PARTNERS IN PROTECTION

Minimizing the Risk of Wildfire

A symposium to address wildfire problems in the wildland/urban interface.

Proceedings

Kelvin Hirsch, compiler

Jasper, Alberta, Canada
September 27 - 30, 1992

MINIMIZING THE RISK OF WILDFIRE: A SYMPOSIUM TO ADDRESS WILDFIRE PROBLEMS IN THE WILDLAND/URBAN INTERFACE

Proceedings of a Symposium held September 27-30, 1992,
in Jasper, Alberta, Canada

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ABSTRACT

Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface was held September 27-30, 1992 in Jasper, Alberta. The thirteen invited presentations, eight poster presentations, and four concurrent workshops provided a variety of perspectives related to fire management issues in the wildland/urban interface. This proceedings contains papers or abstracts for all the invited presentations, poster presentations, the opening and closing remarks, and a summary of each workshop.

RESUME

Réduction du risque des incendies de foret: un symposium sur les problèmes poses par les incendies qui surviennent a la frontière de la ville et des terres inhabitées a été tenu du 27 au 30 septembre 1992 a Jasper, en Alberta. les 13 présentations invitées, les 8 présentations sur affiches et les 4 ateliers simultanés ont donne des perspectives variées sur les problèmes particuliers que présentent les incendies aux limites do la ville. Ce compte rendu comprend le texte ou un résumé de toutes les présentations et affiches, le texte des discours d'ouverture et de clôture ainsi qu'un résumé de chaque atelier.

FOREWORD

Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface was held in Jasper, Alberta, Canada from September 27-30, 1992. Approximately 200 individuals, from a wide variety of organizations and associations, attended the symposium. The majority of delegates were from Alberta, however the symposium also had a national and international atmosphere due to the presence of representatives from all four western provinces, the Yukon and Northwest Territories, New Brunswick, and a number of areas in the United States.

The symposium was conducted by the Partners in Protection, an adhoc committee consisting of individuals from 10 different government departments and associations located within the province of Alberta. The primary purpose of the symposium was to provide delegates with a variety of perspectives related to the problems of fire management in the wildland/urban interface and to initiate the discussion of potential solutions. A secondary or underlying purpose of the event was to motivate delegates to become more actively involved in addressing wildland/urban interface issues on both a local and regional basis.

This proceedings has been produced to provide delegates and other interested individuals with a written account of the many excellent presentations given at the symposium. Background information on the Partners in Protection, listings of the organizing committee members and symposium sponsors, abstracts or papers of the poster presentations, summaries of the four concurrent workshops, and addresses for all symposium participants and exhibitors are also presented.

The production of this proceedings was sponsored in part by the Canada-Alberta Partnership Agreement in Forestry and their support is gratefully acknowledged. Also the assistance of Maren Kreter, Brenda Laishley, Dennis Lee, Max Pinedo, Joyce Simunkovic, and Gail Sullivan in the compilation and production of the proceedings is sincerely appreciated.

Based on the formal questionnaires completed at the symposium and the informal feedback received by the Partners in Protection, the organizing committee believes that the symposium objectives were achieved and even surpassed. This success was due, in part, to the support of the symposium sponsors, superb facilities, exceptional logistical support of numerous individuals, excellent presentations and exhibits, and, of course, the active participation of all the delegates. The Partners in Protection would like thank everyone who was involved with this symposium and is looking forward to future programs and activities that will cooperatively address the issue of fire management in the wildland/urban interface.

Kelvin Hirsch
Proceedings Compiler

CONTENTS

PARTNERS IN PROTECTION: BACKGROUND INFORMATION

In May of 1990 the Alberta Forest Service initiated a meeting to discuss the issue of wildfire in the wildland/urban interface in Alberta. Twenty-two representatives from eight different departments and associations attended this meeting. It was unanimously agreed to proceed with a task force committee to study common concerns and this led to the formation of the Partners in Protection.

The Partners committee recognized that the means are available to reduce the risk of losses due to wildfire, that many players are involved in the wildland/urban interface issue, and that correct courses of action have to be taken long before a fire starts. Based on these general concepts the original mandate adopted by the Partners in Protection was "to increase the level of inter-agency cooperation, and to promote public awareness and education aimed at reducing the risk of loss of life and property from fire". Inter-agency cooperation was deemed a priority and the need for a major symposium to address wildfire problems in the wildland/urban interface was identified. The Partners realized that such a symposium would only be the starting point for the development of new strategies and programs for interagency cooperation on wildland/urban interface issues.

Current members of the Partners in Protection are:

- Alberta Association of Municipal Districts and Counties,
- Alberta Association, Canadian Institute of Planners,
- Alberta Fire Chiefs' Association,
- Alberta Forestry, Land and Wildlife - Alberta Forest Service,
- Alberta Labour - Fire Commissioner's Officer,
- Alberta Municipal Affairs - Planning Services Division,
- Alberta Public Safety Services,
- Canadian Parks Service,
- Improvement Districts Association of Alberta, and
- Forestry Canada.

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The Partners in Protection would like to extend a very sincere thank you to all of the sponsors that helped make this symposium a reality.

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OPENING REMARKS: FIRE IN THE WILDLAND/URBAN INTERFACE, THE DANGER ZONE!![1,2]

Kelly O'Shea[3]

Few people have ever experienced the gut wrenching sight of a large forest fire out of control Imagine a one mile fire front moving faster than a man can run, flames 150 feet in the air, and burning embers igniting new fires half a mile in advance of the main fire. The energy release of a large fire such as this can be compared to the force of one Hiroshima-type bomb every five minutes.

Now picture a community in front of this awesome force of nature. In the community, with the fire only minutes away, panic sets in. Smoke from the approaching fire darkens the sky. Smoke and dust reduce visibility and vehicles are using their headlights on the already clogged two lane access road. Local police on loud-speakers, and going door to door, are telling people to evacuate. A few desperate home owners decide to stay and try to protect their homes. Residents trying to get out are met by concerned residents returning home after hearing that their homes are threatened. Sightseers flock to the area to view the conflagration. News media crews scramble for coverage.

In all this confusion emergency vehicles are trying to respond. Water bombers and helicopters circle overhead. Chaos, trauma, anxiety, fear and panic. The drama unfolds in slow motion and seems to take forever, but it is all over in a matter of hours.

The magnitude of the fire quickly outstrips local fire suppression resources and additional people and equipment are called in. Limited access to the area, homes close to trees, flammable building materials, lack of water, and the sheer size and intensity of the approaching fire prohibit fire agencies from saving the community.

Homes and lives are lost. Damage from the fire and fire suppression costs are in the millions. The fire is over and residents begin the long process of rebuilding their homes and their lives, but the emotional scars from this traumatic experience will take years to heal.

For the fire protection agencies the problems have only just begun. The public outcry began within hours after the fire started: Why did it take so long for crews and equipment to arrive? Why was there confusion, duplication and misinformation? How could a fire like this

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[1]A presentation at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Adapted from a presentation by Dan Bailey given at the 1991 Fire and Resource Management Course in Marana, Arizona.

[3]Chairman, Partners in Protection Committee and Forest Protection Officer, Bow-Crow Forest, Alberta Forest Service, 8660 Bearspaw Dam Road, Calgary, Alberta, T2M 4L8.

occur? Local, provincial, and national political leaders are calling for investigations, and the media has focused national attention on the disaster. Agency managers and department chiefs are struggling to avoid blaming each other.

It is not unusual to see such stories on the national news, or to read about them in the morning paper, but people take comfort in the maxim, "It can't happen here". Unfortunately it can.

Good evening, distinguished guests, ladies and gentlemen. My name is Kelly O'Shea. On behalf of Partners in Protection, it is my pleasure to welcome you to our Symposia, "Minimizing the Risk of Wildfire in the Wildland/urban Interface".

As Chairman of the Partners in Protection Steering Committee, I must admit, there were times when I thought that we would never pull this off. You can't imagine the relief I feel at seeing the tremendous turnout of delegates, corporate sponsors and exhibitors, not to mention the strong support at the national, provincial and municipal levels.

To reaffirm that support, we have some very special guests here this evening. It is my pleasure to introduce them now:

1. The Honourable Peter Trynchy
   Minister Responsible for Occupational Health and Safety, W.C.B.
   and Minister Responsible for APSS
   and Member of the Legislative Assembly for Whitecourt

2. Mr. Brian Evans
   Member of the Legislative Assembly for Banff-Cochrane

3. Mr. Gaby Fortin
   Superintendent, Jasper National Park

4. Mr. Ken Albrecht
   President, Rural Improvement Districts Association of Alberta

5. Mr. Richard Papworth
   Vice President, Alberta Association Municipal Districts and Countries

6. Gary Browning
   President, Alberta Urban Municipality Association

Can we minimize the risk? I believe we can. But first we must acknowledge that there is a problem. Once the problem is identified, we can plan and develop strategies to solve it. This Symposium was developed to help us through this process and to provide some assistance and guidance to where we go in the future. To help us in this endeavour, we have put together a program that I believe you will find very stimulating and informative. Thank you.

SESSION I

REGIONAL/INTERNATIONAL

PERSPECTIVES

WILDLAND/URBAN INTERFACE ALBERTA PERSPECTIVE![1]

Tom Makey[2], Bob Moffatt[2], Mahendra Wijayasinghe[2]

ABSTRACT: A review of wildland and exposure fires during the 10 year period 1981-1990, based on fire statistics kept by the Fire Commissioner's Office, revealed that losses were substantially greater in the second 5 year period. During this period the number of reported incidents for all of Alberta increased by 43.8%, the average dollar loss per fire increased by 30.4% and the average annual loss increased by 87.6%. Strategies must consider both wildland fires and their tremendous destructive potential on adjacent properties. There is a general complacency about this wildland/urban interface fire problem which must be addressed quickly and effectively if the loss experience is to be turned around. All stakeholders must work together in their spheres of influence if the Partners in Protection program is to be successful. It will be necessary to further define the intended audience for the fire safety messages and also to focus on the specific types of losses which are occurring most frequently.
KEYWORDS: wildland/urban interface, exposure fire, fire loss statistics, strategies.

INTRODUCTION

While there seems to be a general complacency in Alberta about wildland/urban interface fires there is good reason to try to change that attitude. Without dealing with forest fires at all we still find large numbers of wildland fires occurring in Alberta, many of which spread to structures, vehicles and other fuels. These fires cause deaths, injuries and property losses. Our fires are not as spectacular or as regular as the fires in California but they have happened, they are still happening and they will continue to happen if appropriate interventions are not developed and implemented. The perspective in Alberta is that wildland/urban interface fires are a problem but with the cooperation and assistance of all stakeholders the severity of the problem can be reduced substantially. We cannot rely on continued good fortune or luck to improve the situation and protect us. The Alberta perspective includes the vision of the stakeholders actively working within their respective areas of influence to prevent the problems from occurring and to quickly, effectively and cooperatively deal with those which do happen.

THE FIRE PROBLEM

The citizens of the Province of Alberta have, to this point, been very fortunate that wildland fires have not generally extended into major urban settings. However, as more people are attracted to less densely populated areas the opportunity for problems increases. These people build their homes and

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[1]A paper presented at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Fire Commissioner, Deputy Fire Commissoner, and Information Officer, respectively, Fire Commissioner's Office, Alberta Labour, 701, 10808 - 99 Avenue, Edmonton, Alberta, T5K 0G2.

other structures in forested areas or other areas where there is substantial natural ground cover. It is expected this trend will continue. As well, there is a growing demand for recreational and tourist facilities in many forested areas. These developments in turn create a demand for housing and service industries which lead to more construction, more people, more vehicles and generally greater levels of human activity. Accidental and deliberately set fires generally increase as human activity increases.

As well, many of our urban communities are built near rivers and there are many natural areas left on the river banks and adjacent ravines or valleys. Natural growth of grass, shrubs and trees tends to build up combustible debris. The use of these areas as parkland for hiking, biking, skiing, etc. is often beneficial as the trails tend to separate and reduce combustibles. On the other hand they create more opportunities for deliberately set fires. These wildland settings which I have described exist even in our largest cities. Combined with land annexations which bring in both wildland and agricultural land the opportunity for both increased incidents and increased losses exists.

Aggravating the wildland/urban interface situation are the changes in precipitation patterns. Parts of northeastern Alberta have been particularly dry for several years making severe fire spread a concern. Other areas have experienced similar patterns for shorter or longer periods of time. This year it has been interesting to note the lush green grass, clover and assorted weeds growing in areas that are traditionally dry and brown. It seems reasonable to expect the combustible fuel load from this ground cover will be unusually heavy during any subsequent dry spell. Time will tell whether or not this is significant. Some of this extra growth has occurred within urban municipalities. Unfortunately many of these urban municipalities seem to think there is little potential for wildland/urban interface fire problems. I was disappointed that the Alberta Urban Municipalities Association chose to withdraw as a member of Partners in Protection. AUMA has considerable capability to influence fire safety in this area and lends a strong voice for any initiatives it supports. Clearly the majority of the wildland/urban interface problems occur in the rural municipalities but some do occur in the urban centres.

Wildland Fire Loss Picture in Alberta

We wanted to determine just what this wildland/urban interface fire problem looked like and how much damage it created. While our fire loss statistics system does not capture every fire as intended it certainly gives us a realistic picture. We looked primarily at two sets of data - wildland fires and exposure fires.

First we will consider what we meant by wildland fires. In this instance we considered only those fires coded 811 under outdoor property. This code includes "brush, grass and light ground cover on open land, field". It excludes forests (818), timber and log piles (757) and farm crops (925). We also excluded trees (813) which is described as "individual trees only" as intended for ornamental plantings., etc. To get a reasonable sampling we studied the 10-year period 1981-1990 inclusive. A breakdown of these fires according to the type of community/municipality follows as Table 1.

GRASS/SHRUB/BRUSH FIRES (PROPERTY CLASS=811)
BY MUNICIPAL GROUPING
ALBERTA (1981 - 1990)

	# OF FIRES	$ LOSS	DEATHS	INJURIES
M.D.s & COUNTIES	1,845	64,620	4	29
I.D.s & S.A.s	205	11,953	0	11
INDIAN RESERVES	65	78	0	2
CITIES	1,481	10,025	1	22
TOTAL	3,596	86,676	5	64

Table 1

While the total loss of $86,676 is not particularly significant the total of 3,596 fire incidents, 5 fire deaths and 64 injuries is somewhat more significant. Of greater significance, from a dollar loss perspective, is the loss of other types of property as a result of the spread of wildland fires to adjacent properties. These are termed "exposure fires". Table 2 below shows the impact of these fires in fire deaths, injuries and property losses. A total of 2,590 exposure fires and $13,385,421 in property losses is certainly significant. The total of 1 death and 9 injuries in these exposure fires indicates the potential of these fires to kill or injure but fortunately the actual number of deaths and injuries is very low.

EXPOSURE FIRES
BY MAJOR MUNICIPAL GROUPINGS
ALBERTA (1981 - 1990)

	# OF FIRES	$ LOSS	DEATHS	INJURIES
M.D.s & COUNTIES	2,014	9,324,577	1	6
I.D.s & S.A.s	244	1,749,247	0	1
INDIAN RESERVES	28	709,226	0	1
CITIES	304	1,602,371	0	1
TOTAL	2,590	13,385,421	1	9

Table 2

Chart 1 shows the relationship between the number of wildland fires and the number of exposure fires caused by them. The number of exposure fires is quite consistently higher at approximately 1.65 times the number of wildland fires.

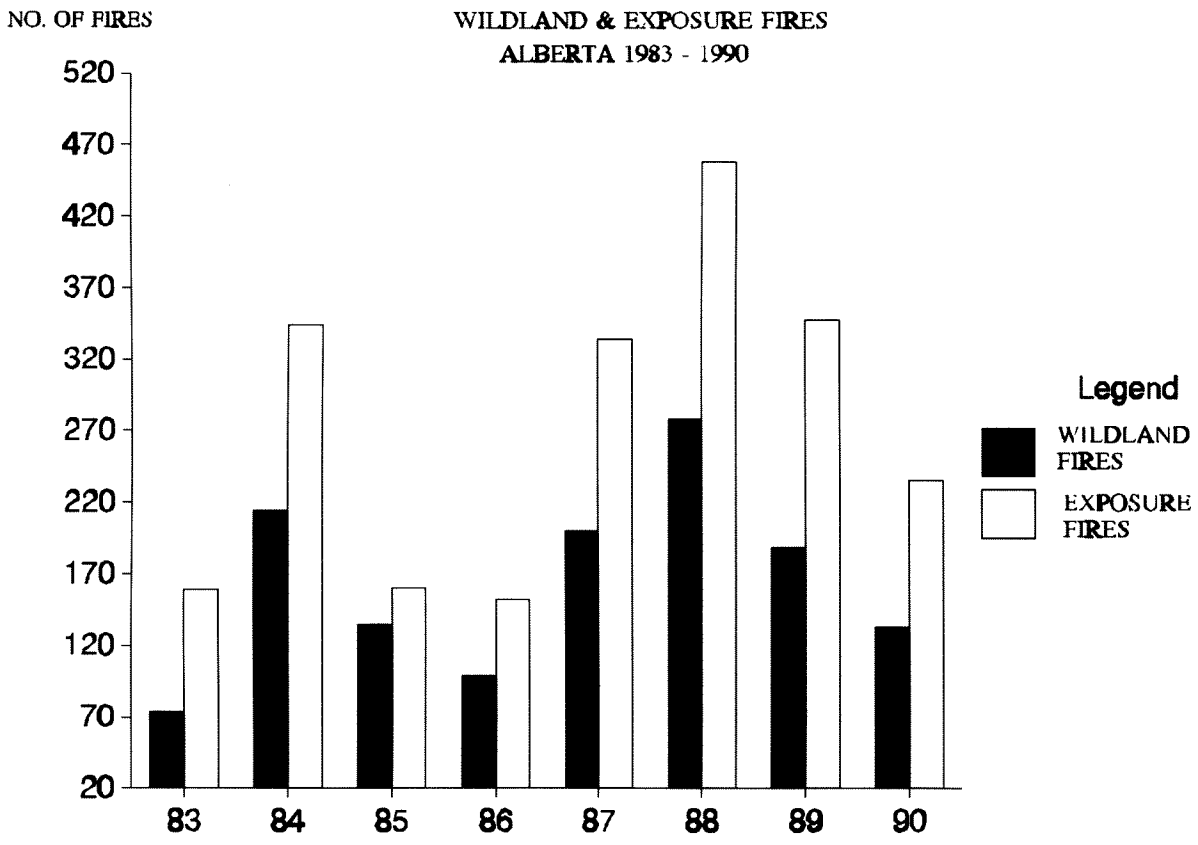

Chart 1

We find a relationship exists, though not entirely consistent, between the number of wildland fires, the number of exposure fires and the dollar loss value of exposure fires. Chart 2 shows the dollar losses of exposure fires for the same eight year period as in Chart 1. 1987, 1988 and 1990 appear to have accumulated disproportionately high dollar losses. It will be another year before we can incorporate 1991 and 1992 losses to see if there is any consistent trend starting to develop. Possibly all we can conclude is that nothing has happened during the 1983-1990 period to change the relationship between the number of incidents and the dollar loss in a positive manner.

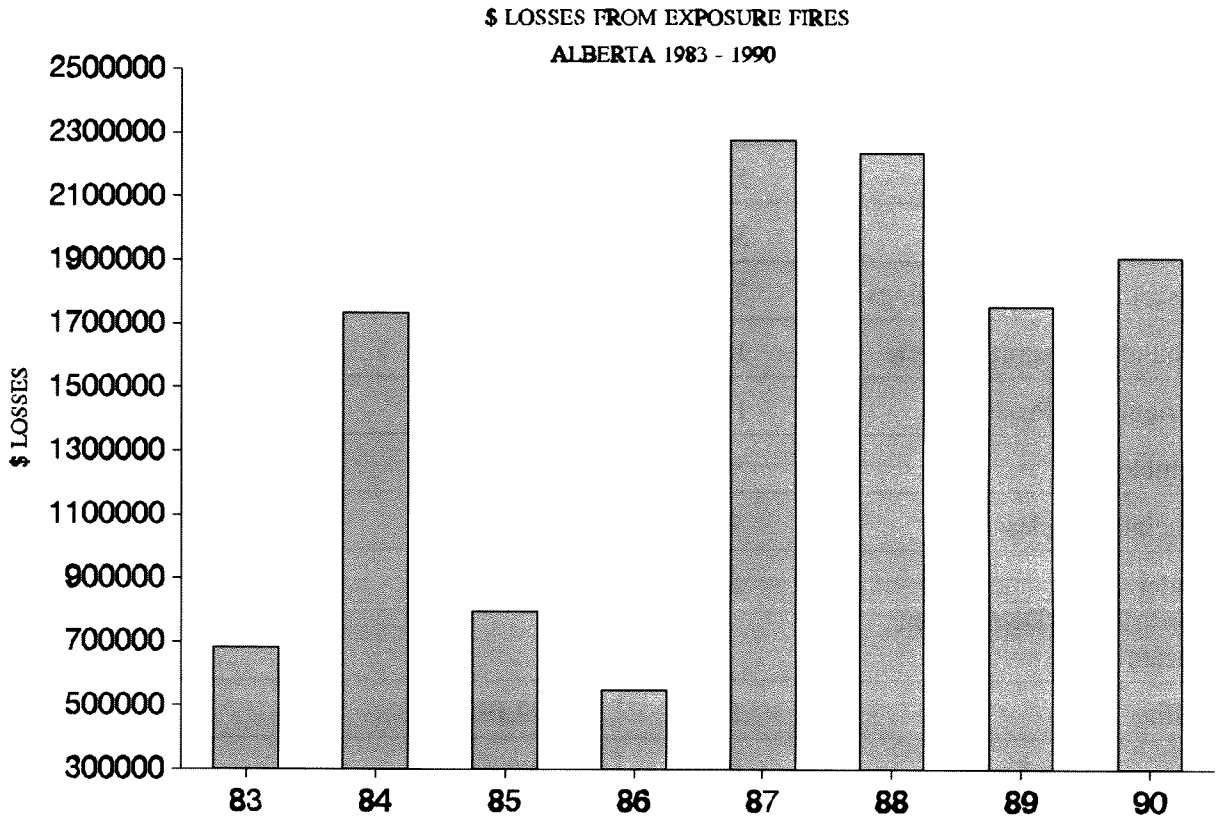

Chart 2

Next we want to know what is actually being burned in these exposure fires. To provide some insight we have listed eleven of the most frequently occurring exposure fires in Municipal Districts and Counties in Table 3.

