Where wildfires destroy buildings in the US relative to the wildland–urban interface and national fire outreach programs
www.nrfirescience.org/resource/17694
Over the past 30 years, the cost of wildfire suppression and homes lost to wildfire in the US have increased dramatically, driven in part by the expansion of the wildland–urban interface (WUI), where buildings and wildland vegetation meet. In response, the wildfire management community has devoted substantial effort to better...
Author(s): H. Anu Kramer, Miranda H. Mockrin, Patricia M. Alexandre, Susan I. Stewart, Volker C. Radeloff
Year Published: 2018
Type: Document
Book or Chapter or Journal Article

Are Wildfires Knocking on the Built-Up Areas Door?
www.nrfirescience.org/resource/17638
Human-started fires represent the vast majority of wildfires in Mediterranean countries. The current expansion of human settlements into fire-prone territories has led to the creation of landscapes where anthropogenic developments merge with wildland areas. In this context, understanding the role of distance from built-up areas in...
Author(s): Leone D. Mancini, Mario Elia, Anna Barbati, Luca Salvati, Piermaria Corona, Raffaele Laforteza, Giovanni Sanesi
Year Published: 2018
Type: Document
Book or Chapter or Journal Article

Multiobjective prioritization of preselected fuel treatment strategies for public forestland: a case study in Flathead County, Montana
www.nrfirescience.org/resource/17346
Preferred fuel treatment strategies (FTSs) were determined for two public forests in Flathead County, Montana, for the period 2010–59 using a multiple-objective evaluation method that accounts for future residential development in the WUI and climate change. Three fuel management objectives were used to evaluate and rank FTSs:....
Author(s): Tony Prato, Travis B. Paveglio
Year Published: 2018
Type: Document
Book or Chapter or Journal Article

Wildfire risk reduction in the United States: Leadership staff perceptions of local fire department roles and responsibilities
www.nrfirescience.org/resource/16481
As wildland fires have had increasing negative impacts on a range of human values, in many parts of the United States (U.S.) and around the world, collaborative risk reduction efforts among agencies, homeowners, and fire departments are needed to improve wildfire safety and mitigate risk. Using interview data from 46 senior officers...
Author(s): Rachel S. Madsen, Hylton J. G. Haynes, Sarah M. McCaffrey
Year Published: 2018
Type: Document
Book or Chapter or Journal Article

Understanding the factors that influence perceptions of post-wildfire landscape recovery across 25 wildfires in the northwestern United States
Disturbances such as wildfire are important features of forested landscapes. The trajectory of changes following wildfires (often referred to as landscape recovery) continues to be an important research topic among ecologists and wildfire scientists. However, the landscape recovery process also has important social dimensions that...

Author(s): Chad Kooistra, Troy E. Hall, Travis B. Paveglio, Michael Pickering
Year Published: 2018
Type: Document
Book or Chapter or Journal Article

Rapid growth of the US wildland-urban interface raises wildfire risk

The wildland-urban interface (WUI) is the area where houses and wildland vegetation meet or intermingle, and where wildfire problems are most pronounced. Here we report that the WUI in the United States grew rapidly from 1990 to 2010 in terms of both number of new houses (from 30.8 to 43.4 million; 41% growth) and land area (from...)

Author(s): Volker C. Radeloff, David P. Helmers, Heather A. Kramer, Miranda H. Mockrin, Patricia M. Alexandre, Avi Bar-Massada, Van Butsic, Todd J. Hawbaker, Sebastian Martinuzzi, Alexandra D. Syphard, Susan I. Stewart
Year Published: 2018
Type: Document
Book or Chapter or Journal Article

The Role of Trust in Homeowner Firewise Actions

Absher and Vaske conducted a mail survey of rural landowners in heavily forested counties along the Front Range of Colorado. They asked questions designed to measure respondents’ trust in (1) the information that the Forest Service provided regarding forest fires, and (2) the agency’s competency in responding to fires and...

Author(s): Josh McDaniel
Year Published: 2018
Type: Document
Book or Chapter or Journal Article

Does plant flammability differ between leaf and litter bed scale? Role of fuel characteristics and consequences for flammability assessment

The increasing concern regarding fire in the wildland–urban interface (WUI) around the world highlights the need to better understand the flammability of WUI fuels. Research on plant flammability is rapidly increasing but commonly only considers a single fuel scale. In some cases, however, different fuel scales (e.g. leaf and...)

