The NATIONAL WILDLAND/URBAN FIRE PROTECTION INITIATIVE

The US Forest Service, through its 5-year 1977-1982 Chaparral Research and Development Program, had already strongly supported finding solutions for reducing the ever-increasing structural losses in watershed fires, as development encroachment into wildland areas was also greatly limiting its mandate of effectively managing the country's public natural resources. It had therefore been at the forefront of expanding such work into a country-wide awareness of the problems and working with agencies in finding effective solutions. Partnering with the National Fire Protection Association (NFPA) and the U.S. Fire Administration administered by FEMA, in 1985 it therefore called for a National Wildland/Urban Fire Protection Initiative. The initiative was put in place in April 1986 by first forming a task force of 30 national leaders in their field inclusive of the Director of the California Department of Forestry (now Cal Fire). He had already been in the forefront of such efforts such as being the keynote speaker at the joint National Foundation for Environmental Safety (NFES) and National Park Service symposium and workshop "Living in the Chaparral of Southern California" held October 20, 1984, at the Los Angeles County Museum of Natural History. It brought together more than 20 public agencies and private organizations and had been organized by Dr. Radtke as NFES' then volunteer Executive Director.

The goal of the April 1986 task force workshop was to find ways to reduce the losses of life, property, and natural and economic resources from fires occurring in the wildland/urban interface. Its strategies were to assemble principal organizations and individuals concerned with the wildland/urban fire problem; to exchange views and to recommend actions addressing the problem. Objectives were to a.) Assess the current status of the wildland/urban fire problem; b.) Identify factors contributing to the problem; c.) Identify ways to mitigate contributing factors; d.) Produce a report recommending a course of action that will lead to a national focus in developing and implementing solutions by government, private interests, and the public to the wildland/urban fire problem.

Its specific outputs were to plan for a NATIONAL WILDLAND/URBAN FIRE PROTECTION CONFERENCE (then set for September 15 - 18, 1986) that could produce a report for public use that defines the fire problem and recommends a course of action for problem resolution by government, private interests, and the public. In preparing for the conference, the task force was to further:
a.) gather information and information sources for development of a national wildland/urban fire protection problem statement;
b.) provide guidance for planning a National Wildland/Urban Fire Protection Conference that will assist in the selection of conference topics and priorities for conference attention;
c. identify individuals and organizations willing to commit resources to assist in the development of problem solutions;
d. identify individuals and organizations with a potential role in the development of problem solutions.

The September 1986 NATIONAL WILDLAND/URBAN FIRE PROTECTION CONFERENCE that followed was based on the concerns that "the 1985 wildfire season was one of the worst in United States history with more than 1,400 structures and dwellings fire-damaged or destroyed, 44 fire-related deaths, and 3 million acres of Federal, State, and private land burned. This problem is caused both by wildland fires threatening developed areas as well as the threat that development poses to the wildland environment. The final figure in all likelihood will exceed $500 million of private and taxpayer funds."
The questions were asked: Who is responsible for the solution, the fire protection agency, the homeowner, the county planner?

In answering this question, it was acknowledged that the responsibility for fire protection cannot be relegated to a single element of society but calls for the combined efforts of governmental agencies, the private sector, and individuals. Just a few of the groups that share in the responsibility include: a) Homeowners; b.) Fire protection agencies; c.) Local and regional planners; d.) Media and communication

experts; d.) Insurance carriers; e.) Builders, developers, contractors, and architects; f.) Training and Motivational experts.

Broken up into 12 working groups, conference participants provided meaningful recommendations to end "Management by Crisis" through planning and development guidelines. Being a "Boots-on the-Ground" activist, and having worked with homeowners, homeowner associations as well as agencies, I strongly stressed the following:

A. There is public concern about fire risk at the wildland-urban interface.
B. Statewide minimal standards for zoning, building codes, hazard reduction ordinances along with mandates for regional and local enforcement are needed.
C. CC&R requirements for all new development have to be established that include public safety and fire hazard regulations for the long-term maintenance of the development, to be paid through homeowner assessments as stated in the CC&R's.
D. Ongoing education & training of professionals as well as the public in local communities is needed.
E. Updating of plans, codes, regulations to incorporate present technology and future needs.
F. Delineation of hazardous areas after providing effective definitions of hazards.

So, what went right and what went wrong over the last 30-40 years? The $500 million wildfire related damage throughout the country in 1985 seems to be just a "drop in the bucket" compared to the accelerating fire losses in California alone. The 2017 Santa Rosa "design-for-disaster" fire burned about 4,800 largely wood-roof homes in the city alone, with firebrands jumping the 101 Freeway as if it did not exist, resulting in a huge urban renewal project. The 2018 "design-for-disaster" Paradise Fire in Northern California and also to some extent the predictable path of the Woolsey Fire that burned at the same time in Southern California continued this destructive path. Large fires burning at the same time or fires, predictably, reburning the same area years later are part of the fire wind (devil wind, or Foehn wind) patterns that are more common in Southern California.

Have any lessons been learned? Perhaps not. Money talks? The Oakland Tunnel Fire of 1991 in Northern California burned only 1,500 acres but destroyed 2,843 single-family dwellings, 437 apartment and condominium units, and killed 25 people. Its economic loss in 1991 USD was estimated at 1.5 billion. As evaluated in July 2019, a somewhat similar disaster on a perhaps smaller scale could happen any time under similar fire weather conditions, as hazardous fuels have increased in some of the fire areas along with continuous buildout of the remaining fire and slide-prone lots. Will the fire-related costs of fires fanned by "Santa Ana winds" now regularly exceed 1 billion USD because of the accelerating estate prices?

In response to the National Wildland/Urban Fire Protection Initiative, fire agencies throughout the country largely tried to respond quickly by providing updated or new brochures on minimum brush clearance/hazardous materials clearance requirements along with proposed minimal access and building code recommendations. However, often they could not agree, acknowledge, along with public officials, that landscape vegetation could be just as flammable as native vegetation while initiating hazard mitigation projects inclusive of prescribed burning. But these efforts seemed to be just "A Drop in the Bucket" compared to the proliferation of development in fire-, flood-, and slide-prone watersheds. Often, local officials, in approving such new development to increase the local tax base and also please special interest groups, provided variances or ignored meaningful codes and ordinances. While there was continuous public outcry about fire losses and the question of who should pay for them, meaningful changes were generally hard to come by as they would encroach on the freedoms and life-styles of people living in such disaster-prone environments.

Apparently there were also turf problems within agencies that undermined even productive public safety efforts. So, let us just take one example and learn from it. The Los Angeles County Fire Department, in

response to its 1979 post-Proposition Management audit that proposed to streamline the department by 14% and at the same time focus some of its resources on practical research and applications for reducing fire losses in wildland watersheds, shut such research down and squashed the audit. This also sent a strong message to its public officials: "Don't mess with the fire unions." Fast forward to 2019. The *Los Angeles Times*, as it had done many times before, disclosed further mismanagement in government agencies. This time it pointed out that despite the yearly over-$1 billion budget for the Los Angeles County Fire Department, its overtime had increased by about 35% in the last five years with some fire captains making almost $300,000 in overtime alone in 2017. This uncontrolled, great increase in overtime endangered other social service projects and also, of course, effective resource management. One does not have to be a mathematician to realize that if the department would have been streamlined as was suggested in the 1979 audit, at least $1 billion could have been saved in the last thirty years, and about $100 million presently every year. What about the thousands of homes lost after all wildland fire safety research was shut down? Is this also a reflection of how other agencies work?

The above is now "water under the bridge." Perhaps we can not change all agency behavior and won't be able to get everyone working together for the common good despite what was proposed in the 1986 Denver conference. However, I truly believe that there are still ways to greatly reduce the present wildland fire losses by depending on the individual and living by example.

If every firefighter living in fireprone watersheds would set an example of how to live more safely by creating a fire-safe environment within his or her property, and also every public servant following suit along with public buildings being maintained in a fire-safe state, the community would pay attention. Seeing is believing and understanding. It is just like a child looking up to a parent, watching and wanting to learn. Neighbors would follow the example and it would carry into the community. So, let us all work together.

A somewhat embarrassing "carrot before the horse" approach would be to publish a full-color brochure of properties of fire personnel and public officials within fireprone communities. Many do not live a fire-safe example. Google documentation could assist with such a project. This would be a more extreme but perhaps more effective case of protecting life and property and more quickly reducing the all-too-predictable fire losses.

On the other hand, we have to give credit to those "Boots-on-the-Ground" fire chiefs that try to stand their ground with obstinate owners that want to have it their own way, thereby endangering themselves and the community. One such chief, as the story goes, had placed red stones adjacent to the driveways of owners that kept dragging their feet with complying even with minimum fire safety standards. When one of the homeowners inquired what the red stones were all about, he told him that he had instructed his staff to bypass these homes in a wildfire as he did not have enough resources to defend these homes.

While every situation is different, another approach would be to train willing homeowners the "art of protecting their home." Many homeowners in high risk fire areas are willing to attend and pay for wildland fire training courses to learn how to live in a fire environment and how to prepare for and save one's home. For example, after the November 2, 1993 Old Topanga Fire in the Santa Monica Mountains, NFES also asked homeowners the following question pertaining to the fire which almost every single, physically able homeowner answered in the affirmative.

> "Would you support a certified (40-hour) citizen training course (with bi-annual re-certification) that would teach you how to make your home and neighborhood more fire-safe and how to protect your home in a wildfire, provided your certificate would allow residents access in fire closure areas (under most situations) if your house and neighborhood meets certain fire safety standards?"

The positive outcome of the post-fire Volunteer Fire Panel established in December 1993 by concerned homeowners was that they were invited to participate in the following courses for firefighters. Today experienced retired fire personnel also offer similar courses geared towards homeowners. Professional fire departments are encouraged to positively support such efforts as part of their policy and not oppose them. This would go a long way toward saving homes and reducing the loss of life in wildland fires.