EXPOSURE LOSSES FROM GRASS/SHRUB FIRES
BY MAJOR PROPERTY CLASS IN M.D.'s AND COUNTIES
ALBERTA (1981 - 1990)

PROPERTY CLASS	# OF FIRES	$ LOSS	DEATHS	INJURIES
Farm Facilities	510	2,662,517	0	0
Outdoor Property	303	434,051	0	1
Miscellaneous Outbuildings	330	1,153,982	0	0
Ground Transport Vehicle	106	375,682	1	0
Agricultural Products	136	657,409	0	0
Vehicle	93	571,046	0	1
Special Vehicles	91	590,300	0	0
Under Construction/Demolition: Vacant	81	58,564	0	1
Utility	86	459,195	0	0
One and Two Family Dwellings	66	1,090,443	0	2
Mobile Home, Trailer	76	568,595	0	0

Table 3

We can see from Table 3 that farm facilities, miscellaneous outbuildings, dwellings and mobile homes or trailers account for a lot of the number of incidents and also for a lot of the dollar loss. Vehicles of various types also take a beating.

We could go further and compare the frequency and severity of losses between individual M.D.'s or Counties to determine if there are areas needing special attention, however that is a bit too detailed for this presentation.

STRATEGIES TO CONSIDER

As has been proven many times and in many parts of the world, no one is immune to the effects of wildland fires whether they live in a forested area, parkland, brush or on the prairie.

Unless we take a proactive stance we can expect the wildland/urban interface fires to continue or increase. It will be most effective if all major stakeholders such as the members of Partners in Protection work together to minimize the destructive effect of these fires. The members of Partners in Protection realize they must broaden their membership and enlist the support of many people

including individual property owners if they are to be successful in preventing these fires or reducing their impact.

The cost of these wildland/urban fires has been dealt with in terms of direct losses. As with any other fires there are also indirect losses and sometimes benefits. Indirect losses may include wildlife habitat, erosion of top soil, etc. There are others far more qualified to address these sorts of losses but they can be and are being quantified. Further we have not considered the cost of fire suppression activities. Wildland fire extinguishment is often a very labour intensive operation and in some cases the operations extend for days or weeks. Although exact figures are not available we do know that some fire suppression operations are very expensive. In some cases they would have been even more expensive without assistance from Forest Protection personnel.

The Government of Alberta has actively promoted the development of numerous partnerships over the last several years. This increases the opportunity to involve people from many special interest areas and with a tremendous variety of skills, knowledge and influence that can all be brought to bear on a problem. It also reduces direct government intervention in business and in our private lives. The membership in Partners in Protection shows that all levels of government, from the smallest municipality to the Federal Government, can work together to solve a common problem. We in the Fire Commissioner's Office have had excellent support and cooperation from our Department, Alberta Labour, and from our Minister, the Honourable Elaine McCoy. This support has allowed us to become and remain an active participant in Partners in Protection.

There has been a lot of work completed by the Committee members over the past two years. Many individuals and groups have been treated to special awareness programs intended to help people understand the problems of wildland/urban interface fires. Awareness levels appear to be rising. The successful planning for this symposium is also a significant achievement. This symposium however is just a beginning. It will enhance our ability to move forward to our goal of reducing losses in the wildland/urban interface. Planning is already under way to have active programs in fire prevention, fire protection and public fire education. We must encourage developers, planners, architects, engineers, building contractors and individual property owners that they too have a responsibility in this area.

We must also continue to pursue other initiatives such as cross training, defining equipment and protective clothing needs for both forestry and municipal fire department members, etc.. The whole matter of communications also requires further study as it is a key to properly coordinated operations.

We must also be continually looking for other partners, areas of influence, operational/technical developments which may help us achieve our goals.

For the most part the solutions to many of the wildland/urban interface problems are simple and well known to fire safety officials. Measures like fuel reduction, fire breaks, fire resistive exterior cladding on buildings, appropriate setbacks or clearances between trees and buildings, adequate road access etc. are not difficult concepts to understand. They are however difficult to achieve in concrete terms on all properties across this vast Province.

We all have our work cut out for us.

The next logical question may be something along the lines of "But who do we have to get the message to?". We may also want to consider who our key audience may be and what message we

may want to get to that audience. Possibly if we turn back to those statistics again we can find out a bit more about where these fires are occurring most frequently and who is being adversely affected. As we saw in Table 2 much of the fire activity occurred in Municipal Districts and Counties. This may well be the reason the Alberta Association of Municipal Districts and Counties is an active member of the Partners in Protection Steering Committee. Another important group of players is the urban fire departments which provide fire protection services in the M.D.'s and Counties which surround them.

We have identified a general audience, we know what types of property are being lost and we know the cause. We also know what needs to be done to reduce these losses. The challenge now is to get a buy-in from those people who must take positive action to protect their property.

WILDFIRE IN THE COMMUNITY: A B.C. PERSPECTIVE OF THE PARTNERSHIP NECESSARY TO PREVENT CATASTROPHIC COMMUNITY LOSSES TO WILDFIRE[1]

Dennis Hutcheson[2]

ABSTRACT: In the early 1980's the B.C. Forest Service found that a consistent increase in wildfire threats to rural development areas was impacting its ability to respond to wildfire priorities within its mandate. Initial attempts to involve other agencies in this problem quickly resulted in a mandate dispute. It was evident that no one agency was responsible, and that major legislative changes were necessary for the Forest Service to undertake the problem. The decision was made to involve all agencies voluntarily, avoiding as much legislative change as possible. As a Risk Management exercise, the B.C. Forest Service began forming a partnership with Municipal and Volunteer Fire Services, and together began the Rural/Urban Interface Program at that level. It was soon evident that as the other agencies became involved, the available resources were insufficient. The Interagency Team took the problem down to the area at risk, the community itself. Through various projects the team has developed a public awareness program for use within the community, showing that they are at risk to wildfire and that the Interagency Team would like to assist them in their efforts to find a solution. In general most agencies have accepted the goal "Fire Safe by the year 2000" and through the team individual agency legislation is being reviewed for minor changes. The focus of this toward minor changes for all agencies rather than one agency mandated with the responsibility. The results of the B.C. project have been somewhat surprising from two perspectives, first the overwhelming response in the community to take on the problem, and secondly, the ease and comfort within the Interagency Team in co-operative support for the program.

PRESENTATION

In the early 1980's, the B.C. Forest Service noted an increasing commitment of Forest Protection resources to wildfire that threatened life and property in the community. By 1987 several near catastrophic events had occurred that involved evacuations and extensive expenditures of fire suppression funds that were borderline, if not outside the mandate for forest fire suppression.

The B.C. Forest Service mandate clearly specifies its responsibility to protect "Forest Land" from wildfire. Our Forest Protection Branch undertook the further obligation to protect "Life and Property" as not only an unwritten mandate, but as our first priority for initial attack.

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[1]A paper presented at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Kamloops Regional Protection Officer, B.C. Ministry of Forests, 515 Columbia St., Kamloops B.C., V2C 2T7.

By 1990 our commitment to this priority was a major budget concern which was undoubtedly only beginning to increase.

The continuing development of forest communities at high or extreme risk to wildfire became a major issue for the Forest Protection Program.

In 1990 we reviewed our options. Clearly, wildfire in the interface, and the need for structural protection from wildfire was not only an alarming problem, but was going to get worse. We had three alternatives. We could have our legislation changed to include this mandate. We could support changes in other agency legislation. Or we could simple get on with the development of an interagency team approach to solve the problem at the community level. We chose this last option.

We began with a review of agency mandate and legislation. We found that development agencies were responsible for referrals to other agencies, but could not establish regulatory standards for rural forest communities. We found that many agencies were concerned about wildfire in the interface, but felt no ownership of the problem. And finally, we found, as the experts in wildfire behaviour, the B.C. Forest Service was carrying the major responsibility for catastrophic losses to wildfire in the community.

Our Interface initiative then became a Risk Management issue as well.

In late 1990, our Forest Protection Branch established the goal "Fire Safe by the Year 2000" for communities in the interface. The definition for "safe" being at moderate risk to wildfire.

With this direction, a number of strategies were developed. Perhaps the most significant step was a partnership with the B.C. Office of the Fire Commissioner at the Provincial and Regional level, and with individual Fire Services at the District level.

This brought together the two primary line agencies in fire control, initially to improve our cooperative response to wildfire, and from the B.C. Forest perspective, to share some of the Risk with another fire control agency.

This partnership quickly solidified through a number of individual projects between Forest District fire staff and Fire chiefs to look at solutions for individual communities.

This led to the development of a Risk assessment system using the N.F.P.A. guidelines. A public awareness program for the interface community. And then, essentially, a joint Risk Management exercise for both the Forest Service and the Fire Services in transferring risk to the community itself.

One individual initiative in 1991 lead to a major simulation exercise for interagency response to a wildfire in a well established high to extreme risk community. This exercise attempted to involve all agencies and resulted in a major review of problems that existed with an interagency response. It also was a critical step in opening the "voluntary" door for other agency participation.

The problem review then became the focus of a major symposium in Kelowna in 1992. The symposium, although Regional in nature, brought up interagency awareness levels throughout the Province, as well as improved the Interagency team concept immensely.

Perhaps the most significant result from the Interagency sponsored symposium has been the sense of common ownership of the problem, and highlighted the need for a Partnership in Protection.

At the Provincial level and informal Interagency Emergency Preparedness Committee (I.E.P.C.) began to review the interface issue. This committee was intended to provide a team approach for emergency response preparedness and has become an effective Provincial structure to shelter "wildfire in the interface" initiatives.

Recommendations from the Kelowna symposium were directed to this committee. Two important ones were the need for an interagency B.C. Incident Command system, and for the development of a Provincial structure under the Office of the Fire Commissioner that can establish and enforce standards for the structural fire aspects of the interface.

The Interagency Team has outlined our strategic Direction. First we must improve our "Coordinated response" to wildfire (emergency) in the interface (community). Second, we must redress those problem communities that are at High or Extreme Risk to catastrophic wildfire. And third, we must prevent future developments in the interface that do not meet N.F.P.A. standards.

In the first instance, the B.C., I.E.P.C. has recently been formally mandated, and one of its first priorities is the development of a B.C. Incident Command system. Further, another Regional symposium is planned in Kelowna in January 1993 with the objective to present an operational manual for interagency response to wildfire (emergency) in the interface.

In the second instance, a number of tools have been developed for assessments for hazard and risk from individual homes to large communities. Public awareness packages have also been developed to these levels. A generic "FIRE SAFE COMMUNITY/NEIGHBOURHOOD PLAN" has been developed for community use, to plan and maintain the community at a "Fire Safe" level.

B.C. has a long way to go, but has taken a positive step toward mitigating the potential catastrophic loss to wildfire in the community. The Interagency Team, in support of the community, may prove that major revisions in legislated mandates are not necessary. The key to success is a PARTNERSHIP in PROTECTION.

WILDLAND URBAN INTERFACE FIRE PROTECTION IN THE UNITED STATES[1]

William J. Baden[2]

ABSTRACT: A major population shift from urban to suburban living, begun after World War II, has greatly expanded what is now called the wildland/urban interface. 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. 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 protection agencies. In response to the increasing wildland/urban interface problems, the Wildland/Urban Interface Fire Protection Initiative was established in 1986 and is currently sponsored by the USDA-Forest Service, U.S. Fire Administration, National Association of State Foresters, National Park Service, Bureau of Land Management, Bureau of Indian Affairs and the Fish and Wildlife Service.

INTRODUCTION

A major population shift from urban to suburban living, begun after World War II, has greatly expanded what is now called the wildland/urban interface, for reasons unrelated to timber operations or other traditional forest uses. While this trend has increased the general population's appreciation for our forests' amenity values, it has also greatly increased the number of primary residences, second homes, and retirement homes located in forests and brushland. 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, unique to Southern California. The extension of residential and commercial development has been noted throughout the nation. Current fire protection practices make it unlikely that fires ever will reach the hugh proportions of those in nineteenth-century America, but the risks to life, property, natural resources, and economic welfare are much higher today than ever before. Huge fires are not required for catastrophic losses in the modern wildland/urban interface.

The "Tunnel Fire" in October 1991 only burned 1610 acres in the hills of Berkeley and Oakland, California, but the losses were dramatic, 25 fatalities, over 3,000 homes lost and an insured loss of $1.2 billion.

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[1]A paper presented at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

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As the wildland/urban interface continues to expand, fire protection must change to better prevent and suppress smaller, fast-moving single and multiple wildfires. This change must 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 protection agencies.

Fire managers are currently unable to make reliable predictions about erratic fire behavior in the mixture of structures, ornamental vegetation, and wildland fuels that characterize 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 a primary cause of structural fire ignitions in wildland/urban areas. Spotting was a major factor in the fire spread in the "Tunnel Fire" in 1991 and the "Paint Fire" near Santa Barbara, California in 1990.

The use of prescribed fire for hazard reduction is made difficult by legal, political and environmental concerns. The 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 prescribed fire. Nonetheless, means must be found to manage fire hazards in the interface. The challenge is to do so while maintaining or enhancing the desired environmental and economic values.

Many property owners are unaware of the wildfire threat, and fire safety ordinances and building codes are frequently inadequate, unenforced, or disregarded. An example, is the use of flammable roof materials in high fire hazard areas. The design and construction of subdivisions continues to defy the principles of fire safety.

Many areas include narrow, winding, or dead end roads with inadequate water systems. Lots frequently are 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.

Most wildland 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 proved effective, the special demands of fires in the wildland/urban interface often force fire fighting personnel to perform unfamiliar tasks. The need to meld structural and wildland fire expertise on interface fires remains a formidable challenge.

THE NATIONAL WILDLAND/URBAN INTERFACE FIRE PROTECTION INITIATIVE

In 1985 the United States experienced the most severe wildland fire losses of this century. More than 83,000 fires burned over 3 million acres, destroying or damaging in excess of 1400

structures and causing the death of 44 persons. Combating 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 was over $500 million 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 was part of a developing trend.

Following the devastating losses from wildfire in 1985 - the United States Forest Service, the National Fire Protection Association (NFPA), and the United States Fire Administration (USFA) began an initiative to focus both public and fire service awareness on reducing such losses.

Joined later by the National Association of State Foresters and the wildland fire agencies of the Department of Interior, the National Wildland/Urban Interface Fire Protection Initiative was established in 1986. The goals of the Initiative are:

- To create general public awareness of the problem;
- To encourage the formation of partnerships among problem solvers and interest groups; and
- To focus on the development of local solutions to the wildland/urban interface fire problem.

These remain the primary goals of the National Initiative and a fourth goal was added after 1987 when, for the first time ever, there were more fire fighter fatalities on wildland and vegetation fires than structural fires. The majority of these fatalities were structural firefighters from rural and volunteer fire departments. The fourth objective is:

- To promote firefighter safety in the wildland/urban interface.

The issue continues to grow and the plans are to continue the national effort in support of the four objectives of the program.

The following is an overview of Initiative Activities and Accomplishments:

National and International Conferences

- National Wildland/Urban Interface Fire Protection Workshop-Boston, Massachusetts, April 30, 1986 - May 1, 1986.
- The National Wildland/Urban Interface Fire Protection Conference-Denver, Colorado, September 15, 1986 - September 18, 1986.
- Wildland/Urban Fire Interface Workshop for Social Scientists-Asheville, South Carolina, April 8, 1987.

- Meeting Global Wildland Fire Challenges (International Conference) - Boston, Massachusetts, July 23, 1989 - July 26, 1989.

State and Local Conferences

The National Initiative has assisted with the planning, provided speakers, publications and video support to approximately 100 state and local conferences including Governor's conferences on the wildland/urban and wildland/rural interface fire problems in Texas, Louisiana, and Arizona.

Video Production

"Wildland/Urban Interface A National Crisis" - 1986. This video used at both the Boston and Denver conferences chronicled the devastating 1985 fire season.

"Wildland/Urban Interface the Problem" - 1986. This program documented the findings at the Boston workshop and was used to explain the issue at the Denver Conference.

"Wildland Strikes Home" - 1987. Publicized the findings and recommendations of the Denver Conference.

(These first three videos were broadcast nationally via satellite in the spring of 1987).

"Wildfire 1987 - Decision Point For The Future" - 1988. A report on the Northern California and Southern Oregon fires of the summer and fall of 1987 with emphasis on wildland/urban interface impacts.

"Building Interagency Cooperation" - 1988. One of the significant findings of the Denver conference was the need for stronger cooperation between fire service agencies in the interface. This video demonstrated a process for building interagency cooperation at the local level.

"Protecting Your Home Against Wildfire" - 1988. A program targeted at individual home owners explaining what they can do personally to provide a fire safe environment and "defensible space" around their home in the interface.

(These three videos were broadcast nationally via satellite in April of 1988).

"Fire Fighter Safety in Wildland/Urban Interface Fires" - 1989. The first section of this video addresses the protective clothing and equipment of wildland and structural fire fighters. It also covers the limitations and applications of the equipment so that both types of fire fighters understand the other's benefits, limitations and expectations.

The second section reviews the 18 Situations That Shout Watch Out and the 10 Standard Fire Fighting Orders for wildland fire suppression.

(This video program was broadcast via satellite in April of 1989 to an estimated 1700 downlinks nationwide).

"Black Tiger Fire Case Study" - 1990. A video report of the case study completed on the Black Tiger Fire that destroyed over 44 homes near Boulder, Colorado in July 1989.

"Fire Behavior On Wildland Urban Interface Fires" - 1990. Building from the fire fighter safety project of 1989 this program looks at basic wildland fire behavior structural fire fighters need to be aware of in the interface and the operational and safety aspects of working around structures.

"Wildfire Strikes Home, 2nd Edition" - 1990. This program reported on the 1988 and 1989 fire seasons and updated the wildland/urban interface problem in America. It also covers some of the actions and accomplishments in the interface that have been developed locally.

(These three programs were broadcast nationally via satellite along with a rebroadcast of last years fire fighter safety video on June 7, 1990).

"The Meeting" - 1991. This video addresses the process of interdisciplinary involvement in community planning for fire protection in interface.

"Wildfire Control" - 1991. This program addresses the basic wildfire control tactics and strategy for rural and volunteer fire departments initial attack on wildfires.

(These programs were broadcast nationally via satellite on July 18, 1991.)

"Firestorm '91". This video reviews the Wildfire Situation near Spokane, Washington in October 1991, including prior incidents of a similar nature. It also reviews initial statewide legislative efforts following Firestorm 91.

Publications

"Wildfire Strikes Home" - The original print project of the initiative, it was the report of the National Wildland/Urban fire protection conference in Denver.

"People and Fire at the Wildland/Urban Interface - A Source Book" - This document serves as a reference publication and was a result of the Wildland/Urban Interface Conference for Social Scientists held in Asheville, North Carolina.

"Building Interagency Cooperation" - This training text was designed to support the video on interagency cooperation developed in 1988.

"Protecting Your Home From Wildfire" - Published for distribution to individual home owners and is a print version of the video.

"Fire Fighter Safety in Wildland Urban Interface Fires" - Training text developed to be used in with the fire fighter safety video.

"Black Tiger Fire" - A case study of the Black Tiger Fire that destroyed 44 homes and other structures near, Boulder, Colorado, July 9, 1989.

"Wildland Strikes Home, 2nd Edition" - Published in the Spring of 1991, this publication is a condensation and update of the original publication Wildfire Strikes Home. The second section of this publication is devoted to technology transfer and information exchange about successful interface programs and activities that are being carried out around the country.

"The Stephan Bridge Road Fire" - A case study of a May 8, 1990 wildfire that burned 76 homes, 125 other structures and 37 vehicles and boats in just over four hours in Crawford County, Michigan.

"Firestorm '91". - Published in the Spring of 1992, this publication documents the "Firestorm '91" incidents near Spokane, Washington that resulted in the loss of 114 homes in October 1991.

(All publications and videos produced by the National Wildland/Urban Interface Initiative are available through the Publication Management System at the Boise Interagency Fire Center)

Awareness Program

A wide variety of activities are carried out to promote general public awareness of the wildland/urban interface fire problem.

New Media - A National news conference was held in Washington D.C. in March of 1987 to formally launch the Initiative. Pro-active media activities are carried out during interface fire situations and numerous articles have been developed and placed in both consumer and trade press. A news conference was held in Colorado for the release of the Black Tiger Case Study and monthly news releases are planned for the summer of 1990 to update the national media on interface fires.

News Releases - In 1990, 1991 and 1992 National News Releases were distributed to the print media addressing wildfire season potential and severity.

Newsletter - "Wildfire News & Notes" newsletter is now published 6 times a year and current distribution is over 16,000

Exhibits - Two national wildland/urban interface exhibits have been developed to be used at conferences and conventions. An effort is planned to exhibit at annual meetings and conventions of architects, builders, planners, and local officials.

