

The Blue Ribbon Panel Report on Wildland Urban Interface Fire

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For a downloadable copy of this report go to:
<http://www.iccsafe.org/government/blueribbon/index.html>

A Note to Readers

The purpose of this *National Blue Ribbon Panel on Wildland Urban Interface Fire Report* is, first, to encourage communities throughout the United States to consider the benefits of mitigating their risk of wildland fire and, second, to bring all of the appropriate national organizations to the table to work collaboratively on this escalating problem.

Included are suggestions, recommendations and guidance, as well as proposed actions to help communities and local governments move progressively toward eliminating the threat of wildland fire, which affects more than 51,000 communities in the United States.

The International Code Council along with all other participating organizations is providing this document to federal, state and local governments, as well as homeowners throughout the United States who are living with the risk of wildland fire. This project was self-funded by the participating organizations, without federal support.

“The world we're dealing with in wildland fire suppression is changing; we just can't continue to do business the same way. We don't have enough wildland firefighters to draw from to handle the situations we're faced with. A lengthening drought, hotter temperatures across much of the U.S. and an increased number of homes built in fire-prone wildland areas contributed to the severity of the wildfire seasons.”

**-Lyle Carlile,
Chair of the National Interagency Fire Center
Coordinating Group,
January 7, 2008**

“Despite the fact that San Diego has been criticized for not imposing stricter building, fire and WUI codes that could reduce structural wildfire losses, the homeowners of the San Diego area are vowing to rebuild while adhering to building, fire and WUI codes, with appropriate methods and materials intended to deter future wildland fire blazes. Everyone will rebuild. But we will all try to learn from what we've been through.”

**-Nora Chaya,
San Diego Homeowner
January 5, 2008**

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While federal agencies have participated in the WUI Blue Ribbon Panel discussions, the key findings/needs and recommendations developed by the panel should not be construed to infer that the agencies are advocating their implementation. Any federal agency position on the key findings/needs would be developed through normal agency procedures.

This effort involved many individuals and organizations in the collaborative development of key findings, needs, recommendations and statistical information. It should not be construed as a binding endorsement of any of the individuals or organizations involved.

Introduction to the Blue Ribbon Panel on Wildland Urban Interface Fire

“Saving lives, natural resources and property starts with prevention.”

Wildfires have long been feared for their catastrophic destruction, causing both environmental damage and loss of life. In the United States, human population densities in wildfire-prone ecosystems are rising. Consequently, the impact of wildfires on communities, both in human and economic terms, is escalating.

This area of intersection between population and wildland, termed the “wildland urban interface (WUI),” has been recognized and addressed by the wildland firefighting profession for well over a decade. Many different programs at various government and civic levels have been developed to help individuals and communities cope with the WUI challenges with varying degrees of success. In spite of these efforts, however, firefighting costs are increasing to staggering proportions.

Fatalities, both firefighter and private citizen, as well as property loss are rising rapidly. In order to examine why current programs are not resulting in a decline of these numbers, the International Code

Council (ICC), in collaboration with other national organizations, spearheaded the formation of a National Blue Ribbon Panel (BRP) to consider all issues relevant to the WUI fire issue. The BRP was brought together to help identify improvements in national, state and local management of this escalating problem. The group includes representatives from over 40 national organizations and first met in June 2007, hosted by the National Association of Counties (NACo). A second meeting hosted by the National Association of Realtors (NAR) was held in October 2007.

This report summarizes areas of discussion and consensus arrived at by the BRP. Representatives of the organizations that participated on the panel designated five key areas to examine, and the following pages include their findings and recommendations.

In addition, as a result of the June BRP meeting, a national email was established to encourage input concerning this problem. A summary of comments received is included at the end of this report.

An appendix containing facts and additional information concerning the WUI issue is also included. For additional information please visit the Blue Ribbon Panel website at: <http://www.iccsafe.org/government/blueribbon/index.html>.

Organizations Participating On The Blue Ribbon Panel

During the June and October 2007 meetings, and in the final review of this report.

The International Code Council (ICC)
American Red Cross
Society of American Foresters (SAF)
Home Safety Council (HSC)
National Geographic
National Wildfire Coordinating Group, Wildland Urban Interface Fire Working Team
The National Volunteer Fire Council (NVFC)
The National Association of Counties (NACo)
The Insurance Services Office (ISO)
The National Resource Conservation & Development Councils (NRC&D)
The National Association of Home Builders (NAHB)
National Association of State Foresters (NASF)
Western State Fire Managers (WSFM)
ESRI
National Wildfire Suppression Association (NWSA)
The Congressional Fire Service Institute (CFSI)
International City/County Management Association (ICMA)
The International Association of Wildland Fire (IAWF)
The Wilderness Society
The International Association of Fire Chiefs (IAFC)
State Farm Insurance
National Academy of Public Administration (NAPA)
Deschutes, County, Oregon
National Fire Protection Association (NFPA)
Institute for Business and Home Safety (IBHS)
USDA Forest Service
U.S. Department of the Interior
Department of Homeland Security-FEMA, U.S. Fire Administration (USFA)
National Association of Realtors (NAR)
National Institute of Standards and Technology (NIST)
U.S. Geological Survey (USGS)
Natural Resources Defense Council
The CATO Institute
Headwaters Economics
AIG Insurance
National Wildfire Foundation
Firebreak Systems
The Nature Conservancy

Summary of Findings in Key Areas

WUI Education

1. Enhance support and coordination of effective WUI programs.
2. More clearly define and market the existing programs.
3. Educate policy makers at the federal, state and local levels about the nature and needs of the WUI, specifically education, incentives, mitigation, regulation and suppression.
4. Maintain ongoing dialogue of stakeholders in their respective concerns.
5. Ensure a common message about WUI programs among all stakeholders.

WUI Incentives

1. Encourage all levels of government to promote greater economic initiatives in prevention, education and mitigation for local communities, associations and homeowners located in designated WUI areas.
2. Encourage the private sector (particularly insurance companies) to develop and promote incentives that support WUI best practices.
3. Recognize communities and public service organizations that promote WUI best practices.
4. Explore national emergency response incentive programs for state and local governments that would encourage wildfire mitigation in the WUI.

WUI Mitigation

1. Establish and/or support an appropriate process for prioritizing and distributing mitigation resources based on risk.
2. Encourage collaboration for mitigation activities at federal, state, local and private-sector levels.
3. Explore and encourage innovative research and design relative to WUI issues.
4. Promote individual property owner responsibility regarding mitigation.

WUI Regulation

1. Promote better integration of land-use planning, community development, community wildfire protection plans (CWPPs) and WUI codes and standards.
2. Endorse public policy through codes and ordinances to support local WUI fire prevention programs.
3. Encourage the development of a mechanism to collect and disseminate data.
4. Encourage and distribute research associated with the effectiveness of local WUI ordinances.

WUI Fire Suppression

1. Support additional development and distribution of WUI programs, such as cross-training structural firefighters, using advanced training concepts and skills crosswalk.
2. Encourage and support initiatives that foster local, cooperative fire suppression efforts across jurisdictional boundaries.
3. Improve the cooperation and coordination of fire preparation and response for cost containment—include improved utilization of local resources.
4. Support funding of existing, proven federal and state assistance programs.
5. Improve coordination between federal and state agencies, national organizations and local first responders.

