Box 15, Folder 4: Fire management/wildfires - President Clinton's visit, Burgdorf fire, 8 August 2000. 2000

[s.l.]: [s.n.], 2000

Mike Dombeck
Forest Service

President's Visit

Burgdorf Fire

August 8, 2000

Payette National Forest

Welcome Aboard

This pamphlet is designed to help you enjoy your flight aboard the Presidential Aircraft. It includes information on the aircraft, on the modern passenger comfort and convenience items available to you, and a brief discussion of emergency procedures in the unlikely event of a mechanical malfunction.

THE PRESIDENTIAL AIRCRAFT

This aircraft is an Air Force VC–25A. It is a Boeing 747–200B, intercontinental commercial jetliner. Principal differences between a commercial 747 and the VC–25A are in electronic and communications equipment, conference facilities, medical facilities, and other interior furnishings. Average cruising speed for the aircraft is 600 MPH with a maximum range of over 7250 statute miles. Wing span of the aircraft is 195 feet 8 inches, the length is 225 feet 2 inches, and a height of 63 feet 5 inches. Maximum gross weight is 836,000 pounds.

COMFORT AND CONVENIENCE

Every effort has been made to make your flight as enjoyable and memorable as possible. Many items are available to you for your comfort and convenience, including an inflight radio telephone service providing clear and secure voice communications. This service is available on a priority official basis. Communication services are channeled through the radio operations switchboard and removing a handset from the cradle of any telephone will automatically alert the radio operator for prompt service in providing intercom calls, conference calls, or radiophone communications. When using a telephone, passengers and guests are cautioned to not discuss classified information when using the white telephones. These telephones are for clear communication only as these conversations are easily monitored. The beige telephones located throughout the aircraft may be used for discussing classified information. These conversations are encrypted providing the required protection of information. On the ground, telephone landlines are connected to the aircraft for telephone service. A digital communications service is available to include clear and secure data capabilities on a priority official basis. A safe provides limited space for storage of classified material. For entertainment, the onboard entertainment system provides four channels of boarding music, six channels of stereo music, and a television/video recording system. Several areas of the main deck have provisions for connecting entertainment system signals to the overhead speakers. These areas are the executive stateroom, executive office, annex, senior staff room, conference room, secretarial/staff area, and guest area. Additionally, individual stereo headsets providing selected audio are available at each passenger seat. The entertainment pro-

gram will assist you in selecting your type of listening. For your viewing pleasure, each compartment will be equipped with television monitors capable of receiving programs from local broadcast stations (ground operations only) or any one of the eight VCRs located in the entertainment console at the CSO station. Other items available to you include stationery packets; playing cards; a variety of magazines; raincoats; sewing kits; an assortment of toilet articles which include razor blades, shaving cream, toothpaste, kleenex, sanitary napkins, aftershave lotion, etc.

Seat Belts

Move around as much as you like in the cabin while the seat belt sign is off. We suggest, however, that you keep your seat belt loosely fastened while in your seat. Of course, seat belts must be fastened any time the seat belt sign is on.

No Smoking

When the "NO SMOKING" sign is off, you may smoke while seated anywhere in the cabin or state room. Whenever the "NO SMOKING" sign comes on, extinguish all smoking materials. Pipe and cigar smoking is prohibited at all times.

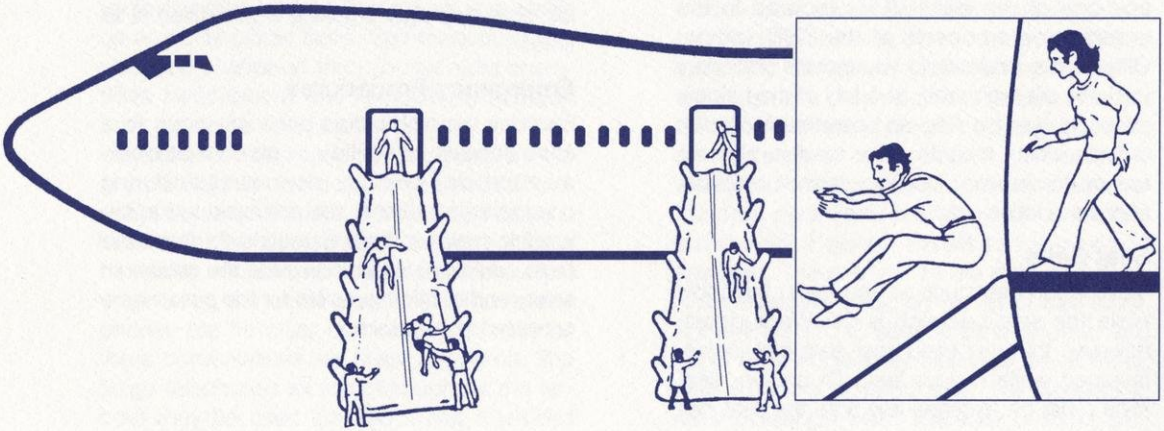
Emergency Procedures

Each crewmember has been assigned to a compartment or section in which that crewmember has primary responsibility during emergency situations. You are expected to follow this crewmember's directions, for they have been carefully trained to provide the maximum safety and comfort possible for the passengers entrusted to their care.

GROUND EVACUATION PROCEDURES: INFLATABLE–ESCAPE SLIDE

Evacuation

Ground evacuation is a remote possibility, but evacuation slides are provided at each door exit for such an emergency. The proper method of leaving the aircraft by evacuation slide is to jump into the slide, SEAT first. Hitting the slide feet first may slow evacuation and could damage the slide or cause you personal injury.



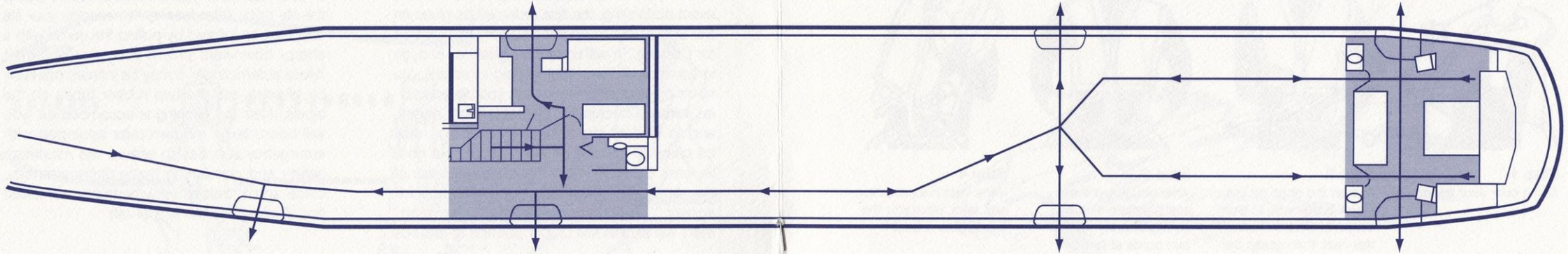
OVER WATER FLIGHT PROCEDURE

Ditching—The airplane is provided with modern, practical emergency equipment for your safety and convenience. The crewmember assigned to your compartment or section will advise you on its location and its use. In the event of ditching, the first order will be given on the aircraft public address system to *"Prepare for Ditching."* It will usually be given far enough in advance of the actual landing to enable you to calmly and efficiently loosen your tie and collar, remove necklaces, glasses, hats, shoes, and to discard sharp objects which you may be carrying. You will be instructed to put on a life vest. DO NOT inflate it until you are clear of the plane. The next order will be *"Brace for Impact."* The crewmember in your compartment will explain the proper position to assume during the water landing. Generally, two shocks will be felt, the second slightly more noticeable than the first. Unfasten your seat belt after the plane has come to a complete stop, but remain in your seat until you are instructed to board the life rafts. After leaving the aircraft, your life vest may be inflated by pulling the cords with a sharp, downward pull. If your vest does not inflate automatically, it may be inflated manually by blowing into the two rubber tubes on the lapels. After the ditching is accomplished, you will board large modern rafts equipped with emergency supplies to ensure the maximum safety and comfort in these circumstances. Once again, trained crewmembers will assist and direct you to the proper raft.

DOOR EXITS

Three exit doors are located in the forward cabin and four in the aft cabin. All exits are marked by arrows on the diagram.

The shaded areas are the forward galley and the aft galley.



FRONT

REAR

It's Easy to Put on Your Life Vest A life vest is provided for each passenger. You'll be shown where it is. To put it on:

Step 1
Slip it over your head.

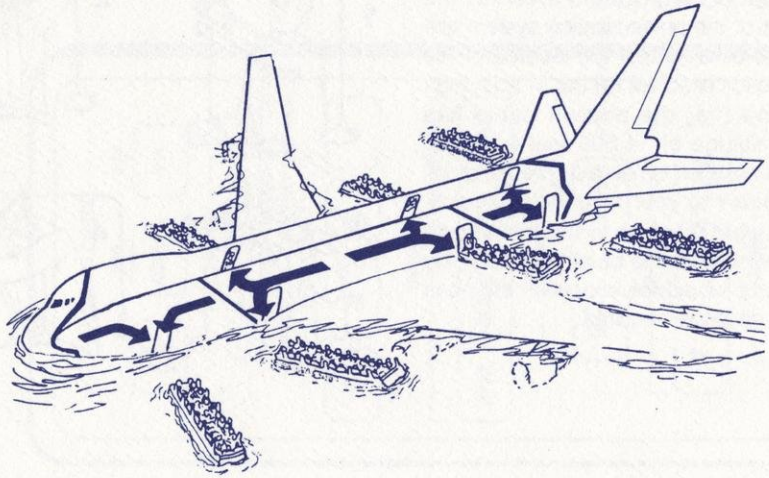
Step 2
Fasten the rings on the waist strap ends to the snaps at bottom front of the vest; then grasp the pull tabs on the waist strap ends and pull snug around your waist.

Step 3
After you leave the plane, inflate vest by pulling sharply on the two cords at bottom.

Step 4
If the vest becomes too soft later, blow into the two rubber tubes.

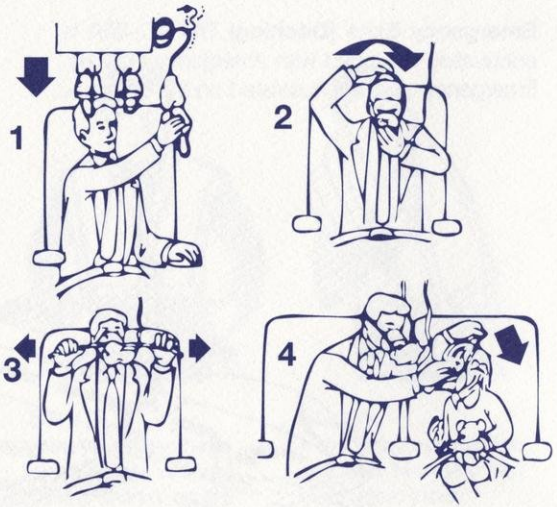
OVER WATER FLIGHT PROCEDURES

Emergency Exits (Ditching) The VC–25A is adequately equipped with emergency facilities. Emergency exits are illustrated on the diagram. Placards are at each exit, giving simple and clear instructions as to their use in the event of an emergency.

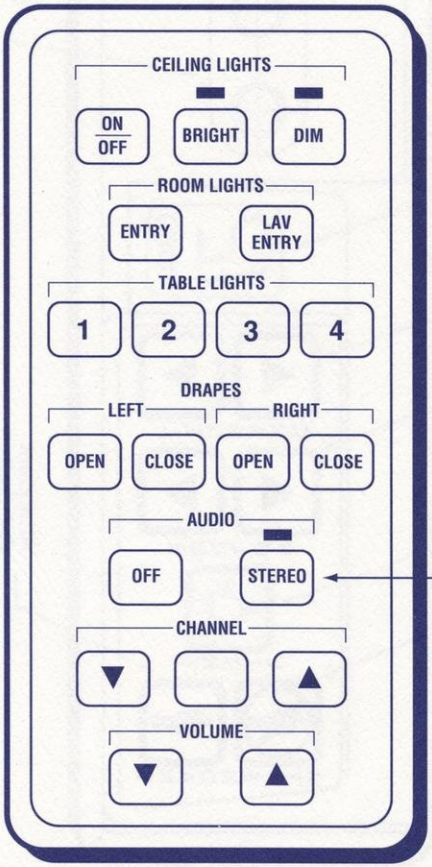


DECOMPRESSION

Decompression–Even though normally flying at an altitude of 29,000 feet or higher, the cabin, because of a pressurization system, is maintained at a comfortable level. In the unlikely event of the pressurization system failing, oxygen masks, which are located in the overhead at each seat, will fall out. It is an indication to you that the aircraft cabin has reached an altitude of 14,000 feet or higher and the use of oxygen is needed. *The action of pulling the mask to your face automatically turns on the oxygen supply to the mask.* Hold the mask to your face and breath normally; the Flight Attendant will advise you when the need for oxygen is no longer required.



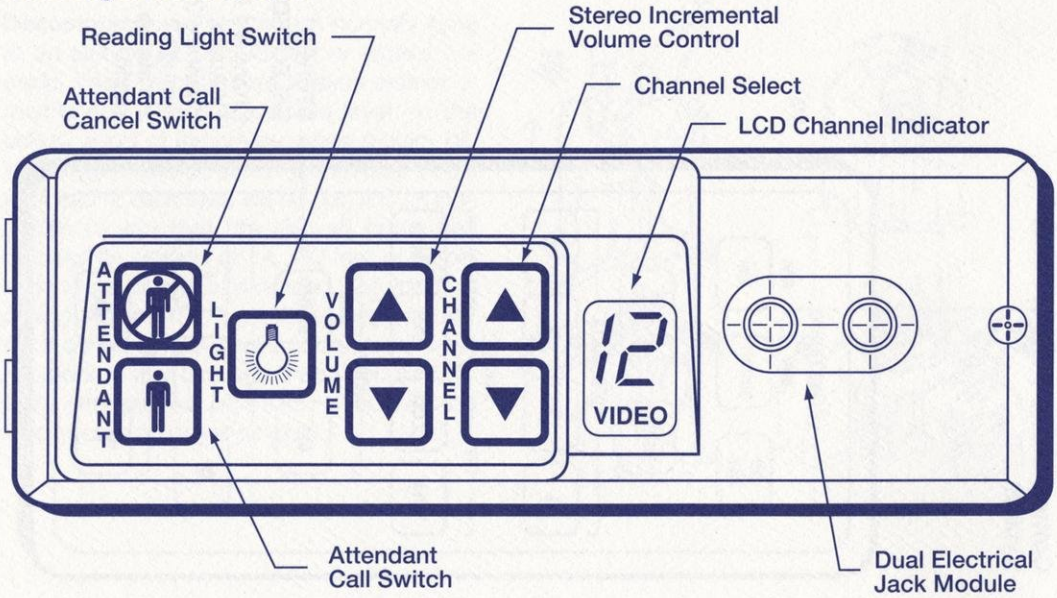
Compartment Control Panel
(Typical)



STEREO SELECTED,

Channel 1 is TV Audio. Channels 2 through 7 are stereo music.

Passenger Control Unit



Have a Pleasant Trip . . .

Fire

- Dapley - resources for compliance
- grants to community groups
- need strong national coord.
- DOI & FS working group need to be on the same page.
- Covington
- Santa Fe - restoration
- FAX fire letter to B^2

Pat Shea - Meeting FS on land exchange

Breakfast w/ B^2

7/31/2000

THE SECRETARY OF THE INTERIOR
WASHINGTON

MR BOMBECK

WELCOME ABOARD Air Force One

ABOARD AIR FORCE ONE

USA –

8:24 tonight

10:05

Incident Intelligence Summary (ICS-209)

Date	Time	Initial	Update	Final	Incident Number	Incident Name
08/07/2000	1900	| |	|X|	| |	ID-PAF-008	Burgdorf Junction

Incident Type	Start Date/Time	Cause	Incident Commander	IMT Type	State/Unit
Wildfire	7/14/00 1530	Lightning	Scott Vail	Type I	Idaho - PAF

County	Latitude and Longitude	Short Location Description (in reference to nearest town):
Idaho, Valley	N 45 16.6 W 115 53.5	27 Miles Northeast of McCall, Idaho

Current Situation

Size/Area Involved	% Contained or MMA	Expected Containment	Line to Build (# chains)	($) Costs to Date	Declared Controlled
24,951 ac.	42%	Date: Unknown Time:	2388	10,690,957	Date: Time: N/A

Injuries Today	Fatalities
1	0

Threat to Human Life/Safety:
Evacuation(s) in progress -
No evacuation(s) imminent - X
Potential future threat - X
No likely threat -

Structure Information

Type of Structure	# Threatened	# Destroyed
Residence	99	0
Commercial Property	5	0
Outbuilding/Other	95	3

Fuels Involved
Fuel Model 8,10, Spruce/Fir, Lodgepole Pine

Resources threatened (kind(s) and value/significance): Communities of Secesh & Warren, War Eagle Lookout, Salmon Fisheries, Burgdorf Hot Springs, Misc. Cabins, Watershed Values

Current Weather Conditions
Wind Speed: 5 G 10 **Temperature:** 78°F
Wind Direction: SW **Relative Humidity:** 18%

Resource benefits/objectives (for prescribed/wild land fire use):
Habitat for Snowshoe Hare and Canada Lynx

Today's observed fire behavior (leave blank for non-fire events): Higher temperatures and decreasing stability resulted in more active fire behavior than the past 2 burning periods. Torching, spotting, uphill runs, and downhill spread were observed in Cottontail Creek and Union Creek, with generally increased activity in most areas.

Significant events today (closures, evacuations, significant progress made, etc.): Approx. 85 ch. of direct handline were completed and held in Divisions T , S, And R. Military crews from T/F Thunder are increasingly replacing contract Type II as they demob as well as working in direct support of Type I crews.

Committed Resources

Agency	CRW1		CRW2		HEL1	HEL2	HEL3	ENGS		OVHD	FIXED WING		WTDR (water tenders)	Camp Crews	Total Personnel
	SR	ST	SR	ST	SR	SR	SR	SR	ST	SR	SR	ST	SR		
USFS	1					1	1	1		108				1	150
State/Local										38					38
BLM	2							1		21					61
NPS										12					12
Private			8		2	1	2	11		31	2		3	1	255
BIA										2				1	12
FWS										2					2
NWS										2					2
TF Thunder			25		4					189					721
Total	3		33		6	2	3	13		405	2		3	3	1,253

Cooperating Agencies Not Listed Above: Idaho County Sheriffs Office. See remarks for T/F Thunder breakdown.

36 crews 11 helicopters 13 engines

Outlook

Estimated Control	Projected Final Size	Estimated Final Cost	Tomorrow's Forecasted Weather	
Date: Unknown Time:	Unknown	$21,700,000	Wind Speed: 9 Wind Direction: SW	Temperature: 79°F Relative Humidity: 17%

Critical Resource Needs (kind & amount, in priority order):

1. Type I Crews
2. Line Overhead (DIVS)

Actions planned for next operational period: Hold & continue mop-up work in Divisions V, U, and T. Improve and hold line in Division S. Continue direct line construction, line holding, and picking up spots in Division R.

Projected incident movement/spread during next operational period (leave blank for non-fire incidents): Expect the fire to continue moving downhill to the northeast approaching the Salmon River.

Major problems and concerns (control problems, social/political/economic concerns or impacts, etc.) Relate critical resource needs identified above to the Incident Action Plan. Low fuel moisture levels and predicted low RH values with a Haines Index of 5. Spots outside of main fire perimeter. Torching, spotting, and downslope spread. Threat of running crown fire. Steep, difficult topography. Firefighter safety. Threat to private land and homes in Secesh, Warren, War Eagle lookout, mining claims and improvements in the Marshall Mining District, ranches and improvements in the Salmon River corridor.

For fire incidents, describe resistance to control in terms of:

1. Growth potential – Moderate to High.
2. Difficulty of terrain - Rugged, dissected terrain, dense spruce/fir timber, with heavy fuel loading and high stand densities and fuel ladders. The area has limited road access.

How likely is it that containment/control targets will be met, given the current resources and suppression strategy? Confidence level low to moderate. Weather patterns and resource availability are still significant factors.

Projected Demobilization Start (date and time): Small scale demobilization is continuous as personnel reach their 14-day limits. Start date for large-scale demobilization is unknown.

Remarks:

-The safe, efficient, and cost effective management of this incident remains the top priority of CIMT 1, but tomorrow's expected visit by President Clinton is requiring significant time and effort from team members. Personnel are working closely with White House and Secret Service advance teams modifying the incident base and ICP to meet a variety of presidential needs.

-Shortages in critical line overhead positions and Type I crews continue to hamper control efforts. Spike camps are being utilized to support line construction efforts in increasingly remote locations on the east flank.

-Contingencies are in place to support the Nez Perce National Forest with initial attack should the fire cross the Salmon River. A Task Force is in place to provide structure protection along the Salmon River at Polly Bemis Ranch, James Cabin, and Shep Ranch.

-Committed resource table for Task Force Thunder includes 34 attached fire personnel (MCAD's, STLM's, & BNML's) assigned as overhead; 59 personnel from the Idaho National Guard and 24 personnel from the 116th Calvary providing the military with air/medical support and four Blackhawk helicopters (military/medical only missions – no water dropping capability.)

Prepared by: Marty Hamel SITL	Approved by: [signature] ICT	Sent to: Payette Exp. Dispatch By: MAH Date: 08/07/2000 Time: 1930

CONTENTS

PART 1

Burgdorf Junction Fire Update

Location: 23 miles north of McCall, Idaho County, Idaho

Cause: Lightning

Fuels: Timber, brush, grass

Acreage: 23,149
(8/07/00 at 0730 hrs)

3 hours 1,500 acres

Containment: 40% complete

~~Background:~~ ~~The~~ fire was reported to Payette National Forest dispatch at 3:30oam on July 14, 2000. At this time eight smokejumpers were dispatched to the fire for initial attack. Fire officials determined that the fire was a holdover form a lightning storm that had moved through the area on July 9. The hot and dry weather in proceeding days caused the smolder to grow and being burning the dry fuels around it. Within three hours, the fire burned over 1,500 acres. On July 15th a Type I incident management team assumed management of the fire.

Resources threatened: Threatened and endangered wildlife (Grey Wolf, Bull trout, Steelhead Trout, Summer Chinook Salmon) and respective habitats. Communities of Sechesh and Warren, the War Eagle Lookout, Salmon fisheries, Burgdorf Hot Springs and watershed values. There are potential threats to homes and ranches along the Salmon River. Three outbuildings have burned, 99 primary residences, 5 commercial properties, and 95 outbuildings are threatened.

Containment problems and concerns: Very steep, rocky terrain; deep canyons; hot, dry conditions and spotting. The Marshall Mine area evacuation is still in effect. Public access between Warren and Burgdorf, north of the Salmon River is closed. The active fire front is 29 miles long.

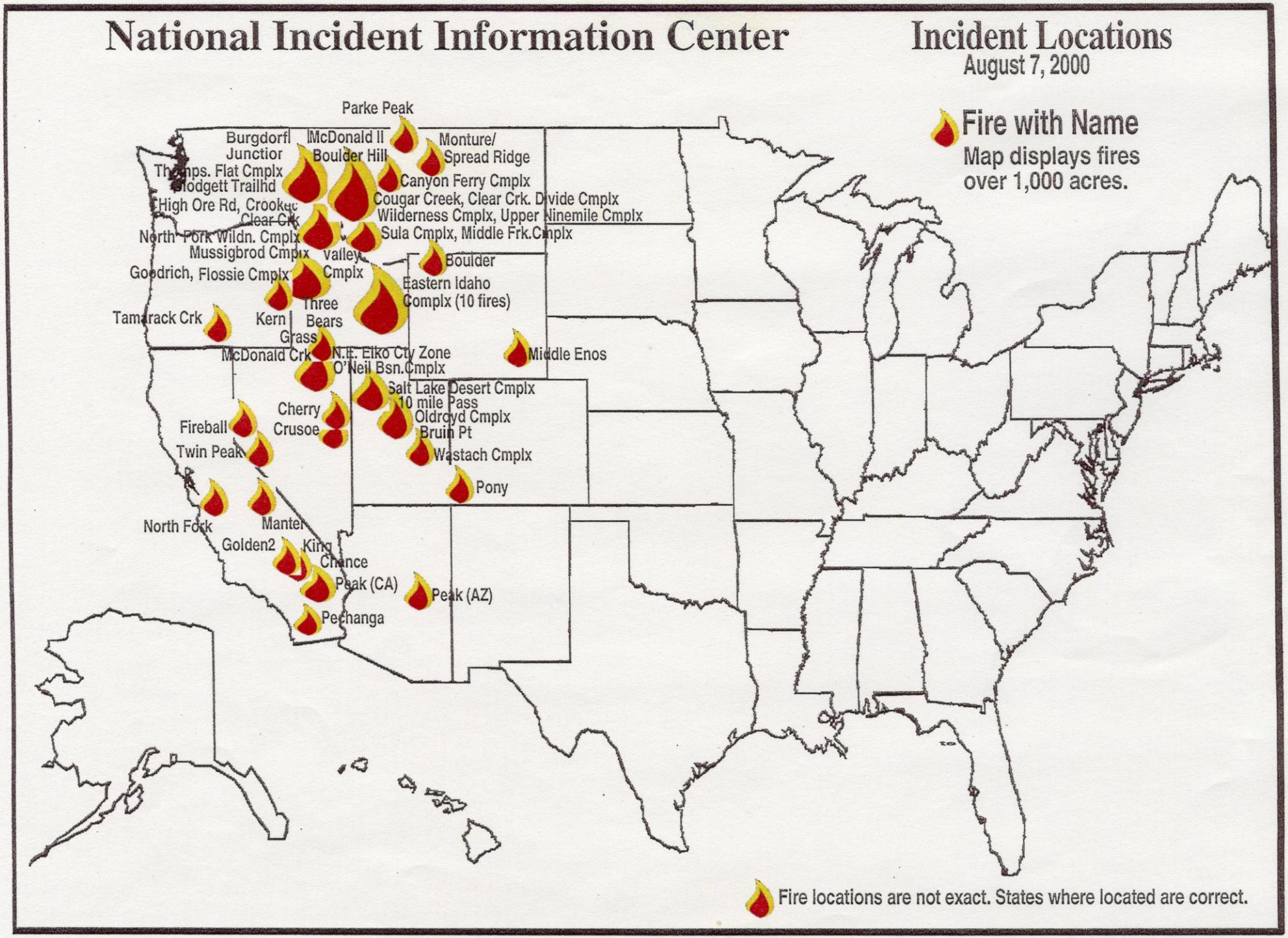
Significant events: Fire has had several major advances but remains within objectives. Military personnel are on the fireline after three days of training.