Workshop participation - Most successful local programs start with a conference or workshop. Participation in local workshops and other programs by National Initiative representatives have included Rapid City, South Dakota; Seattle, Washington; Reno, Nevada; Sacramento, California; Rutland, Vermont; Boulder, Colorado; Windsor Locks, Connecticut; Phoenix, Arizona; Salt Lake City, Utah; Orlando, Florida, and Pineville, Louisiana and many other locations throughout the USA and several locations in Canada.

Additional Programs

The National Fire Protection Association Technical Committee for Forest and Rural Fire Protection has developed a standard titled Protection of Life and Property from Wildfire, NFPA 299. The standard was developed as a tool for use in areas where development is occurring and incudes chapters on wildland urban/interface analysis, fuel modification planning, roads, streets, and ways; standard for signs on streets, roads, and buildings; emergency water supplies, structural design and construction, public fire prevention, and fire safety information, and education.

This standard was just adopted in May of 1991 and is just beginning to be utilized by local communities and jurisdictions. One of the first jurisdiction to adopt NFPA 299 was Douglas County, Colorado, and it was adopted to cover the entire county for development in wildland urban/interface areas.

The California Department of Forestry and Fire Protection has developed a program titled "Fire Safe Inside and Out" to address fire problems of life safety for wildland urban/interface areas.

There have been many other programs developed at the local level; for example, the community of Prescott, Arizona has developed a wildland urban/interface commission that involved members from fire protection agencies, the city government, the county government, an indian reservation that adjoins the community, and many local and public service organizations. This commission initially started to address only the wildfire problems in the interface areas but has since gone on to deal with other problems including water, solid waste disposal, etc.

There are many other successful programs around the country where folks have identified the problems at the local level and are pursuing solutions to those problems, again at the local level. Many of these are addressed in the publications I mentioned titled Wildfire Strikes Home, 2nd Edition.

CONCLUSION

In conclusion, I would suggest that the wildland urban interface fire protection program in the United States is still at the awareness level, particularly with the public. There is an attitude throughout wildland urban/interface areas in the United States that "fire won't happen here, it only happens in other locations", and there is very little interest in making the effort or the expenditures to provide for fire safe homes and properties.

There are many individuals and organizations throughout the United States working to change this attitude and to improve fire safety in the wildland urban/interface, but we still have a long way to go. I believe that was evidenced by recent fires, the more notable ones occurring in California near Santa Barbara and Oakland; but also local incidents in Florida, Oklahoma, Colorado, Michigan, New Jersey, Washington, Idaho, Arizona, South Dakota, and other states. As was mentioned earlier the problem is not unique to Southern California, as every state in the United States has wildland urban/interface problems to some degree.

Our challenge, yours, mine, and everybody else concerned about the wildland urban/interface, is to move beyond the awareness level toward developing structures and homes in the wildland urban/interface that have adequate defensible space and are fire safe.

Literature Cited

California Department of Forestry and Fire Protection, Fire Safe Inside and Out, 1416 Ninth Street, P.O. Box 944246, Sacramento, California 94244-2460, telephone number (916) 445-9886.

California Fire Protection Association, Protection of Life and Property from Wildfire, NFPA 299, One Batterymarch Park, P.O. Box 9109, Quincy, Massachusetts, 02269-9109, telephone number (800) 344-3555.

National Wildland/Urban Interface Fire Protection Initiative, publications and videos are available from the Publications Management System Boise Interagency Fire Centre, 3905 Vista Avenue, Boise, Idaho 83705, telephone number (208) 389-2542.

SESSION II

RELATED AGENCIES' AND RESIDENT'S PERSPECTIVE

THE INSURANCE PERSPECTIVE[1]

Alan D. Wood[2]

It is my pleasure to be with you today to talk about the insurance perspective as it relates to the expansion of residential lifestyles into a rural setting.

Ah, a house in the country. Everyone's dream - fresh air, privacy, no sound except the leaves rustling and the birds singing, a place to put your feet up and live the good life.

In response to that idyllic picture, I can say only one thing ...**NOT!** In reality, the fresh air is masked by the exhaust of your overpriced riding mower that won't start half their time, the leaves are rustling as the wind blows another tree over onto your garage and the birds are singing because they just stripped your strawberry patch clean. You're sitting with your feet up because you wrenched your back pulling the broken sewer pump out of your septic tank. When you wandered out to the end of your driveway to get your mail out of your mailbox this morning, you discover that the neighbourhood punks considered it such a dangerous threat to their existence that they pumped 32 bullets into it. And when you peek in to see if anything survived, you find that your home insurance renewal notice was the only thing that did.

Don't you find it interesting that Better Homes and Gardens doesn't say a word about those hazards?

I can't help with your balking riding mower, your berryless garden or your defective sewer pump. I can, however, talk about your insurance renewal. That's assuming, of course, that you've been able to buy insurance.

Insurance companies don't look upon rural residences with the same level of excitement that, say, a trip to Tahiti would bring. In fact, to many insurance underwriters, a root canal is preferable.

When an insurance underwriter is presented with an application to insure a particular risk, their first job is to determine the exposure to loss that the risk presents. They will try and figure out what type of damage is likely to happen and what is less likely or remote. In either case, they will also attempt to determine the likely maximum dollar amount of damage they could be asked to pay. In short, what they are really trying to figure out is whether they can make money on this risk or not.

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[1]A paper presented at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Regional Vice President, Insurance Bureau of Canada, 10080 - Jasper, Avenue, Edmonton, Alberta, T5J 1V9.

Rural homes are very difficult to underwrite. The risk of some types of loss, such as hail or wind, is not much different than with homes in an urban area. But in the case of seasonal residences that are unattended for much of the year, burglary and vandalism occurs with greater frequency than any other type of loss.

The real cruncher with rural homes, whether occupied seasonally or used as permanent residences, is fire. And the problem is not with frequency, it's with the fact that, if a fire does occur and it isn't caught immediately, the house is going to the ground. To illustrate this, in 1990 the industry in Alberta paid 1345 claims for residential fire damage to owner occupied homes and their contents that occurred in the City of Calgary. In rural Alberta, there were 1683 similar fire claims, only 338 more than in Calgary. But, the Calgary claims cost the industry about $4 million. The rural fire claims, on the other hand, cost almost $11 million.

An underwriter who wants to keep his job has to keep that information in mind when deciding whether or not and under what terms to issue an insurance contract.

OK. He has the application, he knows there is a high exposure to fire. What now?

Well, the underwriter will now look at the fire protection situation. The best situation is a residence located within 1000 feet of a hydrant and two miles of a firehall staffed 24 hours a day by full time fire fighters. Most homes located in a major urban area meet this qualification and are readily insurable at what the insurance industry calls Territory 1 rates, which develops the best rates in the Province. Most companies will grant Territory 1 even if the firehall is a little further away.

After Territory 1, it get's a little cloudy. Some insurers have 2 more territories, others have 4 more. As you get further away from a fire department and/or fire hydrants, you move up in territories. The higher the territory, the higher the premium. This is in keeping with the universal underwriting guideline of "Premium commensurate with Exposure to Loss".

There is one thing that I must make clear - the higher territorial classification and premium in rural areas in no way reflects the quality or dedication of the volunteer fire fighters that respond to rural fires. Under the difficult circumstances they must work with, they do a magnificent job. But they are faced with many obstacles that urban fire departments don't have to worry about.

For example, how many of you that live in rural areas without 911 service know the telephone # of your local fire department off by heart? What about your families? The first problem faced by rural fire fighters is delay in reporting. The second problem is figuring out where the fire is. As any rural fire fighter in the room can attest, getting an excited caller to give coherent directions can be a real challenge. Anyways, the trucks hit the road, arrive at the home to find the property fully involved and start looking for a source of water. Good luck. Despite their absolute best efforts, all they can really do is protect the other buildings.

Once the territory has been determined, the underwriter will now look at individual features of the actual property. They will be looking for two things - what features of the home could increase the exposure to loss and what features would decrease it. The exposure is

increased by wiring that is 40 years old and has not been updated, by wood heat, by fireplaces, by wood shingles and siding, by an obsolete furnace, and so on. The exposure can be improved by modern construction, with much use of non combustible material on both the exterior and interior, sprinkler systems, an alarm system, a body of water close by that remains open all winter or some other source of water year round, removal of trees and brush from around the home, and so on. The underwriter uses a system of credits for good things and debits for bad things to determine insurability.

To digress for a moment, wood heat and free standing fireplaces scare the nose hairs off an underwriter. These are often improperly installed, with an inadequate stovepipe and too little clearance between the pipe and combustible materials, like a wall or ceiling. It's great to be environmentally conscious, but don't put your life at risk by not taking proper caution.

To get back to the underwriting, it is the debits and credits that play a major role in determining the insurability of your residence.

Finally, there are a couple of other factors that are considered. Your previous claims experience will obviously be taken into account. Someone with a history of presenting the insurance company with a claim on a regular basis will have difficulty obtaining insurance, irrespective of the types of claims filed or the amount of dollars paid out. It you have filed 2 or 3 claims in the past few years, chances are that situation won't change unless you can demonstrate that you have taken steps to significantly reduce the likelihood of future claims. An insurance policy is not a maintenance contract. An underwriter is going to reject a risk if the potential for profit is very low.

The overall claims experience of the entire book of business that an insurance agent or broker has with an individual also comes into play. If an insurance company has been losing money on the business written by an individual broker, they will often restrict the type of policies they will issue for the broker.

It is very common for insurers to consider seasonal residences as accommodation business - a risk that they will only insure if they provide other coverage to the customer. The combined premium of all the policies will help offset the high exposure presented by the summer cottage. Actually, it is in your best interest to insure your cottage with the same insurer that provides your homeowners insurance. In this way, gaps in coverage can be avoided and you don't wind up with one insurance company fighting another to see which one should pay the claim.

I should also point out that premiums and underwriting criteria do vary from company to company. While it may be to your financial benefit to obtain competitive quotations on all of your insurance needs every few years, I would certainly recommend it to the owners of rural homes, either recreational properties or your full time permanent residence. A 10 or 15% premium differential from one insurance company to another can translate into a significant dollar savings to you.

I had hoped to get into some discussion of actual policy coverages and limitations, but time does not permit. I will, however, caution the owners of recreational property that their policies are much more restrictive in coverage than policies written to cover your permanent

residence. One quick example - the policy on your city home is a replacement cost policy - if your house burns down, or your TV is stolen, the insurance company will pay the full cost of replacement. Seasonal residences, however, are usually only covered through an "Actual Cash Value" policy. Any claim, large or small, will be subject to depreciation. So if your 20 year old cottage that will cost $40,000 to replace burns down, you will only receive $40,000 less 20 years of depreciation. Replacement cost coverage may be available, but don't assume you automatically have it. Check with your broker to find out what you have.

Let me leave you with one thought that I use to close virtually every one of my presentations. Please put some time and effort into purchasing your insurance, whether it's home insurance, car insurance or whatever. Most people shop for weeks before making a decision on the purchase of a new television set, or stove, or VCR. But they purchase insurance on their home or car over the telephone from someone they not only have never met, but have no desire to meet. And then, when they receive all the paperwork, they put it away for later study, a time that never comes. But they know the contents of the owners manual for their VCR backwards and forwards. Ladies and gentlemen, treat your insurance policies like an owners manual. Look at it this way. If your VCR doesn't perform, you're out may be $400. If your insurance policy doesn't perform, you could be out hundreds of thousands of dollars.

Thank you, and good morning!

A PLANNING PERSPECTIVE: GETTING FROM "POINT A" TO "POINT B"[1]

Greg Hofmann[2]

I have been asked to relate a "planning perspective" concerning this topic. It would be ideal to first outline what planning is, to define planning in some detail, then to describe where planning fits in. For the sake of brevity, however, I will say only that planning is a process (and I emphasize the word process), the primary purpose of which being to resolve conflicts (often involving greatly divergent interests) and/or solving problems, with the ultimate goal being to anticipate and thereby avoid conflicts/problems altogether in the future. Addressing the issue of wildfire in the urban/wildland interface is no exception.

In slightly more specific terms, there are two interrelated levels at which planners operate; two complementary roles. Dealing first with the most obvious and direct role, planners are or should be concerned with the wildfire issue through their involvement in the preparation and implementation of land use planning and resource management policy and development control regulation.

Although there are many other factors involved, within traditional land use planning, two basic variables are always considered in any unserviced subdivision or development. The first variable is whether the land is capable of supporting the proposed subdivision or development without the need for outside services. The second variable is the proposal's proximity to services that simply cannot be made available on-site.

In reference to the first variable, I am basically speaking of ensuring that a suitable building site exists within the parcel. Among other things, this normally includes demonstrating that there is a sufficient supply of potable groundwater available on-site and that soil conditions are such that drainage does not constitute an obstacle to the siting of a foundation structure (ideally) and the safe and economical disposal of sewage. There is no doubt in my mind that planners and decision-makers are justified in adding wildfire risk and minimization to the list of basic on-site variables they consider when evaluating and deciding upon development and subdivision proposals.

We must also realize that wildfire in the urban/wildland interface extends well beyond country residential developments in forested areas. It encompasses industrial, commercial, tourism and recreation development as well. It is also not limited to rural municipalities. In fact, the devastation (just measuring value of property lost) of a wildfire in a large urban park or in one or several of our many summer villages could be staggering.

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[1]A paper presented at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

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In reference to the second variable, I am referring to avoiding development and subdivision that is difficult to access year round as far as school busing and emergency vehicles are concerned and/or where distance from services will result in unacceptable costs and response time. Quite often, otherwise bonafide development/subdivision is turned down for these reasons alone, and justifiably so. Planning for wildfire in these situations, however, might mean that isolated/distant development or subdivision, once untenable, would be made possible by establishing, for example, a fuel-free border surrounding the development, installing a means of delivering adequate volumes of water for fire fighting on-site, using low fire-risk materials, and so forth.

A large part of the kind of involvement I have just outlined has to do with informing and advising developers, decision-makers and the public of the issues at stake and the value of trying to minimize wildfire risk. This role moves planners into the second role they play, that of educator/facilitator. Given that planners understand and feel comfortable dealing with the process(es) needed to solve problems and resolve conflict, they can contribute a great deal in taking what is known (or figuring out what needs to be known) about an issue such as wildfire and then work towards establishing ways and means to implement solutions. In this capacity, planners, and others involved in this issue, can have an impact at the most important level of all, the attitudinal level.

To stay with attitudes for a moment, I want to talk about the responsibilities individuals have with respect to this issue. As we all know, change is most meaningful and permanent when it occurs as a result of a change in attitude. With respect to the wildfire issue, as with any other, this means that individuals (as owners of property, as developers of property and as members of their community) take on the responsibility of reducing wildfire risk themselves and/or they accept that they may incur additional costs (usually much less than is thought) for the community to do so. At the same time, they appreciate that there may be greater financial and social costs if they and/or the community do not take on the responsibility of minimizing wildfire risk.

Beyond the costs that are tangible, those that an insurance adjuster or governments can measure and compensate, there are the intangible costs that no insurance company or government settlement can recover: the psychology trauma of fire, loss of family heirlooms, etc.

On the benefit side of this equation, peace of mind, and enormous, intangible benefit can be realized if individuals and communities take responsibility for minimizing wildfire risk. It is reassuring to know that even though your property is away from the protective services available in an urban centre, every measure possible has been taken in planning for its development in terms of fire protection. Now, add the intangible benefit of peace of mind
to the list of more tangible benefits such as increased marketability, lower insurance rates (for all), overall lower costs to the community (society) in the long run, reduced loss of merchantable timber and habitat, and so forth.

As part of this planning process, as with any other, planners must draw on the more technical expertise available concerning this subject not only to discover what is known (or needs to be known) but in terms of how workable the solutions are and determining their impacts. By the same token, those with the technical expertise (possessing what is known) would benefit from participation in this planning process. The symbiosis here is very important and potentially very

fruitful. Working together, we can assist decision-makers at all levels in formally addressing the issue of wildfire in the urban/wildland interface not only in the plans, bylaws and decision that flow from the enabling legislation but in the relevant statutes themselves.

Planners can and ought to play a large role in dealing with this issue. Drawing upon those with the depth of technical background, they can lend their expertise in the area of process to help take this issue from "point a" to "point b". The time has come to move beyond recognizing that this issue exists and is important. We all seem to agree on "point a". It is time to get to "point b", to develop and implement formalized, workable and sensible ways and means of addressing this issue at all levels and on the ground.

At the beginning of my presentation, I spoke of one of the basic goals of planning being that of anticipating and avoiding conflicts/problems. This is the aim of planning both in the ideal sense and in reality. What seems to distinguish reality from the ideal is that, in reality, conflict/problems must be eliminated/minimized as much as possible given the resources available. In bridging the ideal and reality, I feel that the planning process associated with any issue, wildfire included, should always strive to bring forward and have considered what "ought to be" while recognizing that the course of action taken will always be tempered by the political, economic and social realities within which planning is undertaken.

I feel everyone involved in getting to "point b" on this issue should be acutely aware of this reality. It will not help to have various agencies and interests working in isolation. If this occurs, it is quite possible that in attempting to serve other equally valid objectives or address other issues associated with, say, subdivision or development, various departments/interests may find they are working at cross purposes. This may even occur among various divisions within the same department not to mention that provincial initiatives may either conflict with local initiatives and/or simply not adequately account for local circumstances. And, quite apart from these potential conflicts, there will be the seemingly inevitable differences in perspective between approving authorities and the development community to content with as well. Many of these conflicts or difficulties are not going to be easy to resolve: it is naive to think otherwise.

What this points to is the need for coordination, cooperation and collaboration. This is where planners' expertise with process can play a particularly significant role. Basically, for any of this to work on the ground, to derive mechanisms that will be used, to get to "point b", we must balance all the interests involved, including those of community-based organizations and of the development industry. To ensure that we are all pulling in the same direction, we will all need to compromise our various "ideals" concerning how we want this issue addressed and, for those in government here, give up a little jurisdictional interest in the process (often much more difficult to achieve in practice than in theory, based on my experience).

This conference is a good place to start. As the theme suggest, we are all "partners in protection".

AN INTERFACE FIRE SURVIVOR'S TALE[1]

Nancy W. Mills[2]

ABSTRACT: On August 4, 1990, the Awbrey Hall fire began in an abandoned campsite west of the city of Bend in central Oregon. Before it was contained, the fire had consumed 3,353 acres of forested land and 22 homes. At the time of the fire, Nancy Mills was President of the Sunrise Village Association, a development of 140 homesites in a "natural" setting wherein 10 homes were burned. Nancy's home was not burned, but the Mills' heavily forested acreage and river frontage was completely burned over. The focus of her talk is on the emotional responses of a homeowner involved in a wildland fire, at the time of the fire and as they have evolved during the ensuing two years. She will also offer some thoughts on how survivors of interface fires might be involved in the education of the public regarding the practical consequences of not personally protecting one's interface home or property from fire.

PRESENTATION

The Awbrey Hall fire occurred in Deschutes Country, Oregon, on August 4, 1990. Thirty-three hundred (3353) acres of land were burned and 22 homes destroyed. On the recent disaster scale this was a fairly minor event. It was, however, for Oregon, one of the largest fires in recent history in terms of property loss and was a "classic" urban/forest interface fire. It could have been much worse. There was no loss of human life and only a few minor injuries even to firefighters. The fire easily could have moved into the town of Bend itself, but, for whatever reasons, it did not.

At the time of the fire I was president of the Sunrise Village Association. Sunrise Village is a planned community, just outside the city limits of Bend and close to the highway leading to a large ski resort and mountain recreation area. There were approximately 110 homes built at the time of the fire. Of the twenty homes lost in the fire, ten of them were in Sunrise and three more immediately adjacent to it. All but one home has now been rebuilt. We did not lose our home -- more about that later. We have, or rather had, fourteen forested acres with Deschutes River frontage. We did not lose our home; but we did lose our habitat. Every tree and bush, except a few along the yard perimeter around the house were burned. Two years later we have almost come to terms with the loss.

In building our home, we had given careful consideration to the fire potential and had built and landscaped accordingly. In Sunrise, codes were written to maintain a "natural" environment. Clearing and fuel reduction were encouraged, suggested, requested. But not required. Beginning

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[1]A paper presented at Minimizing the Risk of Wildfire: A Symposium to Address Widlfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Homeowner, 61051 River Bluff Trail, Bend, Oregon, 97702.

more than two years before the fire, the association had been trying to upgrade the water system serving Sunrise. A small fire on the riverbank had shown us—and the local fire department—that we had absolutely no fire flow pressure. At the time we were in the country, not the city of Bend, and water was supplied by a private company. We knew we had a fire hazard. But our emphasis was on the water supply, not fuel reduction. When the fire occurred, power to the pumps sending water up to Sunrise was cut and there was no water at all. Of course, by then we were in the middle of a true-blue wildfire, not just an isolated structural fire and the benefits of having a water supply might be debated. Obviously we made a mistake in our emphasis. We should have been working on both water supply and fuel reduction with equal effort. We should have. We didn't.

One note here might be instructive: The fire prevention officer who was called by a number of residents at varying times prior to the fire, was adamant about the type and extent of brush, limb, needle and other clearing that must be done. Many people reacted to his advice as being actually destructive and urbanizing to the type of environment they sought, too extreme, and, therefore, rejected his advice completely and did little or nothing at all in the way of clearing their individual properties. Sunrise is surrounded on all sides by unimproved land, mostly forested, and the amount of tinder-dry fuel on all this land was great. This is true, to a large extent, of virtually all the Western States in the U.S.