Blue Ribbon Panel Report On Wildland Urban Interface Fire

The loss of life and the destruction of property from wildfire is a centuries old problem. Since the first modern conflagrations in California in the 1960's and 70's, wildland fire among human habitation has been called "*wildland urban interface fire*." Today wildfires claim more lives, structures and acreages. These losses result in enormous costs that impact federal, state and local government budgets. With increasing populations in rural settings at a time of global climate change, all the necessary ingredients for bigger, faster, and hotter burning wildland fires are in place.

Consequently, in 2007, a diverse group of national stakeholders led by the International Code Council (ICC) organized themselves into a National Blue Ribbon Panel to address the challenge of wildland urban interface fire in America.

They designated five major categories of focus, along with other additional findings:

- **Education**
- **Incentives**
- **Mitigation**
- **Regulation**
- **Suppression**
- **Other**

EDUCATION¹

Much has been done to acquaint stakeholders in the wildland urban interface, including property owners, community leaders and government officials, with their fire protection responsibilities. For many reasons, including transition and rapid growth in the WUI, this outreach has not been enough.

1. Accordingly, the BRP recommends more support for WUI-focused education, and offers the following observations: effective WUI education and community action programs exist, but they need more support to build, market and measure the success of their messages.

¹ Education encompasses teaching and learning specific skills, and also something less tangible but more profound: the imparting of knowledge, positive judgment and well-developed wisdom.

The four most utilized WUI programs by communities and homeowners are:

- ***Firesafe*** <http://www.firesafecouncil.org> a successful program whose mission is to mobilize homeowners to protect their homes, communities and environments from wildfire. It promotes the idea that together, people and communities can control the impact of catastrophic wildfires.
- ***Firefree*** <http://www.firefree.org> a successful educational program that has changed attitudes and behaviors about wildfires over the last decade. Each year thousands of residents participate in the spring free recycling event, but more importantly, they are protecting themselves and their neighborhoods from devastating wildfires.
- ***Firewise*** <http://www.firewise.org> an approach that emphasizes community responsibility for planning the design of a safe community, effective emergency response, and individual responsibility for safer home construction, design, landscaping, and maintenance.
- ***Firesmart*** www.partnersinprotection.ab.ca a multi-disciplinary partnership committed to raising awareness, providing information, and developing forums to encourage proactive, community-based initiatives. Initiatives have the principal objective to reduce the risk of fire losses and enhance safety in the wildland urban interface.

Recommendation:

Building on the very successful grassroots models of the National RC&D Councils' <http://www.rcdnet.org> and Fire Safe Councils' <http://www.firesafecouncil.org> organizational concepts, the BRP recommends that at the local level communities that have not already established a county or multi-county Fire Safe Council or similar group, should do so. At the state level it is recommended that a State Fire Council or similar group be established and include all key stakeholders, and at the national level a Fire Safe Council should be established, making a three-tier system that can better coordinate resources and efforts. Each system should be self-governed and independent.

2. The public and policymakers will be best served by a clear, coordinated message about the WUI problem and its solutions.

Recommendations:

Well over a dozen definitions of the WUI exist, based somewhat on what individual groups or organizations want to convey. The BRP recommends a simple and concise universal definition: ***“where structures and vegetation merge in a wildfire-prone environment.”***

To define the WUI problem, the BRP recommends the following characterization: *The WUI problem is a combination of people, homes and frequent fires impacting the lives of increasing numbers of Americans, burning more structures, and resulting in ever mounting costs.*

The enormous impact to our cities, communities and businesses in the WUI is also putting the lives of homeowners and first responders in harms way. The future will be even more challenging, with projections of more homes and people creating even greater hazards for homeowners who elect to build in these areas.

Solutions to the WUI problem are not simple; however, it is a demonstrated fact that Community Wildfire Protection Plans (CWPPS) along with building, fire and WUI codes are effective in reducing structure loss in WUI fires. These codes should be applied universally.

3. The BRP recognizes that WUI education should be extensive and recommends the following key messages:

- **The benefits and role of wildland fire**

While wildfires are a natural and important part of most landscapes, the unnaturally severe fires in recent decades have adversely impacted the environment, including forests, rangelands, watersheds and wildlife.

- **Individual, community and government responsibilities**

People living in wildfire prone areas need to understand the potential dangers and their individual responsibilities to provide wildfire mitigation for their homes and properties. Many do not take seriously the risk of wildland urban interface fires and how to mitigate that risk. Thus federal, state and local governments and non-WUI taxpayers subsidize their decision to live in these high-risk areas.

- **Effective mitigation techniques or “best practices”**

Homeowners living in wildland urban interface areas should understand what effective techniques or best practices are available to mitigate the risk of wildfire:

- Prescribed fire
- Mechanical thinning (including chipping, mulching and other forms of biomass utilization.)
- Hand thinning
- Firesafe vegetation

- **Benefits of prevention and mitigation work**

In the aftermath of recent wildland fires, it became obvious that a number of homeowners had completed at least some recommended mitigation measures. In many cases, they were also willing to attempt additional measures despite mixed motivations to act.

- **Benefits of land-use plans**

Population densities are continuing to increase and structural development is penetrating deeper into wildland regions. At the same time there are significant increases in the number of WUI fires, increasing the risk from wildfires. Land-use planning by communities is a must to ensure that population changes from urban to rural are well thought out and infrastructure is adequate to deal with fire protection issues.

Some areas may simply be too dangerous, from a wildfire standpoint, to safely develop.

- **The function and benefits of building codes and standards**

Building codes and standards and generally accepted practices define acceptable standards for the construction of buildings and the production, properties and performance of buildings. Groups or committees representing the fire service, manufacturers, government agencies, contractors and other organizations develop today's model building codes and voluntary standards. Upon adoption by governmental authorities, these model codes and voluntary standards are incorporated into laws and regulations.

Wildland urban interface standards, generally embodied in zoning and building codes (specification codes), are not widely adopted or implemented in the wildland urban interface. This needs to be examined and improved upon by communities at risk of wildland fire. These specification codes regulate minimum allowable building and site characteristics. Examples of specification codes include requirements for street width, the number of structures per area, vegetation clearance, roof material and screening of vent openings. Standards such as these recommend minimum building and site characteristics for improving structure survival. Based on research by CALFIRE, where these recommendations are implemented, structure survival during a wildland fire can be increased up to 92 percent.

Because many property owners who live in wildland urban interface areas move there to escape urban regulation, there is great resistance to fire safety regulations that restrict building and site characteristics. This suggests the need for a regulatory approach that makes allowances for the diversity of social values while identifying measures for reducing the fire risk. Implementing these measures should not be optional.

In most states, variations in geography, geology and climate necessitate that the code provisions address hazards stemming from these differences. By dealing with these variations at the national level, it has been shown that a nationally applicable code with adaptable performance standards could help serve the full range of the entire nation's need. A nationally applicable model building code helps to ensure consistency and fairness in determining, addressing and meeting the diverse and common needs of all the nation's jurisdictions.

- **Benefits of community preparation**

It is a proven fact that in instances where homeowners and communities become involved and participate in dealing with the WUI issue, homes are better protected. Consequently, during a wildfire situation more homes are saved.