Author(s): Anne Ganteaume
Year Published: 2018
Type: Document
Book or Chapter or Journal Article

Influences on the adoption and implementation of a wildfire mitigation program in an Idaho city

The Firewise Communities Program and other wildfire mitigation programs promote private property actions that alleviate the growing complexity, costs, and damages from wildfire. Despite significant research surrounding performance of mitigations promoted by Firewise, fewer studies explore...
community adoption of the program or how...
Author(s): Travis B. Paveglio, Emma Kelly
Year Published: 2018
Type: Document
Book or Chapter or Journal Article

Scalable evacuation routing in a dynamic environment
www.nrfirescience.org/resource/17242
In emergency management, tools are needed so we can take the appropriate action at different stages of an evacuation. Recent wildfires in California showed how quickly a natural disaster can affect a large geographical area. Natural disasters can create unpredicted traffic congestion or can temporarily block urban or rural roads....
Author(s): Kaveh Shahabi, John P. Wilson
Year Published: 2018
Type: Document
Book or Chapter or Journal Article

Managing Fire and Biodiversity in the Wildland-Urban Interface: A Role for Green Firebreaks
www.nrfirescience.org/resource/17110
In the wildland-urban interface, the imperative is often to protect life and property from destructive fires, while also conserving biodiversity. One potential tool for achieving this goal is the use of green firebreaks: strips of low flammability species planted at strategic locations to help reduce fire spread by slowing or...
Author(s): Timothy J. Curran, George L.W. Perry, Sarah V. Wyse, Md Azharul Alam
Year Published: 2017
Type: Document
Book or Chapter or Journal Article

Wildland urban interface part II: response of components, systems, and mitigation strategies in the United States
www.nrfirescience.org/resource/17715
Structure loss in wildland fires has significantly increased over the past few decades, affected by increased development in rural areas, changing fuel management policies, and climate change, all of which are projected to increase in the future. This paper is Part II of a two-part review, which presents a summary of fundamental and...
Author(s): Raquel S. P. Hakes, Sara E. Caton, Daniel J. Gorham, Michael J. Gollner
Year Published: 2017
Type: Document
Synthesis

Overlapping layers of fire management examined through the lens of post-fire erosion - Final Report to the Joint Fire Science Program
www.nrfirescience.org/resource/17018
At the Wildland Urban Interface (WUI), where undeveloped landscapes meet the built environment, there is a complex interaction among local, state and federal land and hazard stakeholders that must work together to protect life and property from wildfire. The effective use of wildfire science is considered key to successful wildfire...
Author(s): Katie Gibble, Jennifer L. Pierce, Eric Lindquist
Year Published: 2017
Type: Document
Technical Report or White Paper
Examining the influence of biophysical conditions on wildland-urban interface homeowners’ wildfire risk mitigation activities in fire-prone landscapes

www.nrfirescience.org/resource/16539

Expansion of the wildland–urban interface (WUI) and the increasing size and number of wildfires has policy-makers and wildfire managers seeking ways to reduce wildfire risk in communities located near fire-prone forests. It is widely acknowledged that homeowners can reduce their exposure to wildfire risk by using nonflammable...

Author(s): Christine Olsen, Jeffrey D. Kline, Alan A. Ager, Keith A. Olsen, Karen C. Short
Year Published: 2017
Type: Document
Book or Chapter or Journal Article

Learn from the burn: The High Park Fire 5 years later

www.nrfirescience.org/resource/16520

It has been 5 years since the High Park Fire burned over 85,000 acres in Northern Colorado, causing extensive property damage, loss of life, and severe impacts to the water quality of the Poudre River. In the fall of 2016, a conference was organized by the USFS Rocky Mountain Research Station and the Coalition for the Poudre River...

Author(s): Charles C. Rhoades, Peter R. Robichaud, Sandra E. Ryan, Jen Kovecses, Carl Chambers, Sara Rathburn, Jared Heath, Stephanie Kampf, Codie Wilson, Dan Brogan, Brad Piehl, Mary Ellen Miller, John Giordanengo, Erin Berryman, Monique E. Rocca
Year Published: 2017
Type: Document
Research Brief or Fact Sheet

Surface fuel characteristics, temporal dynamics, and fire behavior of masticated mixed-conifer fuelbeds of the U.S. Southeast and Rocky Mountains

www.nrfirescience.org/resource/15582

Mastication is a wildland fuel treatment technique that is rapidly becoming popular with fire managers for fire hazard reduction projects, especially in areas where reducing fuels with prescribed fire is particularly challenging. Mastication is the process of mechanically modifying the live and dead surface and canopy biomass by...