MALIBU RESIDENTS (1994)

SURVEY: FIRE EDUCATION AND TRAINING

For those of you who want to join others in forming the Malibu Volunteer Fire Fighting Company, please contact

_____

FSTEP: FIRE SERVICE TRAINING AND EDUCATION PROGRAMS

The FSTEP courses are designed to provide residents and volunteers with hands-on training in fire fighting, extrication, rescue, vehicle and pump operations. These courses are delivered through registered instructors and are designed for weekend and evening presentation. At the end of each course, you will receive a California State Fire Marshall's certificate of completion from the instructor. There is a minimal fee for books and materials. Please indicate those programs which interest you on page 3, and return your selection by mail.

In Malibu, residents are encouraged to consider the following minimum three courses: Fire Control 1, 2 and 6.

Fire Control 1

Basic Fire Chemistry

Hours: 16

Description: A basic overview of fire chemistry and fire behavior.

Includes: Classes of fire; fundamentals of heat transfer; fire characteristics of materials; products of combustion; hazardous and explosive materials; extinguishing agents; size-up; and exposure protection.

FIRE CONTROL 2

Basic Operations - Structural

Hours: 16

Description: A hands-on course which provides information, methods and techniques for operating basic fire fighting tools and carrying out basic fire fighting evolutions. Includes: Hose, nozzles and fittings; ground ladders; self-contained breathing apparatus; pump operations in theory and in the field; and the use of fire extinguishers.

FIRE CONTROL 3

Structural Fire Fighting

Hours: 16

Description: This course utilizes the burning of buildings to provide students with hands-on fire fighting experience in: Fire behavior within a building; ventilation; SCBA use and survival techniques; interior fire attack; exterior fire attack; and basic fire investigation as it relates to fire fighting.

Prerequisite: Fire Control 2

FIRE CONTROL 4

Oil and Gas Fire Fighting

Hours: 8 - 16

Description: This course utilizes live fire situations to provide hands-on experience in combating fire involving liquefied petroleum gas and flammable liquid fires. Subjects include: Flammable liquid and gas fire behavior; safety; extinguishing agents; transportation fires; waterflow requirements; and live fire fighting.

FIRE CONTROL 5

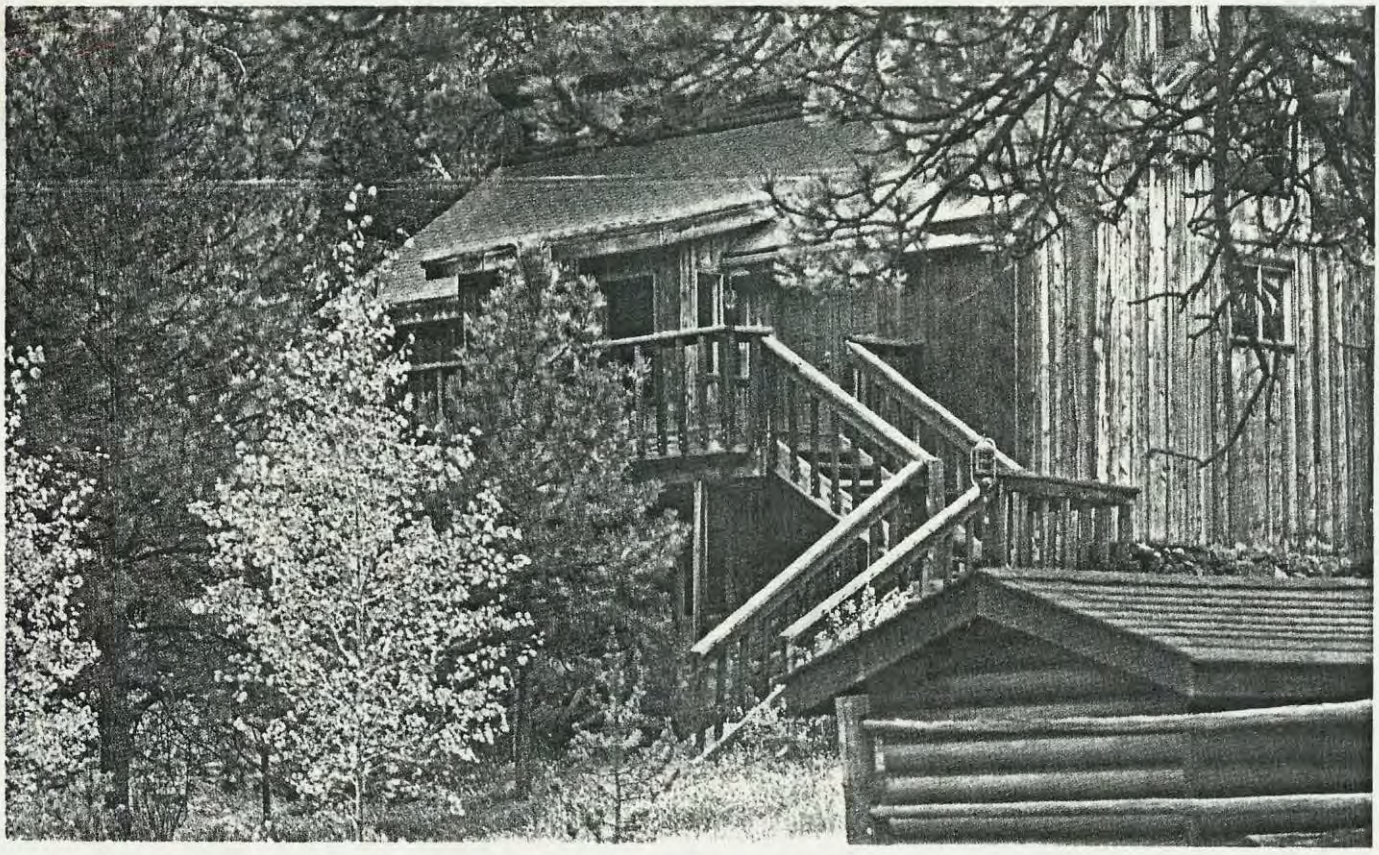
Aircraft Rescue and Fire Fighting

FIRE CONTROL 6

Wildland Fire Fighting Essentials

Hours: 16

Description: This wildland fire fighting course provides information methods and techniques for the utilization of: The California Fire and Rescue Mutual Aid Plan, Incident Command System, wildland fire fighting strategy and tactics, structure triage, terminology, survival skills, and operating safely in a wildland fire fighting incident.



The scene is idyllic, but the woodland home environment has its fire risks.

The Wildland/Urban Interface: ***DESIGN FOR DISASTER***

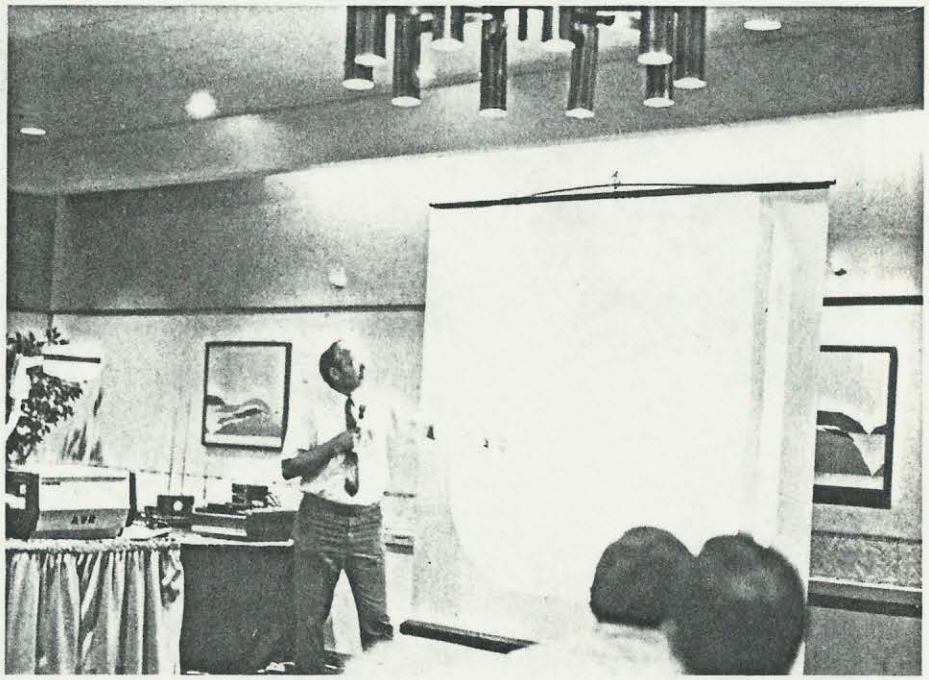
The increasing shift from urban to suburban living has greatly expanded what we now call the wildland/urban interface, or the woodland home environment. The first national conference on this emerging fire problem was held last September in Denver, Colo.

GARY O. TOKLE

Fire Service Specialist
NFPA Public Fire Protection Division

In 1985 the United States experienced the most severe wildland fire losses of this century. More than 83,000 fires burned almost 3 million acres, destroying or damaging in excess of 1400 structures and causing the death of 44 persons. Combatting this devastation cost federal, state, and local fire agencies, as well as private industry, more than $400 million. The damage to property and natural resources is estimated to be in the hundreds of millions of dollars. This excessive loss of lives and property due to wildland fires occurred all across the United States, from Florida, Virginia and New England to Idaho, Nevada and Central California. This loss in lives and property is part of a developing trend.

The nation experienced another large outbreak of wildland fires in 1986. These fires caused the evacuation of thousands of people in Michigan, New Jersey, North Carolina and Idaho. Fortunately, the 1986 fires did not cause the excessive loss of lives and property that occurred in the previous year. The more than 100,000 fires did cause the deaths



Participants of the Denver conference included 100 experts from the United States and Canada. They met for three days of formal, indoor sessions (at right), combined with informal, outdoor sessions (opposite page), to hammer out strategies to meet the problem. Photos by Jamie Haines.

of at least nine fire fighters. It was only with a massive commitment of fire fighting forces and some luck that greater losses were avoided.