Recommendations:

1. The WUI message to policymakers should better explain why solutions might appear to infringe on property rights, but actually provide hidden, but vital benefits.
2. The BRP recommends that the very effective “Smokey Bear campaign” needs a WUI component that provides a clear and concise message about the importance of fire prevention in WUI areas.
3. Homeowners want easy access to WUI information and wildfire situation reports. The BRP recommends that a media campaign be initiated by federal and state agencies and other organizations in early 2008 that highlights where homeowners can find WUI information easily. It is recommended that the following two sites be promoted and utilized for this effort: Current fire information and situation reports at: www.nifc.gov, WUI interface information is available at www.firewise.org and an excellent site for tools to deal with the WUI issue at: www.firecenter.berkeley.edu/toolkit.
4. WUI stakeholders, such as realtors and building officials, should offer more WUI information to customers. It is recommended that realtors and builders, in collaboration with BRP organizations, develop a simple pamphlet that describes what potential and new homebuyers must do to live safely in WUI areas.
5. BRP members recognize and recommend that it is critical for WUI stakeholders at all levels, in all sectors, to continue to dialogue and work together on this issue.
6. It is recommended that homeowners utilize the following website to get the most up-to-date information and/or provide the website with examples of best practices of WUI mitigation efforts: <http://www.wildfireprograms.usda.gov>. It is recommended that BRP groups promote this site on their websites.
7. It is recommended that homeowners, local governments and other organizations utilize the website that has county WUI data for the 11 western states. This information is located at: www.headwaterseconomics.org.

INCENTIVES²

Getting humans to act in their own best interests before disaster strikes is something like getting children to eat their vegetables. Accordingly, the BRP encourages the use of incentives (and sometimes disincentives) to motivate critical change in the WUI, and offers the following insights:

1. Government-based, economic incentive programs, such as the National Fire Plan, State Fire Assistance Grants and mitigation cost-share programs, need continued support and funding.

² Incentive is an inducement or stimulus (the carrot or the stick), which encourages someone to do something.

2. WUI stakeholders in the private sector, such as the insurance industry (through higher premiums for WUI homes and discounts for good practices), can encourage appropriate Firesafe/Firewise action. However, emerging policy in the insurance industry tends toward disincentives, i.e., policy cancellation unless mitigation techniques are employed.
3. Recognize and support communities and organizations engaged in effective WUI education, prevention and mitigation programs.
4. Explaining the advantages of planning and regulation may encourage local buy-in and development of land-use plans, Community Wildfire Protection Plans and WUI codes and standards.
5. Implementing building, fire and WUI codes can create positive change in dealing with the increased threats of WUI fire.
6. Peer pressure can be used to motivate homeowners, i.e., publishing local mitigation progress reports, for example, on the Internet to create a sense of competition between neighborhoods, communities and even states and regions.
7. Free programs that help WUI homeowners dispose of flammable vegetation have proven successful in helping to motivate landscape-scale change.
8. Emergency response (fire suppression) programs may have opportunities that can be used to encourage and support WUI prevention and mitigation programs.

MITIGATION³

Experts agree that the best opportunity to prevent or reduce losses from wildfire occurs before that fire ignites. However, most programs do not adequately fund or measure the success of prevention and mitigation projects. Accordingly, the BRP recommends increased recognition and long-term commitment to the funding and support of WUI mitigation programs. It also offers the following considerations:

1. WUI mitigation resources, including taxpayer dollars, can be better utilized if distributed based on local wildfire risks and hazards rather than politics or geographic equity.
2. Multi-jurisdictional and community collaboration about WUI mitigation programs, priorities, and grant opportunities is critical.
3. WUI mitigation programs should promote landowner responsibility.
4. WUI mitigation program success in hazard reduction should be measured on a more geographically strategic scale than acres treated.

³ Structural and nonstructural measures undertaken to limit the adverse impact of natural hazards. The processes built into the controls environment, such as policies, frameworks, accountabilities, etc., to lower the residual risk.

5. WUI mitigation programs should measure wildfire risks, values-at-risk and the effectiveness of various treatment methods, including cost.
6. WUI mitigation evaluation programs should use long-term measurements.
7. Officials should support innovative research and design of mitigation techniques to offer better tools to WUI homeowners.
8. A clearinghouse of data on mitigation techniques and ideas, wildfire losses and prevention program cost-savings would benefit the public and policymakers.
9. A federal staff position dedicated to wildfire use could benefit public land-management agencies.

REGULATION⁴

On the face of it, people do not like regulation, but just as traffic flows better when everyone knows and obeys the rules, and are held accountable to them, America's WUI will be a safer, more self-sustaining place through the consistent and common use of codes and standards (rules and regulations).

Accordingly, the BRP recommends wider education about and use of WUI regulations, and offers the following suggestions:

1. Explain and promote WUI community planning, codes and standards, i.e., community wildfire protection plans, land-use ordinances and building codes and standards.
2. Ensure integration and consistency of WUI fire plans, codes and standards within and across local jurisdictions.
3. Research effective ordinances in the WUI and publish/distribute these findings.
4. Educate policymakers and the public about why WUI regulations appear to infringe on property rights, but why they are necessary, regardless. Emphasize that the long-term goal of such regulations is to protect property.

⁴ The kinds of codes and other regulations covered in this report (zoning, building, fire subdivision regulation, etc.) are legislative. Essentially, they are local ordinances adopted by local elected bodies (such as city or county councils) under the authority provided by state-enabling legislation. Other types of regulation are legal restrictions promulgated by government administrative agencies through rulemaking supported by a threat of sanction or a fine. This administrative or regulatory law is in contrast to statutory or case law. Regulation mandated by the government or state attempts to produce outcomes which might not otherwise occur, produce or prevent outcomes in different places to what might otherwise occur, or produce or prevent outcomes in different timescales than would otherwise occur.

SUPPRESSION⁵

When fire is threatening communities, humans want a large-scale emergency response. The BRP recognizes the importance of suppression and encourages increased collaboration at all levels, including the following specifics:

The availability of fire protection during a wildland fire is an important factor in structure survival. Structure ignitions, if extinguished, can occur without the loss of the structure. The quantity of fire suppression staff and equipment, together with training, experience, and response times, determines fire suppression availability. This factor is generally considered the domain of fire suppression organizations, but community residents are also a part of the fire suppression availability factor. Residents are often the source of fire reports and augment organized suppression forces by working to protect individual properties.

Recommendations:

1. Support cross-training of structural and wildland firefighters.
2. Support multi-jurisdictional cooperation.
3. Improve cost containment through better use of local resources.
4. Fund proven, fire department assistance programs.

OTHER FINDINGS

1. Create a national consortium of stakeholders that can deal with the WUI issue.
Recommendation: In 2008, establish a national WUI Council made up of members of the BRP.
2. Increase collaboration between the insurance industry and fire service
Recommendation: Establish a joint effort between insurance, fire service and code development organizations that addresses WUI issues.

⁵ Wildland fire suppression is a unique aspect of firefighting. Wildland firefighting requires different tactics, equipment and training from the normal structure firefighting found in populated areas. Working in conjunction with specially designed firefighting aircraft, these wildfire-trained crews knock down flames, construct a fireline and mop up hot spots to protect watersheds, wildlands and the populated areas within the wilds. Wildland fire suppression also addresses the issues of the “urban interface” where populated areas border wildland areas. During the winter months, they are hard at work removing hazardous fuels to reduce fire hazard.