Early in the evening on the day the fire began, my husband and I were at the movies. We had seen smoke from the fire since mid-afternoon, but -- our expectation was that it would be controlled. We had seen it grow, but it appeared to still be a considerable distance away and firefighters always get fires under control, don't they? Coming out of the theatre was quite literally a heart-stopping moment. And the emotions I felt driving home are difficult to even want to describe. When we turned onto the highway leading to our home, we met a roadblock. We had heard on the radio that people were being evacuated from our area. I am a follow-the-rule kind of person, but that night I was prepared to do whatever was required in order to get to my children, then six and three-years old, to my knowledge, were still at home with a 13-year old sitter who didn't know how to drive. The deputy at the roadblock was upset, nervous and trying desperately to perform his duties of maintaining order, and preserving my life by keeping me out of the danger area. Had he succeeded and had my children been killed or even hurt, that life of mine that he saved wouldn't have meant a plugged nickel to me.

The other incident during the fire that sets such a mark in my mind is the fact that it was individual initiative on the part of my husband that actually saved our house. To make a long story short, he bumped into our nearest neighbour, the local police chief (who knew at the time his house was gone) and together, they were able to round up an assistance fire chief who ordered the firefighters back to our house -- a house my husband and the chief hadn't been able to convince the firefighters was there. They were from out of the area and were unable to make a field decision to change their direction of work.

I don't mention those last two events as an argument for every property owner making her or his own decision regarding being involved in the fire. But I am trying to convey to you the state of mind of someone personally involved in a fire and how those events, which fire personnel might see in one way, might be seen in a completely different way.

The actual events of the fire take up some space in my mind's data bank. The events leading up to it, about the same amount of space. But I've run out of disc space for the year following the fire. Although no one died, virtually all of us who were involved in the fire felt that the next year was the absolute pits. It was like a year spent grieving over the death of a loved one. And for many of us, the "body" was kept in view for that year or most of it. The next spring was better, and another year, better again. But for those people whose homes face U.S. Forest land where all the burned trees are still standing, the reminder of Awbrey Butte is daily, even hourly. It would have been helpful to be told that the recovery process would be long and slow. Although I can't guarantee that immediately after the fire we would have heard what was said to us. But hearing those words then, and then again in two to three months, might have been helpful to those of us who kept wondering why we couldn't "get our acts together." That first year the fire was a year of increased family tensions for virtually everyone. Increased physical illness for several. Great anxiety over what to do, and then constant recriminations about whether or not the decision made was the correct one. The second year saw even more time spent thinking on whether or not the right decisions had been made, especially regarding whether or not rebuilding in the same place was brace or just insane.

We all had great difficulty determining what to do about burned trees and landscaping. The advice from foresters didn't always seem reasonable for a home site and that of landscapers not reasonable for a natural, near-forest, non-urban setting. Agency personnel did make themselves available to us, even though we were still in the fire season and there were other fires around the state. They were always polite, accommodating and, best of all, human. But the advice and suggestions were often so general as to be not very helpful in a practical sense. They did plant along the river banks to help prevent water run-off, and that was very beneficial.

It has become something of a theme of mine that, as various government agencies begin to work with one another to deal with the hybrid aspects of the urban/forest interface fire danger, to be truly effective, at some near point, the civilians—the property owners, must be very actively involved in the planning and the long-term missionary work that will be necessary to convince enough property owners to do their own fire prevention. Believe it or not, there are many of us who feel the responsibility for fire safety and control is ours—if we choose to live in that environment. People who have experienced fire loss could be some of your best agents for education. Publicizing some of the not so fun aspects that have to be dealt with following a fire or other disasters should, perhaps, have equal time with stories about the disaster itself.

There have been both positive and negative development in our community since the fire. There have been a few negative aspects. Disasters that affect part but not all of a community, after the immediate problems are solved, can have the effect of dividing that community to some extent. There can be a very real feeling of "them" and "us". Funding of repair and reconstruction work provides a forum for a lot of argument! Most frustrating, however, is seeing the continuing "willful ignorance" of one's neighbours...the denial that it was only this fire which bypassed them. That there will be another. And that they can do something to help themselves...and their other neighbours at the same time.

On the positive side, a bond was established among the residents whose homes burned. For a while they were a self-help group and did much to help each other with the practical problems of rebuilding one's life. They no longer met, but the basic bond still exists. Our homeowners'

group has changed some building codes: Wood shake shingles are not longer allowed for new or replacement roofs and brush and limb clearing are required. Much of the "common area" or open space has been cleaned up; there is a second egress and we now have sufficient fire flow water pressure. I am concerned, however that there has been no institutionalization of fire safety... that there is no standing committee in our community that makes continuing fire safety as important an issue as the color of houses or whether the neighbour's dog has been bothering someone.

The news media has been making an effort to educate the public about the always-present danger of forest fires and the after-effects of those fires. And this is now being done is a positive rather than negative, finger-pointing way. A local development company has done a lot of clearing. State, local and federal agencies have held many meetings to coordinate strategy, equipment, communication systems and funding. I only wish there was more publicity about what all they have accomplished. It appeared obvious that there were some communication problems at the start of the fire. It should be just as obvious to the community that the agencies involved have seen, addressed and solved many of those problems. In the current political climate, that sort of responsible problem solving by both local and national agencies would be gladly seen by the general public.

SESSION III

PUBLIC PERSPECTIVE

HOW TO DEAL WITH THE MEDIA[1]

John Berry[2]

Why is it that the Emergency Services spends thousands of dollars training it's professionals, yet the most important public function you carry out, next to the suppression of fire, is relaying vital information to the public; portraying your branch to the community in a very positive and authoritative manner. But Public Relations and Education, the two most important branches of any service, are the LAST to be given any priority (funding) and the FIRST to be cut. In today's tough economic times, MORE emphasis should be placed on ensuring these two vital functions are insulated from the fiscal axe. Why? Simply put, when it comes to getting municipal approval for funding, perception is everything. If your program has a high profile, if it continues to be a success, if it produces results, and gives your Chief, Mayor, or your Minister positive great media exposure, chances are you'll be greeted much more kindly when you go seeking funds or approval for a new endeavour.

A positive public perception can do so much to help you and your department when things start to hit the fan. A Public Information Officer (PIO) is vital today. Especially when it comes to dealing with that three headed beast known as the media.

Who are we? Why are we such a pain in the butt.

Firstly, know your terms. The media is comprised of three elements or mediums:

1. Newspapers
2. Radio
3. Television

Collectively, we are the Media. We are not the PRESS. That is a 1920's term for newspapers. With the advent of Radio and Television the Press disappeared. We became one. There is nothing more insulting than to call a "PRESS CONFERENCE" for Ladies and Gentlemen of the PRESS. News Conferences are held for the media. You will make friends a lot quicker in our industry if your terminology is correct.

Create a Public Relations program. Appoint someone who is comfortable in speaking publicly, and who has the best interests of your department at heart. The biggest asset the Edmonton Fire Department has, in a Public Relations/Education capacity, is not the Chief, his Deputies, but Tim Vandenbrink. Out of all the PIO's, Administrators, and Chiefs I have ever dealt with, this man KNOWS how to relate to the public, and get his message across and make it stick. Plan to get out Alive is one of the best, indeed it is the best Public Education tool I have seen in a long time. It was Tim's baby. Now granted there will only ever be one Tim Vandenbrink, but you need someone who can get the job done effectively.

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[1]A paper presented at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Japser, Alberta.

[2]Broadcaster, CFRN-TV, P.O. Box 5030, Postal Station E, Edmonton, Alberta, T5P 4C2.

Talk to the Media. Get to know the players. Some people will be more than willing to do anything they can to help. A few may even become your friend. In times of Wildfire, you'll need all the media friends you can find.

Once you have established a solid working relationship with us, you can start making us work for you. Now granted, just as there are bad fire fighters, there are bad journalists. Yes some of them will do anything to get a story, and screw the facts. Luckily these people usually are simply mis-guided and easily brought into line, or they are young, over eager grads trying to make a name for themselves. People like this are not allowed by our industry to stick around. If you ever have a problem with the Media, call that person's News Editor. COMPLAIN strongly. Spend time educating that reporter. Once they are on-side, you'll probably be surprised to learn you have someone with a new found respect for the Service, and an ally.

Remember, when it comes to fire, YOU are the expert. Not the media. You are the author of your own destiny. Please don't scream foul if you're not quoted properly. Was your message clear. Do you state it concisely. Did you do your homework. I had one Chief haul me on the carpet for mis-quoting him. Folks the TV camera never lies. I replayed the video tape for him. And there he was in all of his pontifical glory saying the very words he claimed NOT to be uttering. Be upfront. Don't lie. If you do and get caught, and you will, the media will have a hey day. Everything you had worked so hard to build up will be destroyed. If you don't have all of the facts, tell the reporter you don't know. But you'll check and get right back to him or her. Then do it. That one fact finding mission should then become priority number one. If you need help, then get a co-worker to assemble the info and make that call. You will gain the reporter's respect, and confidence.

NO COMMENT is the most destructive phrase that can be used. Turn it around to a positive. "The matter is under investigation, we are exploring ALL possibilities. When I have something concrete, I will let you know". Now you have given them a tid-bit, without jeopardizing your investigation, and you have avoided the confrontational NO COMMENT.

What do you do when fire strikes and the Media descends upon you and your department. Let's take a look at a typical major fire and how it was covered (Video clip 1 - Edmonton Fire). This is a good example of coverage of a major fire. People make the news. Not reporters. Not cameramen. We want the human element in our stories. Sometimes this can be very difficult at major scenes. But if you co-operate with the media, if you help set-up what they need, then you don't loose control and have media people running all over.

In times of disaster you need that order. Here's an example of what happens if you don't get it (Video Clip 2 - Slave Lake). It wasn't until the next morning that a News Conference was called, almost 32 hours AFTER the fact. It was old news. The electronic media can charter a helicopter, fly to the scene, cover the tragedy, and have it all in living colour by six p.m. The people who I worked with in Slave Lake were excellent. But no one was put in charge immediately to deal with the media. This wasn't even a case of getting the story wrong, there was no story line from officials until a day and a half later.

And then there is the case of total chaos (Video Clip 3 - Tornado). The reason this disaster turned-out so well in the Media, over-all, is because a comprehensive Media plan had

been worked-out as part of the City of Edmonton's disaster plan. We were used by the police, Red Cross and Weather office to relay vital and urgent messages. We were live for almost two hours after the Tornado struck.

Because of our excellent rapport with the Edmonton Emergency services, it was not a THEM/US situation, but a WE scenario that paid off BIG dividends for everyone. If you would like to learn more about how to set-up a PR program, I would be more than willing to come to your town or City and speak to the key players. When YOU win, I win. And hopefully the public is wiser as a result. We are PARTNERS IN PROTECTION.

Summary: How to Deal with the Media

1. SET-UP A PUBLIC RELATIONS DEPT.

2. KNOW WHO YOU ARE TALKING TO:
   - THE MEDIA
   - YOUR AUDIENCE

3. KNOW THE NEEDS OF THE MEDIA

4. GET TO KNOW THE REPORTERS YOU DEAL WITH

5. YOU ARE THE FIRE EXPERT

6. BE UP FRONT. DON'T LIE

7. AVOID THE USE OF "NO COMMENT" IT'S A COP-OUT

8. BE AVAILABLE TO THE MEDIA. WE ARE THERE WHEN YOU NEED US

9. UNDERSTAND DEADLINES

PUBLIC EDUCATION: MULTIPLY YOUR EFFORTS THROUGH COMMUNITY INVOLVEMENT[1]

Tim Vandenbrink[2]

ABSTRACT: Canadian fire statistics are continually among the worst in the industrialized world. Studies indicate that countries with the better fire statistics dedicate more manning and effort in the areas of fire prevention and public fire safety education. The North American Fire Service, traditionally a reactive service, is becoming more proactive and is committing more resources to these important areas. In times of economic recession and restraint, however, these areas are often first to feel the pinch as priority is given to fire suppression services. "If the fire service leadership is not convinced that public education works, they will continue to cut that activity when budget crunches occur... The field of public education will continue to be thought of as a luxury item, or a 'fluff' program which has little substance...rather than [having the] ability to make a difference" (Jim Crawford, Assistant Fire Marshal, Portland, Oregon; Winner of the International Association of Fire Chief's Fire Service Award for Excellence, 1989). The City of Edmonton Fire Department has continually expanded its public fire safety education efforts. Recognizing the reality of limited resources the Department has adopted a philosophy of "multiply your efforts through community involvement". Initiatives such as the Sesame Street preschool fire safety program, Plan to Get Out Alive, Adopt a School, and the Child Firesetters project have proven to be very successful in addressing and improving specific problem areas.

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[1]A presentation at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Fire Prevention Coordinator, Edmonton Fire Department, 3rd Floor, 12220 - Stony Plain Road, Edmonton, Alberta, T5N 3Y4.

SESSION IV

FIRST-HAND PERSPECTIVE

NORTHEAST WASHINGTON FIRESTORM '91[1]

W.E. Wilburn[2], R. Hesseltine[3], R. Anderson[4]

Spokane County, with a 1990 population of 360,000, varied fuel types ranging from urban to primarily ponderosa pine, including pine needles on the roof, with intermingled farm land, grass and homes. Slopes range from flat to rolling. Fire is a common occurrence in this area.

PROTECTION RESPONSIBILITY AND DISPATCH CENTRES SPOKANE COUNTY

The Spokane City Fire Department is responsible for all fires within the city limits, most of the balance of the county is joint jurisdiction between the Department of Natural Resources and the local fire district (the districts also have responsibility for forest and intermingled grass for which they are collect millage as well as structures); there are a few areas where the Department of Natural Resources is solely responsible. All of the fires fell in the area of joint responsibility, with portions of the Trent and Nine Mile Fires in both joint and Department of Natural Resources only. Mutual aid agreements are in effect between fire agencies. In two of the fire districts, the Department of Natural Resources has contracts in which the district provides initial attack and the Department of Natural Resources responds when additional help is needed. In addition, District #4, in the north county, both respond during normal summer working days. In total there are 70 fire stations, approximately 210 fire district apparatus and 1,300 fire fighters in the county.

There are four primary dispatch centres: Spokane City, Spokane FPD #1, Central Dispatch (which also dispatches portions of south Stevens and south Pend Oreille counties) and Fire Central. In addition, two cities, Millwood and Cheney do their own dispatching.

HISTORICAL

The Department of Natural Resources and fire districts have jointly been fighting interface in the Spokane area for over 20 years. Averaging over 100 wildland fires per year with 1 major fire about every 2 years (prior to 1991). Initially only one or two homes were threatened. In

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[1]A paper presented at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Assistant Manger, Resource and Protection Services, Washington State Department of Natural Resources, Northwest Region, P.O. Box 190, Colville, Washington, 99114-0190.

[3]Fire Prevention Specialist, Washington State Department of Natural Resources, Northeast Region, P.O. Box 190, Colville, Washington, 99114-0190.

[4]Fire Chief, Spokane County Fire District #9, W. 14 Graves, Spokane, Washington, 99208.

1975, five homes were threatened and 23 loads of retardant were used to save homes until dozer lines could be established.

CHANGES IN INTERFACE 1970-1990

From 1970 to 1990 the population in Spokane County has increased 25.7%. This growth has increased 11 times faster in the unincorporated portions of the county than in the incorporated areas. During the 20 years 24,000 new homes have been built in the interface, increasing the population by 63,000 people.

HANGMAN HILLS

On July 15, 1987, the Hangman Hills fire occurred with 24 homes lost. This was the first major interface fire in the Spokane area with loss of homes.

The critique following the fire identified four problem areas: Command, communications, media and traffic control, which all could be improved. Four committees were developed by the Chief's Association and Department of Natural Resources, along with two recommendations: 1) Annual interagency fire disaster drills, and 2) formation of an area incident command team.

1. The Communications Committee established a radio net comprised of fire frequencies. These frequencies were already licensed by various agencies in the country.

2. The Media Committee recognized the need of early assignment of fire information officers and working with the media. A fire information workshop was held in the spring of 1988.

3. The Fire Prevention Committee prepared proposed changes to county regulations to better reflect fire concerns. The plan addressed access, building standards, including fire safe roofing, based on fire hazard risk zones in the county. Final recommendations are nearly ready to be presented to the commissioners for adoption.

The Interagency Cooperation Committee identified needs for a county incident command system, NIMMS was adopted. Incident command personnel for ten key positions and training thereof. Training was held for Operations Section Chiefs, Division Supervisors, Strike Team/Task Force Leaders, Staging Area Managers, Incident Commanders, Planning and Logistics Chiefs were held the winters of 1989 and 1990. ICS standard operating procedures were developed for all types of incidents. An interagency instructor cadre has taught the course five times.

DISASTER DRILL

On May 12, 1990, a live disaster drill was held to test the changes. The four hour drill was held in a major interface area. Fourteen fire districts and departments responded along with Emergency Services, Sheriff's Office, Washington State Patrol, American Red Cross, Salvation

Army, Washington Water Power and the media. The drill was evaluated by our peers from throughout the state and Idaho. Minor changes were made after the drill, communication channels were revised and zoned to coincide with dispatch centers.

FIRE PROTECTION DISTRICT PERSPECTIVE - DAY 1

At 0849, the first alarm was received for a major fire at the Spokane International Airport. Within minutes a second major fire threatening structures north of the Spokane Valley was received. Moments later a fire as reported in the foothills of the north Spokane County area, with the first engine reporting multiple structures threatened and a crown fire rapidly spreading east.

The alarms began to saturate radio frequencies as the four dispatch centers sent out 89 alarms the first hour, 57 alarms the second hour and 98 alarms the third hour. In the first 24 hour period they would receive more than 3,000 911 calls and actually dispatch 420 alarms. Dispatchers had exhausted all mutual aid resources within three hours and were forced to triage calls to determine if the situation was serious enough to reallocate engines from another scene. At the time only "life threatening situations" were given any resources with many calling for help being told "there are no units available at this time".

Once on scene, initial attack crews would initiate command and move their units to a designated tactical radio net. As more and more alarms were dispatched, several fires began to share tactical nets and several incidents were forced to operate on primary dispatch frequencies. With over 200 units now deployed, and more alarms to dispatch, all areas frequencies became saturated with radio traffic and nearly dysfunctional. Local fire district chief officers began to utilize cellular phones to communicate with each other, however, due to the onslaught of emergency and other phone calls, the dispatch centres' phones were constantly busy, adding to the problem of requesting, assigning and coordinating resources.

Each fire at this point had its own fire department incident commander and in many cases, a joint DNR incident commander responsible for size-up, development of strategy, ordering, assigning and directing their on-scene resources. However, for the first 12 hours, with most command staff actively engaged in on-scene attack, and centralized command or coordination of local fire resources was being done.

Initial attack crews were faced with a nightmare scenario of more homes to protect than resources available and were forced to utilize structural triage in deploying their resources. Homes had to be quickly sized up as defensible or non-defensible as crews jumped from one house to the next in a "hit and run" highly mobile attack mode. Hundreds of feet of hose was burned and destroyed as crews were forced from their positions by erratic fire behavior. At least two engine crews were caught in sudden wind shifts and "burned over" while seeking their shelter of their truck cab by parking in lighter fuels for makeshift safety zones.

At approximately 1400, the alarm center in north Spokane County began receiving calls of fire in Nine Mile Falls, a community which lies northwest of Spokane next to the long Lake Reservoir. As our crews arrived, they were met by a virtual firestorm of advancing fire with horizontal flame lengths in excess of 60 feet, raining burning embers fell over a five square mile

area, quickly starting new fires. Several homes were already involved and many more were threatened.

The DNR reconstructed the fire spread and determined three separate fires merged between 1330 and 1345 and descended into the Nine Mile area.

A Nine Mile Falls woman tried to escape the advancing fire by car when burning trees blocked her path. She got out on foot, trying to outrun the fire, only to be quickly engulfed in the fast moving fire.

The engine crews retreated to Charles Road with a large open field to their backs and began to steer the monstrous fires round a threatened subdivision. It would be days before this fire was contained.

This firestorm exacted a toll on several fire fighters personally as they lost their homes and all of their possessions while helping to save others.

As the hours wore on and our information flow improved, we began to assess the scope of the disaster. Many fire fighters would work in excess of 30 hours prior to relief due to the need to assign many arriving crews directly to the fires to augment existing operations instead of relieving exhausted crews.

The DNR had requested resources from throughout the northwest earlier in the day and had begun to set up Area Command as staff arrived to fill positions. The first real "big picture" view of the magnitude of this disaster would be at 2300 on October 16th at a briefing at the Spokane County Department of Emergency Services.

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES BACKGROUND - DAY 1

Northwest Washington experienced a "delayed" fire season in 1991. The spring was cool and moist with lush growth of grasses. Normal drying of vegetation was delayed by one to two months. September 1st was the last measurable precipitation in Spokane (only a trace). Fuel moisture in mid October were those normally encountered in mid August; 5% light fuels, 10% heavy fuels.

On Wednesday, October 16, 1991, gale force winds (gusts up to 62 miles per hour measured at Spokane) crossed the Pacific Northwest producing scores of forest fires in Northeast Washington (Spokane, Stevens, Pend Oreille and Lincoln counties) Idaho and western Montana. The winds hit the four county area between 0800 and 0830.

Around 0920 the Northeast Region alerted Fire Control Division in Olympia that we were beginning to pick up fires due to high winds and that all aircraft were grounded because of high winds and dust. Dispatch was notified about 1100 that all local resources were committed, we were into ful-swing ordering of outside resources (overhead teams, overhead, logistics, crews, engines, liaisons, fire information officer's (FIO), weather forecasters, etc.).

As we continued to monitor the incoming fire reports we began to put together a fire organizational plan (which we changed several times as conditions changed). It was very difficult to get any solid information on the complexity of this incident, (there was no one agency monitoring the entire incident) but by 1500 we knew we had major fires in at least three counties and probably more.