Author(s): Robert E. Keane, Pamela G. Sikkink, Theresa B. Jain, James J. Reardon
Year Published: 2017
Type: Document
Technical Report or White Paper

Human presence diminishes the importance of climate in driving fire activity across the United States

www.nrfirescience.org/resource/16345

Growing human and ecological costs due to increasing wildfire are an urgent concern in policy and management, particularly given projections of worsening fire conditions under climate change. Thus, understanding the relationship between climatic variation and fire activity is a critically important scientific question. Different...

Author(s): Alexandra D. Syphard, Jon E. Keeley, Anne H. Pfaff, Ken Ferschweiler
Year Published: 2017
Type: Document
Book or Chapter or Journal Article
While the wildland–urban interface (WUI) is not a new concept, fires in WUI communities have rapidly expanded in frequency and severity over the past few decades. The number of structures lost per year has increased significantly, due in part to increased development in rural areas, fuel management policies, and climate change.

Author(s): Sara E. Caton, Raquel S. P. Hakes, Daniel J. Gorham, Aixi Zhou, Michael J. Gollner
Year Published: 2017
Type: Document
Book or Chapter or Journal Article

In this project we posed the question “Is the whole greater than the sum of its parts?” We focused on homeowner wildfire risk mitigation, community heterogeneity, and fire adaptedness. One of the unique aspects of this project was that the team was a research and practice collaboration. This collaboration facilitated...

Author(s): Patricia A. Champ, Hannah Brenkert-Smith, James R. Meldrum, Christopher M. Barth, Travis Warziniack
Year Published: 2017
Type: Document
Technical Report or White Paper

Champ’s presentation focused on how to get homeowners to take action to protect their properties from fire. She framed this challenge as a last-mile problem, which is a concept from the literature on supply chain. The last mile is the end of the supply chain where a product is transferred to the customer. The last mile is often...

Author(s): Patricia A. Champ
Year Published: 2017
Type: Document
Conference Proceedings

There is much interest in the role of insurance in encouraging homeowners to mitigate wildfire risk to their properties. For example, the Fire Adapted Communities Coalition characterizes the insurance industry as a ‘nontraditional stakeholder’ that ‘may reduce future wildfire-related insurance claims by educating homeowners on...

Author(s): James R. Meldrum, Christopher M. Barth, Patricia A. Champ, Hannah Brenkert-Smith, Lilia C. Falk, Travis Warziniack
Year Published: 2017
Type: Document
Book or Chapter or Journal Article

We characterized wildfire transmission and exposure within a matrix of large land tenures (federal,
state, and private) surrounding 56 communities within a 3.3 million ha fire prone region of central Oregon US. Wildfire simulation and network analysis were used to quantify the exchange of fire among land tenures and communities and...

Author(s): Alan A. Ager, Cody Evers, Michelle A. Day, Haiganoush K. Preisler, Ana M. G. Barros, Max W. Nielsen-Pincus
Year Published: 2017
Type: Document
Book or Chapter or Journal Article

Should I stay or should I go now? Or should I wait and see? Influences on wildfire evacuation decisions
www.nrfirescience.org/resource/16390
As climate change has contributed to longer fire seasons and populations living in fire-prone ecosystems increase, wildfires have begun to affect a growing number of people. As a result, interest in understanding the wildfire evacuation decision process has increased. Of particular interest is understanding why some people leave...
Author(s): Sarah M. McCaffrey, Robyn S. Wilson, Avishek Konar
Year Published: 2017
Type: Document
Book or Chapter or Journal Article

Wildland urban interface wildfire mitigation desk reference guide
www.nrfirescience.org/resource/15251
The Wildland Urban Interface Wildfire Mitigation Desk Reference Guide is designed to provide basic background information on relevant programs and terminology for those, whether community members or agency personnel, who are seeking to enhance their community’s wildfire mitigation efforts. The four primary objectives of this...
Author(s): National Wildfire Coordinating Group (NWCG)
Year Published: 2017
Type: Document
Management or Planning Document

Setting priorities for private land conservation in fire-prone landscapes: Are fire risk reduction and biodiversity conservation competing or compatible objectives?
www.nrfirescience.org/resource/14588
Although wildfire plays an important role in maintaining biodiversity in many ecosystems, fire management to protect human assets is often carried out by different agencies than those tasked for conserving biodiversity. In fact, fire risk reduction and biodiversity conservation are often viewed as competing objectives. Here we...
Author(s): Alexandra D. Syphard, Van Butsic, Avi Bar-Massada, Jon E. Keeley, Jeff A. Tracey, Robert N. Fisher
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

Planning for wildfire in the wildland-urban interface: a resource guide for Idaho communities
www.nrfirescience.org/resource/14856
The price of wildfire has never been higher. Why? And what can local communities do about it? One way to measure the price of wildfire is the dollars spent on suppression alone. In 1995, fire made up 16 percent of the U.S. Forest Service’s annual appropriation budget; in 2015, wildfire consumed more than 50 percent of the...
Do insurance policies and rates influence home development on fire-prone lands?

www.nrfirescience.org/resource/14811

The dangers and costs associated with wildfires are rising and predicted to escalate rapidly in decades to come, primarily because of continued home development on fire-prone lands and the effects of climate change. Those interested in reducing wildfire risk have asked whether insurance can play a role in making new and existing...