3. Explain role of government in the WUI.
Recommendation: Ask the USDA Forest Service, Department of the Interior and U.S. Fire Administration to provide a short narrative describing the role of each organization in dealing with the WUI. These narratives should be electronically submitted to all BRP members.
4. Explain the responsibilities of authorities before, during and after a wildfire.
Recommendation: Ask the USDA Forest Service, Department of the Interior and U.S. Fire Administration to provide a short narrative of what their responsibilities and authorities are before, during and after a wildfire. These narratives should be electronically submitted to all BRP members.
5. Influence growth patterns through land-use planning and regulation.
6. Create a **three-day National Blue Ribbon Conference on Wildland Urban Interface** that is based on the BRP five broad category findings of **Education, Incentives, Mitigation, Regulation and Suppression**. The BRP recommends that this conference be jointly sponsored by all the BRP organizations, including federal and state organizations. The BRP recommends establishing a steering committee to develop the conference concept, framework, timelines and location. As a result of the conference, each national-level and state Fire Safe Council will be identified and/or established. Each state will identify and report on existing local WUI Fire Safe Councils or equivalent.

Key points:

Recommend each state provide (at a minimum) a team of 11 people, that represents the following:

1. National Association of State Foresters (NASF)
2. Federal Wildland Fire Agency Representatives
3. International Association of Fire Chiefs (IAFC)
4. National Volunteer Fire Council (NVFC)
5. National RC&D Councils Representative
6. Homeowner Groups
7. National Association of Counties (NACo)
8. International City/County Management Association (ICMA)
9. National Association of Realtors (NAR)
10. National Association of Home Builders (NAHB)
11. Insurance Industry

APPENDIX

The Wildland Urban Interface Issue

While fires are a natural and important part of most landscapes, unnatural severe fires in recent decades have adversely impacted the environment, including forests, rangelands, watersheds and wildlife.

Fire protection in the Wildland Urban Interface (WUI) has been a problem for many years and continues to grow as the population and the desire to get closer to nature increase. The interface is a term loosely defined and has many definitions depending on one's perspective. It includes areas adjacent to wildlands, structures next to and within wildlands and any combination of people-oriented and natural resources-oriented values.

Natural resources management and conservation in the WUI are complicated by current land-related public policies. These challenges concern both the amount of land being developed in the interface and the speed with which this development is taking place. Current land-use policies have also, to a large extent, been ineffective in curbing changing land-use patterns and the influx of people into the interface.

With population densities continuing to increase, particularly in the West, this country has experienced a significant increase in the number of WUI fires; these fires are impacting the lives of more Americans, burning more structures and resulting in mounting costs with enormous impacts to our cities, communities, businesses and governments.

The use of aircraft, new technology, improved firefighting techniques and better coordination among agencies has helped. Federal, state and local governments extinguish an estimated 97 percent of all fires at less than 10 acres in size. Yet the 3 percent of fires that are not controlled initially are the most destructive. They are taking the lives of firefighters and the public, destroying structures and are the primary cause of skyrocketing wildland firefighting costs.

A look back over the past several hundred years at the worst wildfires in North American history shows us that if the conditions are right, catastrophic fires will occur. There is no region in this country that is exempt from this scenario. For example:

After a summer of sparse rain, in October 1825, sporadic wildfires in Maine and the Canadian province of New Brunswick reached disastrous levels. Strong winds spurred the conflagration, which burned through forests and settlements in Maine and along the Miramichi River in Canada. Among the worst wildfires in North American history, the Miramichi fire burned 3 million acres, killed 160 people and left 15,000 people homeless.

In October 1871, the Peshtigo Fire burned more than 3.7 million acres in Wisconsin and Michigan. Federal authorities estimate at least 1,500 people died in the fire. Eight hundred died in Peshtigo, Wisconsin, alone, nearly half the town's population. Despite the blaze's extensive devastation and the fact that it killed more people than any fire since, the Peshtigo Fire was overshadowed at the time by the Great Chicago Fire, which began the same day.

On September 1, 1894, on the heels of one of the driest summers on record, small blazes converged to form a firestorm near Hinckley, Minnesota. The flames rushed through the city and surrounding towns in a matter of hours, burning 350,000 acres and killing 418 people.

In August 1910, spanning two days and nights, several small blazes, hurricane-force winds and dry forests combined in Idaho and Montana to form what became known as the Great Fires. The flames killed 86 people and burned about 3 million acres, making it one of the biggest wildfires ever recorded in North America. A federal forester later wrote that the fire was “fanned by a tornadic wind so violent that the flames flattened out ahead, swooping to earth in great darting curves, truly a veritable red demon from hell.”

During summer 1988, parts of Yellowstone National Park and surrounding areas were overwhelmed by wildland fires that scorched 36 percent of the park’s 2,221,800 acres by the end of the season. Firefighters from all over the country and others from Canada and Australia were called in, but it took the first snowfalls of the year, in September, to dampen the flames and extinguish the wildfires.

In October 2003, multiple wildfires raged across Southern California, burning about 800,000 acres, killing 22 people and destroying more than 3,400 homes. Thousands of evacuated residents returned to burned-out homes and deadly mudslides caused by heavy fall rains on the newly barren ground.

History tells us that large wildland fires are not new. Humans have likely been facing these dangerous fires for thousands of years. The difference today is that there are now more homes, more people and a more complex landscape combined with drought and critical weather conditions.

A solution seems relatively simple: don’t build or buy a home where wildfires are prevalent. For many, however, this solution does not appear to be acceptable. Why do people ignore the obvious dangers? Many people do not appreciate the risk yet we are seeing more and more American lives impacted by a rising number of disastrous wildland urban interface fires.

WUI and Land Demographic Information

Based on 2000, 2006, U.S. Census Bureau states acreage figures, Natural Resources Conservation Service (NRCS), and USDA figures.

- The total land area of the 50 U.S. states is approximately 2.3 billion acres.
(For comparison purposes Alaska is 366 million acres, 168 million acres in Texas, 100 million acres in California, 93 million acres in Montana and 5 million acres in NJ).
- Combined federal, state, local government and private lands contain close to 600 million acres of wildland urban interface (WUI). 207 million acres of WUI is already developed and the remaining 393 million acres are being developed at an unprecedented rate of over 3 acres per minute, 4,300 acres per day, adding up to about 2 million acres per year. This has been occurring since 1990.

WUI Homes and Population Demographic Information

According to U.S. Census Bureau and NAHB, NAR figures as of January 2007.

- 115 million single-family homes exist in the U.S. and of these, approximately 46 million are located in the WUI. From 1990 to today, close to 17 million new homes have been constructed and 10 million have been built in or adjacent to the WUI.
- U.S. census figures estimate that 100 million people are full-time residents of these 46 million homes located in the WUI.

WUI Communities Demographic Information

**Source: www.forestsandrangelands.gov/reports/documents/healthyforests/2007/healthy_forests_report_05142007.pdf
National Association of State Foresters figures as of January 2007.**

- Over 51,612 communities have been designated as “at risk” of WUI fire in the United States. The breakdown by geographic areas is as follows: In the Western States: 6,169 designated communities at risk and 3,145 with CWPPs, in the Southern States: 40,984 designated communities at risk, 1,160 with CWPPs, and in the Northeast States: 4,459 designated communities at risk, 457 with CWPPs.
- As of January 2008, about 10 percent of the identified 51,612 communities at risk of wildland fire have adopted a WUI code.
Based on ICC statistics January 2008.
- Since 2000, fuels mitigation through federal funding has treated about 23 million acres; about 60 percent of these acres have been in the WUI (15 million acres). About 1 percent of the estimated 600 million acres (shown above) or about 6 percent of the 207 million acre figure described above.