At 1700 we called Spokane County Emergency Management Office and set up a meeting for that evening for 2300 for all agencies (Department of Natural Resources (DNR), fire protection districts (FPD), law enforcement, Emergency Management and Spokane County CISD Team) to gather all information we collectively had between us and began to build an operational plan for the next day. Our final plan was to use the Area Command System.

This plan would include available and needed resources, if joint Incident Command (DNR/FPD) where needed; evacuation plan, investigation, critical incident stress team; how to deal with new starts, etc.

By the end of the first day (October 16) we estimated we had over 50 fires, 20 of which were major fires, burning more than 40,000 acres. We had lost over 100 homes and there was one fatality. What a day to remember!

UNIFIED COMMAND

By Friday morning seven fire teams were activated to control the fires in the four county area. Four of these teams were in place under DNR jurisdiction, three DNR teams and one Oregon State team. The Moses Fire, burning both DNR protection and BIA protection lands was managed by the Local Class II Team. The Marshall Lake Fire (all DNR protection) was managed by the US Forest Services (USFS) Newport Ranger District Personnel. The Homestead Fire, which started in Washington State and burned into Idaho was turned over to the Region I - Class II Team, that was managing the Hauser Lake Complex.

UNIFIED COMMAND ESTABLISHED

Our fire weather meteorologist had just told us a second storm was forecasted of equally strong winds and would likely hit the area by late Sunday or early Monday.

By 1800, Friday October 18th, all fires except Nine Mile were trailed. All existing complexes were alerted to the anticipated winds and requested to provide any existing resources they could to complete the containment of Nine Mile by 1800, Sunday. The Wilbur and Deer Park Complexes each provided two divisions of overhead and equipment which were on the line at Nine Mile Saturday.

At a 2100 p.m. strategy meeting of all the participants they were alerted to the second storm and plans were started by all players (fire, law enforcement, Emergency Services, CISD and other players). A 1000, Saturday contingency meeting with Spokane and Lincoln counties was set up at this time.

On Saturday, a state of emergency was declared jointly by Spokane County Commissioners and the City of Spokane. An expanded unified command was initiated involving the City, County of DNR. Our 1000 meeting brought together over 100 people to try and build an organization which blended together all players, including teams that were in place, i.e. DNR Area Command, existing dispatch organizations and local fire districts, Emergency Services, law enforcement and support organizations. At the same time a method was needed to provide timely information to the general public and media. We broke the people into four groups: fire, law enforcement, emergency services and public information. We game them 1½ hours to come up with a planned strategy for the second storm.

The groups were called back together to discuss their plans with the entire audience, and how all the plans would fit together. At this time we explained how Unified Command would be set up as the organization to bring this joint effort together.

Our challenge in setting up a unified command, was a system which was not too complicated (many of the players had never used the system), was simple to understand (i.e. chain of command, where they fit in the system), and was effective in reaching the objectives and priorities of this incident.

Unified command is nothing more than a method for agencies or individuals who have either geographics or functional jurisdiction on an incident to come together in a common organization, determine overall objectives and select the strategy and action to achieve the objectives.

As we continue to analyze this incident we will find more things which need to be addressed and improved in our operations, that we might be better prepared for the next such incident. As we said, be better prepared for the next such incident. It might not happen to me but someone in this room will probably be involved in a similar incident in the near future.

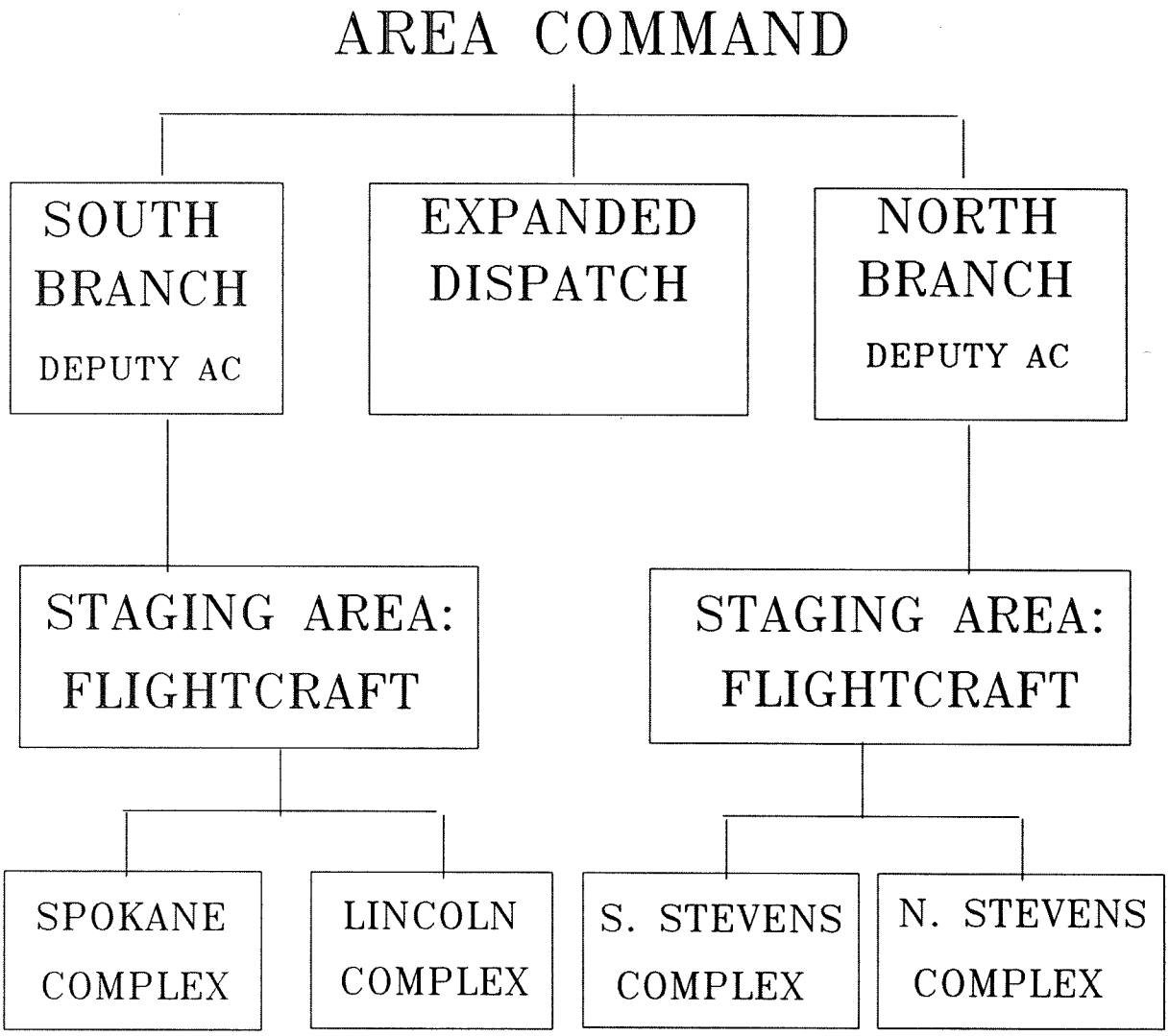
We believe that the incident command system is the best incident system going for us at this time in our business. When multi-agency incidents occur the unified command system is the most effective and efficient way to operate. It worked for us and it will work for you.

UNIFIED FIRE COMMAND

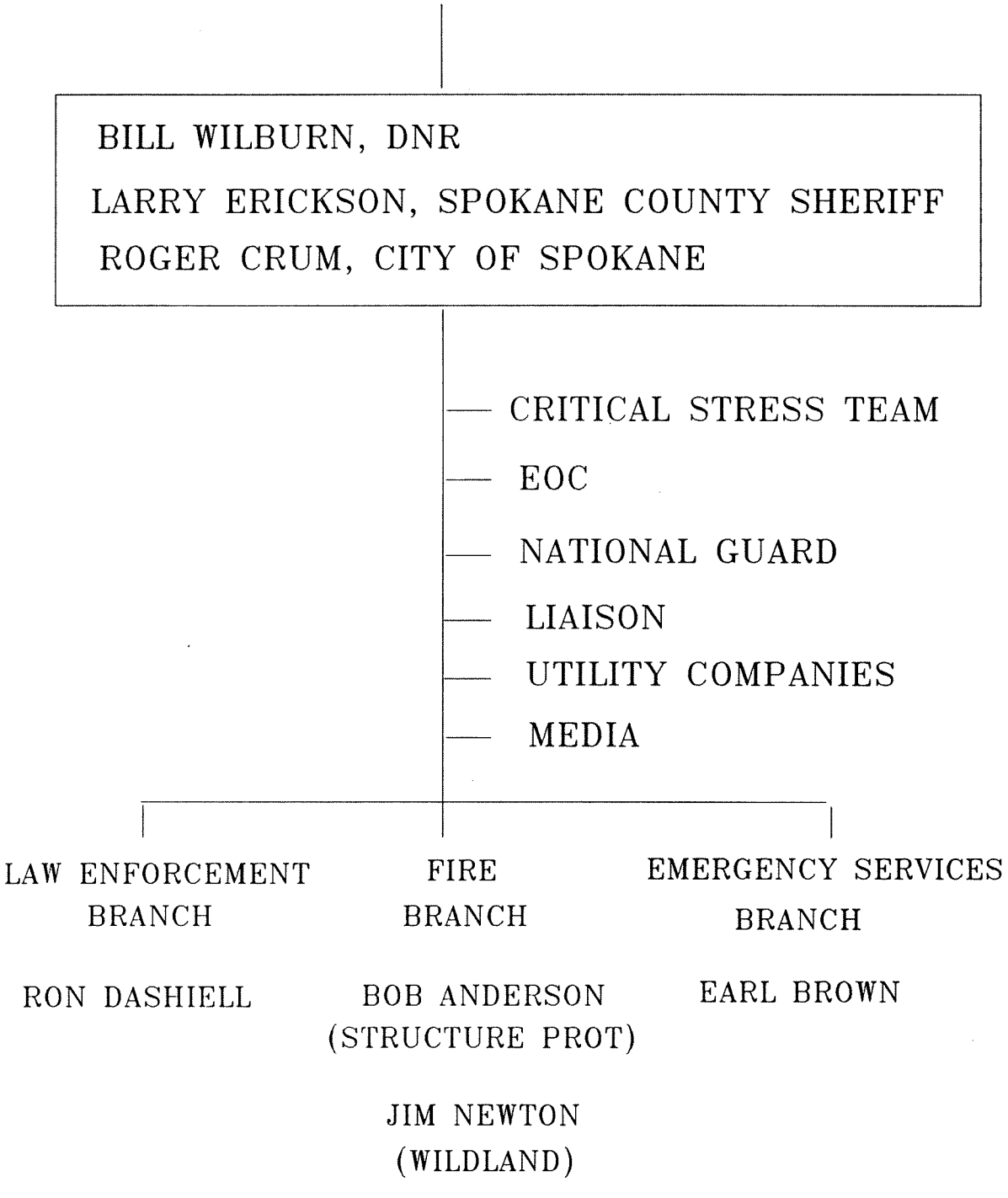
As fire commander, I reviewed the existing containment status, the huge 13,840 acre Nine Mile Fire, just northwest of Spokane was only 50 percent contained and burning in an area with a previous history of spotting across the river. With over 93 fires now actively burning in the Spokane area, it's urban population of nearly 360,000 virtually surrounded by fire, and with more gale force winds predicted, we would likely see new starts and fires.

Fire officials felt it was possible the Nine Mile Fire could extend to the Chattaroy Fire, creating a massive fire front in the north Spokane suburban area.

The new layer of fire command was imposed on top of the existing two complexes to handle new incidents and to provide additional resources to existing teams as needed.The


AREA COMMAND
SOUTH BRANCH
DEPUTY AC
EXPANDED DISPATCH
NORTH BRANCH
DEPUTY AC
STAGING AREA: FLIGHTCRAFT
STAGING AREA: FLIGHTCRAFT
SPOKANE COMPLEX
LINCOLN COMPLEX
S. STEVENS COMPLEX
N. STEVENS COMPLEX

UNIFIED COMMAND ICS



operational objective was to protect in place the urban population and property of Spokane County.

The challenge was to blend together all the players, including existing fire command team, existing and expanded dispatch resources, local fire departments/districts, emergency services, law enforcement and support organizations in a 24 hour period and to work together as a cohesive team to accomplish the mission. The extensive use of ICS and staffing key ICS positions with both a local fire department and a DNR person facilitated this process.

Spokane County was divided into four branches, and branch managers were appointed to coordinate and control resource needs and assignments in each branch. The key element to a coordinated effort was the assignment of an on-scene incident commander to the existing fire incidents who could communicate face to face with the existing DNR incident commander and who could provide instant radio report to his branch manager of situation status or resource needs so unified fire command could respond quickly to any situation.

By 1000 hours Monday, October 21, the second storm arrived as predicted, bring with it winds to 52 miles per hour. As fires flared up, fanned by high winds, the on-scene incident commander would request resources and strike teams were quickly dispatched to assist. A total of 16 additional strike teams were deployed throughout the day. By 1600 hours the winds had calmed and all major fires were contained within existing lines, thanks to efforts of over 4,000 fire fighters, over 400 engine companies, a massive air attack by 20 aircraft, and hundreds of support personnel who worked around the clock, the threat had passed.

We began demobilization at 0800 on Tuesday, October 22, with the structural strike teams taking priority due to a predicted snow storm in the Cascades.

The incident was the worst threat of life and property in Spokane's history, and we could not have dealt with a disaster of this magnitude without the joint efforts provided by many local fire departments, the DNR and ODF.

This event effected the entire community. A community debriefing plan titled "Community Recovery" was initiated to assist local residents with venting their fears and also to provide valuable information on available local, state and federal assistance.

MEDIA AND COMMUNITY RECOVERY

Before we look at community recovery, lets review the challenge of fire information on Saturday. The challenge was twofold: First, how to inform and activate the public without causing panic, and secondly how to reduce the volume of general phone messages to the 911 system.

The Plan Developed had Three Components:

1. Provide information to homeowners who could better prepare their homes to withstand potential new starts. The idea was to have them clean their roofs and yards to flammable pine needles, dry grass and other debris. This provided the homeowners with something proactive they could do to help. Four collection points were established around the county where homeowners could drop off their debris. The county employees then hauled the material to the landfills.

2. Provide timely and accurate fire information to the media on new fires and changing conditions on existing fires.

3. Provide a phone system for the general public, where they could call and get answers on any fire or support questions. These ranged from giving information on debris collection points, how to do it tips, to questions on specific fires, or "fire trucks with sirens going by my house - what's happening?" An "information number" was established, with multiple phone lines and staffed with "emergency service volunteers" and three Fire Information Officers.

A news release was prepared and released by unified command at the major Saturday media briefing.

To support this group, the County Emergency Operation Center (EOC) was activated with three Information Officers present. Each fire camp and Unified Fire Command were suppose to call the EOC with fire updates. The Information Officer would in turn call the media and the public information phone system so both would be giving out the same information. This system did not work and one Fire Information Officer was moved to Fire Command to monitor activities and call the EOC. This change made the system effective.

The public phones were staffed for over 42 continuous hours. At the end of this, the fire information personnel felt they had received a lot of fears and anxiety, people were amazed that they "talked to a real live person that new something about fire" rather than a recorded message. But there were still a lot of concerned people, especially the people who had lost their homes or were threatened. From this continuing concern was born a program called "Community Recovery".

Many agencies, ranging from the Red Cross, Salvation Army, neighbourhood centers, state and local Emergency Services, Critical Incident Stress Team, fire agencies, law enforcement and the power companies participated. About one hour of presentations on what happened and what services are available, were followed by questions and answers, first in a group format and then later one-on-one at listening posts if people wished. We wanted to let the people know their feelings were "normal", and give them a chance to talk through their experiences. Follow-up stress counselling and support is still continuing.

LESSONS LEARNED FROM THE COMMAND

1. Order appropriate resources.
2. Adequately staff receiving and staging areas well in advance of arriving companies.
3. Operate in a well equipped command center to sustain 24 hour operations.
4. Pre-plan backup personnel for each command function.
5. Communications - programmable radios, cellular phones on priority channel, portable radio repeater system, technician.
6. Safety officer is needed to oversee staging area personnel, briefing and equipment.
7. In Unified Command, contact the position not the person.
8. Keep a supply of regional emergency response maps on hand for liaison personnel.
9. Coordinate with existing complex (groups of DNR fires) fire commanders.
10. Resource receiving area should be kept separate from existing base camps.

LESSONS LEARNED FROM OVERALL INCIDENT

1. Unified command works! Implement it early anytime you have joint jurisdiction responsibility.
2. Standardize ICS alleviates confusion and provides an effective management tool for control and coordination of resources.
3. Joint training structural/wildland improves operational effectiveness.
4. Communications were inadequate.
5. Need to improve resource ordering and documentation.
6. Need a regional resource tracking system.
7. Need a regional situation tracking system.
8. Critical incident stress debriefing team is a necessary element.

9. Continue effort to "build in" fire safety:

   - Access
   - Water Supply
   - Fire-safe roofing and building materials
   - Defensible space

10. Involve other agencies and organizations in disaster planning and drills (Red Cross, Salvation Army, law enforcement).

11. Need to develop local/regional command team to avoid unnecessary transfer to outside people.

CONCLUSION

In conclusion, we would like to share with you a few of my thoughts on where we should be going in the future to reduce the risk of another disaster such as the 1991 fire storm incident.

The key to the interface problem in not suppression, but rather prevention and public education backed by strong financial support. If we are going to reduce the loss of life and property damage in the interface, we must have a strong commitment to do so by such players as:

1. Fire, law enforcement, emergency service officials

2. Building and trade associations.

3. County planners

4. State and local elected officials

5. Homeowners

6. Utility companies

If we can get all of these players working together for the common good of our communities, we then will have a start on solving our interface fire problems.

SESSION V

TRAINING PERSPECTIVE

WILDFIRE SUPPRESSION TRAINING: THE FOREST TECHNOLOGY SCHOOL PROGRAM[1]

Terry Van Nest[2]

ABSTRACT: As wildland resources at risk from wildfire increase in value and the wildland/urban interface situation continues to expand, wildfire suppression becomes a sophisticated planning and operational activity which demands high level resource commitments and financing. More than ever, wildland fire suppression agencies are recognizing the need to provide their personnel with the highest level of training possible. The Forest Technology School provides a number of suppression oriented courses for the Alberta Forest Service in the area of initial attack and large fire management. Recently, initiatives have been made to provide training to other fire agencies under a multi-agency concept. In order to enhance the fire training program, the Forest Technology School has utilized videodisc technology to develop a wildfire simulator as well as providing interactive videodisc courses which allow training at the work site.

INTRODUCTION

Alberta's Forest Technology School is unique among educational institutions in the province. The school's primary functions are to deliver educational programs in the renewable resources area to assist government personnel and special interest groups in upgrading their skills and to provide instruction to students completing their second year of the Northern Alberta Institute of Technology forest technician program. The school is operated jointly by the departments of Forestry, Lands and Wildlife and Energy.

Located in Hinton, 280 km (175 mi.) west of Edmonton, the Forest Technology School is situated in the heart of Alberta's forest Country. Nearby are Jasper National Park, Switzer Provincial Park and Wilmore Wilderness Park. Open pit mines, a pulp mill, forested lands and extensive petroleum activity, are all close by. These add significantly to the learning resources available to the school.

The Forest Technology School Facilities

Situated on a ridge overlooking the town of Hinton and the Athabasca River Valley, the Forest Technology School is a self contained educational centre. Its facilities include a rappel tower, two modern residences with accommodations for 165, dining services, greenhouse and nursery, the Alberta Forest Service Museum, a fire lookout tower and a garage/warehouse complex.

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[1]A paper presented at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Senior Fire Management Instructor, Forest Technology School, 1176 Switzer Drive, Hinton, Alberta, T7V 1V3.

The academic building comprises six classrooms, eight specialized labs, a library, gymnasium, indoor rifle range, recreation room and administration offices. As a complement to the educational centre, the Cache Percotte Forest; a 3070 ha (7586 ac.) tract of forested land; located adjacent to the campus; has been set aside as a training area for students enrolled at the school. This forest provides a valuable training site where students are able to practice the hands on skills essential to well-qualified forest technicians. Some examples of training activities within the forest are: forest management, planning, timber cruising, learning current harvesting techniques, aerial photo interpretation, and recreational planning.

The Forest Technician Program

The school's facilities are used extensively by students completing the second year of the two year Forest Technology Program offered through the Northern Alberta Institute of Technology (NAIT) in co-operation with the Forest Technology School. The program stresses forest management for commercial timber production within a multiple use setting. Graduates of the two-year program receive a diploma in forest technology, which prepares them for government service or resource-related jobs in the private sector. Entrance is limited to 75 students annually, and all students must successfully complete the first year at NAIT before entering the Forest Technology School.

The Departmental Training Program

More than 40 different short courses are made available through the school to Energy/Forestry, Lands and Wildlife personnel and special interest groups. They are designed to support or enhance work done by these departments in the areas of environmental protection, management of renewable resources and providing trained personnel for specialized positions. Such courses keep resource management staff current on advanced technology and techniques. Subject areas include forest fire control, timber management, land use, recreation management, wildlife and fisheries management, and administrative techniques.

Many other agencies use the school for their own training programs. Municipal Affairs, Provincial Parks, Canadian Parks Service, several post-secondary institutions and local industries conduct courses at the school on a regular basis.

More than 4000 men and women received some form of training at the Forest Technology School in 1991.