Representatives of the U.S. Forest Service, the U.S. Fire Administration (USFA) and the National Fire Protection Association (NFPA) met early in 1986 to discuss the potential fire problem that is presented by the increasing shift from urban to suburban living. That population shift has greatly expanded what is now called the wildland/urban interface or the woodland home environment. The interface is the area where people are in contact with wildland areas. Vast territories of the U.S. today contain residential, commercial, and industrial properties intermingled with highly flammable native vegetation. It is a design for disaster!

As the Forest Service, the NFPA and the USFA discussed the seriousness of the problem, it became apparent that it is tremendously complex, and that it will be necessary to involve many disciplines to address the issues effectively.

A task force of 25 key individuals met at NFPA headquarters in Quincy, Mass., in April 1986. This task force was made up of representatives from the fire service, insurance industry, architects, local government, wood products industry, research organizations, land management agencies, and academic and other key organizations that appeared to have an interest and an ability to address the issues. Out of this meeting came a consensus of opinion that the wildland/urban fire problem poses serious risks to life, property and natural resources.

The task force recognized that this is not a new problem. In 1871, a wildland fire killed 1500 people and burned 1.2 million acres in Wisc. In 1923, 640 buildings were destroyed in Berkeley, Calif. In 1947, 16 lives were lost and more than 200 structures were destroyed in southern Maine. Most representatives were familiar with the frequent losses that have occurred in the past 30 years in Southern California. It was felt, however, that it will be necessary to mobilize expertise throughout the U.S. and Canada and to develop a national focus in order to help local agencies develop strategies that will mitigate the impact of the wildland/urban fire problem.

"This is a national problem that requires local solutions."

The task force encouraged the NFPA, the Forest Service and the USFA to proceed with efforts to develop a national awareness among the general public and the many disciplines that could provide expertise in the creation of a more fire-safe environment for those living within the wildland/urban interface. They identified the need to bring together a larger group, one that could go beyond their initial overview of the problem, and they also identified additional individuals who should be present to provide the needed expertise. It was felt that the larger group should address the complex issues in greater detail and outline specific strategies for dealing with the problem.

The first national conference dealing with the wildland/urban issue was held in September 1986, when 100 experts from throughout the United States and Canada gathered in Denver for an intensive three-day conference. The level of expertise and commitment among the attendees was overwhelming.

As Colorado State Forester Jim Hubbard told the participants during the opening remarks, "This is a national problem that requires local solutions. I don't think it is a matter of whether or not we are going to have a problem. We know we have one, we know that something is going to happen, even in Colorado where we don't have a high level of fire frequency. But we are going to have one, at least one, and it's a matter of how well prepared we are going to be when it comes."

As the experts debated the issues, it was apparent that both the problem and the solutions did not involve just fire fighting agencies, but also building design professionals, developers, insurance personnel, state and local government officials, planners, sociologists, researchers, homeowners and many others. It also became evident that people in many sections of the U.S. and Canada already have begun addressing various pieces of the problem. There was a need to develop a mechanism to allow people to exchange information on what has been effective and what hasn't.

The participants left Denver with a 100-page preliminary report, which contained their syntheses of the problem and outlined the strategies they felt would focus attention on the problem and begin to develop solutions to it. This is the basis of an official report that currently is being prepared. (Watch *Fire Command* for an announcement of its availability.) The report will help individuals and organizations identify strategies that can be used to develop local solutions. In addition, a one-hour satellite broadcast scheduled for March 3, 1987, (see box) will highlight the seriousness and complexities of the problem and will present an overview of the written report. The broadcast videotape will be made available to those involved in developing presentations focusing on local wildland/urban problems.

The sponsoring agencies also are developing a national awareness campaign. This will bring attention to the fact that wildland fires burn more than vegetation. The campaign will be designed to provide information to the national media and to give them contacts with experts who can provide information on local problems and how they are being addressed. This will be the first time that a nationwide campaign has emphasized the problems encountered in building and living in the wildland/urban interface. It will make people aware of basic safety measures that can be taken to reduce fire risks in this environment.

Being prepared, according to the Denver participants, involves not only what we do when the fire occurs, but also an understanding of the environment when we build and live in these areas. Preparation also should involve the use of recognized good practices to mitigate the potential hazards. It should involve a public awareness program that arms individuals with the information they need to lessen the hazards around their homes or businesses, and to lessen their personal danger by knowing how to react in the event of a fire. Additionally, it involves a recognition by fire fighting agencies that there is, indeed, the potential for disastrous fires and that it isn't a matter of whether it is going to happen, but when.

NFPA schedules satellite broadcast

On March 3, 1987, the NFPA will broadcast via satellite a program that documents the wildland/urban fire problem. The program will deal with the nature of the problem, why it is a national crisis, and the measures that can and should be taken to provide improved fire safety in wilderness areas.

The program will be broadcast at 2:00 p.m. Eastern time via Westar 5 satellite, transponder 10X, channel 20, audio 6.2/6.8 Mhz. Those who plan to tape the program should allow 1½ to 2 hours. The program is unencrypted and is available free to anyone with a C-band satellite receiver. Fire agencies and related groups are encouraged to tape the program for later playback.

FOR ADDITIONAL INFORMATION

- Contact Jim Smalley, Manager, Satellite Communications, at the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

Florida State Forester John Bethea stated it clearly in Denver, when he said, "We can't eliminate the problem because of what society is doing and because of circumstances that can come together—the circumstances of geography, of the layout of the urban/suburban community, of the weather and the fuel—and because of the fact that all of these things sooner or later will come together to cause a catastrophic fire situation. But we can significantly reduce the likelihood, and when it does happen, we can reduce the severity."

As efforts to help solve this serious problem go forward, the leadership of the NFPA, the USFA and the U.S. Forest Service will continue to work with those who were assembled in Quincy, Mass., and Denver, Colo., and with the many others who need to be involved in developing long-range solutions to this national crisis.

NFPA Vice President of Operations Anthony R. O'Neill summed it up very well at the Denver meeting, when he stated, "The NFPA, the United States Fire Administration and the U.S. Forest Service share in the business of preserving and protecting what we have. We acknowledge that there is a problem. Together we can develop strategies to help solve the problem, and together we will find ways to implement those strategies."

FOR MORE INFORMATION

- Contact the author at the NFPA, Batterymarch Park, Quincy, MA 02269.

National Wildland/Urban Fire Protection Initiative

NATIONAL FIRE PROTECTION ASSOCIATION MAR 1

U.S. FIRE ADMINISTRATION

3110

Mr. Gerald Partain
Director
California Department of Forestry
Resources Building
1416 Ninth Street
Sacramento, California 95814

Dear Mr. Partain:

The 1985 wildfire season in the United States was one of the worst in recent memory. The loss of lives, property, and natural resources made it particularly severe. At the end of 1985, more than 1,400 structures and dwellings had been fire-damaged or destroyed, 44 fire-related deaths had occurred, and almost 3 million acres of Federal, State, and private land had been burned. This problem is caused both by wildland fires threatening developed areas as well as the threat that development poses to the wildland environment. The cost in terms of fire fighting and damage is still being totaled. However, the final figure will in all likelihood exceed $500 million of private and taxpayer's funds. (See the enclosed paper "Woodland Home Fire Problem.")

The National Fire Protection Association, The United States Fire Administration, and the USDA Forest Service have joined forces to reduce the loss of life, property, and natural resources from fires occurring in the wildland/urban interface, but we need your help and guidance. We are forming a Task Force to help develop strategies and initiatives to meet this growing fire protection problem, and we are asking you to join 30 other national leaders as a member of the Task Force. Membership will include representatives from fire services, building and construction industry, financial institutions, insurance industry, forest products industry, land development firms, state, county, and city governments, conservation groups, and academic community.

The first meeting will be held April 30 and May 1, 1986, at the headquarters of the National Fire Protection Association in Quincy, Massachusetts. The objectives and outputs which we hope to achieve are described in the enclosed prospectus.

Sponsoring organizations are planning a dynamic working session beginning with an informal reception the evening of April 29. The cost of your air fare and hotel accommodations will have to be borne by your organization. More information on meeting arrangements will be sent to you in the near future. To confirm your participation on the Task Force, please return the acknowledgment form to Gary Tokle no later than March 25.

For further details, please contact either John Marker, Fire Prevention Officer, USDA Forest Service (703) 235-8023, or Gary Tokle, Senior Fire Service Specialist, National Fire Protection Association (617) 770-3000 extension 484. Your involvement is important to the success of this fire protection initiative. We look forward to your assistance.

Sincerely,

ROBERT W. GRANT
President
National Fire
Protection Association

R. MAX PETERSON
Chief
USDA Forest Service

CLYDE A. BRAGDON, Jr.
Administrator
U.S. Fire Administration

Enclosures

NATIONAL WILDLAND/URBAN FIRE PROTECTION INITIATIVE

GOAL

Reduce the losses of life, property, and natural and economic resources from fires occurring in the wildlands/urban interface.

STRATEGIES

Assemble principal organizations and individuals concerned with the wildland/urban fire problem to exchange views and to recommend actions addressing the problem.

OBJECTIVES

1. Assess the current status of the wildland/urban fire problem.
2. Identify factors contributing to the problem.
3. Identify ways to mitigate contributing factors.
4. Produce a report recommending a course of action that will lead to a national focus in developing and implementing solutions to the wildland/urban fire problem.

OUTPUTS

TASK FORCE MEETING (April 30 - May 1, 1986)

Report containing the following:

1. Information and information sources for development of a national wildland/urban fire protection problem statement.
2. Guidance for planning a National Wildland/Urban Fire Protection Conference that will assist in the selection of conference topics and priorities for conference attention.
3. Identification of individuals and organizations willing to commit resources to assist in the development of problem solutions.
4. Identification of individual and organizations with a potential role in the development of problem solutions.