Fuel size impacts on carbon residuals and combustion dynamics in masticated woody debris

www.nrfirescience.org/resource/14488

Mastication of standing trees to reduce crown fuel loading is an increasingly popular method of reducing wildfire hazard in the wildland-urban interface of Canada. Previous research has shown that masticated fuel beds can leave considerable pyrogenic and black carbon residuals after burning, though the impact of fuel particle size...

Evaluating the characteristics of social vulnerability to wildfire: demographics, perceptions, and parcel characteristics

www.nrfirescience.org/resource/14804

A large body of research focuses on identifying patterns of human populations most at risk from hazards and the factors that help explain performance of mitigations that can help reduce that risk. One common concept in such studies is social vulnerability-human populations’ potential exposure to, sensitivity from and ability to...

Living with fire: how social scientists are helping wildland-urban interface communities reduce wildfire risk

www.nrfirescience.org/resource/14451

Reducing wildfire risk to lives and property is a critical issue for policy makers, land managers, and citizens who reside in high-risk fire areas of the United States - this is especially the case in the Rocky Mountain region and other western states. In order for a wildfire risk reduction effort to be effective in a U.S. wildland-...
The affluence-vulnerability interface: intersecting scales of risk, privilege, and disaster  
www.nrfirescience.org/resource/14766  
This paper examines vulnerability in the context of affluence and privilege. It focuses on the 1991 Oakland Hills Firestorm in California, USA to examine long-term lived experiences of the disaster. Vulnerability is typically understood as a condition besetting poor and marginalized communities. Frequently ignored in these...  
Author(s): Christine Eriksen, Gregory Simon  
Year Published: 2016  
Type: Document  
Book or Chapter or Journal Article

Recovery and adaptation after wildfire on the Colorado Front Range (2010-12)  
www.nrfirescience.org/resource/14703  
Following the loss of homes to wildfire, when risk has been made apparent, homeowners must decide whether to rebuild, and choose materials and vegetation, while local governments guide recovery and rebuilding. As wildfires are smaller and more localised than other disasters, it is unclear if recovery after wildfire results in policy...  
Author(s): Miranda H. Mockrin, Susan I. Stewart, Volker C. Radeloff, Roger B. Hammer  
Year Published: 2016  
Type: Document  
Book or Chapter or Journal Article

Wildfire risk to residential structures in the Island Park Sustainable Fire Community: Caribou-Targhee National Forest  
www.nrfirescience.org/resource/14695  
The Island Park Sustainable Fire Community (IPSFC) Project is a collaborative working group of citizens, businesses, non-profit organizations, and local, state, and federal government agencies (www.islandparkfirecommunity.com) working to create fire-resilient ecosystems in and around the human communities of West Yellowstone,...  
Author(s): Don Helmbrecht, Julie W. Gilbertson-Day, Joe H. Scott, LaWen Hollingsworth  
Year Published: 2016  
Type: Document  
Technical Report or White Paper

Understanding the effect of large wildfires on residents' well-being: what factors influence wildfire impact?  
www.nrfirescience.org/resource/13937  
Existing social science has indicated that wildfires can affect the short- and long-term functioning of social systems. Less work has focused on how wildfire events affect the physical and psychological well-being of individual residents impacted by such events. In this study, we explore the extent to which personal- or community...  
Author(s): Travis B. Paveglio, Chad Kooistra, Troy E. Hall, Michael Pickering  
Year Published: 2016  
Type: Document  
Book or Chapter or Journal Article

The relative impacts of vegetation, topography, and spatial arrangement on building loss to wildfires in case studies of California and Colorado  
www.nrfirescience.org/resource/13886
Context: Wildfires destroy thousands of buildings every year in the wildland urban interface. However, fire typically only destroys a fraction of the buildings within a given fire perimeter, suggesting more could be done to mitigate risk if we understood how to configure residential landscapes so that both people and buildings could... 