Model Forest

In 1992, the FOOTHILLS MODEL FOREST was established under the Federal Green Plan, Partners in Sustainable Development of Forests program. Under this program, the Forest Technology School will be developing a number of training activities. Although the model forest program is still in its infancy, training programs are to be developed which will target local,

provincial, national and international audiences. Risk Management and GIS based Decision Support System training are examples of courses which will be developed through this program.

THE FIRE MANAGEMENT TRAINING PROGRAM

Departmental Courses

As the value of Alberta's forest resource continues to increase, its protection relies on a modern, efficient and effective fire management program. The Forest Technology School plays an important role by providing intensive training, as well as updating programs for fire management personnel. A unique training aid is a fire simulator, which places students in realistic situations without the dangers of an actual fire.

Departmental Course List (courses held at the Forest Technology School).

Air Attack Officer Training Course
Air Attack Officer Strategy and Tactics Seminar
Air Tanker Base Manager Course
Initial Attack Crew Leader Training Course
Helitack Training Course
Cat Boss Training Course
Crew Boss Training Course
Industry Crew Boss/Fire Boss I Training Course
Time Officer Training Course
Fire Prevention I Training Course
Fire Prevention II Training Course
Sector Level Fire Suppression Course
Division Level Fire Suppression Course
Prescribed Fire
Decision Support Systems

Although the above courses have been developed to meet departmental needs, seats are normally available to other fire management agencies.

Departmental Field Courses:

Cook I Training Course
Firefighter Training Course
Squad Boss Training Course
Timekeeper Training Course
Initial Attack Crew Member Training

Multi-Agency Courses

In 1990, the Alberta Forest Service and the British Columbia Ministry of Forests, together with the Forest Technology School held discussions regarding the possibility of the British

Columbia Ministry of Forests accessing the Forest Technology School for fire training. As a result of these discussions; a former departmental course; "Advanced Fire Behavior" was offered in 1991 as a multi-agency course.

In 1991, similar discussions were held with the Canadian Parks Service. At this time, other western Canadian fire agencies were approached by the Forest Technology School to see if there was interest in participating in a multi-agency training approach. As a result of a positive response, a meeting was held at the Forest Technology School in the fall of 1991, where representatives from Alberta, Canadian Parks Service, North West Territories, Saskatchewan, Forestry Canada, CIFFC and the Forest Technology School worked on a process for developing multi-agency fire training courses (Agencies indicating support but unable to attend the meeting were: British Columbia, Yukon Territories and Manitoba). "Advanced Fire Behavior" was selected as the pilot course for this concept. In 1992, the course was held with Instructor assistance from Alberta, British Columbia, Saskatchewan, North West Territories and Forestry Canada. A total of 45 students attended this course.

"Advanced Fire Behavior" will again be offered in 1993 and hopefully additional courses will be identified for development under this concept. The Forest Technology school will continue to support a multi-agency training concept as long as there is sufficient interest by fire management agencies. It should be noted that courses developed under this concept are not exclusive to the Forest Technology School.

Other Courses

Fire In Resource Management

In the past two years, discussions with the National Advanced Resource Technology Centre in Marana, Arizona, the U.S. Forest Service and the steering group for the course "Fire in Resource Management" have been held regarding the possibility of holding this course in Canada. As a result of these discussions, a Canadian version of "Fire in Resource Management" will be held at the Forest Technology School in 1993. This course has been advertised both at a national and international level.

Interactive Videodisc

The Forest Technology School with assistance from various fire management agencies has developed two interactive videodisc fire training packages: the Principles of Fire Behavior, and Wildfire Assessment.

The Principles of Fire Behavior is available through the Forest Technology School while the Wildfire Assessment is available from ACCESS Network in Edmonton, Alberta. These courses allow students to obtain training without the need for a formal classroom atmosphere. The courses are contained on computer software while complementary audio and visual sequences are contained on a videodisc. A PC computer, a motion video card and a videodisc player are required to operate these courses.

Two additional videodisc courses are planned in the future:

Prescribed Fire
Fire Safety

Over 300 individuals attend fire courses at the Forest Technology School each year. These courses earn national recognition for the school in the field of fire management training.

STRUCTURAL FIRE PROTECTION TRAINING PROGRAMS AT THE ALBERTA FIRE TRAINING SCHOOL[1]

Laird Burton[2]

ABSTRACT: The potential loss from wildland fires demands coordinated training efforts between parallel agencies. This presentation will attempt to define areas of common or parallel programming and determine how it should be modified for broader acceptance. In addition, the program will explore new training initiatives to minimize the risk with this vital interface.

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[1]A presentation at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Supervisor, Alberta Fire Training School, Drawer 388, Vermilion, Alberta, T0B 4M0.

EMERGENCY TRAINING PARTNERSHIPS: A WIN FOR EVERYONE[1]

Judith Hughes[2]

INTRODUCTION

There is a changing world-wide philosophy about dealing with natural disasters. Increasingly, there is a move towards a proactive, multi-disciplinary approach. In fact, the current goals and objectives of the United National International Decade for Natural Disaster Reduction (IDNDR) refer to innovative, interagency, international approaches to disaster reduction.

The future lies in a philosophy that anticipates hazards rather than reacts to disasters. This process requires cooperative, collaborative approaches involving all levels of government, industry, public institutions, non-government entities, international organizations, etc.

Education, training and awareness programs need to take a proactive, multi-disciplinary stance as well. Quite simply, people who live and work in hazard prone areas need to know the nature and probable impact of natural hazards and how they can protect themselves and their families. Moreover, decision and policy makers need to know how to protect their communities.

The urban/rural interface and the resulting wildfire hazard presents a challenging application of this pro-active interdisciplinary philosophy. Traditional one dimensional approaches to dealing with natural disasters are no longer appropriate, tied as they are to parameters based upon the nature of the emergency, nature of the response agencies and so forth.

THE WILDFIRE PHENOMENON - LESSONS FROM OAKLAND

Recent wildfire tragedies in the Oakland Hills of California can serve as valuable lessons throughout North America because they demonstrated how devastating such urban wildfires can be, and in turn, they highlighted the unique requirements for population protection. The magnitude of the disaster with some 1800 firefighters battling to save lives and homes prompted a major report in February of 1992. **The Report of Operation Urban Wildfire Task Force** provided this advice.

Addressing this problem will involve not only fire officials but also many other groups with responsibilities for community protection, skills to contribute, or a strong interest in finding an appropriate solution. Those concerned include lawmakers, building professionals, community officials, and other community leaders (p1).

After reviewing the experiences in the Oakland wildfires, the Urban wildfire Task Force focused on four main areas that exemplify a multi-disciplinary attitude:

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[1]A paper presented at Minimizing The Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Judith A. Hughes, Director of Training, Alberta Public Safety Services, 10302 - 146 Street, Edmonton, Alberta, T5N 3A2.

- Encouraging the adoption of fire safety measures in homes in areas at risk from urban wildfires;

- Working with the Nation Fire Protection Association's Wild Land Management Section to develop urban wildfire codes, and to encourage State and local officials to adopt these regulations;

- Developing a national public education campaign to reach two primary audiences in urban wild land areas - local officials and families - who will be encouraged to take actions to minimize risks at the community and family level, respectively; and

- Working with local jurisdictions to encourage them to take appropriate action to address the urban wildfire problem through measures such as establishing mutual aid agreements and implementing a single incident command system to facilitate multi-jurisdictional response.

In addressing all four areas, the Task Force stressed as an overriding principle:

> Above all else, the Federal Emergency Management Agency (the American federal Emergency Preparedness agency) should work to assure joint and cooperative effort among wild land agencies, emergency management, law enforcement, and fire service agencies at Federal, State, and local levels. (p2)

and

> ...if each agency goes in different directions in pursuit of the goal they all share - prevention and preparedness for urban wildfires at all levels-duplicative or less effective efforts will be the inevitable result (p2)

Training has an obvious role in dealing with the urban/rural interface issue. With respect to the identification of high risk areas, once a set of standard procedures for quantifying risk is developed, training and educational programs will be required in the area of risk assessment targeting homeowners, emergency responders and decision and policy makers.

Frankly, part of the public education process is one of influencing principals that are key in developing a strategy to address the wildfire issue. These include elected officials, educators, land use developers, planners, public safety officials, insurers, homeowner groups, lenders, builders, contractors, trades people, developers, media people, architects, realters and engineers. Clearly, to influence these groups, a multi-faceted approach is required, Traditional training approaches will simply not be adequate.

An efficient strategy will target high risk groups. In the short run, the decision and policy makers must be educated about the urban/rural interface and the special emergency preparedness concerns. They must be given the information they need to make informed decisions about land use and allocation of resources. In the longer term, educators must create and foster a "culture of safety". A safety conscious public must be aware of the special concerns of the urban/rural interface, of which wildfire is a prime example.

ALBERTA PUBLIC SAFETY SERVICES - A COOPERATIVE TRAINING PHILOSOPHY

Alberta Public Safety Services (APSS) Training School, like other training institutions in the emergency preparedness field, has come to the conclusion that in order to meet our obligations efficiently and effectively, we must work cooperatively with other institutions. None of us can afford to do it alone, and frankly, we will do a better job if we work together. This is true in all areas of emergency preparedness training including the special concerns brought about by the urban/rural interface issue.

Recent concerns about the wildland/urban interface have had an impact upon trends in emergency preparedness training. The philosophy of emergency training is becoming more cooperative and community-responsive. Training institutions are aware that more and more, they must work together to get the job done. Old distinctions based upon type of emergency, response agency and geographical location are not longer the main training parameters.

Mutual aid epitomizes the shared approach to response that will be the hallmark of the future. Planning is now seen so inextricably tied to response that mutual aid agreements are a major part of the emergency planning process. Emergency training must respond to this trend.

As urban areas encroach on rural settings they bring urban hazards with them. Large industry is increasingly located in rural settings, placing particular demands upon rural response agencies. As a result, mutual aid agreements between rural and urban communities and between industry and communities must reflect an understanding of the needs of these groups.

Training institutions must assist in this process. Some recent changes at the Alberta Public Safety Services (APSS) Training School were designed with this changing climate in mind. Examples of an integrated approach to training are the Emergency Planning courses at APSS. There are, in fact, five Emergency Planning courses (for municipalities, Indian Bands, Metis Settlements, Government Departments and Elected Officials). Also under discussion are planning courses for Mayors/Elected Officials, Schools, and Industry. This course design presented an interesting challenge. How does one address the particular needs of the constituent group while maintaining the integrity of the Emergency Planning principles? At the same time one must acknowledge the reality that the groups do not live in a vacuum, that they are part of a greater community. Even within groups distinctions occur, for example, an Emergency Planning course for municipalities must meet the needs of large urban centres as well as clusters of rural hamlets.

If we are to empower communities to take responsibilities for their safety, one thing became clear early on in our planning process. We have to take our courses "on the road" where this is appropriate. A city surrounded by clusters of farming hamlets has very particular needs as a group of communities. Great benefits accrue by bringing courses out to these community clusters and ensuring that "hands on" experiences in the courses are relevant to their needs. One element of this is the rural/urban interface and how this may have a bearing upon emergency planning and mutual aid agreements. In the past the Emergency Planning course was offered only as a singly entity and only at the APSS Training School in Edmonton. Now it is available out in the regions around Alberta and in five different versions designed to meet specific needs.

There were two other needs that students expressed to us. One was that they needed assistance in providing a context for their communities for what they were learning in their courses. We could assist by leading them videos and other material to help them with community awareness. Another

need was that of follow up. We began a process by which we contacted students a month after the course to see how they were doing. In some cases this prompted them to take the action they vowed to take during the last hour of the course. In other cases, they had begun to take action and needed more help from us, or were able to offer us advice.

Cooperation amongst training institutions is increasingly important for philosophical as well as fiscal reasons. Frankly, none of us will do as good a job alone as we can do cooperatively. Furthermore, equality of access to training can only happen if we share resources. For example, APSS has offered its Dangerous Goods Second Responder course at its Edmonton School for five years. Designed as a 2½ month in-class course located in Edmonton, this course became out-of-reach for communities located beyond commuting distance of Edmonton. It was meant to be accessible to all Alberta communities, but effectively, it was not. It is now being revised to ensure a more equitable access across Alberta, delivered in such a way that the work of the response units is not disrupted.

In order to revise the course to allow it to be delivered at a distance, the cooperation of other training schools was required. There is a real will to take a team approach to such an initiative. A team consisting of Alberta Public Safety Services, Alberta Fire Training School, Edmonton Fire Training School, Calgary Fire Training School and others is now working on this revision.

The rural/urban interface presents other anomalies for trainers. As fiscal times become tighter there is a danger that courses will be delivered in locations that can afford to mount them, not necessarily in communities that need them. Alberta Public Safety Services has an obligation to be pro-active in discovering there the needs are and use imaginative means of meeting them. Recently, APSS training Division with the assistance of our field officers, conducted a needs analysis of a course dealing with Ice Rescue/Cold Water Near Drowning. Urban communities tended to have some access to this kind of training, whereas many smaller, rural communities, located near water and likely to experience this kind of emergency, did not have access to this training.

It is the responsibility of APSS to ensure that these communities have access to this training. This winter APSS will pilot an Ice Rescue/Cold Water Near Drowning course with a view to offering it to communities around Alberta.

A ROLE FOR APSS IN WILDFIRE TRAINING

Because APSS offers courses throughout Alberta, and because we aim courses at the community level, we are positioned to incorporate the special concerns of wildfire in our courses. For example, our Emergency Planning courses could identify wildfire as a significant concern in communities where the wildland/urban interface makes this a particular hazard. The municipal emergency plan is a focal point in these courses and, in turn, a hazard analysis is a part of that plan. This is an ideal opportunity to raise the awareness of communities about wildfire.

The case study approach used in many of our courses should emphasize this particular hazard when it is appropriate to the community. Moreover, those identified as candidates for these courses should include the groups identified by the Urban Wildfire Task Force referred to above. Traditionally, students have largely been fire and local disaster services personnel as well as elected officials and other municipal officials. These groups were identified by the Task Force to be sure, but what of the land planners, realters, insurers and so on. We need to broaden our view of likely training candidates.

In terms of public awareness, there is a great deal of work to be done. The public is not aware of the potential for wildfire damage in Alberta. They do not know about the problem of narrow access roads that impede responders. They are unfamiliar with various hazard potentials associated with different vegetation. No one has told them about precautions that they can take within their own families. We need to cooperate better in getting these messages out in the community. Community groups, schools and the like can be allies in assisting this pubic awareness effort.

INNOVATIVE COURSE DELIVERY - BETTER ACCESS TO TRAINING

Once we have the will and the commitment, we need to take a hard look at the means. Alberta has a geographically dispersed population and to offer courses in urban centres only is to deny that reality. It is our responsibility to take our courses "on the road", to get our into the regions and ensure that we are responding to specific community needs. In some communities Ice Rescue/Cold Water Near Drowning represents a significant hazard, in others wildfire is more significant. To meet the needs of the communities we need to know the communities and find ways of discovering their needs. Having done so, we need to design and use innovative ways of delivering courses. Teleconference, home study, interactive video are all ways of meeting community needs. The advantage of employing distance delivery techniques is that they have the potential of freeing the student of the restrictions of time and place. Studying can be done in their home communities at times convenient to their schedules. This is important in communities where individuals often play several roles (some of these voluntary).

The technology required to mount some of these distance techniques would be best acquired jointly by training institutions. There is no need to duplicate equipment or course design efforts. This is an area where cooperation is greatly needed.

CONCLUSION

To meet the needs of Albertans, emergency training must be:

- Accessible to all Albertans;
- Adaptable to particular community needs;
- Accountable to all stakeholders who have expectations;
- Available to those who need it in the way they need it;
- Aimed at those at risk and those who can mitigate disaster;
- Multi-disciplinary in approach;
- Pro-active for prevention;

In order to achieve these objective,s emergency trainers must:

- Assess community needs with community input;
- Respond to community needs;
- Cooperate with other trainers in course design;
- Cooperate with other trainers in course delivery;
- Assist in on-going awareness;
- Empower communities to be pro-active.

The threat of wildfire in Alberta is real and the urban/rural interface issue is a prime example of the need to take a pro active multi-disciplinary approach that begins by empowering communities to take responsibility for their safety. From the individual through the family and schools, to community groups, a culture of safety will grow and become part of the community's view of itself.

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SESSION VI

LOOKING AHEAD

FUTURE ISSUES AND TRENDS IN THE WILDLAND URBAN INTERFACE[1]

William J. Baden[2]

ABSTRACT: There will be a continuation in the population shift from urban to suburban living which began after World War II. The increasing population trend will reinforce another trend that I will call the "Fires of the Nineties" e.g.: The Paint Fire near Santa Barbara, California in 1990; Firestorm '91 around Spokane, Washington and the Oakland Hills, California fire in 1991; The Fountain fire east of Redding, California in 1992. There will be a continuing effort among and between the wildland and structural fire services to improve mutual training and incident activities. The utilization of common incident management systems will help. The expanded use of Class A foam will laid in minimizing structure damage or loss. The improvement of water supplies and systems for interface areas will improve suppression efforts. The most beneficial trend is the increasing community and public awareness of the interface problems. The awareness trend will surface the issue of fire safe code development and enforcement through the adoption of standards like NFPA 299, Protection of Life and Property from Wildlife. The research efforts will be directed at fire behavior in interface areas and toward the sociological issues related to the behavior modification of the public and residents in interface areas.

INTRODUCTION

In this paper, I will discuss issues and trends in the Wildland/urban interface in the near future, 1992 to the year 2000, and in the more distant future, the year 2001 and beyond. There will be a continuation in the population shift from the urban to the suburban and rural living. This shift will increase as the population increases, only at a much quicker rate as more and more people seek to improve their standard of living by moving to the less urbanized areas to build primary, secondary, and retirement homes. In the United States the population has increased from 140 million people in 1945, to 225 million in 1980, an increase of over 60 percent (BOGUE 1985). This population was primarily centered in urban areas in the 1950's and 1960's. The migration began in the 1970's from the urban to the suburban and rural areas of the United States. The U.S. Forest Service reported a population growth rate of 25 percent which was much higher than the growth rate for the nation as a whole for the areas in rural counties around the National Forest (NW-UFPC, 1987). The continuing population shift from the urban to the suburban and rural has continued into the 1990's.

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[1]A paper presented at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

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FIRES OF THE NINETIES

We have entered the decade of the nineties with major losses of life and property as a result of wildland/urban interface fires in the United States; specifically in June of 1990 the Dude Fire near Payson, Arizona, with the loss of 56 homes and the lives of 6 firefighters; the Paint Fire near Santa Barbara, California in June of 1990, with the loss of over 600 structures and one civilian fatality; the College Hills Fire in Glendale, California, with the loss of 46 homes; the Stephan Bridge Road fire, in Crawford County, Michigan, with the loss of 86 homes, and the Awbrey Hall fire near Bend, Oregon, with the loss of 22 homes.

The losses to wildland/urban interface fires continued in 1991 with the Firestorm '91 complex in the around Spokane, Washington, with the loss of 114 homes and 1 civilian fatality. As this fire was being brought under control, the Tunnel Fire in Berkeley and Oakland, California occurred. This fire is the most devastating wildland/urban interface fire in recent history with the loss of over 3000 homes, 25 lives, including one police officer an done fire fighter, and an insurance loss estimated at 1.2 billion dollars.

The losses continued in 1992 with the Fountain Fire east of Redding, California, where more than 300 homes were destroyed by fire.

All of these fires have several elements in common including: structures constructed with combustible materials and roofing; inadequate clearance of native and ornamental vegetation; extreme weather conditions, including high temperatures, low humidities and high winds; and the period of structure loss was of short duration, for example, 70 percent of the structure loss in the Tunnel Fire occurred in the first three hours of the incident. All of these fires with their rapid rates of spread overwhelmed the local fire protection capability in the early stages of the incident. These fires have required large numbers of wildland and structural firefighting forces working together to control the fires with major emphasis being placed on the protection of structures. Al West, Deputy Chief for State and Private Forestry of the USDA Forest Service, made a prophetic statement during a speech in 1987 and I quote, "Our firefighting costs continue to climb because of the need for more equipment and personnel to save structures. Increasingly fire commanders have to sacrifice control of the wildfire to defend buildings" (NW-UFPC, 1987).

The utilization of incident management systems throughout many areas of the United States and Canada has improved our response and suppression efforts for fires in the wildland/urban interface. The fires of the 90's will require a continuing development of incident management systems and the utilization of unified command operations throughout the United States and Canada. Not only in the wildfire community but also in the structural fire suppression community as folks work closer together using common systems and terminology.

As the fires of the 90's continue into the decade, and until such time as major efforts are made at improving fire safe residential and commercial development, I expect there will be a continuing trend of increasing fire losses in the wildland/urban interface areas of North America until there is an interface fire of catastrophic loss proportions involving a large of life. That will be a point in time when enough public and political pressure will make significant improvements in life and fire safety in the wildland/urban interface.

2000 AND BEYOND

As we moved into the next century, the population movement from the urban areas to the suburban and rural wildland/urban interface areas will continue with a projected population of 306 million people in the United States by the year 2025 (BOUGE 1985). A similar rate of growth is projected for Canada, which will also face increasing problems in relation to the wildland/urban interface. Another factor to keep in mind is that an increase in the number of wildland/urban interface fires ware caused by people. What can be done as we move into the twenty-first century to minimize the losses from the inevitable fires that will occur?

I would suggest to you that as we move into the twenty-first century there are four areas that will be addressed to minimize the losses from wildland/urban interface fires. The first is public education and awareness; the second is residential planning and development; the third area includes fire suppression activities; and the fourth area is wildland/urban interface research.