- It is estimated that about \$3 billion have been spent treating these acres utilizing federal and state funding.

Based on USDA/USDO National Fire Plan Statistics, 2007

- As of January 2008, less than 10 percent of the 51,612 at-risk communities have completed a Community Wildfire Protection Plan (CWPPs), a total of about 4,762 plans.

According 2007 National Fire Plan statistics.

- As of January 2008, about 2 percent of the 51,612 at-risk communities have been designated as Firewise Communities, about 1,030 communities.

Based on www.firewise.org statistic

Wildland Fire Statistics

Based on NIFC, USFA, USDA Forest Service, DOI, USFA and ISO figures based on ICC compilation.

- Close to 100,000 wildland fires burn about 1 million acres every year in the United States.
- Wildfire activity is seasonal, yet over the past several years wildland fires have occurred in every month of the year.
- Typically wildfire seasons in the United States are as follows: in the West, most fires occur between May and November; in the Southeast, the fire season is generally March through June; in New England, it is September through November.
- Ninety-seven percent of the 100,000 fires that occur in the U.S. each year are controlled at less than 10 acres. The remaining 3 percent, or 3,000 fires, escape initial action by first responders and become the largest, most dangerous and expensive wildland fires. The majority of these fires are WUI fires.
- Wildland fire statistics for 2007 show that it was the most severe and expensive fire season on record and “5 of the 10 worst seasons since 1960 in terms of acres burned have occurred in the last 8 years,” according to the National Multi-Agency Coordinating Group, which directs firefighting crews and equipment from the National Interagency Fire Center in Boise, Idaho (www.nifc.gov/fire_info/fires_acres.htm). Costs during 2007 for federal and state agencies were in excess of \$3 billion (over \$1.8 billion for federal agencies alone), with more than 90,000 fires burning close to 10 million acres, and in the process destroying 5,203 structures and taking the lives of seven federal, state and local fire department wildland firefighters and 12 civilians.

Structures lost to wildland fire during the 2000 decade

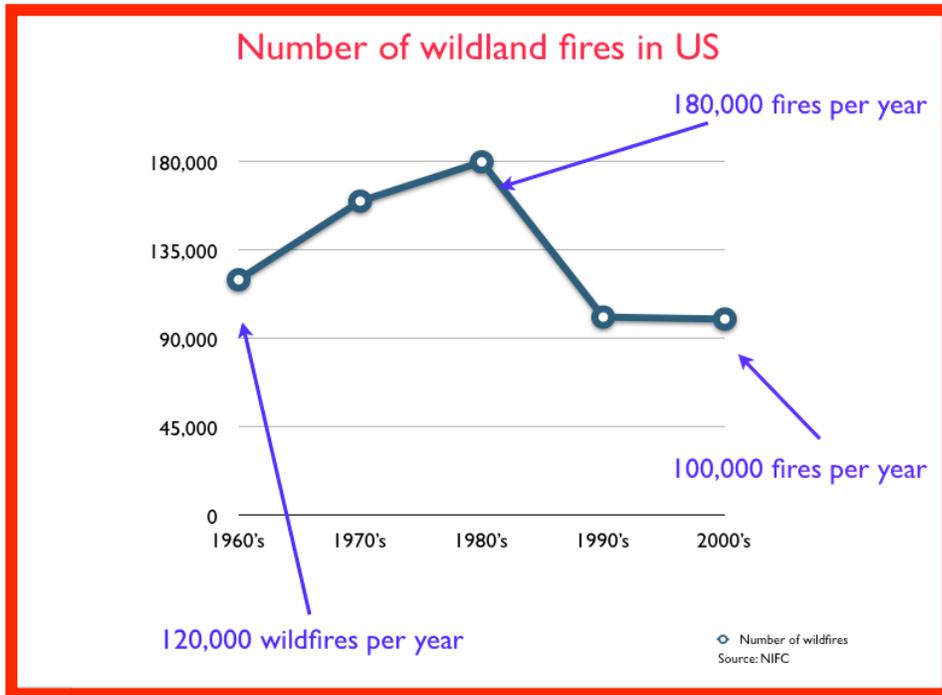
Based on figures from NIFC, USFA, USDA Forest Service, DOI, and ISO.

- **2000**.....861 structures lost to wildfire
- **2001**.....731 structures lost to wildfire
- **2002**.....2381 structures lost to wildfire
- **2003**.....5781 structures lost to wildfire
- **2004**.....2400 structures lost to wildfire
- **2005**.....2200 structures lost to wildfire
- **2006**.....2251 structures lost to wildfire
- **2007**.....5203 structures lost to wildfire

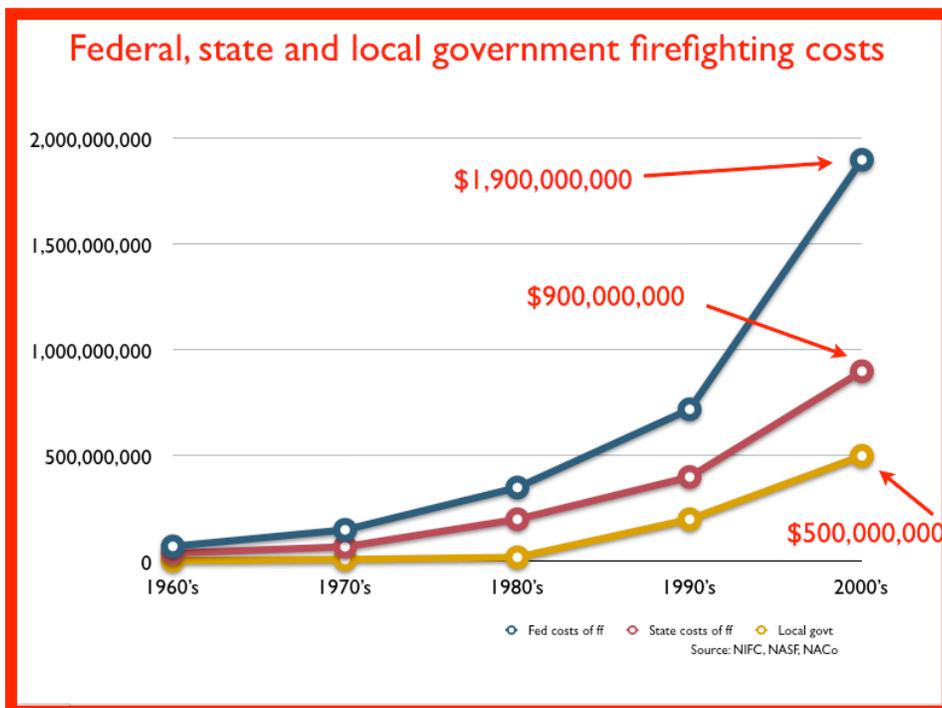
An overview of structure loss from wildfire 1960 to 2007

Based on NIFC, USFA, USDA Forest Service, DOI, USFA and ISO figures based on ICC compilation.