Projected movement/spread during next 24 hours: The fire is predicted to move northeast towards the Salmon River with the threat of running crown fires. Spotting up to 500 feet is occurring on the flanks and ¼ to ½ mile on the head and up to ¾ mile from ridge tops.

National Incident Information Center

Incident Locations

August 7, 2000



PART I

PART 1

NATIONAL INCIDENT INFORMATION CENTER

August 7, 2000, 2:00 pm EDT

Resources and Statistics:

- Resources committed on August 6:

723 - 20 person crews	169 helicopters	3 Battalions military (500 each)
1,038 engines	42 air tankers	8 MAFFs equiped airplanes
9 International crews, plus overhead and air support		**25,658 total personnel**

- To date, 63,623 wildland fires have burned more than 4.0 million acres. There were 290 new fires yesterday. The 10-year average is 54,323 fires and 2,211,771 acres burned. The largest year in recent history was 1996 when 78,977 fires burned more than 3.4 million acres.

- $10-15 million is being spent suppressing wildfire nationwide each day.

Regional Summary:

- In the **Northern Rocky Mountains**, there are 18 fires over 1,000 acres in size. Two of the largest, the Valley Complex on the Bitterroot National Forest and the Canyon Ferry Complex on the Helena National forest in Montana have consumed over 40,000 acres. Good progress has been made on several of the fires.

- In the **Eastern Great Basin**, there are 14 fires over 1,000 acres. On the Salmon-Challis National Forest the Clear Creek Fire (102,382 acres), the 3rd Battalion 5th Marines is assigned. They will complete their training today. The Burgdorf Junction Fire (23,149 acres) on the Payette National Forest, the 3rd Battalion 16th Field Artillery from Ft. Hood, Texas and is assigned to fireline duty.

- In the **Western Great Basin,** 17 large fires over 1,000 acres were reported on Aug. 4th. Great progress has been made with only 4 fires left to contain.

Other Information:

- Fire crews from Canada and Mexico are on the line.

- President Clinton, and Cabinet officials are planning a visit to the Burgdorf Junction fire on Tuesday.

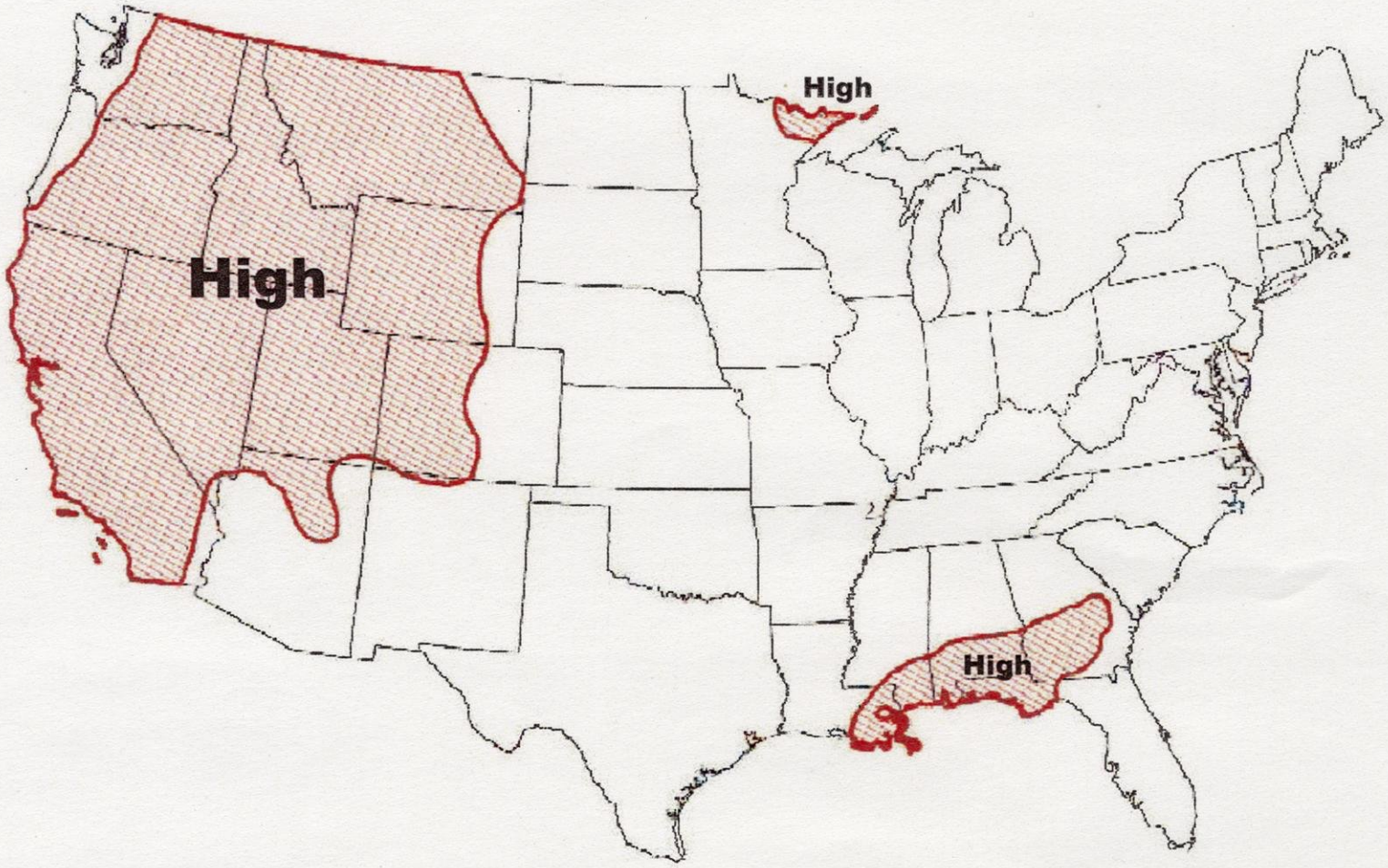
- Three firefighters were injured when a contract engine was involved in a rollover accident on the Clear Creek fire in Idaho. Two were released from the hospital, the third was held for observation.

Weather Forecast:

- A red flag warning is posted for southwest Wyoming for dry lightning, low humidity and gusty winds. A fire weather watch is posted for southwest and south central Oregon for dry lightning. A weak wave of air moving through the northern states will bring cooler and more stable conditions to Montana, Washington, Oregon, Idaho and Nevada. Utah will have isolated afternoon thunderstorms in the mountains. Colorado, eastern Wyoming, New Mexico and Arizona will also experience afternoon thunderstorms. Northern California, southwest Oregon and the northwest corner of Nevada will experience dry thunderstorms. Temperatures will be in the 80's and 90's in most areas, with highs up to 110 in the lower elevations of Utah, Arizona and southern Nevada. The deserts of southern California will see temperatures up to 115 degrees. Winds are forecasted to be generally 10 to 20 mph during the afternoon hours.

Fire Potential Assessment

August 10 to September 7, 200



PART I

PART 1

Morning Report

Fire & Aviation Management -- National Incident Information Center

Monday, August 7, 2000 8:30 AM (EDT)

niicfam@fs.fed.us

SAFETY: GIVE IT A PIECE OF YOUR MIND

NATIONAL OVERVIEW: PREPAREDNESS LEVEL V – Several Geographic Areas are experiencing major incidents which have the potential to exhaust all agency fire resources. When at least 550 crews are committed nationally.

Initial attack activity was light to moderate nationwide. Ten new large fires were reported in the Eastern Great Basin, Rocky Mountain, Southern California, Northwest, Northern Rockies and Southwest Areas. Crews reached containment goals on ten large fires, most of which were in Rocky Mountain and Southern California Areas. The National Interagency Coordination Center continues to process numerous orders for aircraft, equipment, crews and overhead. An Area Command Team was mobilized to Northern Rockies Area. No major changes in the weather pattern are forecast in the near future. All eleven western states, plus Oklahoma and Texas, are reporting very high to extreme fire danger indices.

Click here to see the Fire Danger Map

Summary of Fire Activity Across The United States:

	Yesterday	Year to Date	Ten Year Average
Fires	**290**	**63,623**	**54,323**
Acres Burned	**55,236**	**4,034,362**	**2,211,771**
Estimated Daily Cost	**$15.8 million**		

****New information appears in bold.****

Northern Rockies Large Fires

Montana

HIGH ORE ROAD: This 1,150 acre fire is burning on lands under the jurisdiction of the Montana Department of Natural Resources and Conservation, 3 miles northeast of Basin, Montana. **85%** of the work has been completed to contain this fire. The number of people assigned to the fire is unknown.

MONTURE/SPREAD RIDGE COMPLEX: (two or more fires in the same general area assigned to a single incident commander). Formerly known as the UPPER MONTURE COMPLEX and, prior to that, the SEELEY COMPLEX. This **15,100** acre complex is burning on the Lolo National Forest, 34 miles northeast of Missoula, Montana. There is no estimate of containment. **398** people are assigned to this fire.

CANYON FERRY COMPLEX: This 41,922 acre complex is burning on Montana State Department of Natural Resource administered land, 15 miles east of Helena, Montana. This complex includes the Buck Snort and Cave Gulch Fires. 236 members of the Montana Air and Army National Guard are being trained to work on this fire. **80%** of the work has been completed to contain this fire. **1,004** people are assigned to this fire.

COUGAR CREEK: This **3,983** acre fire is burning on the Beaverhead-Deerlodge National Forest, 15 miles southwest of Philipsburg, Montana. 45% of the work has been completed to contain this fire. **380** people are assigned to this fire.

SPREAD RIDGE: See MONTURE/SPREAD RIDGE COMPLEX.

McDONALD II: This 1,300 acre fire is burning on the Lewis and Clark National Forest, Bob Marshall Wilderness, 36 miles southwest of Choteau, Montana. **Structure protection was successful.** There is no estimate of containment. **2** people are assigned to this fire.

VALLEY COMPLEX: This 42,000 acre complex is burning on the Bitterroot National Forest, 7 miles south of Darby, Montana. **Evacuations from Sula to Lost Trail Pass and the east fork of the Bitterroot River have been ordered.** There is no estimate of containment. **696** people are assigned to this fire.

BLODGETT TRAILHEAD: This **3,900** acre fire is burning on the Bitterroot National Forest, 5 miles northwest of Hamilton, Montana. **Residences in the area are threatened. A mandatory of the community of Pinesdale was ordered.** 30% of the work has been completed to contain this fire. **309** people are assigned to this fire.

WILDERNESS COMPLEX: This **8,900** acre complex is burning on the Bitterroot National Forest, burning in the Selway Bitterroot Wilderness and Frank Church River of No Return Wilderness, south of Hamilton, Montana. **Fire lookouts have been evacuated and structure protection efforts are in place at nearby administrative sites.** There is no estimate of containment. **32** people are assigned to the this fire.

MUSSIGBROD COMPLEX: This **11,500** acre complex is burning on the Beaverhead-Deerlodge National Forest, 12 miles northwest of Wisdom, Montana. Structures remain threatened. 2% of the work has been completed to contain this fire. **257** people are assigned to this fire.

BOULDER HILL: This 2,600 acre fire is burning on Montana Department of Natural Resources and Conservation jurisdiction, 2 miles north of Bilder, Montana. **70%** of the work has been completed to contain this fire. Number of people assigned to this fire is unknown.

CROOKED: This 2,900 acre fire is burning on the Clearwater National Forest, 50 southwest of Missoula, Montana. **30%** of the work has been completed to contain this fire. **592** people are assigned to this fire.

MIDDLE FORK COMPLEX: This 2,100 acre complex is burning on the Beaverhead – Deerlodge National Forest, 30 miles southwest of Philipsburg, Montana. **Structure protection is in place.** There is no estimate of containment. **168** people are assigned to this fire.

THOMPSON FLAT COMPLEX: (formerly known as the FLAT CREEK COMPLEX): This **1,900** acre complex is burning on the Lolo National Forest, near Superior, Montana. This complex includes 10 fires. 10% of the work has been completed to contain this fire. **239** people are assigned to this fire.

CLEAR CREEK COMPLEX: This **13,000** acre complex is burning on land administered by the Bureau of Indian Affairs, Flathead Agency, 60 northwest of Missoula, Montana. This complex consists of Clear Creek, Vanderburg, Seagull, and Magpie fires. **10%** of the work has been completed to contain this fire. **76** people are assigned to this fire.

PARKE PEAK: This **1,300** acre complex is burning on the Glacier National Park in the northwest corner of the park in the Red Medicine Bow Creek area. **40%** of the work has been completed to contain this fire. **40** people are assigned to this fire.

UPPER NINEMILE COMPLEX: This 1,347 acre complex is burning on the Lolo National Forest, near Houson, Montana. This complex consists of the Seagull Pass #7, East Fork Beechers, Pats Creek, Grave Creek, Big Blue, Alpine Divide and Lower Blue fires. Voluntary evacuations in the area. There is no estimate of containment. Number of people assigned to this fire is unknown.

Idaho

THREE BEARS: This 12,000 acre fire is burning on the Nez Perce National Forest, 29 miles from Elk City, Idaho. **Structure protection is in place.** There is no estimate of containment. 12 people are assigned to this fire.

SULA COMPLEX: This **15,000** acre complex is burning on the Bitterroot National Forest, near Sula, Montana. Structures are threatened and evacuations remain in effect. **Two residences have been destroyed.** There is no estimate of containment. 330 people are assigned to this fire.

Eastern Great Basin Large Fires

Idaho

CLEAR CREEK: This 102,382 acre fire is burning on the Salmon-Challis National Forest, 26 miles northwest of Salmon, Idaho. The 3rd Batallion 5th Marines from Camp Pendleton, California, is assigned. Structures remain threatened and structure protection remains in place. **Powerlines have sustained damage.** 40% of the work has been completed to contain this fire. **1,488** people are assigned to this fire.

BURGDORF JUNCTION: This **23,149** acre fire is burning on the Payette National Forest, 23 miles north of McCall, Idaho. The 3rd Batallion 16th Field Artillery of the U.S. Army is assigned to the fire. 40% of the work has been completed to contain this fire. **1,276** people are working on this fire.

COFFEE POINT NORTH, FLATTOP, FISHER SPRINGS, GENTILE VALLEY, TIN CUP, SUPON: See EASTERN IDAHO COMPLEX

EASTERN IDAHO COMPLEX: This 192,450 acre complex is burning on the Bureau of Land Management, Upper Snake River District administered land. All of the fires are south of Pocatello, Idaho. The fires include: Coffee Point North, Flattop, Fisher Springs, Rattlesnake (Idaho), Moonshine, Gentile Valley, Tin Cup, Supon, West Fork, Camus Creek, Sheep Station, Putnam, and Station Creek. 90% of the work has been completed to contain these fires. **271** people are assigned to the fires.

FLOSSIE COMPLEX: This 5,000 acre complex is burning on the Payette National Forest, 50 miles northeast of McCall, Idaho. Structures are threatened and evacuations remain in place. There is no estimate of containment. 8 people are assigned to this fire.

GRASS: This **1,400** acre fire is burning on lands administered by the Bureau of Land Management, Lower Snake River, north of Three Creek Town, Idaho. Structures remain threatened. **20%** of the work has been completed to contain this fire. 60 people are assigned to this fire.

BUTTS: See NORTH FORK WILDERNESS COMPLEX

NORTH FORK WILDERNESS COMPLEX: There are 10 fires in this complex, including the Butts and Filly Fires. This 1,377 acre fire is burning on the Salmon-Challis National Forest, 40 miles northwest of Salmon, Idaho. There is no estimate of containment. 3 people are assigned to this fire.

MCDONALD CREEK: This 8,000 acre fire is burning on the Bureau of Land Management, Lower Snake River District, 3 miles north of Rowland, Nevada. **100% of the work has been completed to contain this fire and this will be the last report unless conditions change. 69** people are assigned to this fire.

GOODRICH: This 3,710 acre fire is burning on Payette National Forest, 2 miles from Goodrich, Idaho. 75% of the work has been completed to contain this fire. 61 people are assigned to this fire.

Utah

WASATCH COMPLEX: This 3,246 acre complex is burning on the Wasatch Cache National Forest, southeast of Sandy, Utah. The complex includes the Iron Mine Lake, Cottonwood, Oak Hill, and Wallsburg Fires. The Timpanogos National Monument remains closed. **80%** of the work has been completed to contain this fire. **362** people are assigned to this fire.

BROAD, YANCE, MONA WEST: See OLDROYD COMPLEX

OLDROYD COMPLEX: This 59,528 acre complex is burning on the Fishlake National Forest, near Richfield, Utah. The complex includes the Oldroyd, Mona West, Broad, Mourning Dove, and Yance Fires. **94%** of the work had been completed to contain these fires. **524** people are assigned to these fires.

BISMARK, WEST CEDAR AND ARAGONITE: See SALT LAKE DESERT COMPLEX

SALT LAKE DESERT COMPLEX: This 44,000 acre complex is burning on the Bureau of Land Management, Salt Lake District, 3 miles north of Eureka, Utah. The complex includes the following fires: Aragonite, Bismark, West Cedar and Box Canyon fires. 80% of the work has been completed to contain this fire. **55** people are assigned to this fire.

BRUIN POINT: This **1,860** acre fire is burning on lands administered by the Bureau of Land Management, Moab Field Office, 30 miles east of Price, Utah. **47%** of the work has been completed to contain this fire. **183** people are assigned to this fire.

TEN MILE PASS: This 5,500 acre fire is burning on lands administered by the Bureau of Land Management, Salt Lake District, 17 miles east of Vernon, Utah. 45% of the work has been completed to contain this fire. 19 people are assigned to this fire.

Wyoming

BOULDER: This 3,360 acre fire is burning on the Bridger-Teton National Forest, 15 miles east of Jackson, Wyoming. 5% of the work has been completed to contain this fire. **116** people have been assigned to this fire.

Western Great Basin Area Large Fires

Nevada

CHERRY: This 7,500 acre fire is burning on the Bureau of Land Management, Ely Field Office administered land, 30 miles northwest of Ely, Nevada. 75% of the work has been completed to contain this fire. 60 people are working on the fire.

TWIN PEAK: This **7,500** acre fire is burning on the Bureau of Land Management, Carson City Field Office administered land, 60 miles east of Fallon, Nevada. **20%** of the work has been completed to contain this fire. **56** people are assigned to this fire.

O'NEIL BASIN COMPLEX: This **33,700** acre complex is burning on the Bureau of Land Management, Elko Field Office administered land, 39 miles north of Wells, Nevada. **40%** of the work has been completed to contain this fire. **158** people are assigned to this fire.

NORTHEAST ELKO COUNTY ZONE: This **73,694** acre complex is burning on the Bureau of Land Management, Elko Field Office administered land, in Elko County, Nevada. This complex consists of nine fires. **100% of the work has been completed to contain this fire and this will be the last report unless conditions change. 288** people are assigned to this fire.

CRUSOE: This 3,100 acre fire is burning on the Bureau of Land Management, Ely Field Office administered land, 13 miles northwest of Ely, Nevada. Several ranches are threatened. **100% of the work has been completed to contain this fire and this will be the last report unless conditions change. 68** people are assigned to this fire.

FIREBALL: This **7,000** acre fire is burning on land administered by the Bureau of Land Management, Winnemucca Field Office, northeast of Fernley, Nevada. **80%** of the work has been completed to contain this fire. **32** people are assigned to this fire.

Southwest Area Large Fires

Arizona

PEAK: This 1,450 acre fire is burning on the Tonto National Forest, 6 miles south of Globe, Arizona. **35%** of the work has been completed to contain this fire. **275** people are assigned to this fire.

Southern California Large Fires

MANTER: This **73,343** acre fire is burning on the Sequoia National Forest, near Kernville, California. **80%** of the work has been completed to contain this fire. **1,158** people are assigned to this fire.

PECHANGA: This **10,626** acre fire is being managed by California Department of Forestry and is burning in the Pechanga India Reservation and the Cleveland National Forest, 5 miles east of Temecula, California. **Structures are threatened. 45%** of the work has been completed to contain this fire. **1,575** people are assigned to this fire.

CHANCE: This 1,200 acre fire is burning on land that is under the jurisdiction of Kern County Fire Department, 15 miles north of Tehachapi Pass, California. **100% of the work has been completed to contain this fire and this will be the last report unless conditions change. 42** people are assigned to this fire.

GOLDEN 2: This 2,150 acre fire is burning on the Bureau of Land Management, Bakersfield District, near Walker, California. **80%** of the work has been completed to contain the fire. **472** people are assigned to this fire.

KING: This **2,900** acre fire is burning on the land that is under the jurisdiction of Kern County Fire Department, 2 miles southeast of Havilah, California. **Structure protection is in place. One structure has been destroyed. 25%** of the work has been completed to contain this fire. **1,568** people are assigned to this fire.

PEAK: This **1,100** acre fire is burning on the land that is under the jurisdiction of Kern County Fire Department, 15 miles west of Tehachapi, California. **100% of the work has been completed to contain this fire and this will be the last report unless conditions change.** 16 people are assigned to this fire.

NORTH FORK: This **1,651** acre fire is burning on the land that is under the jurisdiction of the California Department of Forestry and Fire Protection, 2 miles west of King City, California. 50% of the work has been completed to contain this fire. **402** people are assigned to this fire.

Rocky Mountain Area Large Fires

Wyoming

MIDDLE ENOS COMPLEX: This 13,666 acre complex is burning on the Bureau of Land Management, Worland District administered land, 15 miles south of Meeteetse, Wyoming. **100% of the work has been completed to contain this fire and this will be the last report unless conditions change. 426** people are assigned to this fire.

Colorado

PONY: This **5,000** acre fire is burning on the Bureau of Land Management, Ute Mountain Agency, 20 miles south of Cortez, Colorado. The fire burned east into Mesa Verde National Park forcing the evacuation and closing of the park. **Structure protection remains a priority.** 5% of the work has been completed to contain this fire. **364** people are assigned to this fire.

Northwest Large Fires

TAMARACK CREEK: This **8,880** acre fire is burning on the Oregon Department of Forestry, 50 miles west of John Day, Oregon. **Structures are threatened. 60%** of the work has been completed to contain this fire. **515** people have been assigned to this fire.

KERN: This **11,000** acre fire is burning on the Bureau of Land Management, Vale District, administered land, 25 miles south of Vale, Oregon. **90%** of the work has been completed to contain this fire. **136** people have been assigned to this fire.

WEATHER OUTLOOK

***** A RED FLAG WARNING IS POSTED FOR SOUTHWEST WYOMING FOR DRY LIGHTNING, LOW HUMIDITY AND GUSTY WINDS *****

***** A FIRE WEATHER WATCH IS POSTED FOR SOUTHWEST AND SOUTH CENTRAL OREGON FOR DRY LIGHTNING *****

A weak wave of air moving through the northern states will bring cooler air and more stable conditions to Washington, Oregon, Idaho and Nevada. Montana will be a bit more unstable with isolated to scattered afternoon thunderstorms. Utah will be dry with isolated afternoon thunderstorms in the mountains. Afternoon thunderstorms are also expected in Arizona, New Mexico, Colorado and Wyoming. An upper level low off the California coast will bring isolated mainly dry thunderstorms to northern California, southwest Oregon and the northwest corner of Nevada. Southern California will remain dry.

High temperatures will reach into the 80's and 90's in most areas and up to 110 in the western deserts of Utah, Arizona and southern Nevada. Temperatures will be between 110 and 115 degrees across the deserts of southern California and southwestern Arizona.

Minimum relative humidities will drop to the single digits and teens in the southern portion of the west and range from 10 to 20 percent across the north. Winds are forecast to be generally 10 to 20 mph during the afternoon hours.

Access satellite images of fires from the National Oceanic and Atmospheric Administration at: **http://www.osei.noaa.gov.**

For more information, see the U.S. Forest Service Fire News web page at **www.fs.fed.us/fire/news.shtml.**

The National Incident Information Center is here to serve you from 7 AM - 6 PM (M-F), 8:30 AM - 2 PM (Weekends) EDT.