NATIONAL WILDLAND/URBAN FIRE PROTECTION CONFERENCE (September 15 - 18, 1986)

Product: A report for public use that defines the fire problem and recommends a course of action for problem resolution by government, private interests, and the public.

THE WOODLAND HOME FIRE PROBLEM

In 1871, a fire in Peshtigo, Wisconsin, killed more than 1,500 people and burned 1.2 million acres. In 1894, the Hinkley fire in Minnesota killed 418 people and burned an undetermined number of acres. The Peshtigo fire occurred at the same time as the infamous Chicago fire. While everyone has heard of Mrs. O'Leary's cow, few have heard of the Peshtigo fire in which four times as many people died.

Ancient History? Not so!

Our 1985 Wildland Fire Season has been the most severe this century. As of the first of October, over 83,000 wildfires have burned almost 3 million acres, destroyed or damaged in excess of 1,400 structures and dwellings, caused the deaths of 44 civilians and fire fighters, and cost the Federal, state, local fire agencies, and private industry over 400 million dollars in fire fighting costs. Damage estimates to natural resources and property are not available, but estimates run into the hundreds of millions of dollars.

The Southern States east of the Appalachian Mountains from Florida to Virginia, parts of New England, Idaho, Nevada, and central California were especially hard hit by wildfires. National mobilization was needed in the Western States and in the South to cope with wildfires. During the first week of July, a total fire mobilization of over 20,000 Federal and state fire fighters was committed to fires in 13 Western States including massive fires in California, Idaho, Oregon, and Nevada.

The loss of property was the worst since 1871 when the Peshtigo Fire destroyed entire communities. Major losses of buildings occurred in Florida, North Carolina, and California, but reports of structure losses have also come from Washington, South Carolina, Oregon, and New England. The number of structures saved by wildland fire fighters is not known, but it became routine for wildfire reports to list "structures threatened" in daily status reports. Because protection of property and lives took priority, natural resource losses increased when fire forces were diverted to protect structures.

This year's loss in lives and property is part of a developing trend. A major population shift from urban to suburban living, begun after World War II, has greatly expanded what is now called the urban/wildland or woodland home environment—the zone where people are in contact with the wildlands for reasons not related to timber or other traditional forest uses. While this trend has increased the general population's appreciation for the amenity values of forests, it has also greatly increased the number of primary residences, second homes, and retirement homes located in forests and brushlands. Vast areas of the U.S. contain high-value properties intermingled with flammable, native vegetation.

Structural fire losses are increasing dramatically as more people build and live in proximity to flammable plant communities, and major losses of life are possible—in fact, inevitable. The problem is not, as is often believed, one unique to southern California. The extension of residential and commercial development into high fire-risk areas has been noted throughout the Nation and the world—from the Georgia Piedmont and the sand plains of central Michigan to the Rocky Mountain foothills near Denver and northern New England.

While current fire management practices make it unlikely that fires will ever again reach the huge proportions of those in 19th-century America, the risks to life, property, natural resources, and economic welfare are much higher today then ever before. Huge fires are not required for catastrophic losses in the modern wildland/urban interface. Even small fires can be killers—three homeowners died when an 8-acre fire swept their Baldwin Hills, California, subdivision. Fire management must change in order to better prevent and suppress smaller, fast-moving single and multiple fires as the wildland/urban interface continues to expand through the remainder of the 20th century. This change must occur nationally.

The task of protecting lives and property from wildfires in the wildland/urban interface poses one of the most critical and elusive problems faced by wildfire protection agencies.

Wildfire Protection Agencies see many parts to the problem:

o Fire managers are unable to reliably predict erratic fire behavior in the mixture of structures, ornamental vegetation, and wildland fuels characterizing the interface. Physical fuel properties and moisture relations in these areas are not well understood, as they are governed by both natural and man-made phenomena. Possible relationships among building and landscaping location, design, and construction, with respect to terrain and other structures, add to the complexity of fire behavior. For example, spotting (fires starting from flying embers) is especially difficult to forecast due to the diversity of firebrand materials and unusually complex windflow patterns. Yet, spotting is the chief cause of structural fire ignitions in wildland/urban areas.

o Use of prescribed fire for hazard reduction (fires purposely set to remove undesirable vegetation) is made difficult by legal, political, and environmental concerns. Liability for damages to intermingled private holdings is a significant deterrent. In many cases, the very reason for living in the interface precludes the use of fire. Nonetheless, means must be found to manage fire hazards in the interface. The challenge is to do so while maintaining or enhancing desired environmental and economic values.

o Many property owners are unaware of the wildfire threat, while fire safety ordinances and building codes are frequently inadequate, unenforced, or disregarded. A quintessential example is the insistence on flammable roof materials in the chaparral area of southern California, but similar attitudes are exhibited throughout the world. The design of subdivisions, also, continues to defy principles of fire safety. Many areas include narrow, winding, or dead-end roads with inadequate water systems, while lots are frequently too narrow to permit effective vegetation removal. Without strong motivation to change, homeowners and developers will continue to produce and maintain these dangerous living environments.

o Most forest fire suppression personnel are inadequately prepared for fighting structural fires, while municipal fire departments are not always fully trained or equipped for wildland fire suppression. Although relatively new organizational systems for integrating a variety of fire protection resources and personnel have proven effective, the special demands of fires in the wildland/urban interface often force firefighting personnel to perform unfamiliar tasks. The need to meld structural and vegetation fire expertise on interface fires remains a formidable challenge.

National Wildland/Urban Fire Protection Initiative

NATIONAL FIRE PROTECTION ASSOCIATION

U.S. FIRE ADMINISTRATION

August 1, 1986

Dr. Klaus Radtke
2210 Wilshire Boulevard, Suite 184
Santa Monica, CA 90403

Dear Dr. Radtke:

We are excited to learn of your participation in the Denver Conference of the National Wildland/Urban Fire Protection Initiative. This Initiative was developed in early Spring 1986 by the U. S. Fire Administration, the U. S. Forest Service and the National Fire Protection Association to meet the growing fire protection problem encountered in the wildland/urban interface. A task force meeting was sponsored at NFPA Headquarters in early May to develop strategies and initiatives and the Fall working Conference was planned to help develop a document which will focus national attention on this fire problem. The overwhelming response to the Conference indicates the importance of confronting this growing problem and the involvement of you and others from across the country representing a broad spectrum of interests. Your knowledge and expertise are important in addressing the tough issues that must be dealt with in order to provide realistic solutions to this problem.

The 1985 wildfire season in the United States was one of the worst in recent memory. The loss of lives, property, and natural resources made it particularly severe. At the end of 1985, more than 1400 structures and dwellings had been fire damaged or destroyed, 44 fire-related deaths had occurred, and almost three million acres of Federal, State, and private land had burned. In 1986 wildland fire continues to threaten developed areas. And such development poses a threat to the wildland environment.

The cost in terms of firefighting and damage in 1985 is still being totaled. However, the final figure will, in all likelihood, exceed $500 million of private and taxpayers' funds. As this year's fire season begins the events in North Carolina and other parts of the Southeast may indicate another disastrous series of wildfires. In early Spring 13,500 people were evacuated because of wildfire in Michigan, New Jersey and North Carolina. For further information, see the attached paper entitled "Wildland-Urban Fire Problem."

The Conference will be held at the Stapleton Plaza Hotel and Athletic Center, 3333 Quebec Street, Denver, CO 80207-9988 (800/525-1315 outside Colorado, or 303/321-3500). Because expenses will have to be borne by your organization, special accomodation rates have been arranged for Conference participants at $49 single and $54 double. To take advantage of these

prices, return the enclosed reservation card directly to the hotel no later than September 1, 1986. The hotel is located just two minutes from Stapleton International Airport and a complimentary limousine departs for the hotel every 15 minutes from Gates 2 and 12.

In addition, special discounted air fares, not available to the general public, are being offered by United Airlines and NFPA. This discount is only available when you or your travel agent book reservations through United's Toll-Free Number 800-521-4041 and refer to Account # 6142A. United's Convention Desk is open 7 days a week from 8 a.m. to 8 p.m. United will offer an additional 5% off the lowest available discounted fare for which participants are eligible. This includes the Ultra-Saver Fare and can mean discounts ranging anywhere from 30 to 75% off Regular Coach Fare. (For attendees not eligible for any discounted fares, United will offer a 30% discount off the Y coach fare.)

The sponsoring organizations and the task force members are hard at work planning an intensive and productive 3 1/2 day Conference. To provide a productive, working setting, attendance is limited to approximately 150 key leaders. Participants will be divided into task groups to address key issues and to produce a written report for their respective task group. The document will then be published and distributed nationally to provide recognized guidelines for the different disciplines involved. Your participation is important to this project. The task force needs your input into this document to assure its applicability. The objectives and results we hope to achieve are described in the attached Conference Goals.

The Conference will begin at 1:00 p.m. on Monday, September 15, 1986. Registration will be open starting at 10:30 a.m. The first afternoon's workshop will be followed by a reception Monday evening from 5:30 to 7:00 p.m. hosted by NFPA at the hotel. The "Reception with a Purpose" will provide informal participation and an opportunity for participants to get to know one another.

Tuesday morning's agenda calls for a trip to the front range for a first hand look at the problem. We will be working outside, so please plan for comfortable, appropriate clothing as Denver can be chilly this time of year. The Conference will conclude at approximately 12:30 p.m. on Thursday, September 18th, 1986. Therefore, return flights should be scheduled for no earlier than 2:00 p.m.

More information will be sent to you in early September. In the meantime should you have questions, please feel free to contact me at NFPA, (617) 770-3000 x484. However, to confirm your participation as soon as possible, please return the enclosed acknowledgement form to Gary Tokle no later than August 15, 1986. We look forward to seeing you in Denver.