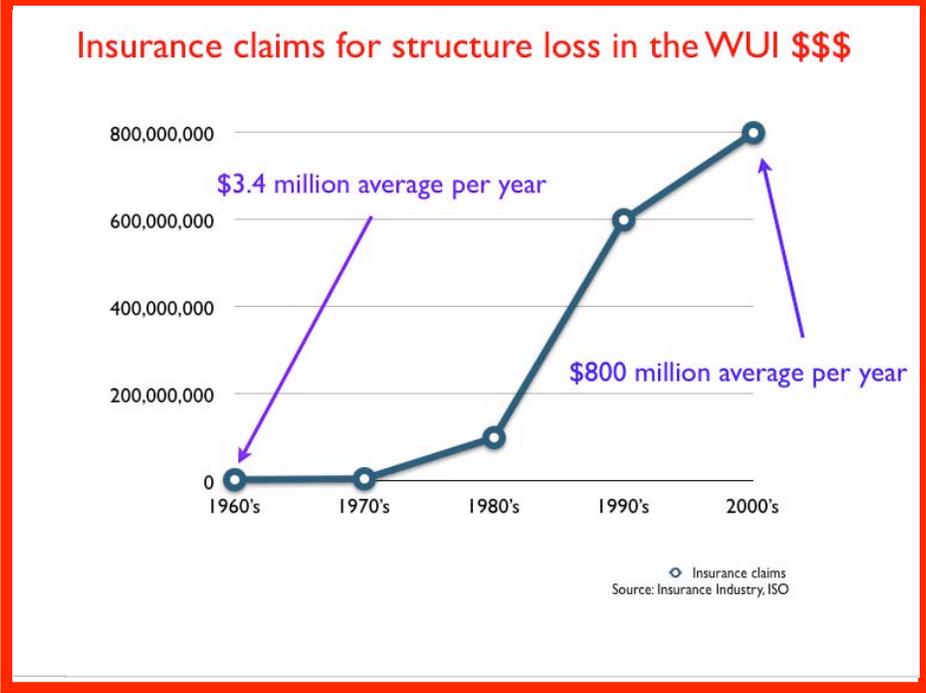
- **1960's** an average of **209** structures lost to wildfire each year.
- **1970's** an average of **405** structures lost to wildfire each year.
- **1980's** an average of **670** structures lost to wildfire each year.
- **1990's** an average of **932** structures lost to wildfire each year.
- **2000's** an average of **2726** structures lost to wildfire per year for the first 8 years of this decade.



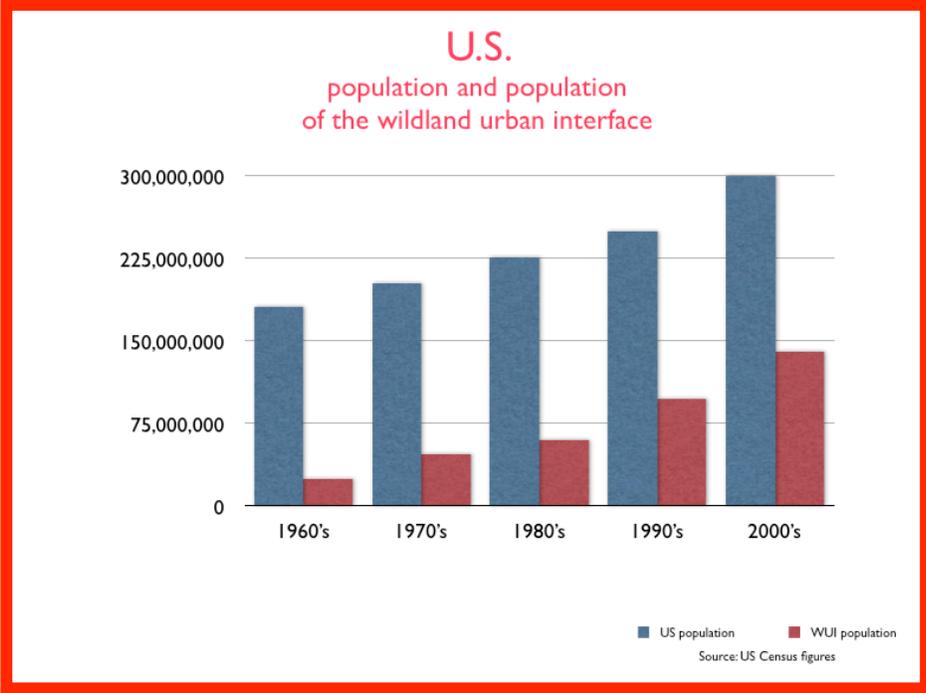
The chart above is an overview by decade (1960-2000) of the average number of wildland fires per year in the United States.



The chart above is an overview by decade (1960-2000) of federal, state and local government wildland firefighting costs per year.



The chart above provides an overview of insurance claims from structure loss due to wildland fire from 1960-2007. Please note costs are not adjusted for inflation.

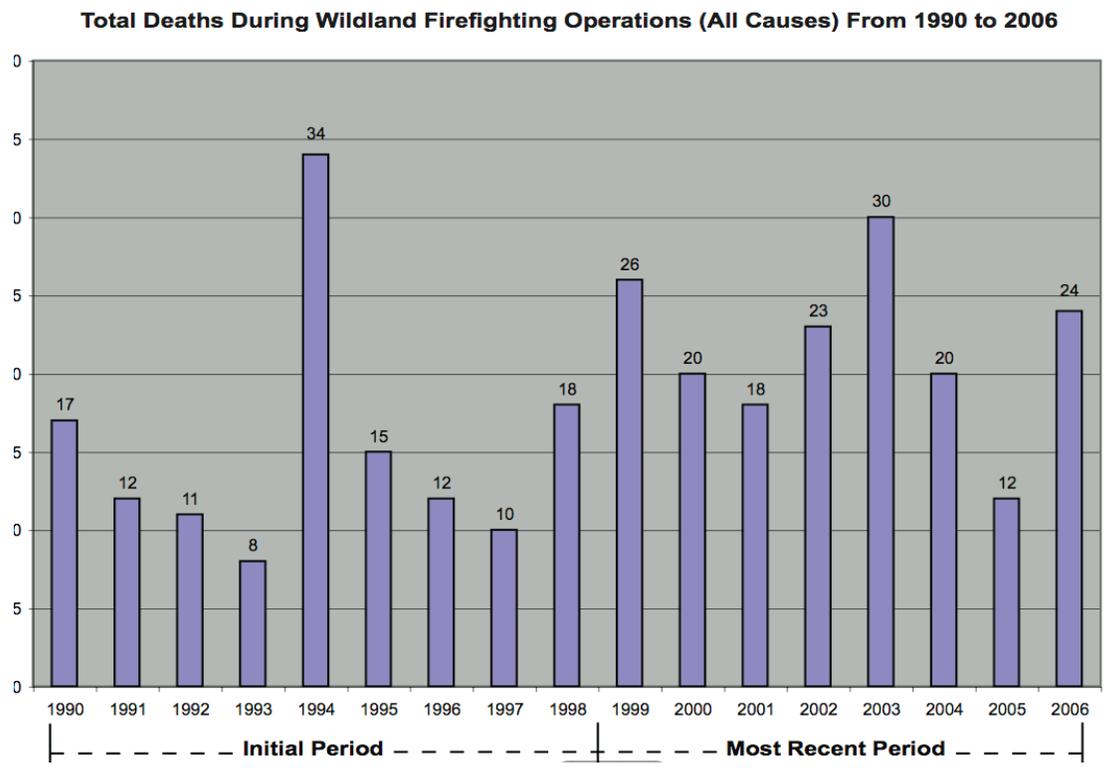


The chart above shows population trends for the U.S. general population (blue) and WUI populations (red) from the 1960's through 2007.