Contact: Terry Virgin, Loretta Ray, Larry Blade or Marion Lostrom		**Voice: (202) 205-1450** **Fax: (202) 205-1272**

BE FIREWISE!!

Are you aware of the threat of wildfire? See if your home is fire safe with a visit to the Firewise Home Page at (**www.firewise.org**).

Forest Service Home Page	Fire & Aviation Management	National Interagency Fire Center
http://www.fs.fed.us	**http://www.fs.fed.us/fire**	**http://www.nifc.gov**

PART I

Firefighting Capability Status

The Forest Service in partnership with the entire interagency firefighting community have activated all available resources to ensure that lives and property are protected, as the western United States deals with one of the worst fire seasons in many years. Federal and state agencies share firefighting supplies, equipment and personnel, to facilitate efficient and cost-effective firefighting management. There are currently more than 20,000 people fighting wildland fires nation-wide, and we are working with the military, the eastern states, and our international partners to get additional firefighting resources. The National Multi Agency Command (Team of representative from all wildland fire fighting agencies and the National Association of State Foresters) is carefully monitoring fire activity and assigning key resources to address high priority fires.

Conditions are expected to get worse before they get better. In the short-term, weather and fire indices in the western states continue to predict very high to extreme fire dangers. Dry lightning across the West has continued to start new fires that fire-fighting teams have scrambled to put out before they get out of control. Many new large fires are likely throughout August, which is typically the worst month for fires in the West.

In addition to the more than 200 aircraft and 1000 engines already in operation, the National Interagency Fire Center has called in military assistance. Army and Marine battalions of about 500 persons each are fighting fire in Idaho. The Air National Guard and Air Force Reserve have also equipped eight C-130 aircraft with airborne firefighting systems that enable them to bomb fires with retardant and water. Several crews, a management team, and aviation resources from Canada are being utilized, as is one firefighting crew from Mexico.

Our priorities during this campaign are:

- First, to protect life and property – we place the highest priority on protecting the public and firefighter safety.
- Second, we are focusing our effort on aggressive initial attack of new fires starts and protecting communities at risk. With dry lightning in the west, it's important to put out new starts early. For example, yesterday, there were 270 new starts across the west that were prevented from becoming big fires.
- Third, we are attempting to protect natural resources at risk. The fires are burning in areas that are important watersheds for communities and for threatened, and endangered species of salmon and bull trout.

Burned Area Emergency Rehabilitation (BAER) teams are implementing rehabilitation projects on areas affected by fire. To date, 118,880 acres have been treated of the 649,556 acres of Forest Service lands burned in 2000. The team of specialists including hydrologists, soil scientists, engineers, and archeologists recommend and implement treatments to limit soil erosion downstream from the burned area.

PART 1

PROTECTING PEOPLE AND SUSTAINING RESOURCES IN FIRE-ADAPTED ECOSYSTEMS

Many forests in the United States have evolved with fire as an important part of the natural cycle. Prior to the advent of modern forest management, lighting-caused fires, under optimum conditions, would burn near the ground under the canopy of larger trees. These naturally caused fires would reduce underbrush and forest litter. The remaining ash would provide nutrients needed to sustain a healthy forest.

After the turn of the century lighting-caused fires were aggressively extinguished. Expanded human development, past grazing and timber management practices, and changes in climate have also contributed to substantial accumulations of understory vegetation. Fuel has accumulated to the extent that lighting-caused fires no longer serve the natural role of keeping forests clear of excess fuel. In excessively dry conditions, like those today, naturally caused fires have the potential to burn out of control through the tops of trees and damage forests, soils, and public property.

The Forest Service has been working to reduce the threat of catastrophic wildfires like these we are experiencing today. Over the last several years, the Forest Service has aggressively increased the number of acres treated to reduce fire risks. In 1994, the Forest Service treated about 385,000 acres. This year the Forest Service will treat more than 1.3 million acres to reduce the treat of catastrophic fires. Treatments involve both prescribed burning, thinning of brush and small trees, and other mechanical treatments.

The Forest Service is also drafting an internal strategy for prioritizing the resources it spends treating forests to reduce the threat of catastrophic wildfires. This strategy is called, *Protecting People and Sustaining Resources in Fire Adapted Ecosystems: A Cohesive Strategy to Reduce Over-Accumulated Vegetation.* The strategy is currently under review by the Administration.

The strategy aims to restore and maintain ecosystem health in fire-adapted ecosystems and is intended to:

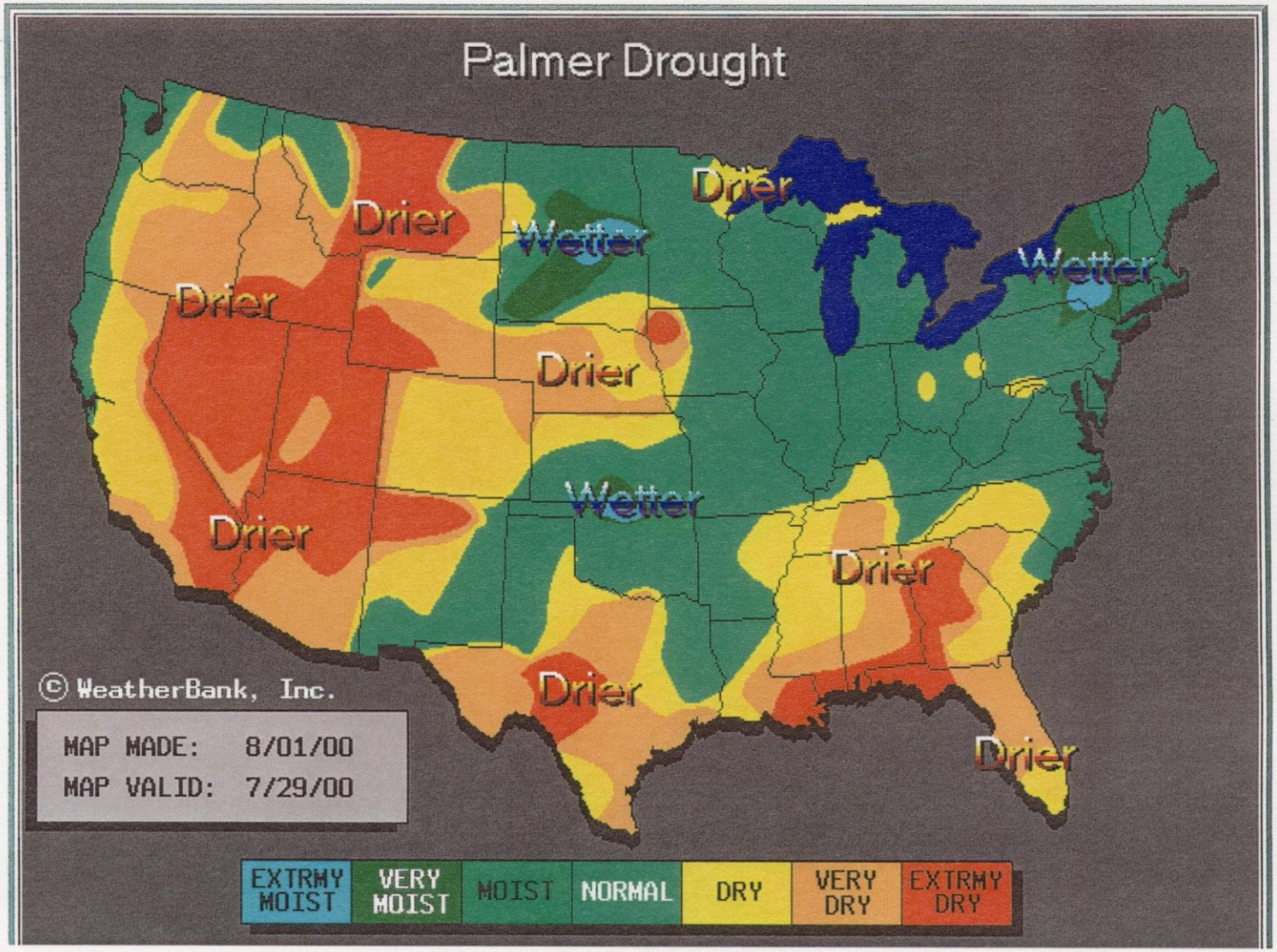
- Better ensure public and firefighter safety;
- Improve the resilience and sustainability of forests and grasslands at risk;
- Conserve species and biodiversity; and
- Reduce wildfire costs, loses, and damages.

Restoring these ecosystems and reducing the risk of catastrophic wildfires will take many years and millions of dollars. Ecosystem restoration will use a wide variety of tools and techniques including mechanical removal of over-accumulated vegetation and prescribed fire.

The strategy focuses treatment on high-risk areas, rather than least cost acres. Of the total acres treated, approximately one-quarter are directed toward those areas in which watersheds, species, or human communities are at highest risk. On other areas, treatments are designed to prevent further increases in high-risk conditions.

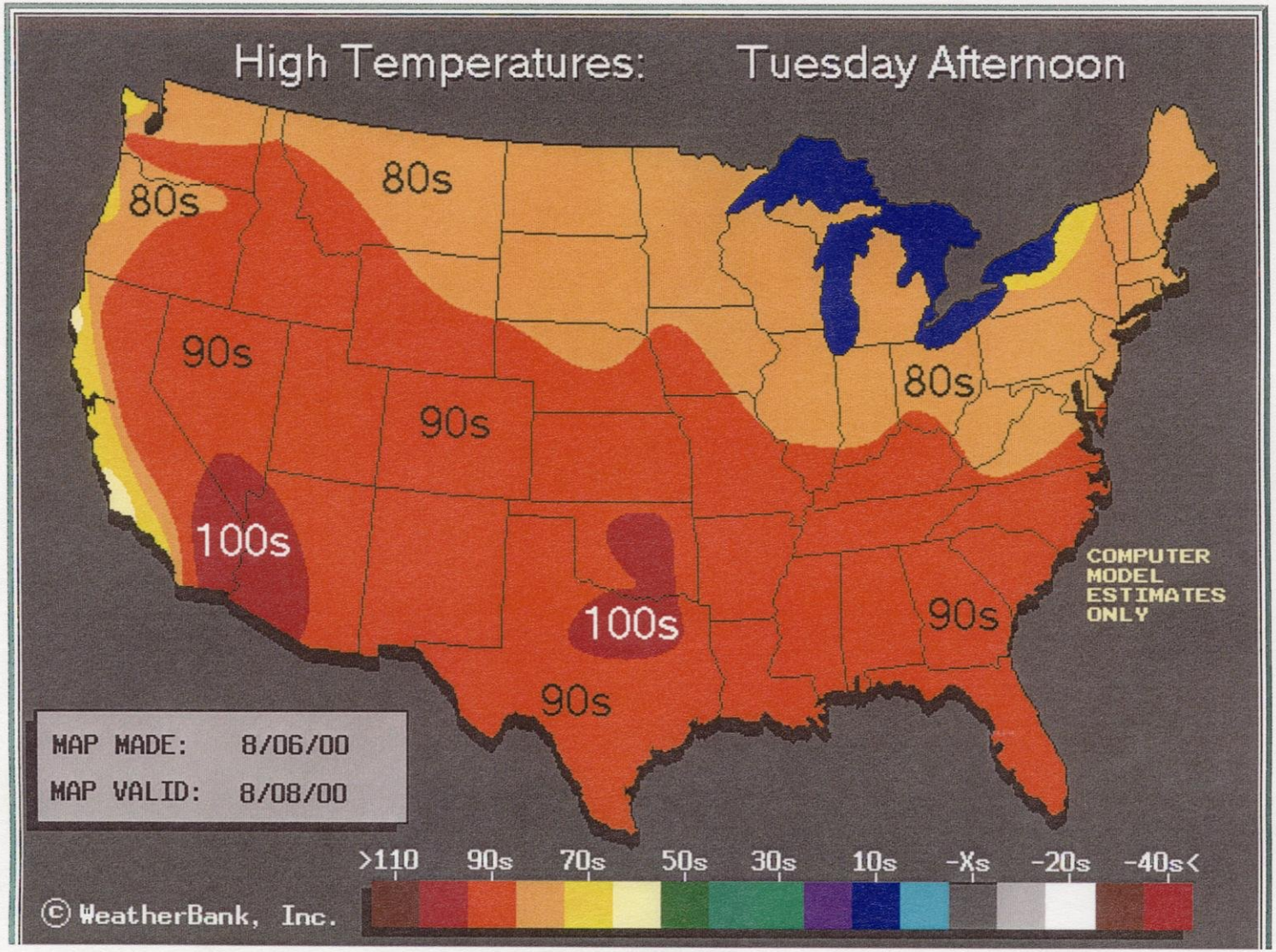
The strategy complements other similar efforts, including the Forest Service Western Forest Health Initiative and the Western Governor's Association Policy Resolution. Both of these efforts recognize that restoring forest health in the Western states is essential to the safety of private communities and the productivity of public lands.

Drought Severity Index



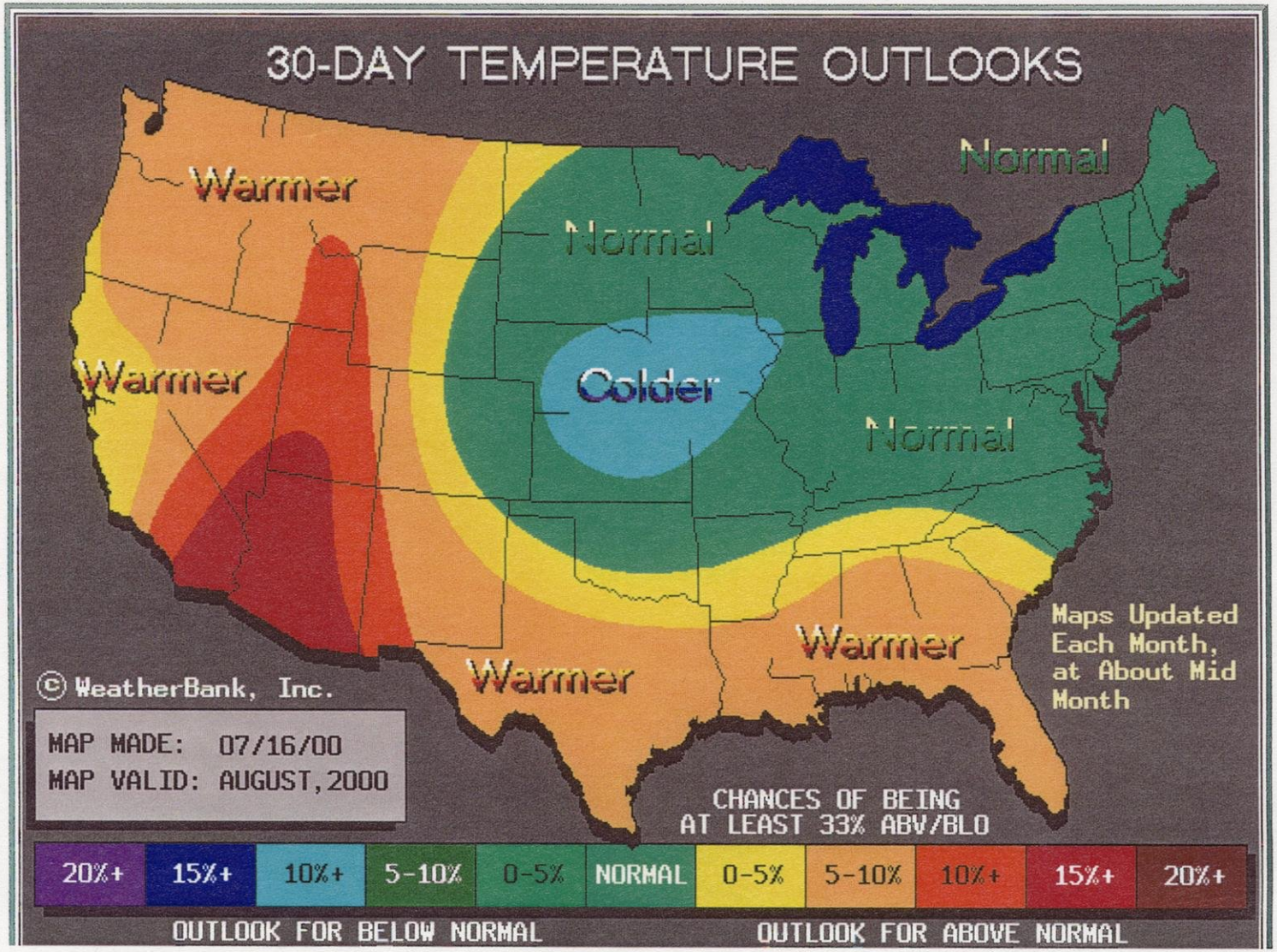
PART I

Highs Day after Tomorrow



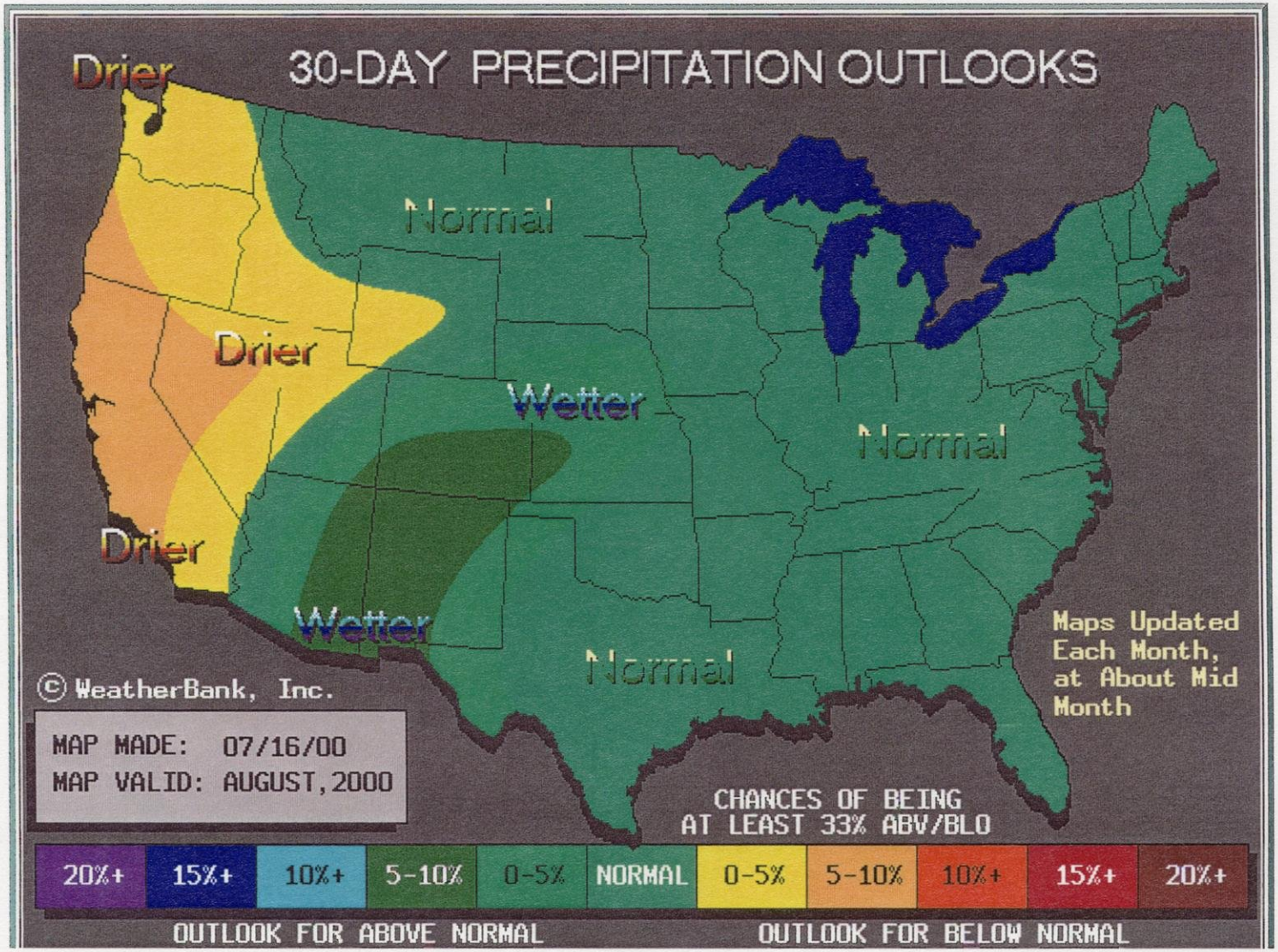
PART 1

30 Day Temperature Outlook



PART I

30 Day Precipitation Outlook



Part I

PART 2

2000 Fire Season
Key Messages
August 7, 2000

- In recent weeks, fire activity (mostly in California and the interior West) has reached near-record proportions for the last 10 years.

- Thanks to the skill and dedication of our wildland firefighters and the support from local residents, we are minimizing the risks to adjacent private homes and communities. However, we continue to be challenged with the onslaught of record temperatures, lighting strikes and wind.

- The Forest Service and other federal agencies are using all available resources, including the 20,000-plus professional wildland firefighters already committed to fires throughout the nation, to assist in firefighting. That includes support from the Canadian government and using our own military. We can mobilize additional firefighting personnel and equipment from Alaska, the Eastern States, the U.S. military, and Canada. With these additional resources we can continue to reduce the risks to lives, homes and property.

- The federal firefighting agencies knew by spring that this year's fire season would develop into one of the most dangerous in many years. We developed a strategy and plans to deal with the season. We were prepared. Those plans are now being tested to the absolute maximum. The basic plan is simple. Focus on initial attack and stop the fires while they are still small. More than 95 percent of fires on federal land are being caught during initial attack.

- Public firefighter safety is our first priority. Our safety record so far this fire season is very good. There is not a timber stand, grassland or structure that is worth the life of one of our firefighters or a member of the public.

WILDLAND/URBAN INTERFACE (WUI) FIRE PROTECTION

Issue: The close proximity of the wildlands and communities, better known as the "Wildland/urban interface", is a common wildfire issue. This was reinforced by the Los Alamos fire in May of 2000. Since 1985, more than 9,000 homes are reported as being lost to wildland fires (National Fire Protection Association). Exponential growth of communities near wildland along with highly flamable forest conditions near these areas increases the threat for more losses in the near future.

Key points:

- The USDA Forest Service is giving high priority to the treatment of lands near interface areas. This requires the involvement of the communities and their commitment to allowing the forest to conduct treatments on Federal land. The commuity must also take action on their property.

- Through an internal strategy called ***"Protecting People and Sustaining Resources in Fire-Adapted Ecosystems- a Cohesive Fuels Strategy for Western Forest"***, the Forest Service is priortizing the fuels work that needs to be completed on the ground. The Forest Service desires to work with cooperators and communities on large landscape scale fuel projects designed to mitigate fire occurrence and loss in the wildland/urban interface. These programs are long-term in duration, recognizing that there are no simple or quick solutions. In FY 2000, the Forest Service will treat more than 1.3 million acres to reduce the threat of catastrophic stand replacement fires.

- The Forest Service began working with the National Wildfire Coordination Group (NWCG) and the National Fire Protection Association (NFPA) in 1987 to promote fire safety in the wildland/urban interface. The **FIREWISE** initiative promotes communities wildfire safety through community involvement. Nine workshops are being conducted for professionals and local officials in the insurance, real estate, banking, building code industries in 2000 and 2001. The hope is that participants will work to establish community fire safety planning and standards. A website is located at www.firewise.org

- Related **FIREWISE** Wildland Urban Interface Projects included: development and distribution of a FIREWISE Newletter to more than 16,000 recipients; issuance of a national wildland-urban interface hazard assessment system; interactive internet access to a variety of wildland/urban interface resources; development of a National WUI Insurance code; training and public education; local conferences and workshops; and fire prevention news releases.

- The Cooperative Fire Protection Program of the USDA Forest Service provides three programs designed to improve the fire protection programs of State and rural organizations: the **Federal Excess Personal Property (FEPP) program**; the **Volunteer Fire Assistance** cost-share grant program; and the **State Fire Assistance program** provides funds to state forestry agencies to improve fire protection.

- Through the State Fire Assistance program, States apply for focused WUI projects funds. Examples of grant projects include: reduction of fire fuel hazards, development of community fire plans through local wildfire councils, implementation of local wildfire safety and building codes, and support to targeted homeowner wildfire education programs. In FY 2000, over $500,000 was provided in special interface grants to states.

FIREWISE COMMUNITIES

Making sensible choices for safety from fire in the wildland-urban interface

www.firewise.org/communities

No community is safe from wildfire, but we can be wise about our community design and preparedness in the United States. We *can* reduce the staggering impact and costs of severe wildland fire. All the cooperators of the national FIREWISE effort hope to do just that.

Wildland/Urban Interface Fire Facts

Over the past century, our population nearly tripled with much of the growth flowing into traditionally natural areas. Cities have grown into suburbs and suburbs have blended into what was once rural America. Secluded family homes surrounded by forests now typify the frontier of urban sprawl, creating an extremely complex landscape that has come to be known as the wildland-urban interface. From this sprawl spring numerous infrastructure problems, including catastrophic wildfires, which increasingly threatens lives, homes, and businesses.