Sincerely,

Gary O. Tokle

Gary O. Tokle
Senior Fire Service Specialist

Enclosures

AGENDA
DENVER CONFERENCE

September 15 - 18, 1986
Stapleton Plaza Hotel and Athletic Center

Monday, September 15

10:30 a.m. Registration Opens - Lower Lobby

1:00 p.m. Conference Opening, John Marker, U. S. Forest Service
Collegiate Ballroom

Welcomes by:
James Hubbard, Colorado State Forester
Gary Cargill, U. S. Forest Service, Rocky Mountain Region

Video Overview of the 1985 Fire Season
"Wildland Fires Strike Home, a National Crisis"
Introduced by: John Bethea, State Forester,
Florida Division of Forestry

Jerry Attridge and Joel Storn, Homeowners

Perspectives of the Sponsoring Organizations

The United States Fire Administration 1974
Clyde A. Bragdon, Jr., Administrator

The United States Forest Service 1905
Allan J. West, Deputy Chief

The National Fire Protection Association 1896
Anthony R. O'Neill, Vice President 35,000 members

Break

Work Session A - Getting Started
Collegiate Ballroom
Jack Hawley, Meeting Manager

May Task Force Meeting, Video Overview
"Wildland Fires Strike Home, the Problem"

5:30 p.m. Break

6:00-7:30 p.m. Work Session B - Reception with a Purpose
Lower Lobby (Wear Expanded Name Tag)

Sponsored by:
The National Fire Protection Association

Tuesday, September 16

7:15 a.m. No-Host Continental Breakfast Available
Lower Lobby
* * * * * * * * * * *

8:00 a.m. Work Session C - Collegiate Ballroom

Field trip to Interface Area near Evergreen, Co
Box lunch provided

1:00 p.m. Arrive back at hotel

1:30 p.m. Work Session D - Reports and Discussion
Collegiate Ballroom

3:30 p.m. Break

Wednesday, September 17

7:30 a.m. No-Host Continental Breakfast Available
Lower Lobby
* * * * * * * * * * *

8:30 a.m. Work Session E - Theme Groups
Collegiate Ballroom

Process Checkpoint

Lunch - Participants on their own

Work Session E continues - Assigned Locations

Process Checkpoint

4:00 p.m. Report Deadline and Break

Thursday, September 18

7:30 a.m. No-Host Continental Breakfast Available
Lower Lobby
* * * * * * * * * * *

8:30 a.m. Work Session F - Oral Report-outs, Review of Product
Collegiate Ballroom

Break

Conference Wrap-Up and Thank You

12:30 p.m. Conference Adjourns

WILDFIRE STRIKES HOME
DENVER CONFERENCE

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Curtis, Cox, Kennerly
Richard Lee
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Chief Donald Perry
Santa Barbara County Fire Dept.
Phil Range
USDI Bureau of Land Management
Lieutenant Eugene Schwartzman
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Henry Webster
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Terry Randolph
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Brooke Smith
Aspen Engineering, Inc.
Billy Weckworth
Wyoming State Fire Marshal

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Chief Charles Boyes
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Hugh Graham
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Keep Oregon Green
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Lawrence Lindner
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Joseph Nasser
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Dennis Dube
Canadian Forestry Service
Dan Zuber
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Chuck Garton
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Inter Canyon Volunteer Fire Dept
Michael Sullivan
City of Boulder
Pete Roussopoulos
US Forest Service

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Florida State Forester
Jack Cohen
Riverside Fire Laboratory
Dean Cromwell
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Klaus Radtke
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Chuck Lewis
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Robert Martin
University of California at Berkley
William Teie
California Dept of Forestry

THEME GROUP ANSWER SHEET

THEME: PLANNING & DEVELOPMENT GUIDELINES

AN END TO CRISIS MANAGEMENT
BEGIN PLANNED FUTURES

THE PROCESS OF PLANNING IS NOT ~~ADAQUATE~~ PROVIDING ADAQUATE PROTECTION OF LIVES AND PROPERTY FROM WILDLAND FIRES. LAND USE PLANS, ZONING, PLATTING, AND OTHER PERMIT SYSTEMS OFTEN IGNORE THE ISSUE OF WILDLAND FIRES OR ONLY DEAL WITH ~~THEM~~ IT AT A SURFICIAL LEVEL.

LAND USE PLANS, PLATTING, ZONING & BUILDING PERMITS MUST INCORPORATE APPROPRIATE AND REASONABLE STANDARDS FOR WILDLAND FIRE PROTECTION. THESE STANDARDS MUST: 1) ABATE WILDFIRE HAZARDS, 2) PROVIDE ROOM FOR CREATIVE DESIGN SOLUTIONS, 3) NOT CAUSE UNDO HARDSHIPS TO DEVELOPERS AND LAND OWNERS, 4) BE ENFORCEABLE BY LOCAL GOVERNING (RESPONSIBLE) ~~BODIES~~ ORGANIZATIONS, ~~AND~~ 5) WORK WITHIN THE LOCAL POLITICAL CONTEXT WHILE MAINTAING THE OBJECTIVE OF SAFETY FROM AND PREVENTION OF WILDLAND FIRES, AND 6) ~~BE~~ PROVIDE FOR THE MAINTENANCE OF HAZARD ABATEMENT IN THE LONG TERM.

THEME GROUP ANSWER SHEET

THEME: Planning and Development ~~Assistance~~ Guidelines

Problems:

1. Public apathy
2. Local officials ignore or give variances to problem.
3. Incorporate of fire hazard problem in Master Plans and other ordinances.
4. Too many codes & ordinances possess inconsistencies.
5. Home owners must accept responsibility
6. Home owners mistrust/ distrust of public elected officials.
7. Legislative authority may not allow any action.
8. Lack of professions "ability" to get information to the public (Risk awareness)
9. Fire Services have adopted and stretched their limits beyond their real capabilities.
10. Rights VS. priviledges in democratic in a capitalistic society
11. Weakness of Plans to implement effective changes.
12. Poor enforcement of existing standard.
13. Conflicts between interest groups that "Dilute" good solutions.
14. Conflicts between land use objective.
15. Its not going to go away.

Hurdles, Barriers.

1. Recognition of need for planning by local government.
2. Communication with other agencies & internal (own agencies)
3. Turf - Politics
4. Attitude about government, more or less
5. Diversity of local needs and/or requirements create confusion
6. Effective sub-division regulations are required (permitting)

THEME GROUP ANSWER SHEET

THEME: Planning and Development ~~Policies~~ Guidelines

Cont of Hurdles Barries:

7. Enforcement and consistency of application of regulations.
8. Political people make decissions instead of professionals.
9. Poorly funded programs, protection, and maintenance. (years later)
10. Increasing public awareness.

THEME GROUP ANSWER SHEET
(IDEA TRAPPING)

PLANNING - I.
theme

THIS GROUP'S WILD, FREE, FAR OUT LIST OF IDEAS SUGGESTIONS, AND RECOMMENDATIONS:

- NO EXCLUSION OF PEOPLE
- EDUCATION
- GATHER INFO.
- INFO DISSEMINATION
- INTERAGENCY CO-OP FOR POLICY DEVEL
- CITIZEN'S ADVISORY GROUP.
- ZONING & PLANNING ENFORCEMENT.
- BUY/RENT L.U.P. OPTIONS.
- ELIMINATE BAILOUTS & SUBSIDIES. (INSURANCE)
- FIRE SERVICES KNOW. LIMITATIONS
- STATE-LEVEL POLITICAL PRESSURES.
- REFINE EXISTING CODES
- GRASS-ROOTS INFLUENCE OFFICIALS.
- INCIDENT PUBLICITY FOR BENEFITS, PROBLEMS, SOLUTIONS
- CREATE A CRISIS
- BALANCE NEED VS. DESIRE
- NO GROWTH POLICY
- VEGETATION MODIFICATIONS.
- TECHNOLOGY TRANSFER
- MAP HAZARD AREAS
- ENDOWMENTS FOR SAFETY/PLANNING
- LOCAL # FOR NATIONAL EFFORTS
- IMPLEMENT STDS INTO REGS.
- PROACTIVE VS. REACTIVE PLANNING.
- BETTER USE OF PLANNED UNIT DEVEL.
- ACCESS TO ASSISTANCE INFO.
- ELIMINATE TAX BENEFIT FOR 2nd HOMES
- STREAMLINE PLANNING APPROVALS
- ONE-STOP PLANNING PROCESS FOR PROPOSALS.
- TAXES ON INSURANCE PAYMENTS FOR LOSSES IN FIRE PRONE AREAS
- CROSS TRAIN OTHER DISCIPLINES ABOUT PROBLEM.
- LIABILITY IMPLICATIONS.
- RETAIN CREATIVITIES

THEME GROUP ANSWER SHEET

THEME: _____

(4.) Keys - Outcomes - Goals:

A. Public concern about 'wildland' fire risk (& urban/wildland interface).

B. Statewide minimal standards for Zoning codes, building codes, fire hazard reduction ordinances etc with mandated regional and local enforcement. Stricter ordinances can be adopted by regional and local jurisdictions.

C. CC+R requirements for all new developments that include public safety and fire safety regulations for the long term maintenance of the development to be paid through homeowner assessments written into the CC+R's.

D. Education + training of professionals as well as the public in local communities

E. Updating of plans, codes, regulations to incorporate present technology + future needs.

F. Delineation of hazardous areas after providing effective definition of hazard.

Florida Findings,

continued from page 6

relationship between fire destruction and brush clearance around the structure. "The fire advanced from the west," Kuypers explained, "and 40 percent of the homes with brush within 10 feet or closer to the house on the west side burned while only 22 percent of the homes with brush clearance of more than 30 feet on the west side burned.

"We're planning to emphasize fuel clearance as a fire prevention measure in all of our future fire education programs," Kuypers said. "This is something that most homeowners can do to help protect their homes from wildfires and it is especially significant in view of the trend toward building homes in wooded areas with fuel right up against the house."

Another significant factor in fire probability was the exterior of the house. The fact that houses with stucco, brick or block exteriors didn't burn as readily as homes with wood exteriors came as no suprise. The results of the fire survey simply served to reinforce this knowledge. Kuypers said the study was undertaken because Florida had not had such a destructive fire before in terms of structures damaged or destroyed.