Author(s): Patricia M. Alexandre, Susan I. Stewart, Miranda H. Mockrin, Nicholas S. Keuler, Alexandra D. Syphard, Avi Bar-Massada, Murray K. Clayton, Volker C. Radeloff
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

**Places where wildfire potential and social vulnerability coincide in the conterminous United States**
www.nrfirescience.org/resource/14522
The hazards-of-place model posits that vulnerability to environmental hazards depends on both biophysical and social factors. Biophysical factors determine where wildfire potential is elevated, whereas social factors determine where and how people are affected by wildfire. We evaluated place vulnerability to wildfire hazards in the...

Author(s): Gabriel Wigtil, Roger B. Hammer, Jeffrey D. Kline, Miranda H. Mockrin, Susan I. Stewart, Daniel Roper, Volker C. Radeloff
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

**High resolution mapping of development in the wildland-urban interface using object based image extraction**
www.nrfirescience.org/resource/14808
The wildland-urban interface (WUI), the area where human development encroaches on undeveloped land, is expanding throughout the western United States resulting in increased wildfire risk to homes and communities. Although census based mapping efforts have provided insights into the pattern of development and expansion of the WUI at...

Author(s): Michael D. Caggiano, Wade T. Tinkham, Chad M. Hoffman, Anthony S. Cheng, Todd J. Hawbaker
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

**Using community archetypes to better understand differential community adaptation to wildfire risk**
www.nrfirescience.org/resource/14469
One of the immediate challenges of wildfire management concerns threats to human safety and property in residential areas adjacent to non-cultivated vegetation. One approach for relieving this problem is to increase human community ‘adaptiveness’ to deal with the risk and reality of fire in a variety of landscapes. The challenge...

Author(s): Matthew S. Carroll, Travis B. Paveglio
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

**Forest density preferences of homebuyers in the wildland-urban interface**
www.nrfirescience.org/resource/14795
In the fire-prone Western U.S., the scale of surrounding forest density can be realized by homebuyers
as an amenity for aesthetics and cooling effects, or as a disamenity in terms of wildfire risk. There has been a lack of academic attention to understanding this duality of forest density preferences for homebuyers in at-risk...

Author(s): Evan Hjerpe, Yeon-Su Kim, Leah Dunn
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

Evaluating the effectiveness of mitigations activities in the wildland urban interface - Final Report to the Joint Fire Science Program
www.nrfirescience.org/resource/17052

There has been relatively little research on Wildland-Urban Interface (WUI) fire spread, compared to fires within structures, despite the increasing frequency and losses from WUI fires. This is due, in part, to the fact that the subject of WUI fire research falls between traditional studies of building fires and forest fires, non-...

Author(s): Alexander Maranghides
Year Published: 2016
Type: Document
Technical Report or White Paper

Examining alternative fuel management strategies and the relative contribution of National Forest System land to wildfire risk to adjacent homes - a pilot assessment on the Sierra National Forest, California, USA
www.nrfirescience.org/resource/14352

Determining the degree of risk that wildfires pose to homes, where across the landscape the risk originates, and who can best mitigate risk are integral elements of effective co-management of wildfire risk. Developing assessments and tools to help provide this information is a high priority for federal land management agencies such...

Author(s): Joe H. Scott, Matthew P. Thompson, Julie W. Gilbertson-Day
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

Anthropogenic influence on wildfire activity in Alberta, Canada
www.nrfirescience.org/resource/14702

The boreal forest of Alberta, Canada, is under pressure from a rapid expansion of the wildland–human interface driven by natural resources exploitation. The specific impact of these changes on area burned remains poorly understood. We addressed this issue by modelling area burned for the 1980–2010 period using variables...

Author(s): Francois-Nicolas Robinne, Marc-Andre Parisien, Michael D. Flannigan
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

Factors related to building loss due to wildfires in the conterminous United States
www.nrfirescience.org/resource/14691

Wildfire is globally an important ecological disturbance affecting biochemical cycles and vegetation composition, but also puts people and their homes at risk. Suppressing wildfires has detrimental ecological effects and can promote larger and more intense wildfires when fuels accumulate, which increases the threat to buildings in...

Author(s): Patricia M. Alexandre, Susan I. Stewart, Nicholas S. Keuler, Murray K. Clayton, Miranda H.
Resolving future fire management conflicts using multicriteria decision making
www.nrfirescience.org/resource/13893
Management strategies to reduce the risks to human life and property from wildfire commonly involve burning native vegetation. However, planned burning can conflict with other societal objectives such as human health and biodiversity conservation. These conflicts are likely to intensify as fire regimes change under future climates...
Author(s): Don A. Driscoll, Michael Bode, Ross A. Bradstock, David A. Keith, Trent D. Penman, Owen F. Price
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