The public education and awareness programs through the fire service delivery systems will continue to provide information to wildland/urban interface residence and the public in general. However, a major improvement in public education and awareness programs will come about through the utilization of other groups and organizations; for example, the american Association of Nurserymen and the National Landscape Architect organizations will have developed publications and pamphlets for proper landscape design and appropriate plant use that will be available at local nursery outlets. Also, the same groups will have training for their landscape planning to provide for adequate defensible space for commercial and residential development in interface areas. Another group active in the public education and awareness field will be the local home building associations and building materials outlets in providing instructions and informational material on the proper construction materials and proper use of these materials in construction in wildland/urban interface areas. Still another area of public education and awareness will be through the training and education of community and sub division developers in the use of fire safe design, construction materials and defensible space concepts in their sub division and building development programs.

The second issue for improvement in wildland/urban interface development is the utilization by local, state, and provincial jurisdictions in the development, utilization, and enforcement of codes and standards for fire safe development. This will include the identification of high risk wildland/urban interface areas and all of the requirements necessary for a home or development to withstand an encroaching wildfire without the intervention of fire protection agencies.

The third area of major improvement in wildland/urban interface fires will include fire suppression activities. A major improvement in fire suppression will be implemented through the utilization of a common incident management system throughout North America. The system will be utilized both for structural and wildland fire operations. This will be enhanced through greater mutual aid programs at the local, state, province, and national levels. There will be improved cross training in wildland and structural fire programs with a high level of pre-planning and incident exercises to implement as training prior to actual fire or emergency incidents.

The adoption and implementation of a uniform incident management system will add for improved mobility at the local, state, province, national, and international levels. The improved mobility will improve utilization of personnel as specialists or in fire management teams throughout North America. This same principle would apply to equipment and other resources, including specialized aircraft, pumping apparatus or hose fittings and other tools and supplies.

The adoption of a uniform management system and the increased mobility will also allow for an increase in standardization on tools and supplies, such as fire hose, and provide standard resources throughout North America.

Another area of improvement that we will see in the next century is with water supplies for utilization in wildland/urban interface fires. This will include the development of additional water supply sources and the increased use of Class A foam for fire suppression in both wildland and structure fires. The introduction and utilization of other fire suppression chemicals developed in the late 1990's will further improve fire suppression capability. Another improvement in conjunction with water supplies is the network of dry hydrant systems placed at the water supplies throughout North America.

The development of the next generation helicopter and/or vertical take off and landing aircraft for the transportation of firefighters supplies and delivery of water and chemicals in the suppression effort will be a major step forward in the early twenty-first century.

Other improvements in the suppression side of the equation will include improved weather forecasting and prediction, and the development and utilization of advanced fire detection systems, including real time delivery of detection information via satellite to the responsible fire protection organization. The detection information and delivery system will be tied to a fire modelling system that immediately begins modelling ignitions as soon as they are identified and will determine fire spread potential, and prediction information. This information will then be utilized to determine the mobilization effort required for the suppression effort.

Included with these developments will be improved and more effective protective clothing and equipment for all personnel involved in wildland fire suppression activities.

The fourth area we will see major areas of change are in research in the wildland/urban interface areas. Major efforts will be programmed towards the public and residents in wildland/urban interface areas to determine how best to communicate with them and to encourage then to create a fire safe environment for their homes, including combustible construction, and defensible space so that their homes may survive a wildland/urban interface fire without fire department home owner or other intervention during the fire. This will be an expansion on the sociological work done by Folkman and others in the mid 1970's.

Another area of wildland/urban interface research will include investigation and studies of the fire behavior that occurs when structures intensity, spread rates, and ember and fire brand production, including spotting distances for those embers and fire brands. Another major outcome of wildland/urban interface research will be the development of additional non-combustible

construction materials and chemical treatments or other types of treatments for wood products to minimize ignitability and flammability.

Research will have been involved in many of the developments discussed previously, including the public education awareness programs, fire suppression efforts, and all of the areas in developing how we deal with managing and suppressing fire in the wildland urban interface.

CONCLUSION

In conclusion, wildland/urban interface fires will continue to increase in number and severity in the near future. But through improved programs and public awareness and education, residential planning and development, fire suppression, and wildland/urban interface research we will hopefully turn the corner early in the twenty-first century in developing wildland/urban interface developments that provide adequate fire and life safety for residents.

CLOSING REMARKS[1]

Kelly O'Shea[2]

It is very difficult to be the closing speaker at a conference that has was as successful as this one has been. The fact that we still have this many people in attendance for the last and closing sessions is a measure of that succuss. It has been a long three days, and many of you are anxious to be on your way, so I will do my best to keep it short.

The character of Western Canada is changing rapidly. Changing because its population density is growing - a characteristic it shares with the rest of the country and that of North America in general.

Based on 1991 census made by statistics Canada, from 1986-1991 Canada experienced a 7.9% growth rate. Alberta with a population of 2.5 million experienced a 7.6% growth in population, secondary only to British Columbia. According to a report by the Market Research Branch of the Department of Municipal Affairs, since 1989 there has been a 20% growth in the amount of residential construction in Alberta, and this is expected to further increase in 1993. Canada Mortgage and Housing Corporation claims that housing starts throughout the province are projected to total 15,6000 - 24% more than 1991. The City of Calgary, for example, now has a population of 754,000, an increase of 11.6% since 1986.

The fine print of Statistics Canada shows that most of nearly two dozen communities, towns, villages, and acreage around Calgary are growing at a dramatically faster pace than City itself is. And I'm sure the same applies in may other large metropolitan areas. There are more residents, more tourists, and increased values at risk, and it is a trend that is not likely to change for some time. Emergency services, including fire protection, are being challenged with new realities.

People moving to rural areas bring with them many expectations. They expect the same services that they were used to in the cities. These expectations are going to challenge those of us that are responsible for providing these services. These challenges are going to be more difficult because of the many issues involved, and there are many. To further complicate it, we are living in an era of shrinking budgets.

It is not just rural areas that have these problems. As cities grow, there is an increasing demand from the public to preserve wildlands within the city boundaries. The home owners backing on to the Saskatchewan River Valley in Edmonton, and on to Nose Hill Park in Calgary, may not understand that they have one significant factor in common with home owners in

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[1]A presentation at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Chairman, Partners in Protection Committee and Forest Protection Officer, Bow-Crow Forest, Alberta Forest Service, 8660 Bearspaw Dam Road, Calgary, Alberta, T2M 4L8.

Muskotwa Creek or Seabolt Estates. Both homes are surrounded by highly flammable vegetation. I wonder if civic politicians and fire departments recognize the potential seriousness of this situation.

You have heard first hand accounts of the tragedy that befell our neighbours in Washington and how they dealt with it. We can learn form them. You have heard the similarities that we have with the United States and British Columbia. Hopefully we can become as proactive as they are. The residents perspective gave us the personal touch, something many of us might overlook. We heard about the realities from the insurance industry. The responsibilities and the importance of the planning process was presented from the planning perspective. With the cooperation of local government, planning agencies and the fire services, we can make a difference in the planning process.

The public education perspective was very entertaining, yet drove home an important message — ATTITUDE. We learned the difference between press and media, and how we can use them to our advantage. All were excellent presentations.

We brought together three of the finest training institutions in North America. The integration of disaster services, wildland and structural fire suppression training is an opportunity that must not be overlooked.

The information and recommendations presented here this morning from the respective workshops will provide us with the direction as to where do we go from here. They were not intended to solve all the problems — we did not expect that they would. They were intended to stimulate thought, encourage interaction, and to get you motivated to continue on to address these important issues.

Bill Baden's look into the future stole a lot of my thunder. He reiterated the fact that our problems will continue to increase. Are Spokane and Oakland the fires of the future for us? Is a catastrophic loss of life necessary for us to recognize this? I hope not.

Where do we go from here? Over the last three days, many people have asked me: What is Partners in Protection going to do next? Well, that is up to you. I hope that each of you go back to your respective agencies and tell them what took place here. I ask that the representatives from the Partners in Protection Steering Committee go back to their respective agencies and ask them: What do you want Partners in Protection to accomplish? Then come to our next Steering Committee meeting with your agency's commitment to make it happen. We have set some pretty high expectations here, and we cannot afford to drop the ball now.

I would like to put forth some challenges to all of you. Hope Hopefully some of them can be met through Partners in Protection.

1. We must continue to work together as true Partners in Protection

   Fires do not recognize political or jurisdictional boundaries. The issues involved in solving the many problems in wildland/urban interface fires are many and varied. We do not have

to give up our organizational identity or priorities and procedures to be able to work with other organizations. Combined it makes us stronger.

Solutions must be achieved at the provincial and local level and their success will come through a multi-disciplinary approach. We have a start — let's keep it going and continue to grow.

2. We must involve the other stakeholders in the interface

We can also build new partnerships with other agencies, departments and individuals throughout our communities. There is a great number and diversity of actors who make decisions or take actions that influence fire safety in the wildland/urban interface. Each of these groups has a different agenda and set of interests that will influence their reactions to fire safe innovations. Many of these "others" were not at this conference, so we may have to seek them out. They are the police and other emergency services, landscape and building architects, developers, builders, realters, and of course the public at large — the residents or prospective residents. They have totally different perspectives that must be considered.

3. We must continue to draw attention to the issues and to inform the public

We are fighting two fires, one on the ground, and one in the public eye. We have a moral and legal obligation to inform people of what precautions must be taken when they build in the interface, and what might the consequence be if they don't take precautions.

There is a definite need for an integrated program of research and education for the many issues of wildland/urban interface fire problems, including: development and planning, fire risk analysis, fire prevention, as well as suppression strategy and tactics.

4. We must convince the people with the power to affect change that change is necessary

Wildland/urban fire can be clearly perceived as a problem at certain levels of society and government, usually at the local level. At other levels, usually higher levels, it may not be perceived as a problem relative to other major items, such as social programs, education, crime, etc. The challenge is to raise the consciousness of the higher levels. We must convince the community leaders and politicians. As Ken Albrecht said, public awareness, planning and training are all important issues, but without the political will to address them, we are wasting our time.

To the public, a firefighter is a firefighter. They do not understand the difference between wildland and urban fire fighters. They do not understand that the training and equipment used is different. And they do not know that we have different mandates — they just want fire put out.

As illustrated by the disasters in eastern Washington and Oakland, California last year, extreme fire weather, fuel conditions and homes imitating their natural surrounding,

produced unstoppable fire behavior. Still and public held fire managers accountable for situations well beyond their control.

At what point is the budget for fire suppression effective in doing the job? The costs of wildland/urban fire are not necessarily borne solely by the land owners or residents in affected areas. They are passed along to the community, to all levels of government, and eventually to the whole population. As illustrated in Denis Hutchinson's presentation, we can spend millions of dollars of taxpayers money on fire protection in the wildland/urban interface, but there comes a time when residents must accept the responsibilities in prevention and mitigation. If that cost is reflected through increased development, construction, insurance and protection, so be it.

Many of the speakers and delegates have been congratulating me for a successful program. It was not "me", it was a group of committed, hard working individuals that made it happen. I think that their enthusiasm and high energy carried over into the proceedings, and they can be very proud of their accomplishments.

Many people have contributed directly to the symposium's success through serving on the program committee as session moderators, speakers, workshop leaders, poster presenters, or corporate sponsors and exhibitors. Without your support and participation this symposium would not have been possible. Thank you all.

In closing, I suggest that you think of this session not as a conclusion, but rather a beginning. When you get home, each of you must try to apply what you have learnt from the excellent presentations, workshops and informal discussions. Meeting all these challenges will not be simple, however, the consequences of failing to try, could be substantial.

Thank you for attending. Good luck and have a safe trip home.

POSTER PAPERS

AND ABSTRACTS

KAMLOOPS REGION WILDLAND/URBAN INTERFACE DISPLAY[1]

Dennis Hutcheson[2], Rick Swift[2], Denis Gaudry[3], Jeff Berry[2]

Abstract: The Kamloops wildland/urban interface display is a free-standing multi-media display that provides information on the wildland/urban interface and smoke management being conducted in the Kamloops Region of central British Columbia. The information is presented in pictorial/written, slide/narration, and video formats at various levels allowing for casual contact to lead to more indepth discussions with Ministry of Forests staff. This display has travelled throughout BC since January 1992 providing the Ministry with many excellent public contacts.

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[1]A poster presentation at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

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INVERMERE DISTRICT WILDLAND/URBAN INTERFACE DISPLAY[1]

Scott K. Cole[2]

ABSTRACT: This two-sided display is comprised of photographic panels that lead the viewer systematically through the concept of wildland/urban interface areas and some of the fire hazards that should be considered if one chooses to live in these areas.

The first side of the display explains what wildland/urban interface is. It creates an awareness that encourages home owners to think about where they live. It suggests that people living in interface areas have a responsibility to make their homes and communities "fire safe".

The second side addresses the development of "fire safe" homes. It illustrates some common practices that are potentially hazardous. In addition, it informs the home owner about where to get more information on how to reduce the risk of fire spreading in their community.

The B.C. Forest Service is embarking on a campaign to create "fire safe" communities within forested lands. One of the best ways to accomplish this is to educate the public and then get them involved. It is our hope that this display will raise awareness and then encourage a commitment to help the forest service and local fire departments in creating "fire safe" communities.

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[1]A poster presentation at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

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FOREST FIRE PROTECTION FOR THE TOWN OF BANFF AND VILLAGE OF LAKE LOUISE IN BANFF NATIONAL PARK[1]

Ian R. Pengelly[2]

ABSTRACT: Banff and Lake Louise Alberta are located in a fire dependent forest type in Banff National Park. These communities have not experienced a forest fire near their borders for over eighty years. Many residents and visitors to Banff and Lake Louise are unaware of the frequency, size and intensity of past forest fires in this area, and the limits to effective forest fire suppression. Public education about the nature of forest fires and a concurrent program to reduce risk of property damage or loss of life are required.

INTRODUCTION

The Town of Banff and Village of Lake Louise are located in the densely forested Bow Valley of Banff National Park (BNP). In the past 50 years, the number, size and value of visitor facilities built in the area has increased dramatically. The many large wildfires that occurred in the Bow Valley prior to 1908 would be a serious threat to public safety and property if they were to recur today (Baker 1984, White 1985).

HISTORIC AND CURRENT FIRE REGIME

Fire history studies in Banff and surrounding areas have shown that the average fire cycle for lower subalpine forest in the region is about 100 years (Hawkes 1979, Tande 1977, White, 1985). In BNP, the frequent large fires caused by settlement activities during the period 1880-1909 maintained the historic fire cycle of approximately 25,000 ha burned per decade. From 1910 to 1949 the burned area per decade declined to an average of 6,500 ha/decade, and from 1950 to present declined to an average of 160 ha/decade, or about 0.6% of the historic fire regime (White 1985). The east slopes of the Canadian Rockies outside national parks have experienced a similar decline in area burned (Quintilio 1987).

There are probably several reasons for the dramatic decline in forest fire activity, - many years with cooler wetter summers particularly during 1941-1966, (Master 1989); and fire prevention, (including the end of Native American caused fire - White 1985). Fire suppression, particularly the initial attack strategy practised in the past decade is also an important factor in lengthening the fire cycle (Quintilio 1992).

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[1]A poster paper presented at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta

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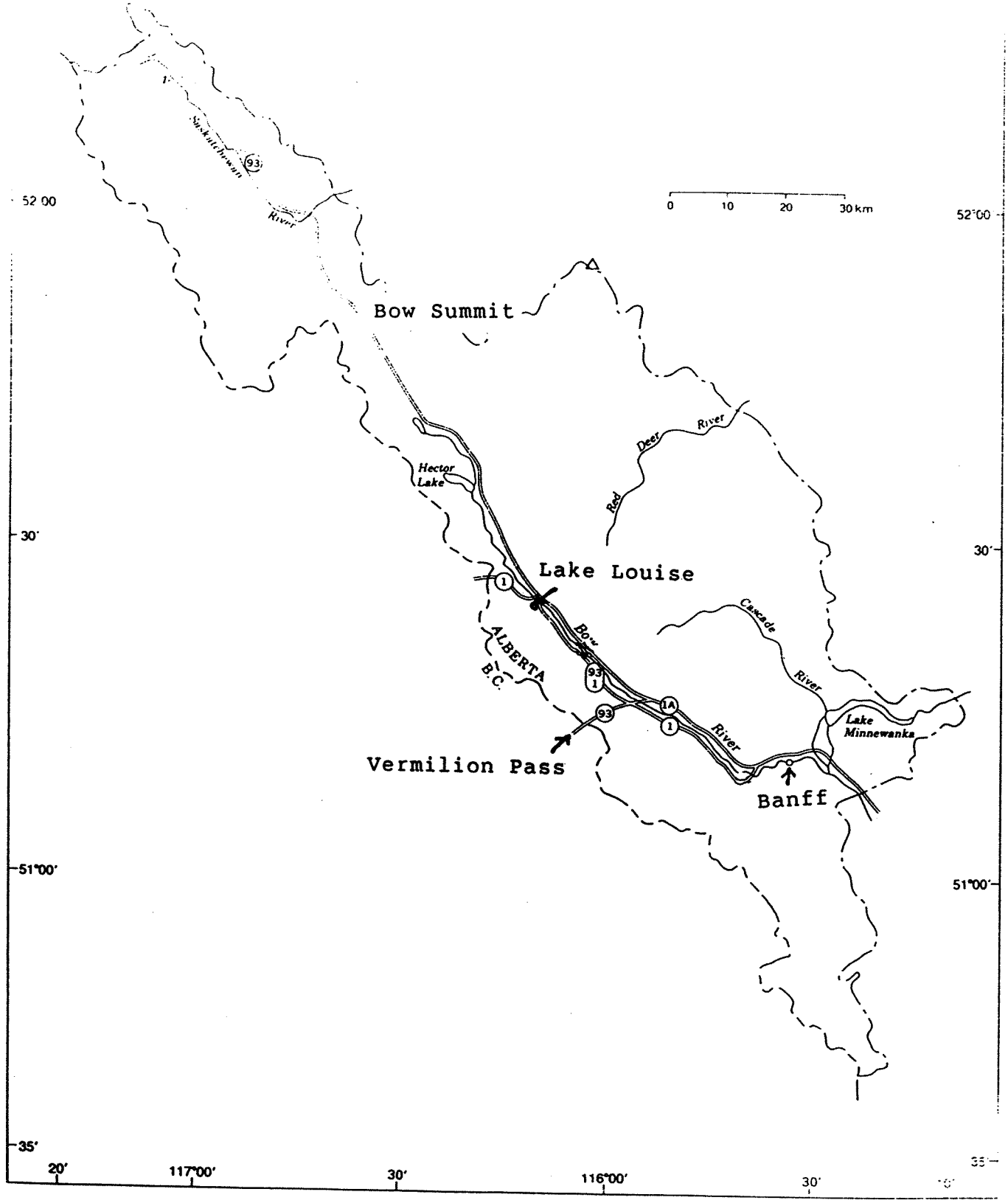
MAP 1

LOCATION OF BANFF AND LAKE LOUISE

BOW VALLEY, BANFF NATIONAL PARK



Prior to 1900, and to a lesser extent between 1900 and 1970, fires often smouldered for days or weeks before weather conditions became conducive for the fire to make a major run. Helicopter access to remote areas and improvements in communications, detection and equipment have greatly increased the efficiency of fire fighters. Now many fires are detected and extinguished while still under 1 hectare in size. Eliminating smouldering fires from the landscape greatly decreases the potential sources of ignition and thus reduces the area burned (Quintilio 1992).

In an area with an aggressive initial attack program most sizable wildfires occur when the conditions favour a very high initial spread at the time of ignition, (i.e., high winds and low fine fuel moisture values). Such a fire may exceed initial attack resources within hours or minutes of starting. In the Banff and Lake Louise areas, this type of fire danger condition occurs 7 - 10 days per year on average.

For a fire to occur on the scale of the larger historic events usually requires multiple ignitions, weather conditions favouring extreme rates of fire spread and prolonged drought which makes most forest vegetation available as fuel. Although this situation rarely occurs, it is inevitable that large scale wildfires will eventually happen in the Bow Valley (Arbor Wildland Management Services 1991).

The down side to reducing the probability of wildfire is that amount of forest biomass and continuity of mature forest in the areas upwind of Banff and Lake Louise is reaching levels that are probably unprecedented (White 1985b). When areas with fuel loads similar to those in the Bow Valley burn, the fires are often well beyond any means of control. The potential to equal or exceed the size and intensity of the 1881, 1889, 1905, or 1908 fires in the Bow Valley is real, and could cause the same kinds of evacuation and facility protection problems that many other areas of North America have experienced during severe fire seasons in the past decade.

THE BANFF PARK WILDFIRE PROTECTION PROBLEM

Many areas which experience urban/wildland interface fires have a fire regime of frequent low intensity fires. The low frequency/high intensity fire regime in Banff and other mountain parks creates some problems in terms of facility protection. There are many situations where a high intensity fire could start near a facility and engulf it on the initial run. There is also the challenge of protecting Banff and Lake Louise from very large fires which could inundate these towns with burning embers and smoke, overwhelming structural fire suppression resources.

BNP has begun implementation of a comprehensive program of risk reduction measures to address both fire scenarios. These include:

- rapid initial attack of all wildfires;

- improved coordination with municipal and provincial fire suppression and disaster services organizations;

- using moderate intensity prescribed fire to create large zones of fuel reduction in strategic areas for fighting wildfires;

- using prescribed fire to change the vegetation mosaic in the Park as a whole;

- mechanical fuel reduction at the boundary of developments and forested areas and in urban green belt areas;

- fuel management around structures to create a defensible space; and

- encouraging the use of fire resistant building materials particularly for roof construction.