Federal and State Wildland Fire Statistics

Source: NIFC, Boise, ID January 2008

Calendar year	Number of wildland fires	Acres burned by wildland fire
2007	79,727	8,915,700
2006	96,385	9,873,745
2005	66,753	8,689,389
2004	65,461	8,097,880
2003	63,629	3,960,842
2002	73,457	7,184,712
2001	84,079	3,570,911
2000	92,250	7,393,493
1999	92,487	5,626,093
1998	81,043	1,329,704
1997	66,196	2,856,959
1996	96,363	6,065,998
1995	82,234	1,840,546
1994	79,107	4,073,579
1993	58,810	1,797,574
1992	87,394	2,069,929
1991	75,754	2,953,578
1990	66,481	4,621,621
1989	48,949	1,827,310
1988	72,750	5,009,290
1987	71,300	2,447,296
1986	85,907	2,719,162
1985	82,591	2,896,147
1984	20,493	1,148,409
1983	18,229	1,323,666
1982	174,755	2,382,036
1981	249,370	4,814,206
1980	234,892	5,260,825
1979	163,196	2,986,826
1978	218,842	3,910,913
1977	173,998	3,152,644
1976	241,699	5,109,926
1975	134,872	1,791,327
1974	145,868	2,879,095
1973	117,957	1,915,273
1972	124,554	2,641,166
1971	108,398	4,278,472
1970	121,736	3,278,565
1969	113,351	6,689,081
1968	125,371	4,231,996
1967	125,025	4,658,586
1966	122,500	4,574,389
1965	113,684	2,652,112
1964	116,358	4,197,309
1963	164,183	7,120,768
1962	115,345	4,078,894
1961	98,517	3,036,219
1960	103,387	4,478,188



The chart above shows wildland firefighter fatalities from 1990-2006. The figures released in January 2008 for the 2007 calendar year show that 10 fatalities occurred.

Blue Ribbon Panel Participants

June and/or October 2007 Meetings

U.S. Senate Committee on Energy and Natural Resources Staff
Frank Gladics

International Code Council
Jim Tidwell
Mark Dinneen
Dan Bailey
Rhonda Lynn Kondoudis
Peter Feldman

National Association of Counties (NACo)
Ryan Yates
Abby Friedman
Rocky Lopes

Home Safety Council
Meri-K. Appy

State Farm Insurance
Steve Austin

Department of Interior, Office of Wildland Fire Coordination
Kelly Hawk

Department of Homeland Security
Federal Emergency Management Agency (FEMA) and U.S. Fire Administration (USFA)
Woody Stratton

Insurance Services Office
Pram Lipczyk
Fred Brower

Institute for Business and Home Safety (IBHS)
Jeff Burton

Congressional Fire Services Institute (CFSI)
Bill Webb
Sean Carroll

National Association of State Foresters (NASF)
Vicki Christiansen

National Volunteer Fire Council (NVFC)
Dave Finger

National Association of Resource and Conservation Councils (RC&D)
Roberta (Bobbi) Jeanquart
Andrew Gordon

The Wilderness Society
Jaelith Hall-Rivera

Natural Resources Defense Council
Franz A. Matzner

Society of American Foresters (SAF)
Doug Crandall

National Association of Homebuilders (NAHB)
Steve Orłowski

National Fire Protection Association (NFPA)
Nancy McNabb
James Smalley

National Institute of Standards and Technology (NIST)
William (Ruddy) Mell
Alexander Maranghides
Glenn P. Forney

American Red Cross
Lauren Lobrano

International City/County Management Association (ICMA)
Gary Cannon

U.S. Department of Agriculture, Forest Service
Rick Prausa
Pam Leschak

National Association of Realtors
Russell Riggs

ESRI
Jennifer Schottke

American Planning Association
Jeff Soule

International Association of Wildland Fire
William Sommers
Dan Bailey

International Association of Fire Chiefs
Shawn Stokes
Ken Lasala
Chief Will May

Deschutes County, Oregon
Joe Stutler
Chief Gary Marshall

National Geographic
Lynnette Terrett
Jess Elder

Keep America Beautiful
Rob Wallace

American Institute of Building Design (AIBD)
Steve Mickley

National Academy of Public Administration
Bruce McDowell
Charles Hulick

USGS
Erik Berg

Headwater Economics
Ray Rasker

National Emergency Equipment Dealers Association (NEEDA)
Kenton Pattie

Oregon Project Wildfire
Tom Fay

CATO Institute
Randle O'Toole

AIG Insurance
Craig Crowder

AIG/Firebreak
Andrew Aamodt

National Wildfire Foundation
Daniel Wayne

PUBLIC COMMENTS RELATING TO WILDLAND URBAN INTERFACE



People Helping People Build a Safer World™

As a result of recommendations from the June 2007 meeting of the Blue Ribbon Panel on Wildland Urban Interface, homeowners and others have been encouraged to share thoughts, comments and ways to improve how the U.S. is dealing with this very important issue. A national email address was set up to receive comments and recommendations: blueribbonpanel@iccsafe.org. From September-November of 2007, email comments were solicited from the public. To advertise this effort to generate public comments, a news release, web page announcements and an emailing to several thousand individuals via the International Association of Wildland Fire's Firenet web-based network was utilized.

TOTAL NUMBER OF EMAIL RESPONSES AS OF 11.02.07: 838

As of November 2, 2007, a total of 838 comments were received through this electronic email process. A total of 181 email comments were rejected because they were deemed not in good taste. 156 were selected as the most representative, with X's representing the 499 similar comments. 63 percent were from the general public, 20 percent were from local community RC&D Councils, 8 percent were from fire departments, 5 percent were from state governments, 3 percent were from local governments and 1 percent were from federal government.

The following summary includes comments received from September to November 2007. Full names and email addresses are not shown for privacy reasons. Individual emails have been consolidated for this report. No response and/or follow-up to individual emails occurred. Comments have not been edited for spelling, grammar or length. Emails that were received that included specific names of individuals and were deemed not in good taste were not included.

The comments, opinions and recommendations in these email responses are not endorsed or accepted by the members of the Blue Ribbon Panel on Wildland Urban Interface or ICC. Each comment was reviewed by the Blue Ribbon Panel and considered in the final findings. The following summarizes key points from public comments and recommendations.

WUI Education

1. Many comments emphasize empowering homeowners to take responsibility for living in wildfire-prone areas, stressing the need to understand the potential dangers and their individual responsibilities to provide wildfire mitigation for home and property.
 - National organizations need to better define where homeowners can get appropriate WUI information and tools. (User-friendly web-based and local contact information). Provide a listing of key websites for WUI information by categories (Statistics/data, Education, Planning, Mapping, Codes and Standards).
 - Federal, state and fire service organizations need to create and publish a listing of key contacts at the national, regional and local levels for WUI information.
 - National organizations need to provide a simple checklist for homeowners to better understand how and where to get involved with local Firesafe Councils, Firewise Communities, RC&D Councils, etc.
 - A large number of comments focused on the issue of national organizations working together on this WUI issue.
 - Organizations need to reinforce the message that saving lives and homes starts with education.
 - Many homeowners feel they have misplaced expectations—and were misinformed before, during and after a WUI fire. Organizations at all levels need to understand this need and build it into education programs.
 - Many homeowners did not initially live in wildlands or WUI areas so they don't know what to expect. Better understanding is needed and should be built into education programs.
 - WUI tools exist, but continuing, improved research is vital in order to address today's issues and to move wisely into the future.