Climate change beliefs and hazard mitigation behaviors: homeowners and wildfire risk
www.nrfirescience.org/resource/14535
Downscaled climate models provide projections of how climate change may exacerbate the local impacts of natural hazards. The extent to which people facing exacerbated hazard conditions understand or respond to climate-related changes to local hazards has been largely overlooked. In this article, we examine the relationships among...
Author(s): Hannah Brenkert-Smith, James R. Meldrum, Patricia A. Champ
Year Published: 2015
Type: Document
Book or Chapter or Journal Article

Understanding gaps between the risk perceptions of wildland-urban interface (WUI) residents and wildfire professionals
www.nrfirescience.org/resource/13447
Research across a variety of risk domains finds that the risk perceptions of professionals and the public differ. Such risk perception gaps occur if professionals and the public understand individual risk factors differently or if they aggregate risk factors into overall risk differently. The nature of such divergences, whether...
Author(s): James R. Meldrum, Patricia A. Champ, Hannah Brenkert-Smith, Travis Warziniack, Christopher M. Barth, Lilia C. Falk
Year Published: 2015
Type: Document
Book or Chapter or Journal Article

The 2010 wildland-urban interface of the conterminous United States
www.nrfirescience.org/resource/13412
The wildland-urban interface (WUI) is the area where structures and other human development meet or intermingle with undeveloped wildland, and it is where wildfires have their greatest impacts on people. Hence the WUI is important for wildfire management. This document and associated maps summarize the extent of the WUI in the...
Author(s): Sebastian Martinuzzi, Susan I. Stewart, Miranda H. Mockrin, Roger B. Hammer, Volker C. Radeloff, David P. Helmers
Year Published: 2015
Type: Document
Community wildfire preparedness: a global state-of-the-knowledge summary of social science research

This article builds on findings from a synthesis of fire social science research that was published from 2000 to 2010 to understand what has been learned more recently about public response to wildfires. Two notable changes were immediately noted in the fairly substantial number of articles published between 2011 and 2014. First,...

Author(s): Sarah M. McCaffrey
Year Published: 2015
Type: Document

Categorizing the social context of the wildland urban interface: Adaptive capacity for wildfire and community "archetypes"

Understanding the local context that shapes collective response to wildfire risk continues to be a challenge for scientists and policymakers. This study utilizes and expands on a conceptual approach for understanding adaptive capacity to wildfire in a comparison of 18 past case studies. The intent is to determine whether comparison...

Author(s): Travis B. Paveglio, Cassandra Moseley, Matthew S. Carroll, Daniel R. Williams, Emily Jane Davis, A. Paige Fischer
Year Published: 2015
Type: Document

Re-envisioning community-wildfire relations in the U.S. West as adaptive governance

Prompted by a series of increasingly destructive, expensive, and highly visible wildfire crises in human communities across the globe, a robust body of scholarship has emerged to theorize, conceptualize, and measure community-level resilience to wildfires. To date, however, insufficient consideration has been given to wildfire...

Author(s): Jesse Abrams, Melanie Knapp, Travis B. Paveglio, Autumn Ellison, Cassandra Moseley, Max W. Nielsen-Pincus, Matthew S. Carroll
Year Published: 2015
Type: Document

Community Mitigation Assistance Team: National pilot highlights

Scores of communities nationwide experience the impacts of wildfire every year; thousands of residents evacuate; infrastructure is threatened; many communities, especially those dependent on tourism or natural resources, are economically devastated; and wildfire response costs billions. But the wildfire itself...

Author(s): Pam Leschak
Year Published: 2015
Type: Document

Wildland fire management: insights from a foresight panel
www.nrfirescience.org/resource/13440
Wildland fire management faces unprecedented challenges in the 21st century: the increasingly apparent effects of climate change, more people and structures in the wildland-urban interface, growing costs associated with wildfire management, and the rise of high-impact fires, to name a few. Given these significant and growing...
Author(s): Robert L. Olson, David N. Bengston, Leif A. DeVaney, Trevor A.C. Thompson
Year Published: 2015
Type: Document
Technical Report or White Paper

Evaluating the effectiveness of wildfire mitigation activities in the wildland-urban interface
www.nrfirescience.org/resource/14047
Each year wildfires damage homes, businesses, communities, watersheds, and forests on millions of acres across the U.S. However there are effective ways to reduce the impact of wildfire. A new report, Evaluating the Effectiveness of Wildfire Mitigation Activities in the Wildland-Urban Interface, shares lessons learned from...
Author(s): Alexander M. Evans, Sarah Auerbach, Lara Wood Miller, Rachel Wood, Krys Nystrom, Jonathan Loevner, Amanda Aragon, Matthew Piccarello, Eytan Krasilovsky
Year Published: 2015
Type: Document
Technical Report or White Paper