PUBLIC PERCEPTIONS OF FIRE OCCURRENCE AND FIRE CONTROL

In the past eighty years the only one wildfire over 40 hectares has occurred in the Bow Valley (Vermilion Pass, 1968). The limited exposure most people have had to wildfire, has a direct impact on their perceptions about risk and expectations of fire control. Few people have a good grasp of when fast moving crown fires could occur, probable direction or rate of spread, distance of ember spotting, or how the topography, wind and fuels are likely to affect their property or personal safety.

Messages about degree of risk can be difficult to convey due to the necessity to use technical jargon; message about responsibility, costs and the conflicting goals of tree management in urban areas often touch a nerve and are heavily filtered by the recipient. Attitudes vary from denial to a cavalier "probably not in my lifetime or term of office" philosophy.

Convincing a sceptical public or local government to undertake difficult, expensive and unpopular actions to mitigate the effects of a low probability disaster is a tough sell. Even if the hazard of forest fire is recognized and a program to reduce risk is in place, the temptation to make compromises which may jeopardize the effectiveness of the measures taken is great.

The values at risk in the Bow Valley warrant a significant fuel management program and other measures to prevent widespread damage or loss of life. However, the financial and aesthetic costs of effective measures against wildfire are high and require support at many levels.

Mechanical fuel reduction and hazard abatement prescribed burning programs are proceeding with the education program lagging somewhat behind. Much more must be done to make the public aware of what elements of the problem are predictable and what is not, the choices and decisions to be made, and the possible consequences of different risk management actions.

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A COLLECTION OF WILDLAND/URBAN INTERFACE RESOURCE MATERIALS[1]

K.G. Hirsch[2], G.J. Baxter[3], C.M. Halun[3], M.E. Maffey[2]

ABSTRACT: A significant amount of information has been and is being produced in the United States, Canada and Australia on a variety of issues related to fire management in the wildland/urban interface (WUI). This includes scientific papers, technical reports, brochures, newsletters, videos and other such reference materials. Individuals or organizations that are pursuing solutions to WUI problems often require background information before they can begin their projects; however, obtaining copies of all the available information can be a difficult and time consuming process. Therefore, a collection of over 400 primary WUI resource materials has been compiled at the Northern Forestry Centre (NoFC) in Edmonton, Alberta and is available for use by both organizations and the general public.

The resource materials were compiled by conducting library searches, reviewing previously published bibliographies, directly contacting fire and resource management agencies, and by assessing literature citations within major publications. The resource materials have been entered into a bibliographic data base (PROCITE) and have been categorized according to subject matter and location using keywords. This collection of wildland/urban interface resource materials undoubtedly includes only a portion of the available materials and therefore it is expected to continue to grow over the next few years.

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[1]A poster presentation at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Fire Research Officer and Fire Research Technician, respectively, Forestry Canada, Northern Forestry Centre, 5320 - 122 Street, Edmonton, Alberta, T6H 3S5.

[3]Graduate Student (Geography) and Undergraduate Student (Forestry), respectively, University of Alberta, Edmonton, Alberta, T6G 2H1.

SASKATCHEWAN WILDLAND/URBAN INTERFACE[1]

Duncan Campbell[2]

ABSTRACT: Saskatchewan's submission is essentially an outline of the province's approach to dealing with the increasing problem of wildland/urban interface fires. After identifying goals, objectives and target audiences, a short background section puts wildland urban interface fires into a Saskatchewan perspective.

The body of the paper briefly describes the three major thrusts of Saskatchewan's program: training, education and public relations. The second on training explains Saskatchewan's "Wildland Fire Suppression" course - subject matter, materials and benefits. The second section details the work of regional fire coordinators and conservation officers to promote pooling of fire suppression resources and community, group and individual fireproofing measures. The third section on public relations describes what items have been developed to assist in the dissemination of fireproofing information and what is planned.

The conclusion recognizes what Saskatchewan's present program initiatives have accomplished to date, while acknowledging that much more remains to be done.

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[1]A poster presentation at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Fire Control Coordinator and Training Officer, Saskatchewan Forest Fire Management Branch, P.O. Box 3003, Prince Albert, Saskatchewan, S6V 6G1.

MANITOBA FOREST INTERFACE EXPERIENCE[1]

Bill Medd[2]

ABSTRACT: This display highlights the major interface fires which have occurred in Manitoba in recent years. It visually portrays the extent of the Ashern, Manigotogan, and Wallace Lake fires through the use of remote satellite imagery, aerial and ground photography. It shows the typical agricultural/forest, recreation/forest, and industry/forest fire disasters. The display is accompanied by a video compiled from newscasts pertaining to the fires. It provides examples of the behaviour in and around interface structures, reinforcing existing ideas on how interface homeowners can minimize their risks.

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[1]A poster presentation at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Superintendent of Fire Program, Manitoba Natural Resources, Box 10, 1495 St. James Street, Winnipeg, Manitoba, R3H 0W9.

MANITOBA FIRE PREVENTION DISPLAY[1]

Peter J. Konopelny[2]

ABSTRACT: This poster presentation highlights the direction Manitoba's fire prevention program has taken since the 1989 fire season. It display promotional items and ideas utilized to target urban, agricultural, recreational, and aboriginal audiences. In addition to this, it outlines a preliminary caller profile analysis of the province's 1-800 fire reporting service.

The caller profile describes the type of people who are utilizing the service, when they are using it, and how effective it is regarding responding to fire emergencies. By tracking the effects of joint promotion of the provinces 1-800 fire reporting service, fire managers will have some insight of the cost effectiveness of targeted media promotion in preventing and reporting interface fires.

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[1]A poster presentation at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

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WILDLAND/URBAN INTERFACE: THE MANITOBA INDUSTRY PERSPECTIVE[1]

Harold Peacock[2]

ABSTRACT: Major forest fire losses on the Abitibi Forest Management License (FML) during the 1980s have placed the Pine Falls Newsprint Mill in a critical wood supply position. Part of this excessive loss could have been averted; however, suppression resources were required to protect interface developments which are numerous in eastern Manitoba. Further complicating the problem is the fact that drought, insects and disease, and blowdown are increasing the fuel hazard situation in the FML. Part of the solution to the problem is prevention through hazard reduction. This includes reducing the fuel load in and around cottages, forest subdivisions, and dumps as well as creating a safer forest environment through proper cut and forest renewal design.

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[1]A poster presentation at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Divisional Forester, Abitibi-Price Inc., P.O. 10, Pine Falls, Manitoba, R0E 1M0.

WORKSHOP NOTES

AND SUMMARIES

PLANNING WORKSHOP[1]

Workshop Leader: Greg Hofmann[2]

The planning workshop did not turn out the way we expected. This is not to say, not by any means, that nothing was gained as a result.

We could have significantly narrowed the focus of the workshop to land use planning and made it much more specific (much like the handout Mr. Dauk had prepared for the session), perhaps using a case study discussion approach concerning one or several different subdivisions. By doing so, participants may have walked away feeling they had some answers, something tangible to apply on the job. Instead, the "planning" workshop was very broad, purposely so, and after briefly contemplating what being "partners in protection" is going to really mean for all the interests involved and the individuals comprising those interests, people left feeling somewhat frustrated and perhaps bewildered by the size and complexity of this issue. This was both necessary and very productive.

What we discovered and learned from our lack of "success", so to speak, was extremely important and, as it turned out, most encouraging as well. Quite simply, the "partners in protection", all of us, are not ready for a workshop designed, as ours was, to discuss and formulate a comprehensive master planning process. We are not nearly ready. To get to "point B" on this issue, the partners need to understand each other better. Before this occurs, some self awareness (to truly understand what acting in partnership is going to mean for each partner) seems to be necessary in addition to interagency and public awareness.

There was unanimous agreement that the Conference was an excellent beginning and that it would be a great loss if we lost sight of the vision and enthusiasm that would accompany the establishment of real partnerships. We need to work hard to avoid having the gains made at this Conference disintegrate into the comfort of our own particular perspective and territory. We may all need to change somewhat to ensure that partnerships continue beyond September 30, 1992. To this end, it was suggested that a very wide-spectrum working committee or task force (including more "partners" than were represented at the Conference) continue on and develop mission statements and strategies to help us get to "point B". This may require the establishment of several sub-groups under the direction of the "Partners in Protection" Committee.

It is important to bear in mind as well that en route to "point B", we need tangible examples of the efforts and effects of the partnerships already initiated and those established as a result of the Conference. Planners and municipal governments need to hear from those in

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[1]A summary of the planning workshop conducted at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Senior Planner, Yellowhead Regional Planning Commission, P.O. Box 249, Onoway, Alberta, T0E 1V0.

forestry and fire suppression/prevention if they are to be educated and begin to lend their support in resolving wildfire problems, to the extent they can. Planners and decision-makers need to be told that current and expected development trends are affecting, and will continue to affect, forest management as emphasis shifts to protecting development, not forests. For example, managing forests using prescribed burning becomes much more difficult when residents are threatened or complain about smoke. Furthermore, planners and decision-makers need to understand that defending wildland development will require increased resources and training, perhaps beyond governments' ability to pay.

Ultimately, if this process is to result in real change, we must fully engage two critical and interrelated players: politicians and the public. First and foremost, there is the need to mobilize public interest and have people "buy-in" to the substantial merits (for them) of acting proactively vis a vis this issue. People who "buy-in" (a.k.a. constituents), in turn, will mobilize their political representatives to devote the resources and will required to successfully complete this process. The importance of these two "partners" cannot be overstated.

The solution lies in being proactive in our approach and we have an excellent opportunity in Alberta to be so given that our wildland/urban interface is still relatively small compared to almost anywhere else on earth. By establishing all of the partnerships discussed above and by linking up with and learning form other partners who no longer have the advantage we do in Alberta (e.g. Spokane County, B.C. Forest Service, etc.), we can sidestep reinventing the wheel and do it right before we experience problems: an absolutely ideal scenario as far as a planning process is concerned!

POLITICS WORKSHOP[1]

Workshop Leader: Ken Albrecht[2]

Opening Remarks (Ken Albrecht)

- political will - to make happen - provincial level, federal level, etc.
- political decision
- training, public education
- political backing
- idea on how to put together
- consensus for direction
- politics plays key issue

Introduction of Panel Members

Terry-Dawn Hewitt	Lawyer, Edmonton
Ross Risvold	Mayor of Hinton and Instructor Forest Technology School
Bill Baden	NFPA, driven a lot by politics (USA)
Bill Wilburn	Coordinator for fire program (USA)

Presentations and Discussion

Ross
- politics is not an exact science
- politicians react differently, they must understand need
- fire is not the only department - important but it's one piece of the pie. Politicians look at the whole.
- people must realize there are limited resources
- concentrate preventive actions
- need to be creative, minimal amount of dollars for one department or group
- politicians don't like surprises
- to maximize benefits one should work on an interagency basis

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[1]Notes from the politics workshop conducted at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]President, Rural and Improvement Districts Assocation of Alberta and Council Chairman, Improvement District of Yellowhead, c/o Suite #201, Provincial Building, 111 - 54 Street, Edson, Alberta, T7E 1T2.

- people working in fire may have to realize public and politicians think different than you do
- politicians can influence planners and developers therefore people who have concerns about fire should try to implement conditions which are preventive. These conditions are necessary politicians can indicate to developers and planners what is required during preliminary discussions concerning new developments.
- pro-active thinking is required in order to be successful
- be direct - politicians don't want to guess at what you're trying to accomplish. Provide the politician with something they can hit and understand.
- you must realize that people have different values and all of these are correct depending on their background and experience.
- assessment of resources; who can help (someone credible), technical knowledge. Lobbying includes assessment of resources and who can help and then must choose someone who is credible.
- develop a timeline when something has to be done. Who has technical knowledge.

Bill B.
- political identity (organization)
- work together
- squeaky wheel complaint from public, handle first
- credibility of politicians or yourself
- you as a fire boss, fire chief
- deal with hard decisions
- leave the fire with no enemies
- support deal with politicians

Terry-Dawn- lawyers will make you nervous
- growth of legal community
- because of impact that law is having
- law can mean change
- knowledge but antidote for fear
- politics mean people
- help preventive aspects
- risk management
- law as a tool, motivate
- identify the problem
- prioritize
- change
- education to reduce/help fear
- motive
- wildland interface fire will happen
- legal ramifications, law suite
- legislative law, foreseeable loss
- civil law
- risk management end use law as educational tool
- educators to supply knowledge
- fire service will protect

- public education service
- documentation is key
- legislation in law
- good will avoid law
- regulation can give planner, developer ground to act on

Ken A.
- lobby from within - legislation
- get our Minister to agree to legislation
- effective internal departmental lobbying
- access

Ross
- Expect to have a frustation level because we all have different values and backgrounds. In order to be successful it's necessary to form teams consisting of people with various backgrounds. Be creative in how you will achieve your pre-established goals.

Ken Saulit- shrinking budget
- need innovation
- cost effective
- interagency management cooperation
- master planning set priorities
- no level of service in prevention/suppression

Back to Politics
- turf wars need balance

Kelly Oshea
- turf battles, do not have to lose identity
- strength together
- people want to be heard more, listen to people
- special interest groups community leaders
- strength in unity

Rick Lanoville (Fort Smith)
- not afraid of lawyers
- don't lie nothing to fear
- employees do homework, reasonable people
- no money in budget, not true
- government has budget
- reasonable idea, there is money if it is a good idea
- decisions right or wrong, rely on training
- best professional judgement call

Ralph Bourque
- farmers intellectual regionalization, achieve same goal
- explain risk management

- understand the issue, make a person understand
- use available resources, develop partnership
- credibility, prioritize, set goal for community
- support of everyone concerned, protected
- sharing resources, carried on for future generations
- awareness, education

Don
- step by step process, work with people then move up to politicians
- group decision, based by a group of people
- personal consensus of the people
- if turned down, has to be justified
- don't get frustrated, understand the ramifications
- gag clause, nothing leave the room

Dick P.
- get to the point, do not bring a lot of lawyers
- overcome fear of being sued
- priorities
- understand risk
- disasters going to happen, need lawyer, prevention of law suite
- bringing ideas to council

Lavern Sorgaard
- people that you hire
- when you have a good idea, don't be afraid to talk or ask
- get people motivated
- science and technology, commitment, homework

Vigin
- who do you lobby? Minister, Deputy Minister?
- both all important also field people
- admin., deputy
- political or policy, minister

Dennis Hutcheson
- risk management, legal/logical, common sense
- high or extreme risk, liability
- give comm. public presentation
- what you know, right to know puts you at risk
- assess the risk, make aware, document
- not in legislation, go through past cases
- brainstorming session

Ray Olsen
- enforce the partners in protection
- who fights fires
- partnerships
- partners for ideas, fire service lobbying also

What actions are needed

- education
- common theme
- successful symposium
- promotion is lobbying
- identify goals/resources
- money to continue
- objective, what achieve, identify the partners, resources required, get other partners interested
- can't do alone, need collectively, copy legislation's
- lobbying has partners, prioritize
- communication regular (critical issue)
- ensure that all stake holder are involved, commitment
- coat tailing
- encouraged support from the two USA gentlemen
- encouraged use non-copy righted material
- hotline information, from Terry-Dawn

Ross

- has learned a lot
- remember in order to achieve your goals you must be specific
- cooperative and realistic

Ken

- thanks everyone, need volunteers in your community
- proud of what you have accomplished

PUBLIC EDUCATION WORKSHOP[1]

Workshop Leader: Tim Vandenbrink[2]

What is Public Education?

- It used to be thought of as having an open house and visiting schools.

- One problem was that every community was doing their own thing. This results in low staffing and budget and so prevention areas are of cut. Therefore communicate with your own community so that people get a consistent message.

- Multiply your efforts through Community Involvement.

- Share ideas and talk with each other.
- As a community a message can be sent. Burn injury's can be prevented. Information should be accurate.

Education in the Community

- Investigate

    - How do fires start
    - Ask questions
    - What contributed

    - Example: Four main causes of residential fires in order are: (1) cooking, (2) smoking, (3) children, (4) electrical.

- Procedure

    1. Identify the Problem

        Child play fires occur with children 3, 4, 5, years of age. Parent need to be educated and relay message to children. Drugs and prescriptions are not kept on the table, nor are poisonous items, so lighters and matches should be kept out of the reach of children.

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[1]Notes from the public eduation workshop conducted at Minimizing the Risk of Wildfire: A Symposium to Address Wildfire Problems in the Wildland/Urban Interface, September 27-30, 1992.

[2]Fire Prevention Coordinator, Edmonton Fire Department, 3rd Floor, 12220 - Stony Plain Road, Edmonton, Alberta, T5N 3Y4.

2. Design a Program

   Teachers need to be educated. Design a program for the user so that they will use it.

3. Implement the Program

   Pilot the program. Let a teacher implement it so that you can evaluate it. Is it sending the right message. If so, finalize it.

4. Evaluation

   Evaluate the program to assess how it is doing and is it working.

Example:

City of Edmonton in 1981 had 101 child play fires (ages 3, 4, 5). A fire safety program was implemented. There are now 500 parent and teachers teaching fire safety in Edmonton. It is a two week fire prevention course (not a 25 minute course) and it includes field trips. Since the program was implemented child play fires have dropped: 1989 - 62 fires; 1990 - 63 fires; 1991 - 40 fires.

- The approach is to work in the community and to use simple direct program.
- Get involved in education at the right age with the right group.
- See benefits that you can evaluate.

Some Current Programs

- Plan to Get Out Alive
  - Media events
  - Be creative
  - Create awareness in the community
  - Fire drill in the home
  - Get into hard to reach areas
  - Get corporate sponsors for programs
- Learn to Burn
  - Safety must be emphasized in the school curriculum
  - Can be integrated into all programs: music, art, language arts.
  - High school kids need to know the truth. They want to know the realities (burn injuries). A burn victim spoke to the high school students and left a great

impression.

- Adopt a School

    - Phone the Fire department. They are more than willing to go out to the schools. Fire service does 1,000 presentation a year in Edmonton reaching 35,000 people.

    - Share - Make it work for the community.

TRAINING WORKSHOP[1]

Workshop Leaders: Laird Burton[2], Judith Hughes[3]

Each participant was asked to introduce themselves and identify what they felt the main training issue was and what they could take away from this session.

Issues expressed were:

- firefighter cross training
- updating shills - market/needs assessment
- national standards for exchange of firefighters
- liaison between training facilities
- better communication between firefighters of different agencies
- fireline certification
- training in prevention in interface areas; community training
- public needs information on wildfires
- compatible equipment; know limitations
- lack of material to instruct rural fire departments
- use of foam on structural fires
- availability of people to train
- special issues in a Metis society compared to municipalities
- find the most efficient way to get training done
- where will the money for training come from.

Since cross training was the most frequently mentioned issue, participants were asked to list components of "cross training".

- When no wildland firefighters are available structural firefighters have trouble with bush fires.
- Courses need to be recognized; motivated to get a "certificate".
- Communications.
- Terminology.
- Safety.
- Agency logistics.
- Who should be cross trained.
- Command; roles and responsibilities.
- Jurisdiction issues.

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[1]Notes from the training workshop conducted at Minimizing the Risk of Wildfire: A Symposium to Wildfire problems in the Wildland/Urban Interface, September 27-30, 1992, Jasper, Alberta.

[2]Supervisor, Alberta Fire Training School, Drawer 388, Vermilion, Alberta, T0B 4M0.

[3]Director of Training, Alberta Public Safety Services, 10320 - 146 Street, Edmonton, Alberta, T5N 3A2.

- ICS; global understanding; defines accountability and shows where everything fits in the hierarchy.
- Investigate ICS as a structure (guideline).
- Tactics of structural firefighter and forest firefighter are different. Structural firefighters look at a short time period that forest firefighters.
- Communications; radios; equipment compatibility.
- Who is the cross training going to? Answered by the ICS guideline; different levels according to position.

The brainstorming results were organized into a model as follows.

Cross Training

1. Awareness level = mandate of the Alberta Public Safety Services (APSS). Needs assessment is required which would lead to course development.

2. Beyond awareness

Prevention	Logistics	Response
NFPA 299	Communications	Endorse ICS
Resources	Money	Endorse NFPA 295/299
Investigation	Delivery	Who gives?
	Resources	Who takes?
	Equipment	Tactics
	Certification	Strategy
	Standards	Jurisdiction

It was agreed that 1 Awareness Level was straight forward and could be formulated as a recommendation:

Recommendation:

That APSS conduct a needs assessment to determine the general public awareness about the wildland/urban interface (intermix) and the related wildfire risk.

Participants were divided into two groups to discuss the prototype model represented by item 2.

A revised model was developed by group #1 and endorsed by the other groups.

Revised Model

Partners in Protection Committee

Municipal Wildland Agencies

Cross Training

Prevention Component

Needs Assessment

Delivery

Alberta Fire Training School Forest Technology School

Discussion Items:
- needs assessment includes: acquire/develop, assess, implement, monitor, evaluation
- investigation should appear under both prevention and response
- joint inspections should appear under prevention
- some endorsed NFPA 295 and 299, but some felt they needed more public exposure and some were skeptical about the American focus
- Incident Command System was endorsed but it was felt that Alberta Fire Training School (AFTS) and the Forest Technology School (FTS) should work together to tailor it to suit the wildland/urban interface issues
- jurisdictional issues might be clarified by ICS but AFTS and FTS should examine this.

Recommendations:

- Since all groups endorsed the revised model presented by group 1, Partners in Protection is requested to facilitate a greater discussion of the models discussed

- That Partners in Protection facilitate discussions between Alberta Fire training School and Forestry Training School to address "cross training" issues.

Note: It was noted that for participants from outside Alberta, the discussion was of a conceptual nature. The application of which would require further discussion in the home communities.

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