Where wildfires historically occurred in wildland areas, they now frequently happen in America's backyards, and the risk will continue to grow as the interface is developed. Threats to life and property and the costs for suppressing wildfires expand at astounding rates. In 1973, 1.9 million acres of private, state and federal lands burned from wildfires. In 1996, with increased expansion into the interface, almost 6.7 million acres were consumed by wildfires with taxpayer's costs exceeding $689 million (fy1996est), not including property loss estimates. Since 1970, more than 10,000 homes and 20,000 other structures and facilities have been lost to severe wildland fire, wildfires that have cost our government agencies some $20 billion to suppress and the insurance industry another $6 billion in restitution. More than 620 wildland firefighters have been killed on duty since 1910.

Breaking the Wildfire Disaster Cycle

*This building-loss-rebuilding cycle is much more costly in every way than planning, preventing and mitigating **before** a disaster*

Communities can break the cycle of loss-rebuilding-loss through effective Firewise Planning.

Following a fire, low cost loans and insurance funds become available for homeowners to rebuild. Without FIREWISE planning (through community regulation or volunteer compliance), people tend to rebuild the exact same home they lost, replace the same vegetation, and thereby, create the same conditions that lead to the loss of the home.

Not only do many people return to re-build what was lost without building in mitigation measures, but, because of low cost emergency/disaster loans, many return to the area to build even larger homes than before. Many of the features that contributed to the original loss are also incorporated into rebuilt structures and surrounding landscapes.

The vegetation re-grows around the structure, and this sets the stage for the next wildland fire, thus continuing the wildland fire disaster cycle.

FIREWISE COMMUNITIES

Wildfires can occur in areas of residential development without the occurrence of disastrous loss

The tenets of a firewise community include cooperative land use planning, construction and landscape choices that help prevent the conversion of these homes to fuel for a wildland fire.

Communities designed with FIREWISE concepts helps preserve not just houses, but homes, a cherished lifestyle, natural settings for wildlife and recreation and incredible views. It's also good business. Protecting collateral and investments, reducing exposures, and avoiding loss will increase values and save lives. It's a safer place for people to live and it benefits the landscape and wildlife as well as people. Being firewise means leveraging fire protection and maximizing community and property owners' values.

Coordinated Programs and Cooperative Stakeholders: A true public-private initiative

America's wildland fire agencies and the National Fire Protection Association (NFPA) have been promoting Firewise living since 1986. Their National Wildland/Urban Interface Fire Program has attracted new partners in this work and estimated savings of **about $20 million annually** in fire suppression costs.

The following stakeholders support the concept of Firewise Community Planning and encourage their constituents to participate on the local level where key decisions are made:

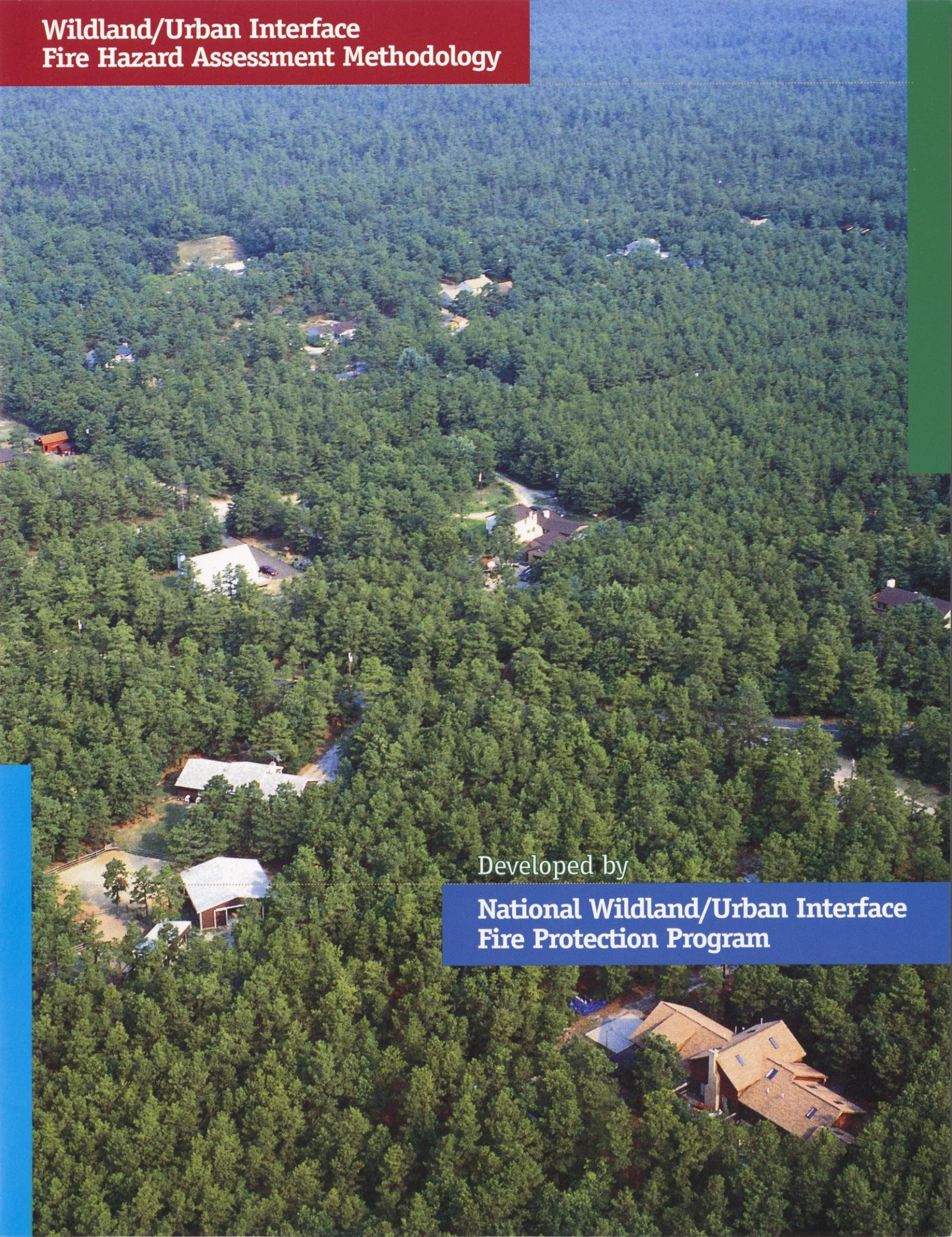
National Wildfire Coordinating Group
American Planning Association
American Institute of Architects
International Association of Fire Chiefs
National Association of State Fire Marshals
National Emergency Managers Association
National Association of Realtors®
FEMA Project Impact
American Banking Industry
National Rural Utilities
Institute for Business and Home Safety (IBHS)
National Association of Home Builders®
American Society of Landscape Architects
ISO (Insurance Services Office)
National Volunteer Fire Council
National Association of County Officials
Metro Fire Chiefs
American Forestry Association
Congressional Fire Services Institute
American Red Cross

Our organizational and corporate stakeholders supporting workshops by providing services, expertise, materials, hardware/software and/or financial support.

- National Fire Protection Association
- USDA Forest Service
- USDI Bureau of Land Management
- USDI Bureau of Indian Affairs
- USDI National Park Service
- US Fire Administration
- National Association of State Foresters
- Compaq Computers
- Microsoft Corporation
- State Farm Insurance
- The Hartford Insurance Group
- Wildland Firefighter Magazine™
- ESRI (Environmental Systems Research Institute)

For more information about the Firewise Communities Workshop series, visit our website at
www.firewise.org/communities

Wildland/Urban Interface Fire Hazard Assessment Methodology



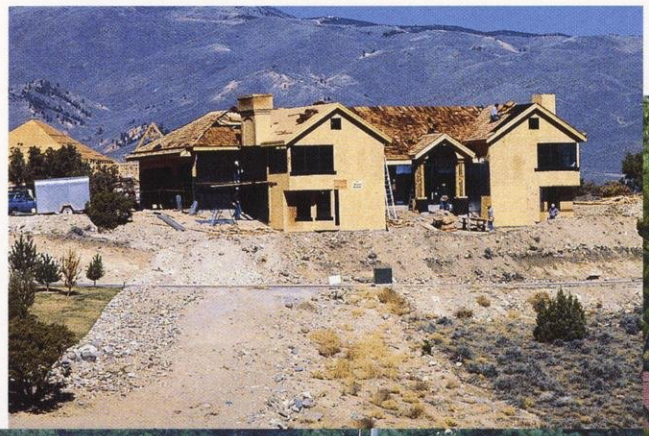
Developed by

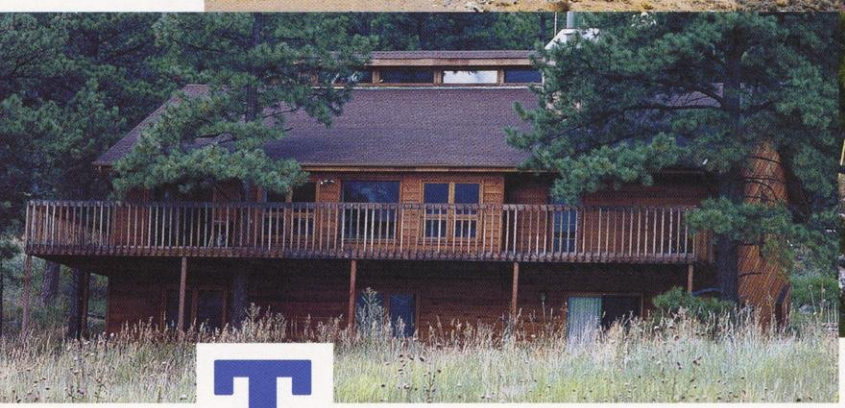
National Wildland/Urban Interface Fire Protection Program

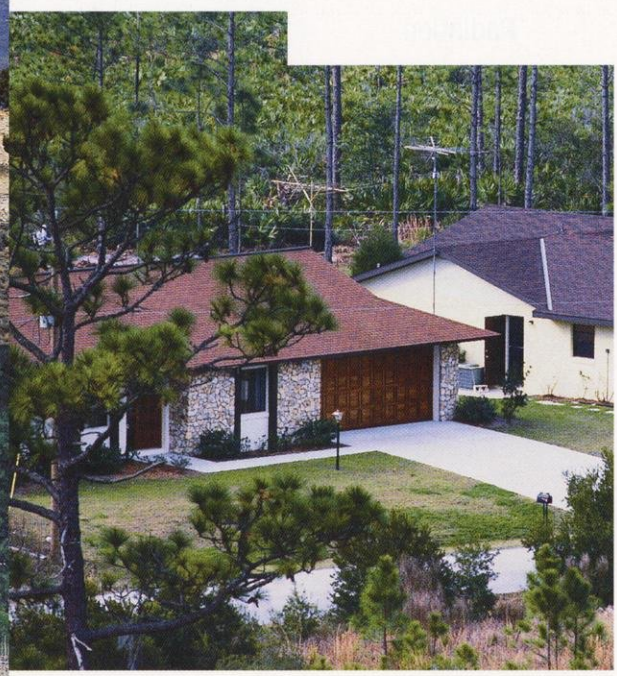
PART 3

CONTENTS

INTRODUCTION







Wildland/urban interface located in (clockwise from upper left): Nevada, Florida and Colorado

Throughout the United States it is more and more common to see homes and other types of structures being built in wildland environments. This trend is creating an expansion of wildland/urban interface areas where structures are located next to large amounts of vegetation. Because of their location, these structures are extremely vulnerable to fire should a forest or wildland fire occur in the surrounding area.

There are many actions that can be taken to reduce the potential of fire in existing housing developments as well as planned new developments. This guide will help users assess the potential of a structure located in a wildland environment to withstand an approaching forest fire *without the intervention of fire fighting personnel and equipment.* This document focuses exclusively on proactive, pre-fire preventative actions rather than reactive fire suppression plans.

This guide first provides a description and understanding of the three ignition sources of concern to a structure located in an wildland environment:

- radiation,
- convection and
- firebrands.

Next, it offers a five-step method for assessing the hazards of a wildland/urban interface area. Several potential hazards are discussed in depth. In addition, this guide provides suggestions for reducing the fire potential using the following approaches:

- building a structure or altering an existing structure to reduce its chance of ignition and,
- completing mitigation measures on the surrounding wildland area.

STRUCTURE IGNITION SOURCES

Structures exposed to wildland or forest fires can ignite by radiation, convection or firebrands. An explanation of each type of ignition source follows.

Radiation

Wildland fires can cause ignition by radiating heat to a structure. Radiation exposure depends on the intensity and the duration of the flame front.

The radiant heat exposure to a structure (and the chance of ignition) will increase under the following conditions:

- An increase in the size of the flames
- An increase in the structure surface area exposed to the flames
- An increase in the duration of the exposure
- A decrease in the distance between the flames and the structure

Convection

Ignition of a structure by convective heat transfer requires the flame to come in direct contact with the structure. Contact with the convection column also can cause ignition but the temperature of the column is generally not hot enough to ignite a structure.

When attempting to reduce the chance of ignition by convection, the duration of the exposure to the flame is more critical than the size of the flame. Thus, clearing to prevent flame contact with the structure must include any materials capable of producing even small flames (for example, cured grasses, low ground cover, leaves, pine needles and trash). Wind and steep slopes will tilt the flame and the convection column uphill increasing the chance of igniting a structure. Structures extending out over a slope have the greatest likelihood of ignition from convection.

Firebrands

Firebrands are pieces of burning materials that detach from a fire due to the strong convection drafts in the burning zone. Firebrands can be carried a long distance (one mile or more) by fire drafts and winds. Severe wildland/urban interface fires can produce heavy firebrand showers. The chance of these firebrands igniting a structure will depend on the size of the firebrand, how long it burns after contact, and the materials, design, and construction of the structure.

This fire generates radiative and convective heat. The radiative heat is generated horizontally to the adjacent trees. The convective heat rises vertically in the smoke plume.

The Hazard Assessment Process is presented in step functions that are descriptive, not prescriptive in nature. The methods recommended describe an overall approach that combines approaches taken by several jurisdictions throughout the United States. In reviewing each step, consider the extent each step contributes to a realistic assessment of the fire hazard in your area.

Step 1: Select the Areas to be Evaluated

Identify the interface boundary or boundaries on a map. Use a map (preferably a topographic map) of the jurisdictional area and define the known interface areas. After identifying the interface areas on the map, give each area a name or number. Consider naming the areas after related geographic names or land marks for easy reference.

Step 2: Select the Hazard Components to be Considered in the Assessment

This guide describes and evaluates only the common, essential hazard components involved in a wildland/urban interface fire. It may be necessary to take into account additional components specific to the local situation in order to complete a more accurate hazard assessment. A list of additional hazard components that may be relevant to your area are listed on page 9.

The hazard components discussed are divided into three categories—structure hazards, vegetative fuel hazards, and other miscellaneous hazards. The structure hazards include the structure's location, building materials and design. The vegetative fuel hazards include the vegetation both within and beyond the vicinity of the structure. Miscellaneous hazards included are the structure density (i.e., the number of structures in an area), slope, weather and fire occurrence.

Structure Hazards

The building materials, design and location, and the fuels within the area will all contribute to the ability or inability of the structure to survive a wildland fire situation. By considering the following structural hazards, new developments can be built with an increased chance of surviving a wildland/urban fire. Homeowners should be educated on how to reduce the fire risk of existing structures.

Structure Location

The structure should be built in a location that will minimize vulnerable design features and maximize its survivability. Structures should be set back at least 30 feet from property lines so that the owners will have control of the adjacent areas. Structures should be located away from dangerous topographic features such as the top of slopes or adjacent to chimneys (draws and canyons).

Building Materials and Design

Should a building come in contact with heat, flames or firebrands, the building materials and design should prevent or retard the penetration of the fire beyond the exterior of the structure.

• *Roof*

Roofs are less vulnerable to radiation and convection because of their slope but are more susceptible to ignition by firebrands. Roofs should be covered with nonflammable materials and should be inspected for gaps which could expose ignitable subroofing or roof supports. A major cause of home loss in wildland areas is flammable woodshake roofs.

• *Walls*

Walls are most susceptible to ignition by radiation and convection. The edges of flammable wall materials, such as trim materials on casings and facing, will ignite before flat surfaces. The walls should be constructed of fire resistant materials compatible with the surrounding fuels. Wall materials which resist heat and flames include cement, plaster, stucco and concrete masonry such as stone, brick or block. Though some materials will not burn, such as vinyl, they may lose their integrity when exposed to high temperature and fall away or melt, exposing interior materials.

• *Windows*

Exposure to heat can cause windows to fracture and collapse leaving an opening for flames or firebrands to enter and ignite the interior of a structure. Using glass products that can withstand the potential convective and radiant heat will reduce this risk. Tempered glass will withstand much higher temperatures than plate glass and should be used for large windows—particularly windows overlooking slopes or vegetation. Double pane glass is slightly more resistant to heat than single pane glass.

• *Eaves and Overhangs*

Eaves and overhanging features—room pushouts, bay windows, and extensions over slopes—are very vulnerable to convective exposures and have a design that can sustain ignition. Fuels should be eliminated from contact with eaves and overhangs. Eaves and overhangs should be boxed or enclosed with nonflammable materials to reduce the surface area and eliminate the edges that can trap firebrands.

• *Vents*

Vents are a necessary feature of a structure for preventing condensation and subsequent wood decay. However, openings should be screened to prevent firebrands from entering the structure. The screens should prevent passage of objects larger than 1/4 inch (6.0mm). Both vents and screens should be constructed of materials that will not burn or melt when exposed to heat or firebrands.

• *Attachments*

Attachments include any structures connected to the residence such as decks, porches and fences. When assessing the ignition potential of a structure, attachments are considered part of the structure. For example, if the ignition potential of the attachment is high, the ignition potential of the entire structure is considered high.

Vegetative Fuel Hazards

Vegetative fuels include living and dead vegetation materials. The amount of heat energy released during a wildland fire is defined by the amount, arrangement and rate of combustion of the vegetative fuels. Vegetative fuel flame lengths can exceed 100 feet and the radiated heat can ignite combustible materials from distances of 100 feet or more. Winds can carry live firebrands for several miles.

Fuels *within the immediate vicinity* can have a significant impact on the potential of a structure to ignite. The size of the "immediate vicinity" will vary depending on the vegetation and characteristics of the land. Fuels within the immediate vicinity of the structure should be fire resistant and maintained in fire resistant condition.

Fuels *beyond the immediate vicinity* are those that surround the structure but are not immediately adjacent to

it. The concern with these fuels is primarily their ability to produce firebrands, which can indirectly cause ignition of the structure, and their ability to produce long flame lengths and intense radiant energy. Fuels beyond the immediate vicinity of the structure should consist of fire resistant ground cover and trees that are thinned and pruned to prevent ground fires from igniting the crowns, or tops of trees.

Miscellaneous Hazards

Structure Density

The density of structures is determined by lot size, structure arrangement and number of structures per lot. This density affects the overall exposure, spread and intensity of wildfires.

Slope

Slope is defined as the upward or downward incline or slant of the terrain. All other variables being equal, a fire traveling up a slope will move faster and have longer flames than a fire traveling on flat terrain—a fire on a 30 percent slope can produce flames twice the length and travel as much as one and one half times as fast, as a fire on flat ground.

$$\% \text{ slope} = \frac{\text{(Y) vertical distance (rise or fall)}}{\text{(X) horizontal distance}} \times 100$$

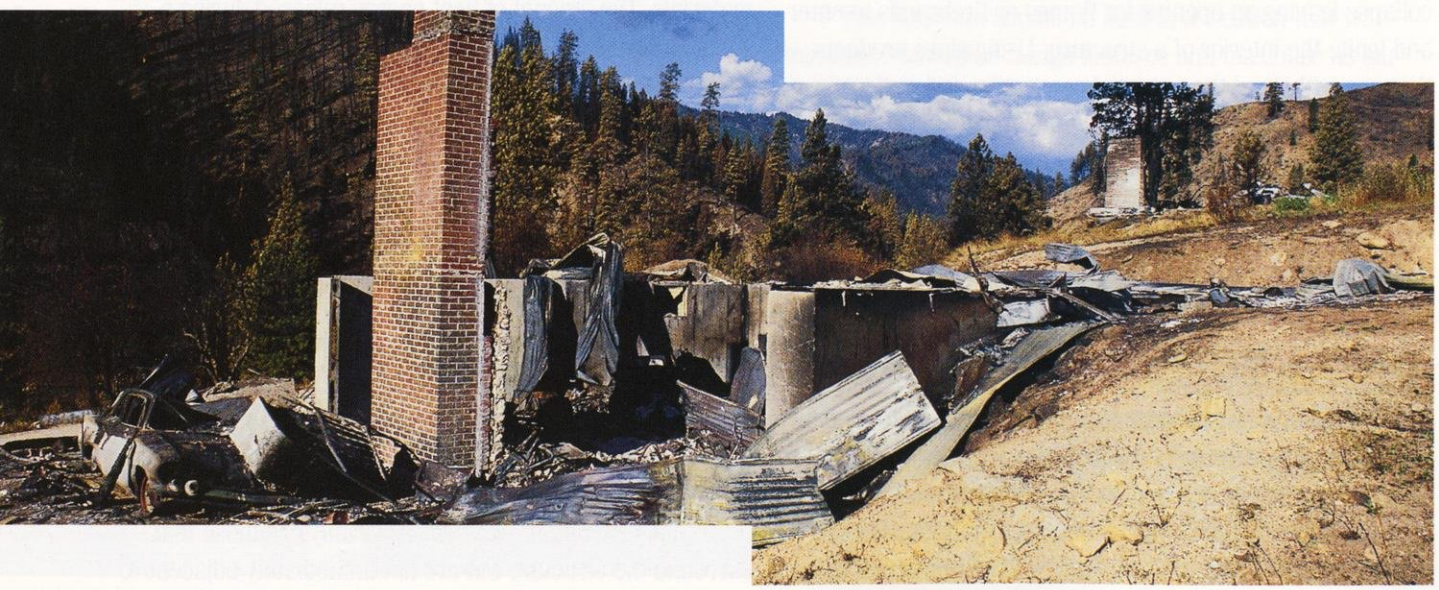
Weather

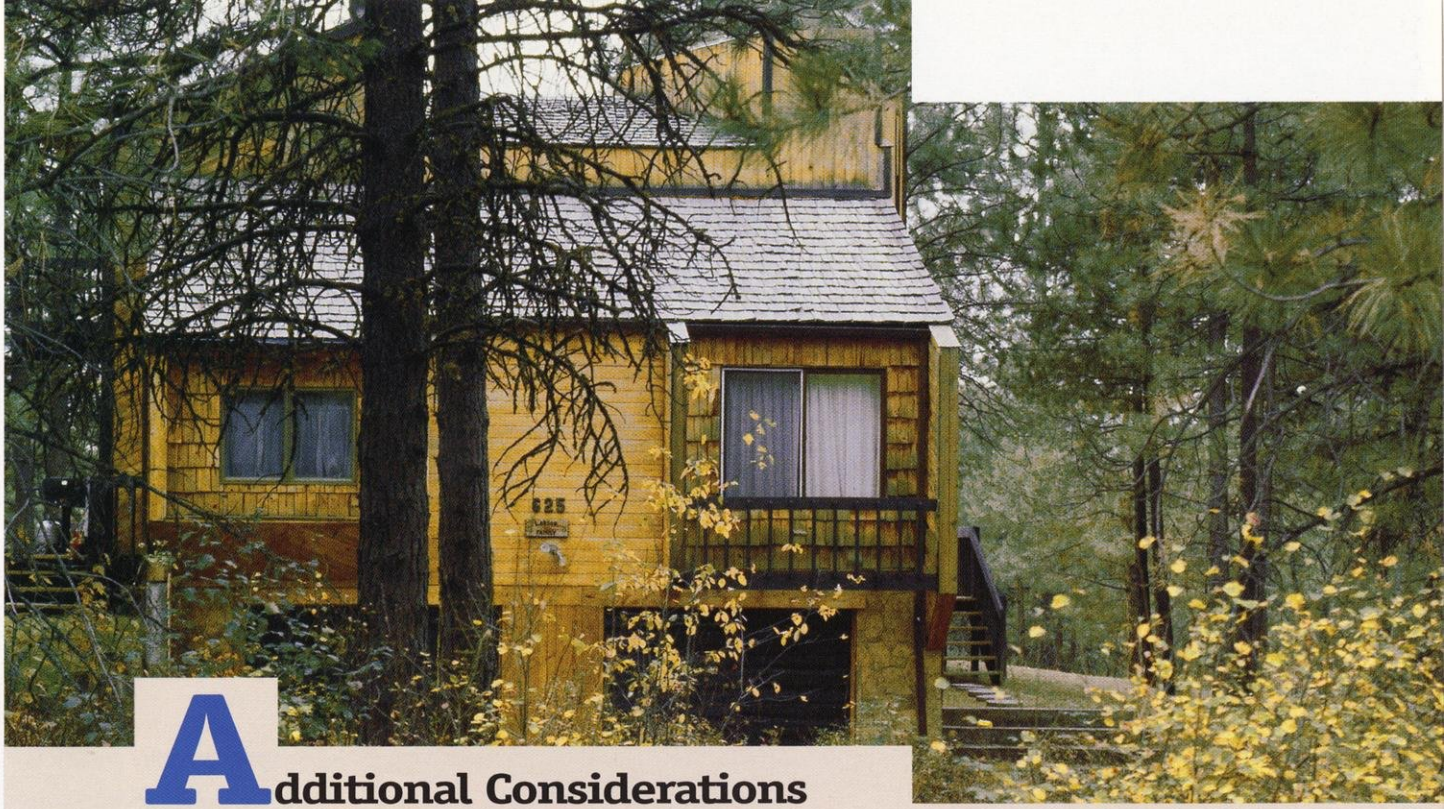
All aspects of weather can affect the fire assessment. Temperature, humidity and winds will affect the probability of ignition and the ability to control and extinguish the fire. Weather patterns such as long and short-term droughts need to be considered.