"Based on experience, we had a pretty good idea of what the most significant factors would be in a fire like this that occurred in a residential area built among trees," he said. "This was, however, an opportunity to statistically determine the most important elements associated with damage or destruction of structures and what, if anything, helped save other structures from damage or destruction."

Kuypers said numerous other factors, including whether the windows were open or closed, debris on the roof, ridge vents in the roof and fire suppression efforts by the homeowners were also studied and found to be insignificant.

"The analysis indicated, for example, that homeowners who watered the roof of their house before evacuating did little to prevent damage or destruction," Kuypers said. "However, the data were really inconclusive because no differentiation was made between homeowners who turned their sprinklers off before leaving and those who left them on throughout the fire.

"A study done in Australia showed that homeowners who actively defended their residences fared much better than those who simply evacuated," he said. "There are, of course, many variables to be considered, including jeopardizing the safety of the homeowner, but we can't draw any conclusions except that a perfunctory wetting down of the structure was not significant in detering the fire."

Copies of the Palm Coast Fire Study are available from the Florida Division of Forestry, Forest Education Bureau, 3125 Conner Blvd., Tallahassee, FL 32399-1650.

Kuypers said numerous other factors, including whether the windows were open or closed, debris on the roof, ridge vents in the roof and fire suppression efforts by the homeowners were also studied and found to be insignificant.

Australia

—continued from page 6

appears that people are reluctant to build better houses. Interviews carried out by the Division of Building and Research staff with victims of Ash Wednesday fires have brought the following responses:

- *Nothing can save a house in a major bushfire.*
- *It's too expensive.*
- *It's too difficult.*
- *There's nothing about bushfires in the building regulations.*

"Except for the last remark, none of these positions can generally be substantiated. In addition, it appears that many people want to rebuild a similar house as soon as possible in order to forget the traumas of Ash Wednesday, and this in some cases was encouraged by local government authorities who granted building permits on existing plans," Dr. Ramsay said.

He also believes that a combination of education and modification of the building regulations is the most effective way to improve the housing stock in bushfire prone areas.

"At present, education material is being written and distributed by many authorities in a piecemeal fashion. The South Australian Government is drafting new building regulations for houses in bushfire prone areas whereas the Victorian Government is not.

"If houses are to be preserved and lives saved, the various authorities need to coordinate a concerted and sustained campaign of education and regulation," Dr. Ramsay concluded.

A more complete story on the bushfire problem in South Australia from *The Volunteer*, the official Journal for the County Fire Services South Australia.

For a copy, contact Gary Tokle at NFPA.

National Wildland/Urban Fire Protection Initiative

NATIONAL FIRE PROTECTION ASSOCIATION

U.S. FIRE ADMINISTRATION

DENVER CONFERENCE
September 15 - 18, 1986

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Vol. I, No. I

WILDFIRE STRIKES HOME! NEWSLETTER

• National Fire Protection Association •

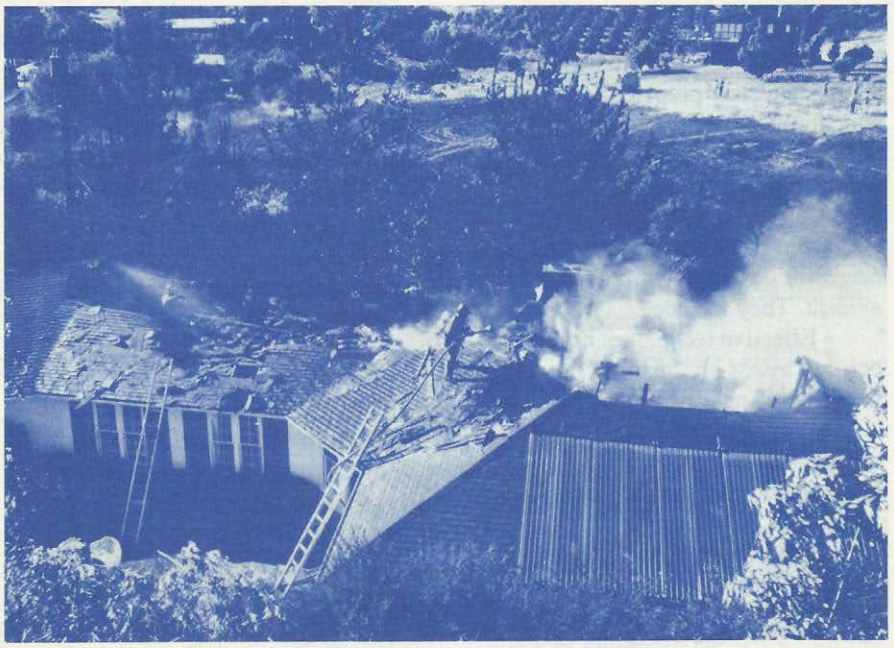
FIRE MANAGEMENT in the WILDLAND/URBAN INTERFACE

A major demographic trend from urban to suburban living, begun after World War II, has greatly expanded what is now called the wildland/urban interface–the zone where people are in contact with the wildlands for reasons not related to timber or other traditional forest uses.

This trend has increased the general population's appreciation for the many values of forests. It also has greatly increased the number of primary residences, second homes, and retirement homes located in forests and brushlands. Vast areas of high-value properties intermingled with flammable, native vegetation now exist nationwide.

Structural fire losses are increasing dramatically as more people build and live in proximity to flammable plant communities, and major losses of life are possible. The problem is not, as is often believed, one unique to southern California. The extension of residential and commercial development into high fire-risk areas has been noted throughout the nation and the world–from the Georgia Piedmont and the sand plains of central Michigan to the Adelaide Hills of South Australia.

While current fire management practices make it unlikely that fires will ever again reach the huge



proportions of those in 19th Century America, the risks to life, property, and economic welfare are much higher today. Huge fires are not required for catastrophic losses in the modern wildland/urban interface. Fire management will change in order to better prevent and suppress smaller, fast-moving single and multiple fires as the wildland/urban interface continues to expand through the remainder of the 20th century. This change will occur nationally and internationally.

The task of protecting lives and property from wildfires in the wildland/urban interface poses one of the most critical and elusive problems faced by fire managers today.

The Challenges:

- Fire managers are unable to reliably predict spotting and crowning fire behavior in the mixture of structures, ornamental vegetation, and wildland fuels characterizing the interface.
- Use of prescribed fire for hazard reduction is made difficult by legal, political, and environmental concerns.
- Many property owners are unaware of the wildfire threat, while fire-safety ordinances and building codes are frequently inadequate, unenforced, or disregarded.
- Forest fire suppression personnel are inadequately prepared for fighting structural fires, while municipal fire departments are not fully trained in wildland fire suppression.

The Development Needs:

From these challenges, several needs for development products are evident. They include:

- Effective techniques and strategies to assess and manage fire hazards in the wildland/urban interface.
- Improved fire behavior prediction models that address crowning and spotting behavior on residential/wildland fires.
- Aids for planning, budgeting, and training for increased involvement in the residential/wildland interface to ensure a balanced capability in conducting structural and wildland fire suppression activities.
- Effective ways to educate property owners, land developers, insurance carriers, and local planners about vegetation fire problems and solutions.

The Research Needs:

To accomplish the development tasks outlined above, the following research products must first be provided:

- Fundamental knowledge about the physics of fire spotting and crowning in the wildland/urban interface.
- Knowledge about relationships of building design, materials, and landscaping with fire hazard and behavior.
- Improved understanding of why people build fire-prone homes in highly flammable areas and how they respond to various motivational tactics to reduce vulnerability.

EDITORIAL

The idea for a newsletter that would address wildland fire issues, specifically the problem of wildland/urban interface, came from the two national meetings held in May and September of last year.

In addressing the seriousness of the wildland/urban fire problem throughout the U.S. and Canada, many of the 130 participants of these two meetings felt there was a significant gap in the sharing of information from one region to another. Many people asked if it would be possible to publish a newsletter that would help improve this situation. What you are now reading is the modest beginnings of what hopefully will become a valuable source of information for those interested in protecting lives and property from the ravages of wildfire.

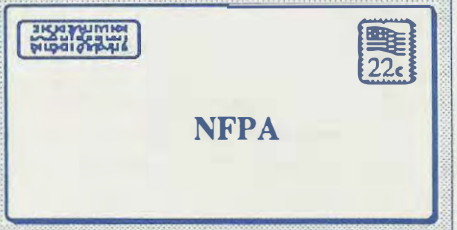
I would like to thank those who submitted material for this first issue, although space limitations have prevented us from using everything right away. However, as many of you know who have been involved in the production of a newsletter, its success depends entirely on the willingness of its readers to submit material of interest.

Therefore, I am soliciting you as readers of this newsletter to help us ensure that we may continue its production by submitting material that you feel should be shared with others. With everyone's cooperation I am sure we can provide information of value in solving the wildland fire problem.

Gary Tokle
Fire Service Specialist, NFPA

WANT MORE?

If you are interested in receiving more information about the wildland/urban interface fire problem, and would like to receive future editions of this newsletter, send your name and address to **Gary Tokle, National Fire Protection Association, Batterymarch Park, Quincy, MA 02269**



Write For It!

Available Publications, Copies, and Reprints:

Middle-Atlantic Interstate Forest Fire Protection Compact

A brochure which evolved from the 1984 compact training meeting entitled, "Wildfire is the Enemy of your Forest Home. Reduce the Risk." The theme was well prepared and has received very favorable acceptance in the Northeastern United States.

For more information contact: SIG PALM, Prevention & Training Specialist, Fire Protection, USDA, Forest Service, Northeastern Area State and Private Forestry, 360 Read Road, Broomall, PA 19008.

Insurance Committee for Arson Control's Arson Report

Develop a standard definition of arson for reporting purposes; develop a uniform process for gathering data; and eliminate jurisdictional issues to foster greater cooperation among agencies involved in the criminal investigation and prosecution of arsonists.