Exploring how alternative mapping approaches influence fireshed assessment and human community exposure to wildfire
www.nrfirescience.org/resource/13949
Attaining fire-adapted human communities has become a key focus of collaborative planning on landscapes across the western United States and elsewhere. The coupling of fire simulation with GIS has expanded the analytical base to support such planning efforts, particularly through the "fireside" concept that identifies areas where...
Author(s): Joe H. Scott, Matthew P. Thompson, Julie W. Gilbertson-Day
Year Published: 2015
Type: Document
Book or Chapter or Journal Article

Rebuilding and new housing development after wildfire
www.nrfirescience.org/resource/13201
The number of wildland-urban interface communities affected by wildfire is increasing, and both wildfire suppression and losses are costly. However, little is known about post-wildfire response by homeowners and communities after buildings are lost. Our goal was to characterise rebuilding and new development after wildfires across...
Author(s): Patricia M. Alexandre, Miranda H. Mockrin, Susan I. Stewart, Roger B. Hammer, Volker C. Radeloff
Year Published: 2015
Type: Document
Book or Chapter or Journal Article

Climate change and wildfire risk in an expanding wildland-urban interface: a case study from the Colorado Front Range corridor
www.nrfirescience.org/resource/13861
Context: Wildfire is a particular concern in the wildland-urban interface (WUI) of the western United
States where human development occurs close to flammable natural vegetation. Objectives: (1) Assess the relative influences of WUI expansion versus climate-driven fire regime change on spatial and temporal patterns of burned WUI....

Author(s): Zhihua Liu, Michael C. Wimberly, Aashis Lamsal, Terry L. Sohl, Todd J. Hawbaker
Year Published: 2015
Type: Document
Book or Chapter or Journal Article

The role of defensible space for residential structure protection during wildfires
www.nrfirescience.org/resource/12775
With the potential for worsening fire conditions, discussion is escalating over how to best reduce effects on urban communities. A widely supported strategy is the creation of defensible space immediately surrounding homes and other structures. Although state and local governments publish specific guidelines and requirements, there...
Author(s): Alexandra D. Syphard, Teresa J. Brennan, Jon E. Keeley
Year Published: 2014
Type: Document
Book or Chapter or Journal Article

Understanding evacuation preferences and wildfire mitigations among northwest Montana residents
www.nrfirescience.org/resource/12955
There is currently insufficient information in the United States about residents' planned evacuation actions during wildfire events, including any intent to remain at or near home during fire events. This is incompatible with growing evidence that select populations at risk from wildfire are considering alternatives to evacuation....
Author(s): Travis B. Paveglio, Tony Prato, Douglas Dalenberg, Tyron J. Venn
Year Published: 2014
Type: Document
Book or Chapter or Journal Article

Building trust, establishing credibility, and communicating fire issues with the public
www.nrfirescience.org/resource/12385
With more people than ever living in the vicinity of the wildland-urban interface, communicating wildland fire management activities and building trust with the public is paramount for safety. Although the time and resources it takes to build and maintain the public's trust may seem daunting, it may be one of the most important...
Author(s): Josh McDaniel
Year Published: 2014
Type: Document
Research Brief or Fact Sheet

Learning to coexist with wildfire
www.nrfirescience.org/resource/15326
The impacts of escalating wildfire in many regions — the lives and homes lost, the expense of suppression and the damage to ecosystem services — necessitate a more sustainable coexistence with wildfire. Climate change and continued development on fire-prone landscapes will only compound current problems. Emerging strategies for...
Author(s): Max A. Moritz, E. Batllori, Ross A. Bradstock, A. Malcolm Gill, J. Handmer, Paul F. Hessburg, J. Leonard, Sarah M. McCaffrey, Dennis C. Odion, Tania L. Schoennagel, Alexandra D. Syphard
Are wildfire management resources in the United States efficiently allocated to protect resources at risk? A case study from Montana

www.nrfirescience.org/resource/12909

Federal wildfire management agencies in the United States are under substantial pressure to reduce and economically justify their expenditures. To support economically efficient management of wildfires, managers need better estimates of the resource benefits and avoided damage costs associated with alternative wildfire management...

Author(s): Derek T. O'Donnell, Tyron J. Venn, David E. Calkin
Year Published: 2014
Type: Document
Book or Chapter or Journal Article

The rising cost of wildfire protection

www.nrfirescience.org/resource/12409

Headwaters Economics produced this report to better understand and address why wildfires are becoming more severe and expensive. The report also describes how the protection of homes in the Wildland-Urban Interface has added to these costs and concludes with a brief discussion of solutions that may help control escalating costs....