Fire Occurrence

The history of wildfires can provide a valuable dimension for the assessment. There will be an increase in the probability of a fire occurring in environments where they have occurred in the past. The severity and frequency of fires enable authorities to determine the resources required.

See Additional Considerations on page 9.





Additional Considerations

Additional considerations may need to be studied depending on the local situations. A list of additional hazards are given in Table 1.

Table 1 **Additional Considerations**

Fire Suppression	Slope	Fuel	Weather	Environmental
Access/Egress	Aspect	Building Construction	Drought Factor/Index	Endangered Species
Bridges	Dangerous Terrain	Defensible Space	Historic Climatological Data	Endangered Plants
Building Construction	Position by Slope	Fuel Breaks	National Fire Danger Rating System	Environmental Impact
Density and Spacing	Percent Slope	Fuel Continuity		Visual Impact
Preattack Plan		Fuel Loading		
Resources		Fuel Type/Models		
Response Times				
Utilities				
Water Supply				

Step 3: Rank the Hazard Components

Develop or use an existing system to define the significance of each hazard component. The system, though subjective in nature, should be specific and consistent. Page 15 of this document references several hazard assessment systems that are currently being used by wildfire experts throughout the United States.

One system used by the Virginia Department of Forestry uses a system that ranks the *risk, hazards* and *values* at risk in each area of the assessment using a low (**L**), medium (**M**) and high (**H**) rating scale. The *risk* is defined as the likelihood of a wildfire ignition. The *hazards* included are fuels and topography. The *values* are the loss potentials should a wildfire occur. Each delineated area in the assessment will have three rankings. For example, a **LMH** ranking would designate the area as having a low potential for ignition; a medium level of hazards such as moderate slopes and/or moderate amounts of vegetation; and a high value such as a residential area. Areas with a **HHH** ranking would be the most severe fire risks receiving the most immediate attention. Areas with a **LLL** ranking would be the least fire risks and would be a lower priority.

Alternatively, the component may be assigned a numerical value to indicate its significance. For example, *NFPA 299 Standard for the Protection of Life and Property, 1997 Edition,* uses a numerical rating system to define the relative contributions of several components. A summary of the NFPA 299 system is given in Table 2. To obtain an overall rating for the interface, the NFPA 299 system requires simply adding the points from the individual components.

Table 2 **NFPA 299 Wildfire Hazard Severity Checklist**

Component (Number of items)	Criteria	Points per item
Subdivision Design (6)	Road widths, dead ends, lot sizes, street signs	1 - 5
Vegetation (2)	Fuel models, defensible space	1 - 10
Topography (1)	Slope	1 - 10
Additional Factors (3)	Topography, weather conditions	2 - 4
Roofing Material (1)	Materials used for roofing	1 - 10
Building Construction (1)	Materials used for siding, decks	1 - 10
Fire Protection (2)	Water sources and supply	1 - 10
Utilities–Gas and Electric (1)	Utility placement	1 - 5

Table 3 **Virginia Department of Forestry Component Rating System**

Component	Criteria	Points
Fuel	Low hazard fuels	1
	Medium hazard fuels	2 - 3
	High hazard fuels	4 - 5
Slope	Mild (0-5%)	1
	Moderate (6-15%)	2
	Steep (16-25%)	3
	Extreme (greater than 25%)	4
Structure	Roof and siding material	1 - 10
Safety Zone	Percentage of homes with defensible space	3 - 10
Emergency Access	Road width, dead ends, turnaround and bridges	2 - 3
Other Factors	Marked addresses, street signage, water sources, power lines and special circumstances	1 - 5

Figure 1

_____ (Fuel Hazard Rating
x _____ Slope Hazard Rating)
= _____
+ _____ Structure Hazard Rating
+ _____ Safety Zone Rating
+ _____ Emergency Access Rating
+ _____ Other Factors Rating
= _____ **Fire Hazard Rating**

Similarly, another Virginia Department of Forestry system assigns numerical values to each component as defined in Table 3 (*Everyone's Responsibility: Fire Protection in the Wildland/Urban Interface*). The Virginia system uses the formula as shown in Figure 1 to determine an overall interface hazard rating.

The numerical rating will be significant only considering the system from which it was derived. For example, under NFPA 299, 69 to 83 points indicates a high hazard property. In contrast, a high hazard property in the Virginia rating system is defined as 40 to 60 points.

Step 4: Compile the Hazard Rankings in a Useable Format

Compile the component hazard rankings in a format that will reveal the relationships between the individual hazards and categories of hazards. Three methods are often used to analyze the data collected.

1. A geographic information system (GIS) can define the hazards components on a map of the assessment area. Displaying each hazard on clear overlays, rather than on a single map, allows you to study various combinations of data.

2. A grid index system references specific points of interest on a map. The coordinates of the grid define the hazard rating of a specific property or area.

3. A matrix system describes the severity of each hazard for each area within the assessment.

Any or all of these data analysis methods can be used to understand the relationships between the various hazard components and can also help to develop an overall hazard ranking of each area within the assessment. On pages 11 and 12 examples of each of these data analysis methods are given.

Methods for Analyzing Hazard Ranking Data

Geographic Information System (GIS)

Consider either manual or computer graphic techniques to illustrate hazards according to their location on a map. This technique can show the frequency of particular hazards to a specific geographic area—identifying problem areas. Called "pattern recognition maps," these maps can be used to visually analyze the relationship of hazard components to land use, fire management, economic development and so forth.

Figures 2, 3, and 4 demonstrate this technique by defining the roof material of the structures; the vegetation density; and the percent slope in each area of the assessment. From the maps, it is easy to identify the high risk areas of each hazard. Figure 5 demonstrates how the three maps are combined to determine the relationship between each hazard component.

Grid Index System

A grid index system can be used to reference specific points of interest on a map. Each grid can represent a square mile or fraction of a square mile. A grid index is used to display each hazard component included in the assessment. Table 4 displays a grid index system where the structure density is rated for each square mile of the assessment area. This example identifies G-5 as an area having a high structure density.

Descriptive Matrix System

A descriptive matrix system simply describes the severity of each hazard component for a given area. Table 5 shows how a descriptive matrix system is used to rate the vegetation, structures, slope and history of each lot in the assessment area.

Table 4 Example of Grid Index System

	A	B	C	D	E	F	G	H
1	L	L	L	M	L	L	L	M
2	L	L	L	L	L	M	L	L
3	L	M	L	L	L	L	L	L
4	L	L	L	L	L	M	M	M
5	L	L	L	L	L	M	H	M
6	L	L	L	L	L	M	M	M

Structure Density

Low = <10 structures per square mile.
Medium = 10-30 structures per square mile.
High = >30 structures per square mile.

Table 5 Example of Descriptive Matrix System

Area	Vegetation	Structures	Slope	History
Melville Heights	heavy hardwood trees and brush	large homes on about one half acre lots, primarily wood sided with wood roofs	moderate	two small wildland fires in the last two years—suspected cause is children with matches
Melville Slopes	small trees and medium-size shrubs with grass undercover	small homes primarily with wood roofs and stucco siding	moderate	four wildland fires last year caused by trash burning

Example of Geographic Information System (GIS)

Roof Material
Figure 2

- Composite or Asphalt
- Metal or Tile
- Untreated Shake
- Treated Shake

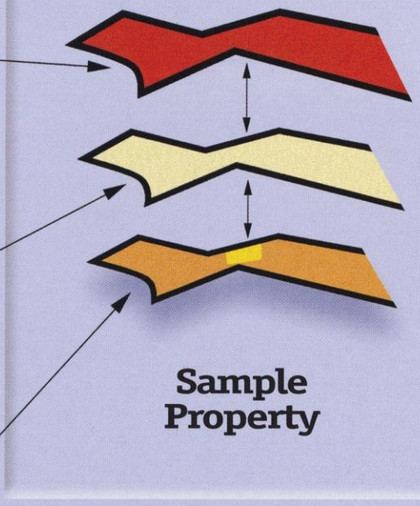
Vegetation Density
Figure 3

- Thinned Conifers
- Sagebrush/Willow
- Mod. Dense Trees
- Grass
- Grass with Aspen

Percent Slope
Figure 4

- Less than 8%
- Between 8% and 20%
- Between 20% and 30%
- Greater than 30%

Figure 5



Sample Property

Results of Assessment

Roof material assessment is high (**H**) for untreated shake, vegetation assessment is medium (**M**) for thinned conifers and slope assessment is high (**H**) for a greater than 30% slope. The overall rating is **HMH** for this sample property.

Step 5: Develop Future Actions

The information developed from the assessment can be used to develop strategies to reduce fire hazards in the wildland/urban interface. Suggestions on how to use the information follows:

- Develop mitigation strategies
- Develop fire response/evacuation plans
- Provide reference tools for planners, insurers, bankers and local code adoption
- Develop region-wide cooperative fire protection agreements
- Use as a basic fire protection evaluation tool in conjunction with the Insurance Service Office (ISO) fire suppression rating schedule
- Distribute along with public fire safety education information
- Improve fire fighter and public safety
- Perform cost/benefit analyses
- Implement or evaluate existing programs
- Adopt a more sophisticated fire modeling program
- Strategically focus fuel reduction projects
- Educate property owners, local and state governments and fire-service agencies

HAZARD ASSESSMENT SUMMARY

Step 1: Select the Areas to be Evaluated

- Define the area or scope of the assessment
- Using a map, display the interface areas
- Name or number each area

Step 2: Select the Hazard Components to be Considered in the Assessment

- Assemble the list of hazard components that will be included in the assessment

Step 3: Rank the Hazard Components

- Define a system to rank the hazard level of the components
- Evaluate and rank each individual component that is included in the assessment
- Develop an overall hazard rating system
- Calculate the overall hazard rating

Step 4: Compile the Hazard Rankings in a Useable Format

- Use a variety of display methods to make the data useable and understandable
- Consider maps, clear overlays and computer modeling as methods for analyzing and displaying data

Step 5: Develop Future Actions

- Use the information developed to reduce the fire loss potential in the wildland/urban interface

Hazard Assessment Systems

The following references are the basis for the hazard components and the methodology outlined in this publication. These publications give details on a variety of hazard rating systems and can be used as additional information.

1. ***California's I-Zone—Wildland/Urban Fire Prevention and Mitigation.*** **Rodney Slaughter, Editor. Governor's Office of Emergency Services. 1996.**
   This book was made possible by hazard mitigation grant funding from the Federal Emergency Management Agency and involved several agencies. It is a reference manual that addresses: model codes, hazard zoning and enforcement; building standards and technology; domestic and wildland fuels; and community programs. It is available from CFESTES Bookstore, 7171 Bowling Drive, Sacramento, CA 95823-2034.

2. ***California Fire Plan: A Framework for Minimizing Costs and Losses from Wildland Fires.*** **California State Board of Forestry. 1996.**
   This document gives a detailed framework for evaluating and prioritizing wildfire hazards including structures, watersheds, timber, range land, air quality, recreation potential, sensitive habitats and cultural resources. It includes a process for developing assessments that involve multiple jurisdictions and interested parties.

3. ***Colorado Wildland Interface Pre-plan Initiative.*** **Colorado State Forest Service (CSFS). 1997.**
   This system is being taught through classroom and field sessions. It provides a simple method to rate homes within the wildland/urban interface on their ability to withstand wildfire. This system uses the *Wildland Home Fire Risk Meter*, a rating sheet developed jointly by CSFS and the Fire Protection Districts and the *Fire Hazard Severity Form* as shown in the *1997 Urban/Wildland Interface Code*.

4. ***Development Strategies in the Wildland/Urban Interface.*** **International Association of Fire Chiefs and Western Fire Chiefs Association. 1996.**
   This handbook was designed to be an educational tool for the fire service and academic and development professionals protecting or developing wildland or forested areas. It provides strategies for land use decisions, risk assessment, vegetation management, public education and fire operations.

5. ***Everyone's Responsibility: Fire Protection in Wildland/Urban Interface.*** **NFPA, 1994.**
   This is a combination videotape/book program discussing how three communities dealt with the interface problem, each using different methods but all focusing on cooperation and improved safety. The Virginia Forestry's Woodland Home Fire Hazard Rating Form is included.

6. ***Fire Risk Rating for Existing and Planned Wildland Residential Interface Development.*** **Montana Department of Natural Resources and Conservation, Missoula, MT, March, 1993.**
   This rating system allows prevention planners to assess interface areas for risks and hazards, rank them according to their risk score, and then set priorities for prevention resources and actions. It organizes physical site information, such as road access, topography, fuels, construction and water sources, so that the fire managers can easily review all the information at once.

7. ***Fire Safety Considerations for Residential Development in Forested Areas—A Guide for Fire Agencies, Planning Boards and Subdivision or Housing Developers.*** **New Hampshire Rural Fire Protection Task Force. February, 1997.**
   This guide lists minimum fire safety considerations for woodland development, guidelines for a sample subdivision rating, and a wildfire hazard rating form for subdivisions.

8. ***Incline Village/Crystal Bay Defensible Space Handbooks: A Volunteer's Guide to Reducing the Wildfire Threat.*** **University of Nevada Cooperative Extension Service, 1991.**
   This handbook, designed as a reference guide for neighborhood leaders, provides guidance in understanding the threat of wildfire, implementing defensible space and developing the role of leadership in neighborhood efforts.

9. ***IFCI Urban/Wildland Interface Code.*** **International Fire Code Institute, 1996.**
   This wildland interface code provides specifications for water supplies, defensible space and access in wildland interface areas. It includes a table to rate the severity of the hazard based on vegetation, slope, fire and weather frequency, and fuel models.

10. ***NFPA 299 Protection of Life and Property from Wildfire.*** **National Fire Protection Association, 1991.**
    This document, developed by the NFPA Forest and Rural Fire Protection Committee, provides criteria for fire agencies, land use planners, architects, developers and local governments to use in the development of areas that may be threatened by wildfire.

11. ***North Whitefish Fire Risk Ration GIS Project.*** **Fire and Aviation Management Office, Montana Department of Natural Resources and Conservation, Missoula, MT, 1995.**
    This project applies geographic information systems (GIS) to Montana's Fire Risk Rating System (FRA). Twenty-eight key variables are assigned a weighted score and the scores are added to achieve a composite score. This publication is useful for agencies wishing to automate all or part of an existing fire hazard rating system.

12. ***Protecting Life and Property from Wildfire: An Introduction to Designing Zoning & Building Standards for Local Officials.*** **Great Lakes Forest Fire Compact, 1996.**
    This document focuses on planning needs and considerations for assessing the urban interface and includes recommendations for firewise landscapes, access, water supplies, and structural design. The appendix provides ideas for risk assessment and a sample risk rating system for a subdivision or development.

13. ***Wildfire Hazard Evaluation—Field Notes.*** **Colorado State Forest Service, 1992.**

This hazard-rating field form, developed for subdivision level use, considers many of the key elements defined in the NWCG document. It is simple in function and design using low, moderate and high fire risks based on numeric scores.

14. ***Wildfire Hazard Identification & Mitigation System (WHIMS),* Boulder, Colorado. 1992.**
Through the involvement of multiple local, state, and federal government inter-agencies, wildfire components have been tied together to identify hazardous areas. The fire protection district can foresee these high-hazard areas, passing along mitigation tips to the individual residents, homeowners and homeowner associations and showing them the importance of mitigation around their homes. www.boco.co.gov/gislu/whims.html.

15. ***Wildfire Prevention Analysis and Planning.* Department of the Interior. 1992.**
This procedure was developed to determine the locations and levels of fire risks, hazards (fuels and topography of an area), and values (areas where loss of destruction by fire would be unacceptable) in fire-prone forests or wildland developments. Ratings of low, medium and high are determined for risks, hazards and values (delineated on a map), as well as a ranking system for planned activities in specific areas.

16. ***Wildfire Risk Analysis.* Virginia Department of Forestry. 1997.**
This statewide project uses the *Wildfire Prevention Analysis and Planning* procedure. Field personnel determine the level of risk, hazard and value in each county, based on local knowledge of an area and historical fire occurrence. The result will be a series of GIS-based maps to be used to identify and prioritize planned specific actions to reduce fires in problem areas. The Virginia Department of Forestry also conducts woodland home and development forest fire hazard ratings, and a five-year woodland home survey.

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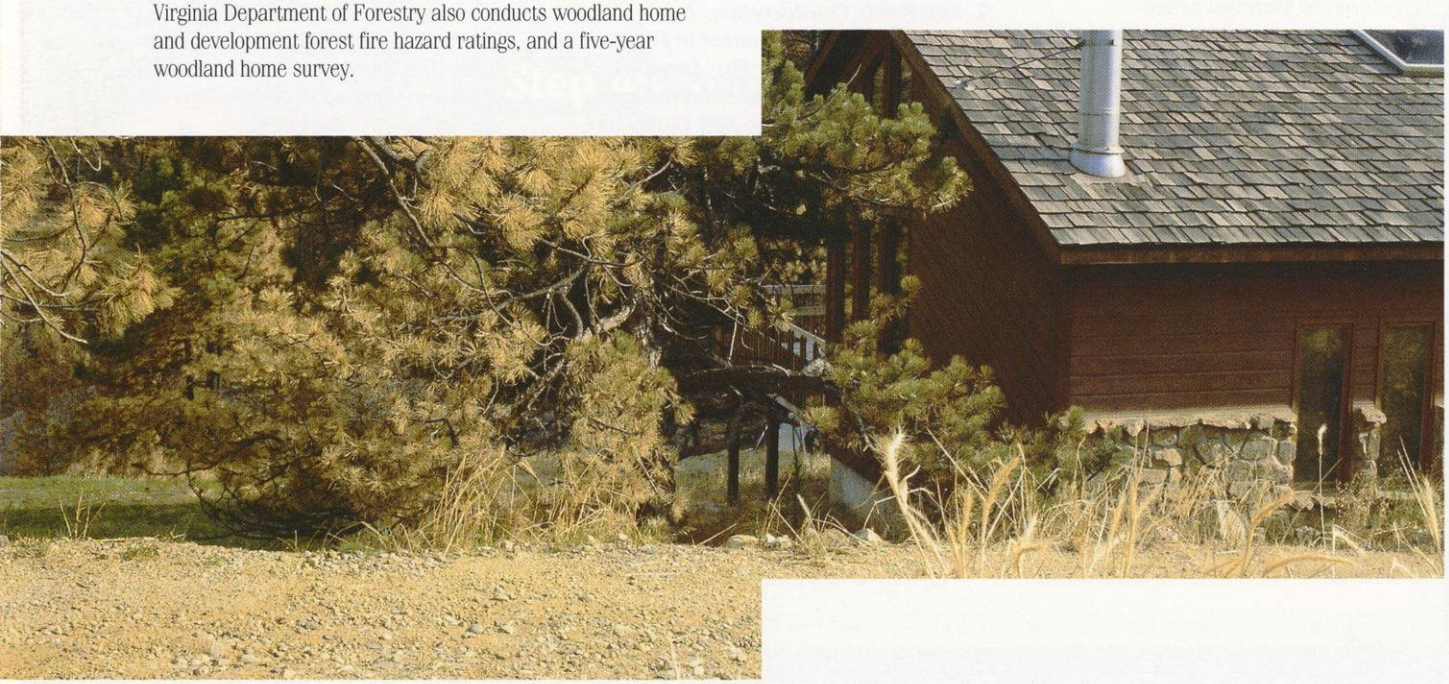


Future Hazard Assessment System

Structure Ignition Assessment Model (SIAM)

SIAM is a computer program being developed that can rate the potential for ignition of a structure located in a wildland/urban interface. The purpose of the program is to enable home-owners and developers to incorporate features into a structure and the structure's surroundings that will improve its chances of surviving a wildland fire. The program can also be used to identify problem areas of existing structures and/or developments.

SIAM uses an analytical approach to establish relationships between the structure design and the resulting fire exposure. SIAM requires the user to input a general description of the structure, the topography at the building site, and the potential fire characteristics. Because actual conditions of a potential fire are unknown, the worst-case scenarios are assumed. SIAM rates only the potential for structure ignition and does not predict ignition.

The computer model completes five principal processing steps.

1. The program requires the fire professional to provide an estimate of the flame length and the rate of fire spread—based on the weather, topography and the fuels.
2. Based on the input information, the program calculates the flame size, flame angle, burning residence time and the structure's exposure to the radiant and convective heat.
3. The firebrand exposure is estimated from the type of fuels and the fire intensity.
4. The ignition potential is estimated based on the firebrand exposure, the structure design, and the heat transfer model.
5. The final risk rating is calculated by combining the heat transfer and firebrand exposure.

The SIAM program is being designed to be used by:

- **local regulators** to establish minimum fire safety requirements
- **home owners** to integrate a structure's design and landscaping to meet fire safety requirements
- **developers** to plan a new development to meet fire safety requirements
- **fire agencies** to assess wildland/urban interface fire risks for pre-suppression and suppression planning

The SIAM computer model is expected to be available in late 1998. For more information on SIAM contact:

Intermountain Fire Sciences Laboratory
USDA Forest Service
P.O. Box 8089
5775 Hwy. 10 W.
Missoula, MT 59807
(406) 329-4820

Sponsors of the National Wildland/Urban Interface Fire Protection Program include:

National Association of State Foresters
National Fire Protection Association
United States Department of Agriculture
Forest Service
United States Department of the Interior
Bureau of Indian Affairs
Bureau of Land Management
Fish and Wildlife Service
National Park Service
Federal Emergency Management Agency
United States Fire Administration

PART 4

The Relationship Between Wildland Fires and Roads
August 7, 2000

- The Forest Service seriously considered the issue of fire in its draft Environmental Impact Statement on the roadless proposal.

- The Forest Service's proposed Roadless Area Conservation policy would not affect the agency's ability to fight fires.

- The Forest Service has managed fires in roaded and roadless areas for decades. We have developed suppression methods and technology to effectively detect fires and efficiently mobilize fire suppression forces for both roaded and roadless areas.

- The Forest Service stops small fires before they get out of control at the same rate in roaded or roadless areas (98% of fires are successfully contained during initial attack).

- Fire occurrence, by all causes, is twice as high on roaded areas than roadless areas.

- Human-caused fire occurrence in roaded areas is approximately 3 times greater than in roadless areas.

- The highest priority for fire suppression is to protect life. The protection of property and resources is second. Generally, the highest priority areas for fire suppression are inhabited and roaded. There are very few Wildland/Urban Interface Areas that lie adjacent to roadless areas.

- Nationally, the average size of a large fire (1,000 acres or greater) is greater on roaded areas (7,778 acres), than in roadless areas (6,350 acres). On large fires, roads can facilitate suppression efforts by providing ground access for firefighting forces.

- The most logical solution to reduce the threat of catastrophic fire is to treat hazardous fuels rather than increase access by building more roads.

- The proposed rule would allow road construction if a wildland fire threatened public health and safety.

- As proposed, the Forest Service would also be able to continue prescribed burning, thinning and other mechanical treatments in roadless areas to reduce wildfire risks. However, given limited resources and the location of communities, the Forest Service would likely target its resources in already roaded areas.

PART 5

THE FEDERAL AGENCIES OF WILDLAND FIRE

National Interagency Fire Center (NIFC)

The National Interagency Fire Center (NIFC) in Boise, Idaho, is the nation's logistical support center for wildland firefighting. NIFC coordinates and supports operations for managing wildland fire and other natural disasters throughout the United States.

Forest Service (USFS)

US Department of Agriculture—USFS manages 191 million acres of national forests and grasslands. State wildland fire organizations are represented at NIFC through the Forest Service's Cooperative State and Private Forestry authorities.

Bureau of Land Management (BLM)

US Department of the Interior—BLM manages 264 million acres of public lands, provides fire protection for 388 million acres, and is the host agency at NIFC. BLM's National Office of Fire and Aviation is also headquartered at NIFC.

Fish and Wildlife Service (FWS)

US Department of the Interior—FWS manages more than 92 million acres of national wildlife refuges and wetland areas. The FWS national Division of Refuges, Fire Management Branch, is headquartered at NIFC.

National Park Service (NPS)

US Department of the Interior—NPS administers 80 million acres of national parks, monuments, historic sites, natural areas, and other federal lands. Its national Branch of Fire and Aviation is located at NIFC.

Bureau of Indian Affairs (BIA)

US Department of the Interior—BIA provides wildland fire protection for 60 million acres of Indian reservations and other trust lands. BIA's national wildland fire and aviation staff is headquartered at NIFC.

National Weather Service (NWS)

US Department of Commerce—NWS provides vital weather analysis, forecasts, and fire weather training to all fire management agencies. During fire season, NWS provides daily weather briefings to NIFC.