Those recommendations were among many put forth in a recently released report, *Arson: Ten Years Later*, that summarized findings of a group of the nation's leading authorities, policymakers, and strategists on the war on arson, who met in May 1986 at a forum sponsored by the Insurance Committee for Arson Control (ICAC).

Representatives from the fire services, law enforcement agencies, criminal justice system, the insurance industry, and the state and federal

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THE WILDLAND/URBAN INTERFACE:

DESIGN FOR DISASTER

The increasing shift from urban to suburban living has greatly expanded what we now call the wildland/urban interface, or the woodland home environment. The first national conference on this emerging fire problem was held last September in Denver, Colorado. Representatives of the U.S. Forest Service, the U.S. Fire Administration (USFA) and the National Fire Protection Association (NFPA) met early in 1986 to discuss the potential fire problem.

The interface is the area where people are in contact with wildland areas. Vast territories of the U.S. today contain residential, commercial, and industrial properties intermingled with highly flammable native vegetation.

It is a design for disaster!

As the Forest Service, the NFPA and the USFA discussed the seriousness of the problem, it became apparent that it is tremendously complex, and that it will be necessary to involve many disciplines to address the issues effectively.

A task force of 25 key individuals met at NFPA headquarters in Quincy, Mass., in April 1986. This task force was made up of representatives from the fire service, insurance industry, architects, local government, wood products industry, research organizations, land management agencies, and academic and

> **"This is a national problem that requires local solutions. I don't think this is a question of whether or not we are going to have a problem. We know we have one, we know that something is going to happen..."**
>
> Colorado State Forester Jim Hubbard

other key organizations that appeared to have an interest and an ability to address the issues. Out of this meeting came a consensus of opinion that the wildland/urban fire problem poses serious risks to life, property and natural resources.

The task force recognized that this is not a new problem. In 1871, a wildland fire killed 1500 people and burned 1.2 million acres in Wisconsin. In 1923, 640 buildings were destroyed in Berkeley, Calif. In 1947 16 lives were lost and more than 200 structures were destroyed in southern Maine.

Most representatives were familiar with the frequent losses that have occurred in the past 30 years in Southern California. It was felt, however, that it will be necessary to mobilize expertise throughout the U.S. and Canada and to develop a national focus in order to help local agencies develop strategies that will mitigate the impact of the wildland/urban fire problem.

The task force encouraged the NFPA, the Forest Service and the USFA to proceed with efforts to develop a national awareness among the general public and the many disciplines that could provide expertise in the creation of a more fire-safe environment for those living within the wildland/urban interface. They identified the need to bring together a larger

—continued on next page

Design for Disaster, continued from page 3

group, one that could go beyond their initial overview of the problem, and they also identified additional individuals who should be present to provide the needed expertise. It was felt that there was a need to address the complex issues in more greater detail and outline specific strategies for dealing with the problem.

The first national conference dealing with the wildland/urban issue was held in September, when 100 experts from throughout the United States and Canada gathered in Denver for an intensive three-day conference. The level of expertise and commitment among the attendees was overwhelming.

Colorado State Forester Jim Hubbard told the participants during his opening remarks, "This is a national problem that requires local solutions. I don't think this is a question of whether or not we are going to have a problem. We know we have one, we know that something is going to happen, even in Colorado where we don't have a high level of fire frequency. But we are going to have one, at least one, and its a matter of how well prepared we are going to be when it comes."

There was a need to develop a mechanism to allow people to exchange information on what has been effective and what hasn't. The participants left Denver with a 100-page preliminary report, which contained their syntheses of the problem and outlined the strategies they felt would focus attention on the problem and begin to develop solutions to it. This is the basis of the official report that currently is being prepared for distribution in late February.

For information on the report contact Gary Tokle at NFPA.

Wildland Fire Management Section

Interest has been expressed for NFPA to establish a Wildland Fire Management Section. The Section would allow members with a special interest in wildland fire management the opportunity to work together within the Association to address pertinent concerns and share their expertise on an international basis. The Section would also allow for the development of educational sessions and a newsletter.

If you are interested in the establishment of a Wildland Fire Management Section, please return the coupon below to Gary Tokle, Fire Service Specialist, NFPA, as soon as possible.

Name: _____

Title: _____

Organization: _____

Address: _____

_____

Phone: _____

Write For It, continued from page 3

governments all participated in the forum. Their job was to review the progress made in the decade past and to lay the groundwork for the decade to come.

"The report that grew out of that meeting will act as the program for another gathering of those different disciplines during which specific projects will be developed to cary out the Fourm's recommendations," said Rick Hammond, ICAC executive director.

For more information on ICAC or a copy of the report, *Arson: Ten Years Later*, write; ICAC, 1501 Woolfield Rd., Suite 400 West, Schaumburg, IL 60173-4980.

Several brochures on wildfire are available from the Nebraska Forest Service, dealing with such topics as cause, prevention and harvesting.

For more information contact: The University of Nebraska-Lincoln, Institute of Agriculture and Natural Resources, Nebraska Forest Service, Fire Control Section, Lincoln, NB 68583-0814.

A catalog titled *Forest Service Films* is available from the Southwestern Region of the United States Department of Agriculture Forest Service: The Forest Service audio/visual programs listed in this catalogue are available as a public service (except as indicated) for free loan use by New Mexico and Arizona residents. Borrowers are responsible for the programs while they are in their possession and must pay the return transportation charges. Programs are not cleared for television except as indicated. Televising of films not cleared is prohibited.

NOTE: Only those programs produced by the Government may be copied. For a copy, please contact the USDA Forest Service, Office of Information, R-3, 517 Gold Ave., SW, Albuquerque, MN 87102, 505-842-3292.

DETOUR

—continued on page 5

Will you be prepared?

WILDLAND FIRES STRIKE HOME

Several states experienced fire disasters in 1985 that were unequaled in their history.

In Florida, more than 600 homes were damaged and destroyed on a single day! Most of these losses, as in similar fires across the country, were in wildland/urban interface areas.

Interface areas are those areas between urban centers and wildlands. During the past few decades, homes and businesses have been built next to and into these wildlands. Fires occur in these areas when structural fires extend into nearby wildlands, or, conversely, when forest fires spread into residential or commercial areas.

The National Fire Protection Association, in cooperation with the U. S. Forest Service and the U. S. Fire Administration, **has produced a television program that dramatically demonstrates the wildland/urban interface fire problem and measures that should be taken to reduce their tragic toll.**

On March 3, 1987, this important program will be broadcast via satellite for you to view and to record for use later at training sessions or other meetings. The program will provide useful information for wildland and structural fire fighters as well as other members of related professions, such as architects, planners, local government representatives, and landscape architects.

Special Satellite Broadcast March 3

Basic Satellite Broadcasting Components

To Receive the Program

The program will be broadcast over a commercial communications satellite. The broadcast is not scrambled and is open to anyone with a C-band satellite antenna. To receive the broadcast, locate a satellite antenna in your area and make arrangements with the owner or operator for reception. You will need the use of the antenna, television, and recording equipment for about two hours on the day of broadcast. When inquiring about reception, provide the technical information in the box to the antenna owner or operator. Make sure that the antenna can be retuned to receive the signal from the satellite. You should also provide your own blank videotape for recording the program for later use in training sessions and other meetings.

To Find Downlinks

Satellite antennas can be found in many places. Some government agencies, private companies, schools, and hospitals maintain such equipment. Even private homes have the kind of equipment necessary to help you get the broadcast. Of course, local cable systems and network television stations will also have the capability to receive the program, but they may charge for the use of their equipment.

Date: U.S. and Canada—March 3

Technical Information

In the U.S.—

Satellite: Westar V
Location : 122.5 degrees West
Transponder: 10X (Channel 20)
Polarity: Vertical
Video frequency: 4100 MHz
Audio frequency: 6.2/6.8 MHz

In Canada—

Satellite: ANIK D1
Location: 104.5 degrees West
Transponder: 7A (Channel 13)
Polarity: Vertical
Video Frequency: 3960 MHz
Audio Frequency: 6.8 MHz
Time: Pacific 11:00 AM
Mountain 12:00 Noon
Central 1:00 PM
Eastern 2:00 PM
Duration: Approx. 90 min.

A 10-minute test signal will precede the program. For reception problems in the U.S. **during broadcast only**, call 303-458-7273; in Canada call 202-783-5030.

For more information write to: James C. Smalley, NFPA, Batterymarch Park, Quincy, MA 02269.

Write For It, continued from page 4

Protecting your home against brushfire

An informative report with specific guidelines for homeowners is reprinted from September 1983 and September 1985 issues of Sunset Magazine, may be obtained by contacting Gary Tokle at NFPA, Batterymarch Park, Quincy, MA 02269.

Home Firesafety Handout produced by Montana Interagency Group:

The Montana Association of Fire Protection Agencies (Missoula County Fire Protection Association) has produced *IS YOUR HOME FIRE SAFE ?*, a public handout. This new multicolor product is designed to make people more aware of fire hazards around the home. For a copy or additional information write to: Missoula County Fire Protection Association, 5115 Highway 93 South, Missoula, MT 59801.

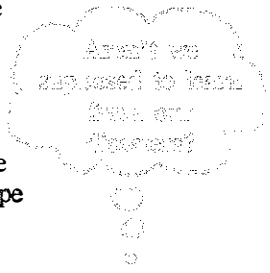
[illegible] from Australia

[illegible] of "Ash Wednesday" (Feb. 16, 1983) destroyed many thousands of homes in Victoria and South Australia. Since then many owners have built new homes to replace those lost, and new residents have built additional houses in fire prone areas of both states. According to Dr. Caird Ramsay, few owners have built with brushfires in mind.

"Generally, they are not incorporating even the simplest of measures which would increase the chances of survival of their houses in future brushfires. Better homes would also help save the lives of occupants wanting shelter during a fire. Indeed, since the experience of Ash Wednesday, rural fire authorities are recommending that fit and able householders stay inside their homes rather than evacuate under hazardous conditions," he said.

