprehensive plan for economic dislocations whether those are caused by slack demand, productivity growth, technological advances, or structural changes in the economy. This approach would mark a dramatic improvement over the current patchwork of programs, which are both inefficient and inequitable.

- o Any assistance plan should be open to all displaced forest industry workers, regardless of the precise cause of their dislocation. Revolutions in technology, improvements in productivity, and the development of new products are changing the nature of forest industries. We should reach out to all forest industries workers who are affected without distinguishing the cause of the impact.

- o Policies should be coordinated among federal and state agencies to maximize benefits to affected communities and workers. More than a dozen federally-funded programs currently provide assistance to timber workers and their communities. A coordinated federal response would make the system more accessible and more efficient.

o State and local governments are best situated to direct economic development. Federal policy should not attempt to dictate preferred paths for economic development but instead should build upon the independence and strength of these communities and their residents and provide them with the tools needed for economic revitalization based on their own needs and on potential new opportunities in forest related employment..

AGENCY COORDINATION WORKING GROUP

Too often in the past, various federal agencies with responsibility for some aspect of forest management in the Pacific Northwest and northern California have acted in isolation or even at cross-purposes. This problem becomes even more critical as we move toward an ecosystem approach to forest management where a number of agencies must be involved in planning and implementing a management strategy. We must improve the working relationships among federal and state agencies in the region and eliminate impediments that block coordinated action. The efforts of this working group are key to our success in this area.

To help identify new means to encourage coordination at all levels, we believe you should examine a range of issues.

Identify structural and procedural problems that in the past have made coordinated action difficult and suggest solutions or procedures for reaching solutions to those problems.

Identify ways the federal land management agencies can and should work together in the future to achieve coordinated management strategies that take into account the statutory mandates of those agencies.

Identify and suggest ways for dealing with issues concerning agency coordination related to implementing strategies currently being developed by the Ecosystem Management Assessment working group.

Identify ways to improve the process in which the land management agencies are required to consult with the Fish and Wildlife Service and the National Marine Fisheries Service concerning their responsibilities under the Endangered Species Act.

Identify ways to improve coordination between the land management agencies and the Environmental Protection Agency.

And, identify ways to improve working relationships between federal and state agencies in the region and suggest a course of action for involving those state agencies in the implementation of strategies being developed by the Ecosystem Management Assessment working group.

As you develop your recommendations, you should continue to call on personnel from the Forest Service, the Bureau of Land Management, the Fish and Wildlife Service, the National Marine Fisheries Service, the Environmental Protection Agency, and others as appropriate, as well as on advice from the states in the region.

CONCLUSION

We appreciate your efforts and recognize, as President Clinton did, that these are difficult issues with difficult choices. And, we'll remind you of something else the President said at the Forest Conference, talking to the people of the Pacific Northwest and northern California: "We're here to begin a process that will help ensure that you will be able to work together in your communities for the good of your businesses, your jobs, and your natural environment. The process we [have begun] will not be easy. Its outcome cannot possibly make everyone happy. Perhaps it won't make anyone completely happy. But the worst thing we can do is nothing."

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