Office of Aircraft Services (OAS)

US Department of the Interior—OAS provides aircraft, and technical and administrative aviation services to governmental organizations. OAS, part of the Office of the Secretary of the Interior, is located at NIFC.

ADDITIONAL WILDLAND FIRE COOPERATORS

OTHER FEDERAL AGENCIES:

- Department of Defense
- Federal Emergency Management Agency (FEMA)

STATE AGENCIES:

- Department of Forestry [National Association of State Foresters (NASF)]
- Fish and Game Department
- Department of Conservation
- State Law Enforcement Agencies
- National Guard Units
- Emergency Management Agencies
- Department of Corrections

COUNTY AGENCIES:

- Fire Department
- Sheriffs Office
- Department of Corrections

MUNICIPAL AGENCIES:

- Fire Department
- Police Department

OTHERS:

- Local Volunteer Fire Departments
- Private Firefighting Contractors
- Private Supply and Equipment Contractors

A BRIEF OVERVIEW OF NATIONAL FOREST FIRE MANAGEMENT FUNCTIONS

FIRE PREVENTION

The U.S.D.A. Forest Service has a long history of fire prevention programs. The best known for these efforts is the Smokey Bear fire prevention campaign. Begun in 1944, Smokey's "Only You Can Prevent Forest Fires" message has been credited with creating positive attitudes toward wildfire prevention. The Forest Service and many of its wildland fire protection partners have developed aggressive and effective fire prevention programs over the years.

In 1942, the national Cooperative Fire Prevention Program (CFPP) was created. Originally, the CFPP used professional advertising talent to assist in wildfire prevention campaigns. Today, fire prevention promotional materials are produced and distributed by CFPP free of charge through the mass media across the country.

A variety of educational efforts are used by wildland fire agencies today to teach people how to prevent wildfires. Brochures, news releases, school programs, and personal appearances by Smokey Bear are all used to share information about how to be fire safe. The Forest Service is continuing to learn better ways to help people take responsibility for making their communities more fire safe. A key strategy relies on community leaders to encourage wildfire prevention behavior in their local areas.

At the field level, fire prevention technicians patrol forest areas to greet visitors and educate them about their fire prevention responsibilities. In addition, national fire prevention education teams are assigned to local areas where critical fire danger is eminent or has recently developed. These teams target local residents with information about what can be done to prevent wildfires and how to protect their homes in case of a wildfire emergency. Recently, national prevention teams have been very successful in reducing human-caused fire starts in Arizona and New Mexico.

PRESCRIBED FIRE

Many forests in the United States have evolved with fire as an important part of the natural cycle. Prior to the advent of modern forest management, lightning-caused fires, under optimum conditions, would burn near the ground under the canopy of larger trees. These naturally caused fires would reduce underbrush and forest litter. The remaining ash would provide nutrients needed to sustain a healthy forest.

After the turn of the century lightning-caused fires were aggressively extinguished. Over the decades, so much fuel accumulated that lightning-caused fires no longer served the natural role of keeping forests clean of excess fuels. The healthful effects of natural fire soon gave way to destructive wildfires that have increased in number and intensity since the middle of the century.

Over the past 20 to 30 years, fire managers have begun to reintroducing fire into forest ecosystems. This process is referred to as prescribed fire. A prescription is written to achieve the kind of results managers desire. They must decide how hot they want the fire to burn, how fast they want it to spread, and how big they want it to get. Then they must specify the weather conditions and people and equipment needed to maintain control the fire. Prescribed burning is part of an overall fuels management program that includes thinning of immature trees.

Experience has shown that when a wildfire reaches an area that has been burned by prescription, the flames usually remain near the ground. A ground fire is much less destructive to a forest. The goal of forest land management agencies is to improve forest health in order to create a wildfire-resistant condition through prescribed burning and selective thinning.

None of the fires now burning were the result of prescribed fires. The agency is currently developing a cohesive strategy for reducing fire risks on National Forests.

INTERAGENCY WILDFIRE SUPPRESSION

Wildland fire agencies are best known for their ability to fight and extinguish forest fires. Before the 1970's, each firefighting agency worked independently of other agencies. Each had it's own training procedures, job titles and specialized equipment. This worked well until fires became more complex and the need to work together became imperative. Today, interagency wildland firefighting is the norm. People responding to a fire may be from multiple agencies and work together in a single fire organization. This was made possible by standardization in 5 areas: training, qualifications for various fire positions, names for equipment, names for various positions, and organizational charts.

Each person who is called to a fire has pre-qualified for the job they will be performing (trainees may also be called; they must work under a qualified mentor). Since the training and qualifications for various positions have been standardized, it's possible for people from a wide variety of agencies to be involved in the overall firefighting effort. They carry "red cards" that identify their qualifications.

Within the Forest Service many people who are not full-time firefighters also carry "red cards." Public information, food management, personnel time recording and medical care are examples of specialties that may be provided by people who have full-time jobs that are not primarily fire management in nature.

When a wildland fire breaks out in the United States, federal agencies and states have the ability to call upon national resources to help stop the fires. Firefighting agreements exist between the federal, state and local governments. The military can be called in to assist when all civilian resources are about to be depleted.

Supporting this national interagency fire fighting capability is the National Interagency Coordination Center (NICC) in Boise, Idaho. This center in turn is connected to regional coordination centers located throughout the U.S. At any one time, NICC will know the location and availability of firefighting resources nationwide. National caches of firefighting supplies are stored in various western locations.

NATIONAL WILDFIRE RESOURCES

The following is a list of federal resources available for wildland firefighting:

17 Incident Management Teams trained and ready for assignment nationwide

· 49 Incident Management Teams trained and available for assignment regionally (may be shared across regions in extreme situations)

· 70 Interagency Hotshot Crews (20 persons each) trained and available for assignments nationwide

· 447 Regular Crews (20 persons each) trained and available for regional assignments (may be shared across regional boundaries when needed)

· 407 Smoke jumpers trained and available nationwide

· 40 Helicopter rappeller crews trained and available, generally used within region

· 23 Helicopters on contract for various time periods for service nationwide

· 58 Air tankers under contract for various time periods and available nationwide

· 3 Airplanes equipped for infrared fire detection

- There are more than 1,000 engines available through federal/state and local sources

- 3 military battalions (500 persons each) are currently activated

- 8 MAFES equipped military airplanes

- International crews currently assigned include 8 from Canada, and 1 from Mexico

PART 5

BURN AREA REHABILITATION

Once a wildfire is out, the rehabilitation work begins. A team of specialists is assembled before the fire area is cool. The team's job is to develop a short-term plan to reduce further damage to watersheds and to protect the quality of water flowing in rivers and creeks affected by the fire. The team will determine work that will need to be done to minimize problems caused by fighting the fire.

The team will recommend measures needed to prevent excessive erosion off the burned area. They may recommend, for example, ways to prevent sediment from flowing into creeks and rivers, or ways to protect fish and wildlife habitat and public safety.

Rehabilitation efforts will continue after the short-term work is complete. A long-term recovery plan will be developed with the completion of an environmental analysis. This analysis examines a variety of ways to address environmental problems caused by the wildfire.

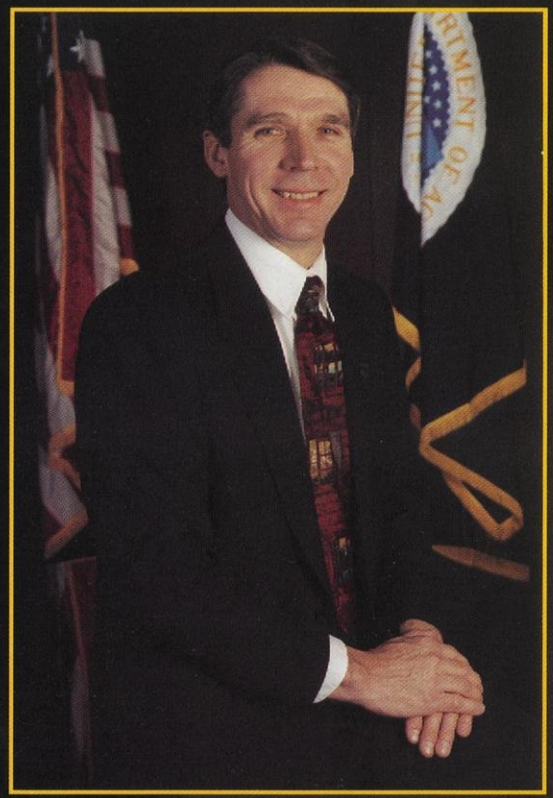
The Forest Service will be assessing whether it needs additional resources to complete these tasks given the extreme fire year.

faces of fire

PREVENTION • SUPPRESSION • PRESCRIBED FIRES

How our management integration
of wildland fire prevention, suppression, and use of prescribed fire:

• **Helps** ecosystem management. • **Supports** forest health objectives.
• **Protects** and enhances our country's natural resources
through the safe and effective use of fire.



In the last 10 years, public attention has been gripped by the dominance of wildland fires across the American landscape. Events such as the Yellowstone fires, Oakland Hills, the tragic deaths of 32 firefighters in 1994, and the lengthy 1996 season when a record 6 million acres burned—all have captured America's attention. One thing people have noticed this past decade is that public forests and rangelands are threatened. The fact is that we do not have a fire problem. We have a fuels problem. By using all of the tools available to us—carefully thinning young dense stands of trees, using prescribed fire, controlling invasive noxious weeds, using appropriate grazing systems—we can reduce fuel levels. Of course, all of our fire management must take place within the context of first protecting human lives and property. By applying science wisely, in this case the science of wildland fire, people as well as wildlife and natural resources will benefit. The stage is set for the Forest Service to work with States, other Federal managers, and private landowners to restore healthy forests and rangelands. Recently we adopted the concept of FIRE 21, which promotes the safe and effective use of wildland fire. At the top of the FIRE 21 triangle is safety; its foundation is accountability. In the middle are all the actions needed to maintain, restore, and sustain fire-adapted public lands. The challenge of tackling wildland fires is bigger than any one agency or organization. Only through cooperation, collaboration, and integrated landscape planning with agencies and States, will we be effective in securing healthy landscapes for future generations. To achieve these benefits, we must act now. As we move forward, we will not be alone. We recognize the tremendous amount of support provided to us by our Federal, State, and tribal partners who work shoulder-to-shoulder with us during fire emergencies. Our resource management and protection partners are invaluable. We will work together in prevention, prescription, and suppression to provide the extra effort needed to protect the Nation's valuable natural resources. I hope everyone reading "Faces of Fire" will gain a better understanding of wildland fire. A balanced program of prevention, fuels reduction, and suppression, using the principles of FIRE 21, will require the effort of every individual. Nonetheless, the future of America's publicly owned natural resources and the benefits they provide depend on it.

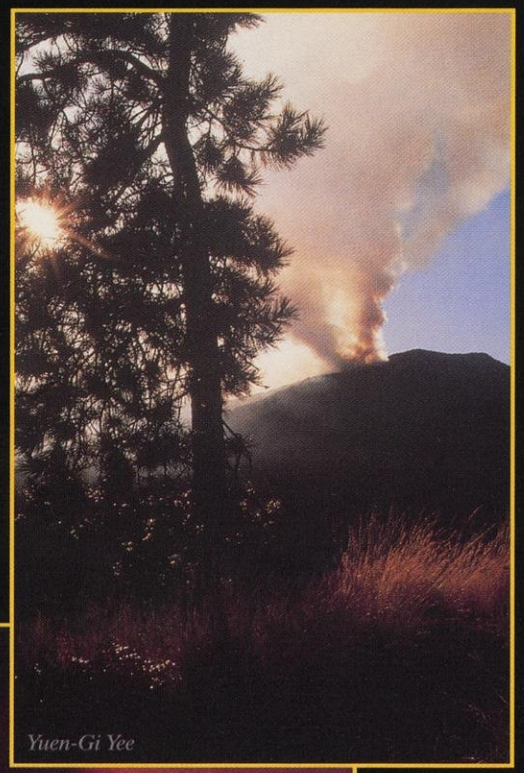
MIKE DOMBECK

Chief
USDA Forest Service

fire helped shape our home

"THE EARTH, BORN IN FIRE, BAPTIZED BY LIGHTNING, SINCE BEFORE LIFE'S BEGINNING, HAS BEEN AND IS A FIRE PLANET."

E.V. KOMAREK



Yuen-Gi Yee

Tom Iraci

Fire was here long before humans were.

In fact, for the last 400 million years the Earth has had the capacity to burn.

Lightning has ignited fires on this planet and helped stimulate life by catalyzing the Earth's earliest organic compounds. For millennia, fire proved a pervasive force for shaping ecosystems across North America.

These free-burning fires played an important role in influencing vegetation and the life cycles of trees and plant communities. Many species even became dependent on this process or "fire-adapted"—able to survive, regenerate, and thrive in a fire-prone environment.

Today, these fire-adapted forests comprise one-third of all our National Forest System (NFS) lands and half of our NFS grasslands.

Native Americans used slash and burn operations across this continent for hundreds of years before Europeans arrived. Accounts by early fur traders, explorers, Native Americans, and the first Euro-American settlers here concur that fires were set to improve rangelands for livestock and to help in hunting game. By the 1800's, fire as an agricultural tool was as common as the hoe.

There is no doubt this dynamic history of both natural and human-triggered fires that originally burned across this country helped clear the way for our modern civilization.

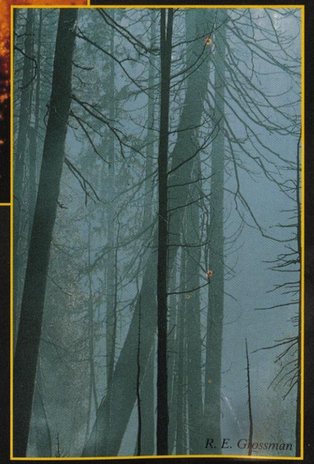
fire's reputation goes up in smoke

By the beginning of this century, wildfire had earned its reputation as a notorious adversary.

For example, the 1871 Peshtigo Fire, fueled by logging slash, killed 1,500 people in Michigan and Wisconsin. The inferno burned more than 3.5 million acres. In 1910, fires in Idaho and Montana killed 80 firefighters and blackened another 3 million acres. They leveled entire towns and cost $1 million to extinguish.

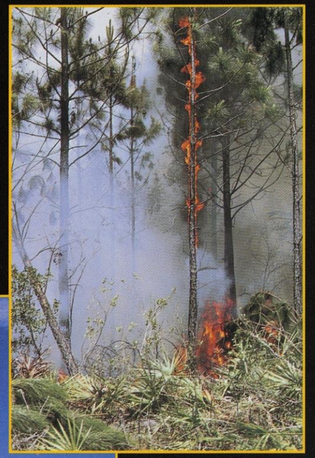
Dictated by our society's values, stringent Federal fire control policies quickly evolved.

At the same time, these early fire disasters made it difficult to recognize that fire could be anything but damaging. All fires were considered a major threat.



TURN-OF-THE-CENTURY FIRE DISASTERS MADE IT DIFFICULT TO REALIZE THAT THIS NATURAL PROCESS CAN ALSO BENEFIT ECOSYSTEMS.

SUCCESSFUL PREVENTION AND SUPPRESSION EFFORTS HAVE ALTERED FIRE PATTERNS DURING THE PAST CENTURY.



In the public's eyes, fire—the natural force that had shaped our wildlands for centuries—became the face of the enemy.

For the most part, the public didn't understand the complex and necessary role that fire serves in fire-adapted ecosystems. They didn't see fire's important ecological function. They didn't realize the many negative and enduring consequences of fire's exclusion, including: loss of fire-dependent species; insect and disease epidemics; and the paradoxical buildup of fuel (combustible carbon from trees, understory growth, etc.) that would eventually lead to even more severe and costly wildfires.

Therefore, for decades, our Nation depended on the Forest Service and other wildland fire agencies to eliminate fire from the environment. In response, we developed highly trained and effective prevention and suppression forces.

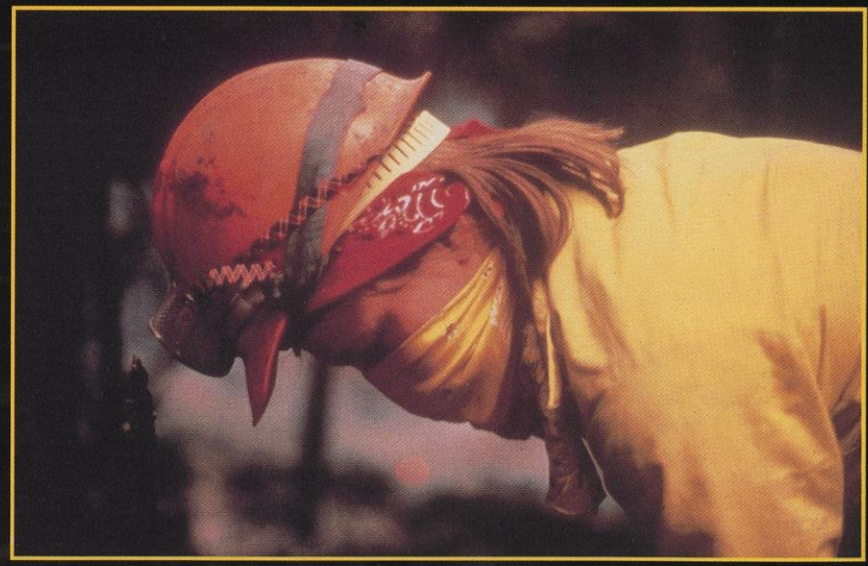
In many cases, we protected lives and property and trees—but at the expense of the forest community. Due to our successful prevention and suppression efforts, fire patterns were markedly altered during the past century.

A dramatic change in the condition of our ecosystems had begun.

If we continue to restrict fire's role in ecosystems:

- Wildland fires will become more severe and more costly to suppress. (Suppression efforts on a single wildfire can cost as much as $1 million per day.)
- The risk of catastrophic wildland fire will greatly increase.
- People's lives and property will be increasingly endangered—especially within our country's popular wildland-urban interface areas.
- Our firefighters will face greater dangers.
- Water quality and fish and wildlife habitat will be impaired and will decline.
- Habitat for threatened and endangered species will be lost.
- Smoke emissions that impair air quality will increase.
- The subsequent conversion from fire-resistant species to fire-intolerant species will make ecosystems even less resilient to fire.
- Those who enjoy hunting, fishing, camping, and other recreational activities will be adversly affected.

Michael E. Best



Ron Nichols

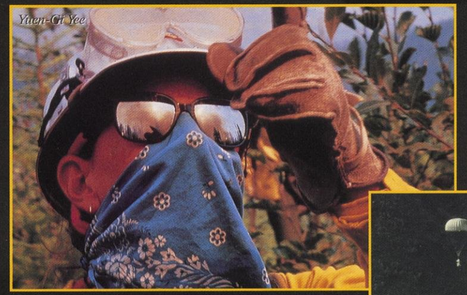
In the absence of fire, massive insect and disease epidemics and various other forest health problems have proliferated. Millions of trees have been killed outright. Millions more are threatened. People throughout the Nation have joined our ecosystem managers in their concern over this deteriorating health of our country's lands. As recent fire seasons have shown us, fire exclusion has made our wildlands even more flammable and susceptible to severe wildland fire.

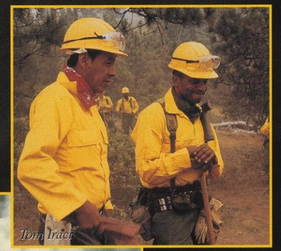
the face of fire suppression

As a result of our success in training and preparing its fire prevention and suppression forces, the country has learned to depend upon this agency to take a leadership role in suppressing potentially harmful wildland fire.

Effective management of wildland fire in the United States, however, is becoming increasingly complex. Catastrophic wildland fire now threatens millions of wildland acres. Enormous public and private values and resources are currently at risk.

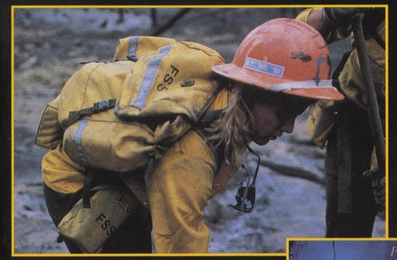
A carefully managed prescribed fire is one thing. Wildland fire—when destructive, powerful, out of control, and threatening life and property—is quite another.


Yuen-Or Lee

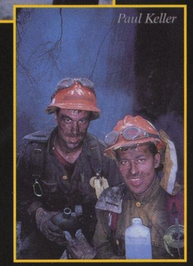

Tom Trader


Jim Hughes

Uncontrolled fire can contribute to serious erosion and flooding.



Fire suppression strategies range from monitoring lightning-started wildland fires to launching full-scale attacks on human-caused blazes that imperil communities.


Paul Keller


Jim Hughes

Fire's Destructive Impacts

Uncontrolled fire can:

- Take human life.
- Burn and destroy homes and communities.
- Contribute to serious erosion and floods—washing soil and ash into streams, lakes, and community reservoirs.
- Destroy wildlife and fish and their vital habitats.
- Spoil scenic and recreational qualities and attributes.
- Damage and destroy recreation areas, roads, trails, and streams.
- Damage and destroy valuable tree-harvest areas.

Today, fire suppression strategies can range from monitoring a lightning-started wildfire in remote wilderness areas under an approved plan, to launching a full-scale attack on a human-caused blaze that imperils a community.

America's wildland firefighters are the best in the world. While their mission varies with time and place, their main goal remains the same: to protect human life, property, and our myriad natural resources.

Thanks to these courageous men and women, loss of life and damage to property and to this country's natural resources from wildfires remains low.

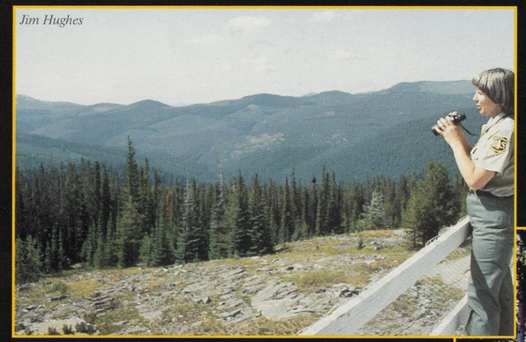
In fact, today, our highly trained and qualified fire suppression organization has broadened its capabilities. We now call upon its members to also help implement the critically important hazardous fuel reduction programs.

the face of fire prevention

Fire prevention and fire readiness and preparation activities are an integral foundation to our fire management organization. Today, we place an even greater emphasis on these proactive efforts.

For decades, fire suppression actions were the main purpose of our fire management organization. But we have realized that to truly function as an ecosystem management agency, fire management activities must begin before the fire starts.

Fire prevention has become an important strategic tool to help mitigate specific wildland fire problems. We have moved from an era in which we believed "all fires are bad—prevent fires" to a time of renewed commitment to landscape and ecosystem needs.



Jim Hughes

To truly function as an ecosystem management agency, fire management activities must begin before the fire starts.

John Gale

Devastating, unplanned human-caused wildland fires must be prevented. The benefits of prescribed fire must be realized and encouraged.

Jim Hughes

Brian Harris

Still Need to Heed Smokey

Human carelessness will always be an absolutely unacceptable cause of fire. We must, therefore, continue our public education campaign to prevent these potential—and sometimes fatal—calamities.

The Smokey Bear crusade and other prevention efforts continue to help reduce this potential for devastating and destructive human-caused wildfire.

In 1941, wildland fire claimed 30 million acres in this country. Nine out of 10 of these fires were caused by people. Since the advent of Smokey Bear's fire prevention efforts, wildfires caused by humans have been reduced by half—even though 10 times as many people use our national forests today.

Unquestionably, we must now take our public education message even further. We need to convey the importance of a desired balance—avoiding fires with adverse effects while simultaneously increasing beneficial prescribed fire.

We must also place a renewed and special emphasis on education, prevention, and protection in wildland-urban interface areas.

the face of prescribed fire

As our understanding of fire's role in the ecosystem has grown, we have made significant revisions in our fire management policy. We now realize that frequent, often less-intense fires of ancient times were beneficial in some settings. We know it is more logical to view fire as a natural process rather than an absolute enemy.

Obviously, the wildlands of centuries past have changed. More people are now affected by fire—or lack of fire. And the various resources that our national forests provide have become extremely valuable to our society.

Within our abundant fire-adapted ecosystems, however, it is difficult to replicate the complex effects of fire by mechanical, chemical, or any other single means.

As part of our prevention and suppression efforts, an answer—an antidote—to our current forest health dilemma does exist. The third face of fire: prescribed fire.

before

FUEL BUILD-UP AND GROUND LITTER ARE OBVIOUS TO THE EYE IN THIS STAND IN OREGON'S OCHOCO NATIONAL FOREST. PHOTO WAS TAKEN PRIOR TO THE MILL CREEK PRESCRIBED FIRE.

THE ISSUE IS WHETHER WE WANT CONTROL OVER THE EFFECTS OF FIRE, ITS LOCATION, AND INTENSITY. PRESCRIBED BURNING ALLOWS US THAT CONTROL. MOST OFTEN, WILDFIRES DO NOT.