The research carried out by Dr. Ramsay's Division in surveying the fate of some 1,200 houses (700 of which were destroyed), has shown houses can be designed and built to withstand brushfires.

Many of these measures can also be used to upgrade existing houses and are within the scope of the home handyman.



Despite the ready availability of advice and information, it

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[illegible] in Florida Wildfire

[illegible] that hit the Palm Coast subdivision in May, 1985, could have been considerably reduced by fire prevention measures, according to a study just completed by the Florida Department of Agriculture and Consumer Services and the University of Florida.

"The study showed that 57 percent of the homes burned where the fire crowned but only 12 percent burned where the fire did not crown," explained Commissioner of Agriculture Doyle Conner.

"The second most significant factor was the effect of fiberglass soffit vents.

"Crown fires occurred most often in those areas where ground fuel was present and fed the fire, allowing it to move from the ground into the branches," he said. "The study indicated that preventing crown fires would probably have reduced the number of homes that were destroyed or damaged."

The study of the Palm Coast fire, which was the worst of some 100,000 acres of fires that burned around the state on the weekend of May 17, was undertaken by Division of Forestry Bunnell District Forester Mike Kuypers. It was in Kuypers' district, consisting of Flagler, St. Johns and Volusia Counties, that some 100 structures were destroyed on Friday, May 17 by the wildfire that started as a 150-acre fire and spread to encompass an estimated 13,000 acres. The exact cause of the fire was never officially determined.

"Crown fires occurred most often in those areas where ground fuel was present and fed the fire, allowing it to move from the ground into the branches. The study indicated that preventing crown fires would probably have reduced the number of homes that were destroyed or damaged."

Kuypers and Division of Forestry personnel spent more than three months surveying homes in the Palm Coast subdivision and interviewing owners of burned, damaged and spared homes to determine what they did or did not do when their homes were threatened by the fire. The conclusions reached through the analysis are based on Kuypers' interviews and survey work.

"The significance of the crown fires did not surprise us." Conner said, "but the finding involving the fiberglass soffit vents was totally unexpected." Kuypers speculated that the fiberglass soffit vents melted quickly from the heat of nearby fires. As heat built up in the houses, the convection of air through the melted vents increased and pulled embers into the attic.

"Apparently metal vents, which did not melt, kept the embers from getting into the attic," Kuypers said. "The same was true of the plastic vents which were considerably thicker than the fiberglass screening and less likely to melt."

Another significant factor found by his analysis was the

[illegible] on next page

relationship between fire destruction and brush clearance around the structure. "The fire advanced from the west," Kuypers explained, "and 40 percent of the homes with brush within 10 feet or closer to the house on the west side burned while only 22 percent of the homes with brush clearance of more than 30 feet on the west side burned.

[illegible] as a fire prevention measure in all of our future fire education programs," Kuypers said. "This is something that most homeowners can do to help protect their homes from wildfires and it is especially significant in view of the trend toward building homes in wooded areas with fuel right up against the house."

Another significant factor in fire probability was the exterior of the house. The fact that houses with stucco, brick or block exteriors didn't burn as readily as homes with wood exteriors came as no suprise. The results of the fire survey simply served to reinforce this knowledge. Kuypers said the study was undertaken because Florida had not had such a destructive fire before in terms of structures damaged or destroyed.

"Based on experience, we had a pretty good idea of what the most significant factors would be in a fire like this that occurred in a residential area built among trees," he said. "This was, however, an opportunity to statistically determine the most important elements associated with damage or destruction of structures and what, if anything, helped save other structures from damage or destruction."

Kuypers said numerous other factors, including whether the windows were open or closed, debris on the roof, ridge vents in the roof and fire suppression efforts by the homeowners were also studied and found to be insignificant.

[illegible] for example, that homeowners who watered the roof of their house before evacuating did little to prevent damage or destruction," Kuypers said. "However, the data were really inconclusive because no differentiation was made between homeowners who turned their sprinklers off before leaving and those who left them on throughout the fire.

"A study done in Australia showed that homeowners who actively defended their residences fared much better than those who simply evacuated," he said. "There are, of course, many variables to be considered, including jeopardizing the safety of the homeowner, but we can't draw any conclusions except that a perfunctory wetting down of the structure was not significant in detering the fire."

Copies of the Palm Coast Fire Study are available from the Florida Division of Forestry, Forest Education Bureau, 3125 Conner Blvd., Tallahassee, FL 32399-1650.

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appears that people are reluctant to build better houses. Interviews carried out by the Division of Building and Research staff with victims of Ash Wednesday fires have brought the following responses:

- *Nothing can save a house in a major bushfire.*
- *It's too expensive.*
- *It's too difficult.*
- *There's nothing about bushfires in the building regulations.*

"Except for the last remark, none of these positions can generally be substantiated. In addition, it appears that many people want to rebuild a similar house as soon as possible in order to forget the traumas of Ash Wednesday, and this in some cases was encouraged by local government authorities who granted building permits on existing plans," Dr. Ramsay said.

He also believes that a combination of education and modification of the building regulations is the most effective way to improve the housing stock in bushfire prone areas.

"At present, education material is being written and distributed by many authorities in a piecemeal fashion. The South Australian Government is drafting new building regulations for houses in bushfire prone areas whereas the Victorian Government is not.

"If houses are to be preserved and lives saved, the various authorities need to coordinate a concerted and sustained campaign of education and regulation," Dr. Ramsay concluded.

A more complete story on the busbfire problem in South Australia from *The Volunteer*, the official Journal for the County Fire Services South Australia.

For a copy, contact Gary Tokle at NFPA.

WILDFIRE STRIKES HOME
NEWSLETTER

COMING EVENTS

Protecting Homes from Wildfire Workshop

Final planning is being completed on a 3-day workshop that is planned for October 6-8, 1987 in Missoula, Montana. The workshop/symposium *Protecting Homes from Wildfire in the Interior West* is being sponsored by the USDA Forest Service Intermountain Forest and Range Experiment Station, Society of American Foresters, National Fire Protection Association, Montana Extension Forestry and the University of Montana.

The workshop will deal with the mounting problem of residential development in wildland areas. Workshop planners are encouraging agencies or departments to present contributed papers on this issue. Poster presentations should transmit the intended message primarily by graphics, oversized text, video or other highly visual means.

For additional information contact Intermountain Fire Sciences Lab, PO Box 8089, Missoula, Montana 59807. 406-329-4805. Pre-registration for the workshop/symposium will begin in April. Workshop planners are encouraging participants to register early. If you are interested in receiving the pre-registration package write to: University of Montana, Center for Continuing Education, Protecting Homes from Wildfire Workshop, Missoula, Montana 59812.

Wildland Fire 2000 Planned for April 27th thru 30th at Lake Tahoe

Wildland Fire 2000 is billed as a 'futuring' meeting to address the possible, preferred, and probable status of wildland fire management and research in the year 2000 and beyond. The program will deal progressively with future response and needs of the community, management and research. The session will take place at the Stanford Sierra Lodge near Lake Tahoe.

For additional information contact Robert Martin, session coordinator, at (415) 642-7931.

CALL FOR PAPERS: The 1987 NFPA Fall Meeting will take place in Portland, Oregon, November 9—11. The call for papers (maximum 30 minutes) deals with the theme "Future Trends in Fire Protection." Three major topics will be the wildland fire problem, hazardous materials, and fire technology. Include bio, photo, affiliation, title, address and membership status with NFPA and SFPE. Send abstract to Ken Backman, NFPA, Batterymarch Park, Quincy, MA 02269. Deadline is April 1.

National Fire Protection Association
Batterymarch Park, Quincy, MA 02269

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National Wildland/Urban Fire Protection Initiative

NATIONAL FIRE PROTECTION ASSOCIATION

U.S. FIRE ADMINISTRATION

January 27, 1987

Dr. Klaus Radtke
President
National Foundation for
Environmental Safety
2210 Wilshire Boulevard, Suite 184
Santa Monica, CA 90403

Dear Klaus:

Enclosed is a copy of the "Wildfire Strikes Home" report developed by you and the other participants at the Denver Conference last fall. I am sure you will agree that Jerry Laughlin and Cynthia Page did an excellent job in taking the preliminary report and compiling it into an impressive and substantive document.

I think you and the other participants should be very proud of your contributions towards increasing public awareness regarding this serious fire problem. Although this is only the beginning, I'm sure you'll agree that by working together we can continue to make progress.

A satellite broadcast is scheduled for March 3 in both the U.S. and Canada to highlight the report and to get the message out to as many people as possible. There will also be a press briefing in Washington, DC on March 12 that will highlight the report to the media.

Additional copies of the report are available from local Forest Service Offices, Bureau of Land Management Offices, and State Forester Offices. Also additional copies may be ordered for $4.00 to cover postage and handling, through the NFPA Customer Service 1-800-344-3555.

Again, on behalf of the sponsoring organizations, I want to thank you and compliment you for your contribution. If John Marker or I may be of any further assistance, please do not hesitate to contact us.

Sincerely,

Gary O. Tokle
Fire Service Specialist

GOT/ljf

STATE OF ARKANSAS
OFFICE OF THE GOVERNOR
State Capitol
Little Rock 72201

Bill Clinton
Governor

July 20, 1987

Dr. Klaus Radtke, President
National Foundation for Environmental Safety
Suite 184, 2210 Wilshire Boulevard
Santa Monica, CA 90403

Dear Dr. Radtke:

I have just had an opportunity to read the Report of the National Wildland/Urban Fire Protection Conference, "The Wildfire Strikes Home."

I want to compliment you upon your participation in this very important undertaking and the subsequent educational effort. The coordination of and communication among all of these agencies, organizations, and individuals are absolutely essential and more nearly accomplished because of your efforts.

Best wishes for much continued success in your efforts to improve the safety and security of our people. If there is ever any way in which I may be of assistance to you in your efforts, please let me know.

Sincerely,

Bill Clinton

BC/kg/dr