WUI Mitigation

1. Better tools are needed to help the homeowner know what to do in relationship to mitigation—what kind of mitigation techniques are the best and most cost effective?
2. Reducing homeowner risks is the bottom line. Firewise, Firesafe, Firesmart solutions can, through research, provide up to a 92 percent chance of making a home survivable from wildland urban interface fire based on research by CALFIRE on the Paint and Oakland Hills wildland urban interface fires.
3. Many homeowners want information to better define roles and responsibilities in mitigation—who is responsible for what? (Homeowners, adjacent landowners, local government, etc.).
4. Many emails recommend providing a listing of existing mitigation techniques as well as new research toward implementing more effective mitigation efforts, perhaps some kind of clearinghouse or website.
5. Many comments requested a site to share new mitigation ideas as they are generated, so homeowners could be more knowledgeable.

WUI Incentives

1. Homeowners need to understand that if their home doesn't meet certain standards, they may not get insured. More information is needed concerning insurance company policies.
2. Homeowners feel insurance companies are starting to get more involved, but must be better tied to other groups and more collaborative with fire service.
3. Many comments suggested doing assessments of jurisdictions, posting them on websites, and thereby creating peer pressure to do something.

WUI Regulation

1. Provide general information and educational programs that describe what regulations are and how effective they are in dealing with WUI fire. Show examples of best practices. There is a need for better understanding of voluntary standards vs. adopted standards, and discussion of growth management issues and how to get people involved at the local level.
2. Many comments from homeowners requested more local training about growth, land-use planning and effective use of codes and Community Wildfire Protection Planning.

3. Homeowners would like to be shown good examples of types of activities that other communities are finding useful to help solve the local WUI issues.
4. Insurance Information Institute—homeowners should see the video “*Ready to Leave*” which highlights what to do in the event of a WUI fire, this is an excellent product.
5. Homeowners want to know how they can become better involved in how to stop sprawl and build good growth development and land-use plans.
6. Many homeowners say it is unfair to place the burden on the federal government when people choose to live in remote areas.

Other

1. Several comments related to people wanting better coordination at the national level, and requesting the formation of a National WUI Coalition/Alliance to streamline WUI coordination. (Encourage a link from local, state and national websites as well).

INSURANCE INDUSTRY AND THE WUI

Compiled from information from Insurance Industry information, including ISO, State Farm and State Insurance Industry Councils.

Background

Wildland fire is becoming an issue for the insurance industry, mainly due to a series of costly fire seasons this decade.

- 2000-\$40 million in just Colorado
- 2002-\$100 million
- 2003-\$3 billion
- 2006-\$2 billion
- 2007-\$4 billion
- This decade is averaging over \$1 billion a year

Insurance Industry Concerns

- Drought conditions
- Record low snow packs
- Fuels buildups
- Wildland fire suppression rising costs and associated issues
- Increasing development in the WUI

Insurance Industry response to the WUI issue

- Reviewing their exposure in wildfire areas
- New guidelines for writing homeowner policies
- Re-underwriting what is already insured
- Customer education (letters, pamphlets)
- Developing relationships in the wildland fire community through partnerships
- Support of the *International Wildland Urban Interface Code*[®] adoption
- Encourage Firesafe/Firewise education efforts

Common excuses from policyholders for not implementing mitigation

- **Denial:** “It won’t happen to me...”
- **Nature:** “It’s wrong to cut trees...”
- **Irresponsibility:** “It’s not my responsibility!”
- **Lack of ownership:** “It’s my neighbors problem and the government’s problem!”
- **Insurance:** “If my home is destroyed by wildland fire, my insurance company will build me a new home...”

Insurance Industry response

- The Insurance industry needs to better understand the WUI problem and language of the wildland fire community.
- Establish relationships with the fire service, federal and state wildland fire organizations and building and code/standards organizations.
- Partner in WUI initiatives like FireSafe, Firewise, Firesmart and Firefree.
- Develop and implement a WUI homeowner inspection program for WUI policyholders.
- Example of this response is State Farm Insurance's commitment in over 13 states, including CO, ID, UT, NV, WY, MT, AZ, NM, WA, OR, AK, CA and FL, in a new WUI homeowner inspection program.

The WUI homeowner inspection program:

- Homes located in target states will be inspected to identify any needed treatments to reduce wildfire hazard.
- The selection of homes is based on potential wildland fire risk from GIS technology, natural hazard mapping for wildfire risks, and the listing of the 51,612 communities at risk of wildfire along with Insurance Industry Policy data.

What is the Insurance Industry inspection program?

- The original State Farm programs began in May 2003, and started in AZ, NV, NM, UT, CO and WY. In 2005 other companies began to follow the lead of State Farm, in other states including AK, WA, OR, ID, TN, GA and MT. In 2006, CA was added and in 2007 FL. Beginning this year over 20 additional states are being added to the Insurance industry programs.
- Each homeowner receives a letter of notification approximately one to two weeks prior to the survey. Because the survey is exterior only, the homeowner isn't required to be on site. Insurance inspectors contracting with insurance companies and trained by state agencies will conduct the inspections.
- During the survey, potential hazards on the property will be identified. If only minor treatments are needed, insurance companies will send a letter to the customer two to four weeks following the inspection, listing the items to rectify and notifying the homeowner that he or she has up to two years to correct those items.
- If the property requires significant measures to rectify the hazards, the customer will receive a letter asking that he or she arrange a meeting on the property with

local fire service officials to develop a wildfire mitigation plan. This letter will also advise the customer that he or she will have 18-24 months to obtain the plan and complete the recommended treatments. Any charges assessed for the help of the fire service officials are the responsibility of the customer.

- Insurance industry officials will follow up to verify that the recommended measures are completed. If a homeowner chooses not to complete these safety measures, putting his or her property and the lives of fire official at greater risk, nonrenewal of the insurance policy for the property would be considered.

Insurance Industry goals:

- Protect the lives, homes and personal property of customers.
- Create a safer environment from the fire and emergency service officials who respond to wildland fires.
- Educate our customers who live in the WUI about the dangers associated with wildland fires and how they can better protect their property and homes.
- Reduce the potential for future financial losses in identified high-hazard areas.

Approximately 46 million homes in the United States exist in the WUI. The status of the insurance industry programs is about 100,000 homes have been inspected in about 18 states.

- About 33 percent of the homes inspected need some corrective action.
- About 20 percent of the homes inspected had major concerns.
- About 1 percent of the homes inspected had nonrenewal or canceled policies.

Summary:

- Wildland fire is now on the Insurance industry's "radar screen."
- Wildland fire is not an individual's problem alone—it is a community problem.
- Collaborative education and action in communities involving all stakeholders including homeowners, insurance companies, fire service and federal and state forestry agencies will be the only way to get mitigation accomplished.



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