THE RESULTANT MILL CREEK PRESCRIBED FIRE CLEANSED THE AREA BY REDUCING THE CURRENT AND FUTURE AVAILABILITY OF POTENTIALLY HARMFUL HEAVY BUILD-UP OF FUELS—AS ILLUSTRATED IN THE ABOVE PHOTO, TAKEN IN THE SAME LOCATION (AS PHOTO ON LEFT) AFTER FIRE MANAGERS HAD CONDUCTED THE PRESCRIBED FIRE.

after

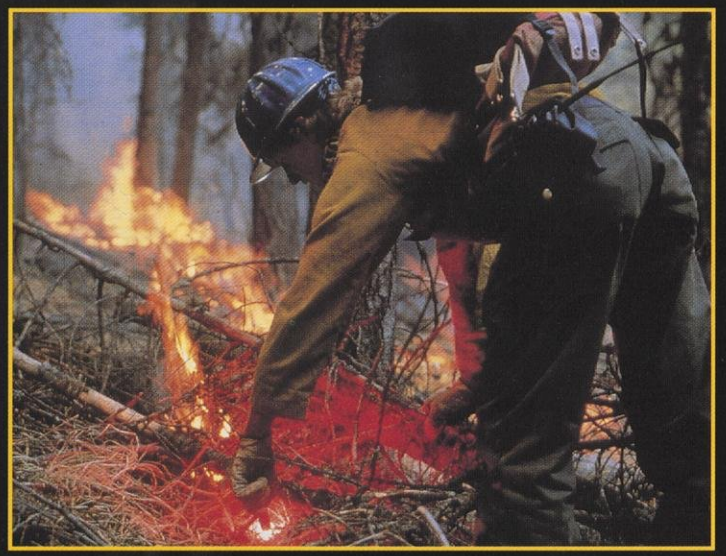
Today, our fire management concept is threefold. We recognize the importance of prevention and protecting human life, property, and resources from wildfire— and taking appropriate suppression actions. And we also address the importance of prescribed fire.

Fire obviously can produce dramatic short-term changes. But its more subtle influences are most significant for maintaining healthy ecosystems. In fact, fire's primary benefits are often long term, biologically complex, and largely inconspicuous.

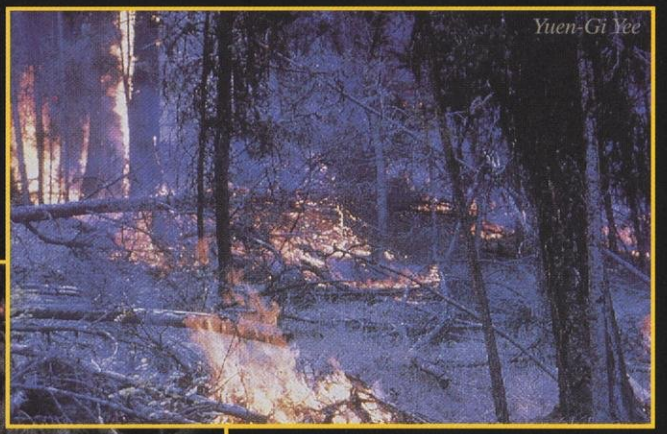
Consequently, it becomes difficult to truly appreciate the importance of fire.

Prescribed Fire:

- Reduces the accumulation of combustible materials.
- Recycles forest nutrients.
- Minimizes insect populations and spread of disease.
- Encourages and maintains the growth of native trees and plants best suited to fire-adapted ecosystems.
- Removes unwanted species that threaten an ecosystem's health.
- Provides better access and conditions for wildlife.
- Is used only under appropriate conditions and on appropriate sites.
- Meets specific management objectives—such as reducing wildfire potential and enhancing vegetation.
- Is carefully planned in advance—long before ignition.
- Occurs only when optimum temperature, humidity, wind speed, and fuel moisture content occur—ensuring that the fire remains inside designated boundaries and accomplishes objectives.
- Is guided by smoke management plans to minimize smoke's impact on populated areas.



Even as we launched our aggressive fire suppression efforts over the last century, some forest managers observed that low-intensity surface fire—in some stands—actually provides benefits. Today, prescribed burning has gained its rightful acceptance.



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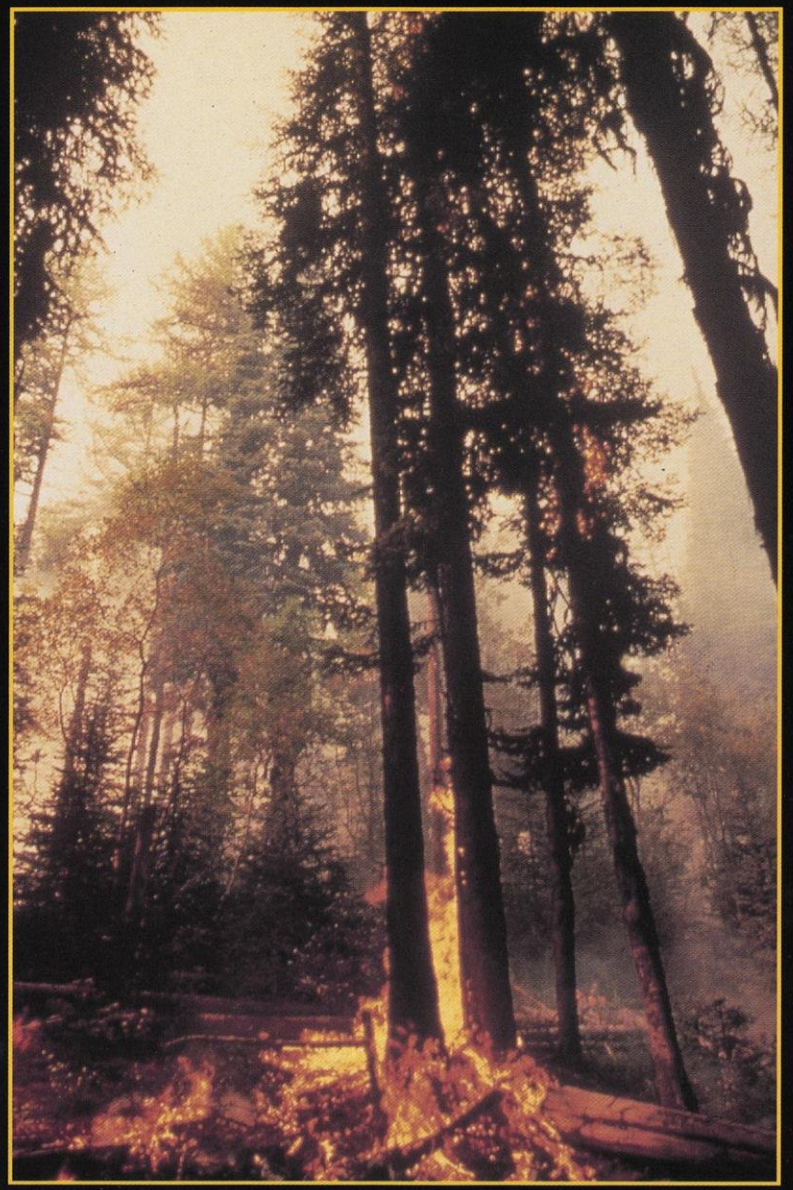


Returning fire to the ecosystem is not a simple undertaking.

Many of our ecosystems are far more complex today than a century ago. In many cases, unprecedented changes in tree species composition and structure, fuel build-ups, alien species, insect and disease dynamics, and the tremendous growth of the wildland urban interface have been added to the complexity of our ever-changing ecosystems.

Prescribed fire must therefore be planned in specific wildland ecosystems.

Information needed to reintroduce fire includes well-planned, large-scale scientific assessment of current ecosystem conditions, as well as the consequences of various management strategies.

Prescribed fire must also be consistent with land and resource management plans, as well as approved prescribed burn plans.

As the American public understands that fire in the ecosystem is a natural and revitalizing process, it must also accept that fire's return to the landscape is not without consequence. These potential outcomes include possible hazy skies, patches of a blackened forest for a time, disruption of recreational activities, and even the risk of a fire becoming larger than expected. The fact remains, however, that prescribed burning and its tradeoffs will remain necessary if we, as a society, are to sustain the values, products, and experiences we desire and expect from our public lands.

can prescribed fire improve our air quality?

It's an intriguing question: Can prescribed fire really help improve our air quality?

Our fire managers and fire researchers today—after ongoing research and field study—are nodding their heads "yes."

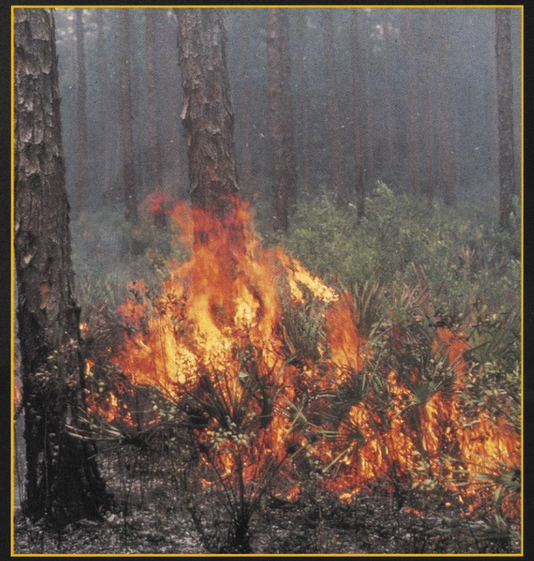
In 1994, the 65,700 wildfires that burned 3.8 million acres of Federal lands also produced millions of tons of airborne particles. Many communities were plagued with smoke pollution that far exceeded the Environmental Protection Agency's Federal air quality standards, designed to protect public health.

Indeed, a single wildfire that consumes 100 acres of heavy forest fuels can emit as much as 90 tons of particulate matter into the atmosphere.

As our forests' fuel loads and understory biomass increase, we face an increasing potential for even higher particulate matter emissions that conflict with the Federal Clean Air Act.

"Since prescribed fires are ignited during weather conditions that minimize emission impacts on populated areas and wildfires are not, the emissions from wildfires have a greater chance of affecting these areas than do prescribed fires."

Ken Snell
Air Resource Manager
Pacific Northwest Region,
USDA Forest Service



Prescribed fire can be ignited when weather and fuel conditions allow for minimized smoke impacts on the public's air quality.

Tom Iraci

The public's perception that the smokeless air it values so much is part of the natural condition is most likely erroneous. Turn-of-the-century surveyors recorded days of paddling through heavy smoke in the Great Lakes region. Myriad journals kept by Oregon Trail pioneers also document the smoke and haze hanging over the western landscape. Fire—and its attendant smoke—has been with this planet from the beginning.

Prescribed fires, on the other hand, can be ignited when weather and fuel conditions allow for minimized smoke impacts on the public's air quality. At the same time, these prescribed fires can decrease the increasing threats that large wildfires pose to our air quality and public health.

Certainly, one of the most effective ways to reduce adverse effects of wildfires is to reduce their intensity. This can be accomplished by reducing the amount of material available to burn, and by selecting the optimum time to burn.

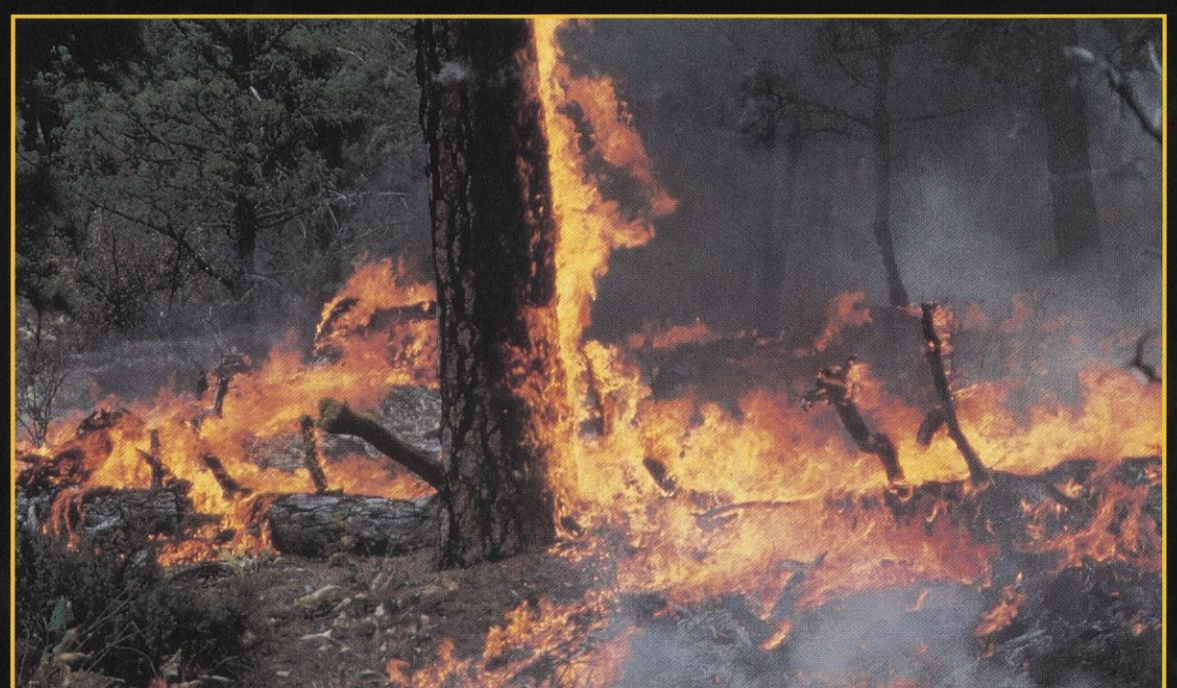
A study on national forest land in northeastern Oregon is producing encouraging results. "Our computer model is looking for a minimum emissions level," explains Ken Snell. "Obviously, the more acres you treat with prescribed fire, the more emissions you get. The net effect on wildfire, though, is that less fuel is available to burn. Therefore, when it does burn, there will be fewer emissions."

meeting the challenge

Today, the Forest Service's fire management program is an integral part of ecosystem management.

For a successful bridge to the future, fire management must continue to develop and integrate focused cost-effective fire prevention, fire suppression, and prescribed fire strategies in a safe and effective manner.

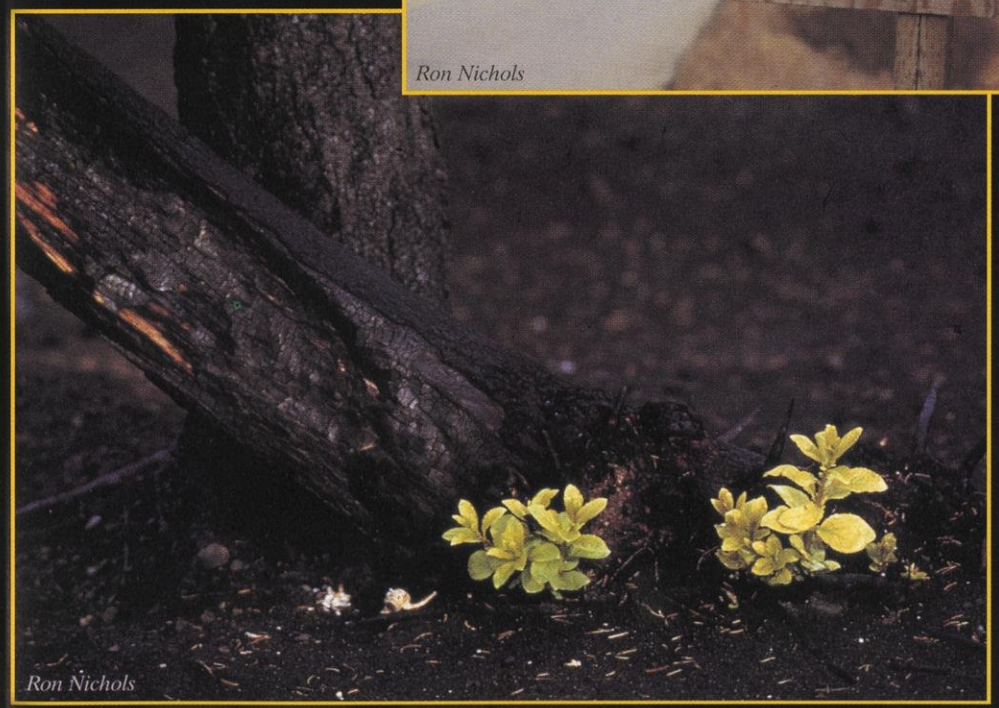
We must also ensure that a successful integration of these three efforts concentrates on ecosystems, supports forest health objectives, and protects and enhances our Nation's natural resources.



"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."

Federal Wildland Fire Management Policy and Program Review
December 1995

Ron Nichols


Ron Nichols

We need wildland fire to maintain and enhance resources, to function in its natural role, and to serve as an essential ecological process.

But no matter what we do, the health of our forests and rangelands will not be restored overnight. Our present forest health dilemma took a century or more to develop. Many believe it will take decades to restore.

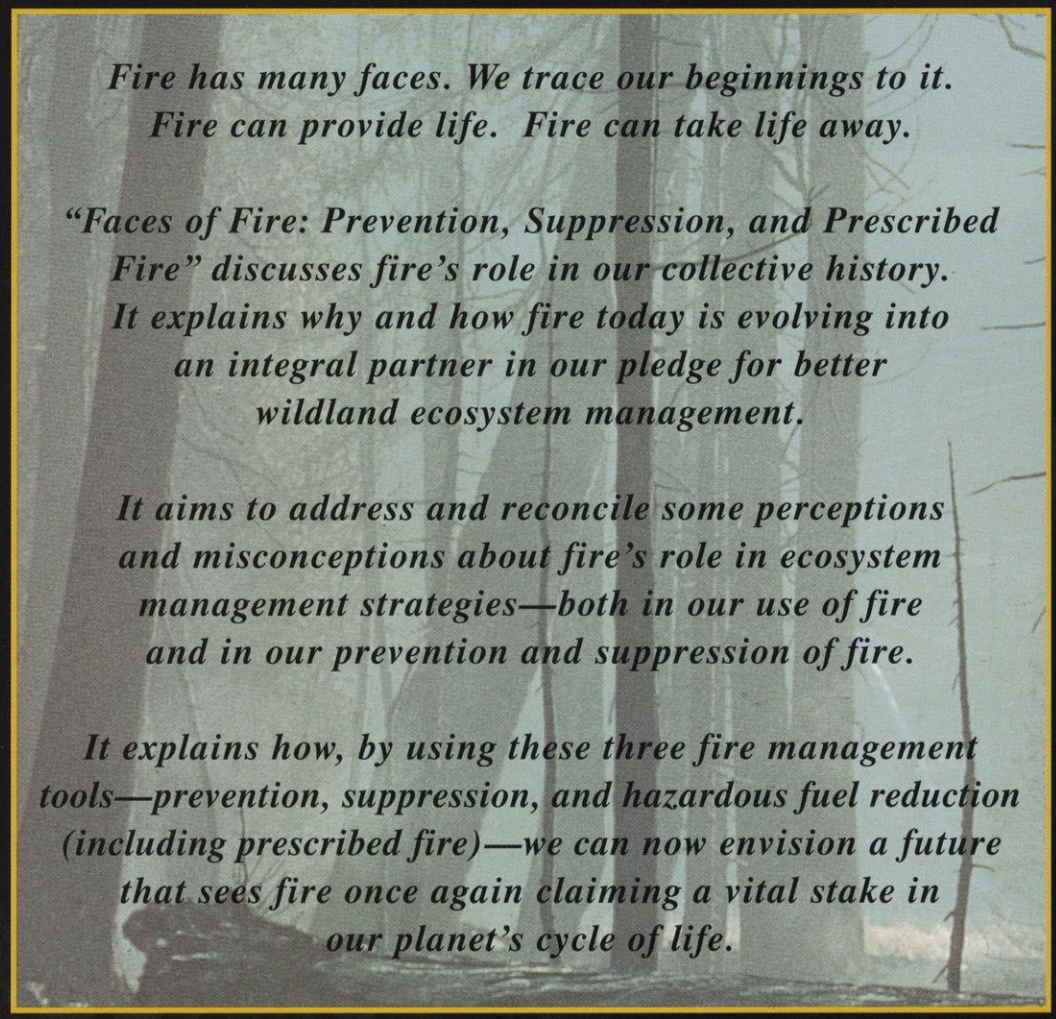
This use of fire to sustain ecosystem health should always be based on sound scientific principles balanced with other societal goals—including public health and safety, air quality, and various environmental concerns.

Because the forest and rangeland health problem transcends property boundaries, we also need strong cooperation between various government agencies, private companies, and the public.

Furthermore, to restore and maintain sustainable ecosystems, fire management goals and objectives—including the reintroduction of fire—must be incorporated on a landscape scale.

In conclusion, we must continue to strengthen the concept of total fire management by increasing prescribed burning while continuing to maintain and utilize our strong fire prevention and suppression capabilities.

It is a challenge, like all others that have confronted the Forest Service family in the past, that we have pledged to meet. The safe and effective use of fire through these three faces of fire, today and on into the 21st century.



Fire has many faces. We trace our beginnings to it. Fire can provide life. Fire can take life away.

"Faces of Fire: Prevention, Suppression, and Prescribed Fire" discusses fire's role in our collective history. It explains why and how fire today is evolving into an integral partner in our pledge for better wildland ecosystem management.

It aims to address and reconcile some perceptions and misconceptions about fire's role in ecosystem management strategies—both in our use of fire and in our prevention and suppression of fire.

It explains how, by using these three fire management tools—prevention, suppression, and hazardous fuel reduction (including prescribed fire)—we can now envision a future that sees fire once again claiming a vital stake in our planet's cycle of life.

U.S. Department of Agriculture

Forest Service

Fire and Aviation Management

Program Aid 1572
Slightly Revised
March 1998

Glossary of Wildland Fire Management Terms

AIR ATTACK: The deployment of fixed-wing or rotary aircraft on a wildland fire, to drop retardant or extinguishing agents, shuttle and deploy crews and supplies or perform aerial reconnaissance of the overall fire situation.

AIR TANKER: Fixed-wing aircraft certified by FAA as being capable of transport and delivery of fire retardant solutions.

CONTAIN A FIRE: A moderately aggressive wildfire suppression strategy which can reasonably be expected to keep the fire within established boundaries of constructed firelines under prevailing conditions.

CONTROL A FIRE: To complete control line around a fire, any spot fire therefrom, and any interior island to be saved; bum out any unburned area adjacent to the fire side of the control lines, and cool down all hot spots that are immediate threats to the control line, until the lines can reasonably be expected to hold under foreseeable conditions.

CROWN FIRE: A fire that advances from top to top of trees or shrubs more or less independent of a surface fire. Crown fires are sometimes classed as running or dependent to distinguish the degree of independence from the surface fire.

DISPATCHER: A person who receives reports of discovery and status of fires, confirms their locations, takes action promptly to provide people and equipment likely to be needed for control efforts.

DRIP TORCH: Hand-held device for igniting fires by dripping flaming liquid fuel on the materials to be burned; consists of a fuel fount, burner arm, and igniter. Fuel used is generally a mixture of diesel and gasoline.

DRY LIGHTNING STORM: Thunderstorm in which negligible precipitation reaches the ground. Also called dry storm.

FIRE BEHAVIOR: The manner in which a fire reacts to the influences of fuel, weather, and topography.

FIRE BENEFITS: Fire effects with positive monetary, social, or ecological value or that contribute, through changes in the resource base, to the attainment of organizational goals.

FIREBREAK: A natural or constructed barrier used to stop or check fires that may occur, or to provide a control line from which to work.

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

FIREFIGHTER: Person whose principal function is fire suppression.

FIRELINE: The part of a control line that is scraped or dug to mineral soil. Also called "fire trail."

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

FIRE MANAGEMENT PLAN: Statement, for a specific area, of fire policy, objective, and prescribed action; may include maps, charts, tables, and statistical data.

FIRE RESOURCES: All personnel and equipment available or potentially available for assignment to incidents.

FIRE RETARDANT: Any substance except plain water that by chemical or physical action reduces flammability of fuels or slows their rate of combustion.

FIRE STORM: Violent convection caused by a large continuous area of intense fire. Often characterized by destructively violent surface in-drafts, near and beyond the perimeter, and sometimes by tornado-like whirls.

FIRE SHELTER: An aluminized tent offering protection by means of reflecting radiant heat and providing a volume of breathable air in a fire entrapment situation. Fire shelters should only be used in life threatening situations as a last resort.

FLARE-UP: Any sudden acceleration in rate of spread or intensification of the fire. Unlike blowup, a flare-up is of relatively short duration and does not radically change existing control plans.

FUEL: Combustible material.

FUELBREAK: A natural or man-made change in fuel characteristics which affects fire behavior so that fires burning into them can be more readily controlled.

HOT SPOT: A particularly active part of a fire.

HOTSHOT CREW: Intensively trained fire crew used primarily in hand line construction (Type-1).

INCIDENT COMMAND POST (ICP): Location at which primary command functions are executed. The ICP may be collocated with the incident base or other incident facilities.

INCIDENT COMMANDER: Individual responsible for the management of all incident operations at the incident site.

MOPUP: Extinguishing or removing burning material near control lines, felling snags, and trenching logs to prevent rolling after an area has. burned, to make a fire safe, or to reduce residual smoke.

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

PRESCRIBED BURNING: Controlled application of fire to wildland fuels in either their natural or modified state, under specified environmental conditions, which allows the fire to be confined to a predetermined area, and produce the fire behavior and fire characteristics required to attain planned fire treatment and resource management objectives.

PRESCRIPTION: A written statement defining the objectives to be attained as well as the conditions of temperature, humidity, wind direction and speed, fuel moisture, and soil moisture, under which a fire will be allowed to burn. A prescription is generally expressed as acceptable ranges of the prescription elements, and the limit of the geographic area to be covered.

PREVENTION: Activities directed at reducing the incidence of fires, including public education, law enforcement, personal contact, and reduction of fuel hazards (fuels management).

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

PULASKI: A combination chopping and trenching tool widely used in fireline construction, which combines a single-bitted axe blade with a narrow adze-like trenching blade fitted to a straight handle.

REHABILITATION: The activities necessary to repair damage or disturbance caused by wildfire or the wildfire suppression activity.

SMOKEJUMPER: A specifically trained and certified firefighter who travels to wildland fires by aircraft and parachutes to the fire.

SPOT FIRE: Fire ignited outside the perimeter of the main fire by a firebrand.

SUPPRESS A FIRE: The most aggressive wildfire suppression strategy leading to the total extinguishment of a wildfire.

SUPPRESSION: All the work of extinguishing or confining a fire beginning with its discovery.

UNDERBURN: A fire that consumes surface fuels but not trees and shrubs.

UNDERSTORY BURNING: Prescribed burning under a forest canopy.

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

WILDLAND: An area in which development is essentially non-existent, except for roads, railroads, powerlines, and similar transportation facilities. Structures, if any, are widely scattered.

WILDLAND FIRE: Any fire occurring on the wildlands, regardless of ignition source, damages or benefits.

WILDLAND/URBAN INTERFACE: The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

PART 7

Question and Answers for the 2000 Fire Season

Q. How many acres have burned so far and how does this compare to past years?

A. As of 8/7/00, Nearly 4,000,000 acres have burned. The ten year average shows this is almost twice the average number of acres of 2,168,000. Based on the average acres burned to date this is the worst fire year in 12 years.

Q. What is long-term weather forecast? What is the long term fire forecast?

A. The long range forecast is for warmer and dryer weather from the Rockies of Colorado throughout the west. The Palmer Draught index shows all areas of the west are extremely dry. From 10 to 20 plus inches of rain will be required to bring levels back to normal. With soil and fuels extremely dry, lightning will continue to produce new fires. From 10 to 30 new fires are reported each day. No change in this trend is expected until early to mid autumn. It is very likely that some of our fire and resource managers will be making tough decisions about how to best use limited resources. Consequently, the agencies are not approaching the fire job with a "business-as-usual" attitude.

Q. **How does the Forest Service and its interagency partners prioritize resources for fighting fires?**

A. National priorities are established by a National Multiple Agency Command located in Boise, Idaho. This group established a set of criteria based on a national strategy that is dictated by the current fire situation and the fire resources available.

Firefighter and public safety is the highest priority. There is not a structure, timber stand or grassland worth a human life. Resources are allocated to a fire when it can be fought safely. **Initial Attack is the second priority**. This means that in a time of scarce resources and multiple starts occurring simultaneously in the same area, resources are allocated where they can keep new fires from becoming large fires. Emphasis is placed on the incidents that present the greatest potential threat. **The third priority is protection of communities**. Emphasis is placed on communities where the natural resources needed for the well-being of the community are threatened.

Q. How does new home building in the woods affect the Forest Service's job?

A. Almost every National Forest, National Park, and much of the Bureau of Land Management lands have homes and communities located on their boundaries. Protecting public safety and private property is high priority. An estimated 20% to 25% of all wildfires involve the protection of structures on private lands. This requires a coordinated effort between local fire departments, state forest fire suppression agencies and federal agencies to balance the demands of structure protection while continuing suppression efforts on the fires. More aircraft, engines and personnel are needed for suppression efforts around homes resulting in higher suppression costs. On the average,

any protection of structures, even the staging of resources, costs a minimum of $1,000,000. Cost can run into the tens of millions.

Q. How many people have been evacuated? Are more evacuations likely?

A. Evacuations have occurred on numerous fires. Since many of these are voluntary and not official, it is impossible to give an exact number. Official evacuations have occurred at least 25 times this year. Evacuations are likely to continue whenever fires threaten communities. Last week 300 people were evacuated in Montana

Q. Does the Forest Service have enough money in its budget to fight these fires?

A. The Forest Service has $525,000,000 in its budget counting appropriated, contingency and supplemental funds. We estimate we will spend $562,000,000 this year. The 10 year average is $290,000,000. To date, the agency has spent $301,000,000. All agencies are spending an estimated $10,000,000 to $15,000,000 per day. Should the cost exceed available funds, the Forest Service has special authorities to borrow from budgets within the agency until supplemental funds can be appropriated.

Q. Why is this year such a bad fire year?

A. Bad fire years are usually the result of many factors occurring simultaneously. Forest fires have occurred naturally for thousands of years. The west has experienced extended periods of dry weather, which has occurred this year on the end of the most recent La Nina event. The continuing hot, dry weather has turned the forests, rangeland, and grasslands into a tinderbox. With thunderstorms and dry lightning starting more than 250 fires each day, the challenge facing firefighters is extreme.

Q. What started these fires? Were any of them caused by prescribed burning?

A. While, lightning started the vast majority of the fires, some were caused by people. None are the result of escaped prescribed fires.

Q. Is there anything that can be done to reduce the risk of fires in the future?

A. Yes. In the short-term, everyone can take individual responsibility for being fire safe. We don't need to add to the problem by being careless or inattentive. The long-term solution is to strategically reduce the over-accumulation of hazardous wildland fuels in fire-prone areas. This is especially important where these high-risk fuels are immediately adjacent to or intermixed with communities and homes. A third step is broader adoption of the Firewise program. The tenets of a Firewise community include cooperative land use planning, construction and landscape choices that help prevent the conversion of homes to fuels for a wildland fire.

Q. Are the forest fires the result of a decline in timber harvest? Would increasing the timber harvest reduce the fire danger?

A. The current wave of forest fires is not related to the decline in timber harvest. The fire outbreak is related to two primary factors; drought and forest condition. The timber harvesting program mostly removes larger trees that have commercial value. Treatments focusing on decreasing the susceptibility of forest to fire remove small trees and manipulate shrubs and down material through mechanical treatments and prescribed burning. Markets for the small material are limited or non-existent. Forests most in need of treatment from a fire perspective may be low priority for timber harvest due to differing objectives. In other cases, priorities coincide, and timber harvesting, combined with other treatments can aid in reducing flammability.

Q. Will these trees be salvaged after they have been burned?

A. The Forest Service is in the process of determining what opportunities there will be for salvage of this fire mortality. The focus right now is fire suppression and rehabilitation. It will be at least a month before any real estimate of potential for salvage is known.

National Forests will do analysis to determine which areas are appropriate to enter and salvage fire killed trees. Interdisciplinary teams will consider environmental factors, such as wildlife and fisheries concerns, soil stability, and the value of the remaining timber.

Trees in wilderness areas would not be considered for removal. Of the forest lands that are available for entry, an estimated 25 to 30 percent of the trees may be removed. Some will be left on the ground to provide additional erosion control and down wood for habitat, some will become snag habitat, and some will not be suitable for salvage because of fire damage.

Q. Senator Craig expressed concerns about the administrations resource policies resulting in the current fire situation. What is being done under this administration to reduce the effects of wildfire?

Over the last several the Forest Service has aggressively increased the number of acres treated to reduce fire risks. Since 1994, the acreage has grown from about 385,000 to the current 1,300,000. Furthermore, the agency has drafted a strategy to reduce fire risks, "*Protecting People and Sustaining Resources, A Cohesive Strategy*". The agency uses a broad range of treatments including mechanical treatment and prescribed fire to reduce fire risks. Mechanical treatment is most appropriate in formerly open forests that have become overcrowded with small trees. Timber harvesting and fire management objectives sometimes coincide but often removal of small trees to reduce fire risks does not contribute to timber harvesting goals.

Q. Why does the military need to supply airtankers?

A. The Interagency Fire Center can convert eight C-130 aircraft to aerial tankers capable of dispensing fire retardant and water in support of ground forces. These units are called Mobile Aerial Fire Fighting System (MAFFS) that can be fitted into C-130's with no modification. Military planes are requested when all federal and contract air tankers are being used the maximum time allowed. All eight units are currently deployed.

Q. The Russians have airtankers they want the Forest Service to use. Will you use them?

A. Obviously, given the current situation the Forest Service is interested in using all resources that help us put out these fires safely and effectively. At the same time, this is an emergency situation and we don't have a lot of trained personnel we can spare to figure out how to integrate new equipment into our fire-fighting operations right now. These planes operate very differently from our existing planes. They need bigger bases to land, and we don't have the facilities and logistical support to resupply them. Without clear operational guidelines, they also raise potential safety concerns for firefighters.

How much money has the Forest Service/Administration spent helping communities recover from fires in past years?

Helping Communities damaged from wildfire to recover is a function of the Federal Emergency Management Agency. Communities destroyed or damaged by wildfire can qualify for special recovery assistance.

Q. Why have so many homes been threatened and even destroyed?

A. Today, there are higher concentrations of homes in "wildland urban interface" areas, which are defined as areas where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. Counting Los Alamos, more than 300 have been lost in 2000.

Wildland firefighters can help to protect homes, but they are not trained or equipped to battle structure fires. Structure fires can pose life-threatening risks to firefighters who are not equipped with adequate protective equipment. Wildland firefighters focus their skills on wildland firefighting, but they also work in partnership with local fire departments to offer support in wildland urban interface.

The FIREWISE program developed by the Forest Service, Department of Interior, State Foresters and the National Fire Protection Association is designed to help homeowner living in the wildland urban interface. The program provides direction for communities and individual homeowners to assess their risk and take steps to make their homes

wildfire resistant. One homeowner at Los Alamos credited the survival of his home to FIREWISE and this information he employed to protect his home.

Q. Are extensive firefighting efforts needed on all fires? Aren't some fires good?

Many forests in the United States have evolved with fire as an important part of the natural cycle. Prior to the advent of modern forest management, lightning-caused fires, under optimum conditions, would burn near the ground under the canopy of larger trees. These naturally caused fires would reduce underbrush and forest litter. The remaining ash would provide nutrients needed to sustain a healthy forest.

After the turn of the century lightning-caused fires were aggressively extinguished. Over the decades, so much fuel accumulated that lightning-caused fires no longer served the natural role of keeping forests clean of excess fuels. The healthful effects of natural fire soon gave way to destructive wildfires that have increased in number and intensity since the middle of the century.

Over the past 20 to 30 years, fire managers have begun to reintroducing fire into forest ecosystems. This process is referred to as prescribed fire. A prescription is written to achieve the kind of results managers desire. They must decide how hot they want the fire to burn, how fast they want it to spread, and how big they want it to get. Then they must specify the weather conditions and people and equipment needed to maintain control the fire. Prescribed burning is part of an overall fuels management program that includes thinning of immature trees.

Experience has shown that when a wildfire reaches an area that has been burned by prescription, the flames usually remain near the ground. A ground fire is much less destructive to a forest. The goal of forest land management agencies is to improve forest health in order to create a wildfire-resistent condition through prescribed burning and selective thinning.

The combination of hot, dry weather, winds, and dense amounts of forest debris and live vegetation, along with lighting as a source of ignition, can lead to uncontrollable wildfires. Fires burning in these extreme conditions threatens public safety and are more likely to case losses of resources and property.

None of the fires now burning were the result of prescribed fire. The agency is currently developing a cohesive strategy for reducing fire risks on National Forests.

Q. Would the roadless policy increase the risk of fires or hamper the agency's ability to fight fire?

The Forest Service's proposed Roadless Area Conservation rule would not affect the agency's ability to fight fires. In the draft environmental impact statement for the roadless area proposal, the Forest Service seriously considered the fire issue (Pages 3-98 to 3-107 and 3-149-3-160). Roads are not necessary to fight fires. In fact, the Forest

Service fire suppression organization is staffed to attack fires in roadless areas using fire crews delivered by helicopter and fixed-wing aircraft. The Forest Service presently controls an estimated 98 percent of all wildland fires in inventoried roadless areas, while the fires are still considered small. The Forest Service has also found that the risk of fires, especially human-caused fires, is significantly higher in areas that have already been roaded. Still, the proposed rule would allow road construction if a wildland fire threatened public health and safety.

As proposed, the Forest Service would also be able to continue prescribed burning, thinning, and other mechanical treatments in roadless areas. Still, the agency will likely focus its limited resources in areas that are roaded, in part, because roaded areas tend to be closer to people and property than more remote unroaded areas and have more forest health problems. At current budget levels, the agency could work in roaded areas for fifteen years before being able to address the problems in more remote roadless areas.

Q. What kind of restoration activities does the Forest Service plan after these fires?

A. The Forest Service has a well developed and effective process in place to identify and implement burned area emergency rehabilitation efforts. The policy requires interdisciplinary teams to promptly conduct burned area surveys of all fires larger than 300 acres. Forest Supervisors are required to submit a Burned Area Report and monitoring plan to the Regional Forester within 7 days after total containment for fires meeting this criteria. Regional and Washington Offices usually authorize emergency rehabilitation work within 3 days.

Damage caused by fire suppression activities is rehabilitated as part of the immediate fire suppression effort and erosion control measures are installed as soon as practicable following control of the fire or portions of the fire.

Emergency treatments have been implemented on 372,000 acres this fiscal year to date on 18 fires this year. The cost so far is $20,000,000. Half of that cost is associated with the Cerro Grande fire (Los Alamos). The need is increasing dramatically with the increase in large fire activity. An accurate prediction of the need is not possible, however, this figure could quadruple.

Q. Last year the agency requested a waiver from the Office of Personnel Management to exempt firefighters from the temporary limited employment regulation (1039 hour limit for seasonal firefighters). Does the Forest Service intend to request this waiver again this year?

A. The Forest Service is strongly discouraging requests for exemptions to the 1039 hour rule because it may not be in the best interest of the agency as well as the temporary workforce. This regulation was intended to prevent abuse of temporary employees that occurred by continually re-hiring them without providing health and other benefits that are given to employees with TERM and permanent tours of duty. The agency supports local units reviewing their organizational structures to ensure they meet the needs of the

agency while following the intent of this regulation. If we expect temporary employees to return season after season, then we should provide a more permanent status, which includes providing benefits.

Q. Is there any efforts to remove the existing cap at a grade of 10/1 for overtime pay for exempt employees?

A. The General Accounting Office recognizes the need to address this problem. The issue is dicussed in the GAO report, "Federal Wildfire Activities: Current Strategy and Issues needing Attention" (GAO/RCED-99-233). This law affects all Federal employees. I am working with OPM in trying to find means to address this issue. Currently, the pending Wildland Firefighter Equity Act of 1999 may address the problem.

Q. What is the current status of the Wildland Firefighters Pay Equity Act of 1999 (HR 2814)?

A. The July 26, 2000 hearing for this bill was postponed indefinitely. This bill was to authorize equal overtime pay provisions for all Federal employees engaged in wildland fire suppression operations. Although other bills are pending that provide incentive for upper management participation on wildland fire incidents, the wildland firefighting agencies continue to work with the Office of Personnel Management to pursue alternatives.

Q. Can someone elect to stay on a fire for 21 days rather than the new 14 day policy?

A. The new 14 day fire policy was developed following a study conducted in cooperation with the Brookings Institute called, "An Agency Strategy for Fire Management". What we found was many qualified fire personnel unwilling to serve for 21 days because of a number of personal and professional reasons. The change has made available new fire resources. At the same time, any person may elect to work a 21 day assignment with the approval of their supervisor. Beyond 21 days, I encourage people to recuperate for several days before taking another assignment. This is for health and safety reasons.

Q. Increasing the Fire Workforce: Are there any actions being considered to increase the Federal Fire Suppression Workforce?

A. The Forest service is planning to hire 1500 new employees service-wide over the next several years. Many of the new hires will be Fire and Aviation Management Personnel. This is dependent upon budget levels. By doing this, we plan to develop a younger organization that can develop critical fire skills we desperately need. These new people will be become our future fire resource leaders and help replace skills being lost through retirements.

Q. Is there any relief from the annual planned accomplishment requirements, called targets, for people going on fires?

A. During these periods of high fire occurrence, protection of lives, property and resources is first priority. Any planned work goals or Targets for all other programs are secondary under these circumstances.

THE WHITE HOUSE

Office of the Press Secretary
(New York, New York)

Saturday, September 9, 2000

RADIO ADDRESS BY THE PRESIDENT
TO THE NATION

Waldorf-Astoria
New York, New York

THE PRESIDENT: Good morning. This year our nation is experiencing one of the worst wildfire seasons in memory. Extreme weather and lightning strikes have helped spark an estimated 250 fires every day. More than 6.6 million acres have burned already, and more than 35 large fires continue in nine states. We've all witnessed the tragedy of family homes destroyed, and admired the bravery of firefighters and citizens joining efforts to battle the blazes. I saw it firsthand in Idaho last month, and I'll never forget it.

Today I want to talk with you about important new steps we're taking to help communities recover and to ease the threat of fires in the years ahead. For months now, we've been mobilizing federal resources to provide firefighters and communities the tools they need to combat the fires. More than 25,000 federal, state and local personnel have been engaged in the effort. We provided $590 million in emergency firefighting funds, and recently I declared Montana and Idaho disaster areas, making them eligible for more federal relief. But we must do more.

That's why I directed Interior Secretary Babbitt and Agriculture Secretary Glickman to prepare a report outlining a strategy to help communities recover from these fires, and to ensure that others are spared from similar tragedies in the future. Today I'm accepting the recommendations contained in this report and announcing the first steps we're taking to implement them.

First, saving lives and property is, and will remain, priority one. Our nation is blessed with the best firefighting force in the world. They're doing an extraordinary job in some of the most dangerous and difficult conditions imaginable. Some are finally returning home for well-deserved rest. But the fire season isn't over, and as long as the fires burn our firefighters will continue to receive our strong support to get the job done as quickly and safely as possible.

Second, we're launching new actions to help hard-hit communities recover as the smoke clears. Once the fires are out, the threat doesn't stop. Rain, for example, could trigger mudslides and dirty runoff threatens water quality. To help prevent further damage we've dispatched more than 50 rapid response teams to work with local communities to develop plans to repair damaged lands and protect precious water supplies.

In addition, we've just released nearly $40 million for 90 restoration projects throughout the West. We'll also soon establish one-stop centers in Idaho and Montana, so that citizens can gain quick access to assistance from unemployment aid to small business loans. We want to make sure the help gets to those who need it right away.

Finally, we must continue to take a long-range look to diminish the threats from fires in the years ahead. For almost 100 years our nation pursued a policy focusing on extinguishing all wildfires. It was well-intentioned, but as a result, many of our forests now have an unnatural buildup of brush and shrubs. This excessive undergrowth fuels forest fires, making them far more dangerous and difficult to control.

Our administration has taken a new approach to protect communities and reduce wildfire risks by getting rid of the forest underbrush that has accumulated over the last century. We're reducing the risk of fire on more than 2.4 million acres a year -- a fivefold increase since 1994. We want to work with communities to expand these efforts, in an environmentally sensitive way, particularly in those areas at greatest risk of wildfire.

Today's report provides a blueprint for action -- immediate steps to deliver assistance to hard-hit communities, new measures to build on our efforts to ease the threat of wildfires nationwide. The report recommends an additional $1.5 billion to carry out this strategy, and I'm committed to working with the Congress to secure this critical funding.

Throughout this wildfire season we've seen our fellow citizens come together to save lives and aid communities in need. That's the best of the American spirit. It's reflected in these new steps to help put out the fires today, help communities heal tomorrow, and help to reduce wildfire threats for years to come.

Thanks for listening.

END

PRESIDENT CLINTON'S RADIO ADDRESS TO THE NATION: NEW STEPS TO RESTORE FIRE-STRICKEN COMMUNITIES AND REDUCE THE FUTURE THREAT OF WILDFIRE

Today, in his weekly radio address, President Clinton will announce new actions to help restore communities and lands affected by this season's wildfires. The President will also unveil a new strategy for strengthening federal efforts, in partnership with states and communities, to ease the threat of future wildfire. During a visit to a fire camp in Idaho last month, the President directed Agriculture Secretary Glickman and Interior Secretary Babbitt to report back to him with recommendations to help communities recover from this year's fires - the worst in half a century - and to reduce the threat of future fires. Today, the President will accept the Secretaries' recommendations, and pledge to work with Congress to secure the funding needed to fully implement them.

The Worst Fire Season in Half a Century. The 2000 fire season ranks among the most severe in our country's history. The two major causes of this year's intense fires include a severe drought -- accompanied by an unusual number of storms, lightning strikes and windy conditions -- and the long-term effects of 100 years of aggressive fire suppression and the resulting buildup of fire fuel in our forests and rangelands. Today, 38 large fires continue to burn across nine states. As of early September, more than 6.5 million acres have burned and more than 76,000 wildfires have started. More than 25,000 civilian and military personnel have been mobilized to fight the fires. Through their extraordinary efforts, more than 75,000 fires have been contained this year. Extreme weather conditions are predicted to continue in coming weeks, and as the Santa Anna winds pick up, California will face an increased risk of wildfire.

Dedicating Fire Fighting Resources. While some firefighters are now heading home, thousands remain on the fire lines protecting hundreds of communities across the West. In his address, the President will renew his commitment to ensuring the resources and support needed to get the job done as quickly and safely as possible. To date, the President has released $590 million in emergency fire-fighting funds to combat the western fires; and appropriate compensation for hard-pressed firefighters has also been made available.

Helping Communities Recover and Rebuild. The President announced new actions to help hard-hit communities recover from this year's severe fires. These actions include:

> ***Protecting Communities From Future Damage:*** In addition to fire damage, communities face other health and safety threats, including mud slides from heavy rainfall or water contamination from polluted runoff. To help prevent future damage, the President announced that more than 50 rapid response teams have been dispatched to work with local communities to develop plans to repair land damaged by the fires and to protect precious water supplies. These teams will review burned areas to assess what sites need to be treated and what kind of work needs to be done to restore them.
>
> ***Restoring Damaged Lands and Forests:*** To date, more than 4 million acres have been burned. To restore damaged lands across the West, the President announced that $40 million has been released for 90 restoration projects. The Interior and Agriculture Departments will begin restoration activities on the damaged lands, including re-vegetation, soil stabilization, erosion

control, seeding of native species and stabilization of municipal watersheds. These projects include: $101,550 to reseed approximately 750 acres damaged this summer in Devine Canyon, Idaho; $553,200 for joint federal, state and local ranchers' efforts to reseed 8,000 acres of burned lands in Idaho's Bell Mare fire; and $100,000 to help reseed burned lands and construct nearly ten miles of fence to allow for natural recovery and watershed protection in the Piceance Basin west of Meeker, Colorado.

Providing One-Stop Disaster Assistance: In many communities, workers, small business owners, families and others are in need of new resources and assistance to rebuild after this year's intense forest fires. Today, the President will announce that the Administration will soon establish one-stop disaster assistance centers in Idaho and Montana where citizens can gain quick access to a full array of services, from unemployment aid to small business loans. FEMA, the Small Business Administration and the USDA's Forest Service and Rural Development Agency will work together to provide quick and easy access for affected citizens and businesses.

A Strategy to Reduce Future Threats. This season's wildfire patterns reflect a century-long disruption of the natural fire cycle. In the late 19th century, millions of acres of forests and wildlands were cleared, leaving behind undergrowth, slash and weaker trees more susceptible to fire. Catastrophic fires in the early 1900's led to the adoption of an all-out federal fire-suppression policy that allowed an unnatural buildup of heavy undergrowth, which serves as "fuel" for forest fires. In addition, rapid population growth in the West has exacerbated fire risk as new development occurs alongside fire-prone forest and grasslands – the so-called urban-wildland interface.

In 1994, the Clinton-Gore Administration initiated the first-ever, comprehensive interagency review of wildland fire policy. Over the last six years, the Administration has expanded by fivefold its efforts to reduce the fuel load in the nation's forests through prescribed burns and mechanical thinning, which leave behind healthier, more fire-resistant forests. More than 2.4 million acres will be treated this year.

Today, the President will accept the Secretaries' recommendations for building on the Administration's efforts to reduce the threat of fire and restore healthy forests. The strategy calls for: significantly increasing the number of acres undergoing fuel reduction treatment each year; developing new uses and markets for small-diameter trees and other biomass removed during fuel reduction; forging new partnerships with local communities and helping them expand their efforts to reduce fire risk; and establishing a Cabinet-level team, chaired by the Agriculture and Interior Secretaries, to coordinate these efforts. The report concludes that these efforts can successfully reduce fire risk without relying on increased commercial logging.

The Secretaries' report recommends an additional $1.6 billion in fiscal year 2001 to carry out this strategy and to support other efforts to help fire-stricken communities and maintain firefighting capabilities. The President is committed to working with Congress to secure this critical funding.

Working With States and Communities. Over the coming weeks, Secretaries Glickman and Babbitt will travel to Western states to meet with Governors and to visit fire-stricken communities to detail their recommendations and to hear from those on the front lines of this summer's fires how best to recover and to reduce the future threat of fires.