Author(s): Ross Gorte
Year Published: 2013
Type: Document
Technical Report or White Paper

Simulating effects of land use policies on extent of the wildland urban interface and wildfire risk in Flathead County, Montana

www.nrfirescience.org/resource/12036

This study used a wildfire loss simulation model to evaluate how different land use policies are likely to influence wildfire risk in the wildland urban interface (WUI) for Flathead County, Montana. The model accounts for the complex socio-ecological interactions among climate change, economic growth, land use change and policy....

Author(s): Travis B. Paveglio, Tony Prato, Michael Hardy
Year Published: 2013
Type: Document
Book or Chapter or Journal Article

Living in a tinderbox: wildfire risk perceptions and mitigating behaviours

www.nrfirescience.org/resource/14672

The loss of homes to wildfires is an important issue in the USA and other countries. Yet many homeowners living in fire-prone areas do not undertake mitigating actions, such as clearing vegetation, to decrease the risk of losing their home. To better understand the complexity of wildfire risk-mitigation decisions and the role of...

Author(s): Patricia A. Champ, Geoffrey H. Donovan, Christopher M. Barth
Year Published: 2013
Type: Document
Book or Chapter or Journal Article
Wildfire risk and optimal investments in watershed protection
www.nrfirescience.org/resource/16172
Following what was then one of the most destructive fire years on record, President Bush signed into law the Healthy Forests Restoration Act of 2003. The law requires no less than fifty percent of all funds allocated for hazardous fuels reductions to occur in the wildland-urban interface (WUI), with the aim of enhancing the...
Author(s): Travis Warziniack, Matthew P. Thompson
Year Published: 2013
Type: Document
Book or Chapter or Journal Article

How risk management can prevent future wildfire disasters in the wildland-urban interface
www.nrfirescience.org/resource/12757
Recent fire seasons in the western United States are some of the most damaging and costly on record. Wildfires in the wildland-urban interface on the Colorado Front Range, resulting in thousands of homes burned and civilian fatalities, although devastating, are not without historical reference. These fires are consistent with the...
Author(s): David E. Calkin, Jack D. Cohen, Mark A. Finney, Matthew P. Thompson
Year Published: 2013
Type: Document
Book or Chapter or Journal Article

Fighting fire with fire: does a policy of broad-scale prescribed burning improve community safety?
www.nrfirescience.org/resource/17711
Wildfires cause enormous damage worldwide, particularly in Victoria, Australia, with growing populations in fire-prone ecosystems. Broad-scale prescribed burning is an established, yet controversial, wildfire management policy in Victoria and Australia. But does broad-scale prescribed burning reduce fire damage? The answer depends...
Author(s): Danielle Clode, Mark A. Elgar
Year Published: 2013
Type: Document
Book or Chapter or Journal Article

Social amplification of wildfire risk: the role of social interactions and information sources
www.nrfirescience.org/resource/14671
Wildfire is a persistent and growing threat across much of the western United States. Understanding how people living in fire-prone areas perceive this threat is essential to the design of effective risk management policies. Drawing on the social amplification of risk framework, we develop a conceptual model of wildfire risk...
Author(s): Hannah Brenkert-Smith, Katherine L. Dickinson, Patricia A. Champ, Nicholas Flores
Year Published: 2013
Type: Document
Book or Chapter or Journal Article

The Waldo Canyon Fire: Fires on the Colorado Front Range and Home Destruction - A Report to the Pike and San Isabel National Forests
www.nrfirescience.org/resource/11266
The purpose of this white paper is to discuss fires on the Colorado Front Range and to share initial observations of fire behavior and home destruction during the Waldo Canyon Fire. It is my hope that these lessons and observations will be beneficial to agencies and especially the public. I want to share
Research perspectives on the public and fire management: a synthesis of current social science on eight essential questions
www.nrfirescience.org/resource/12601
As part of a Joint Fire Science Program project, a team of social scientists reviewed existing fire social science literature to develop a targeted synthesis of scientific knowledge on the following questions: 1. What is the public's understanding of fire's role in the ecosystem? 2. Who are trusted sources of information about fire...
Author(s): Sarah M. McCaffrey, Christine Olsen
Year Published: 2012
Type: Document
Synthesis

Burning questions for managers: fuels management practices in riparian areas
www.nrfirescience.org/resource/8354
Vegetation treatment projects for fuel reduction in riparian areas can pose distinct challenges to resource managers. Riparian areas are protected by administrative regulations, many of which are largely custodial and restrict active management. Like uplands, however, riparian areas have been affected by fire suppression, land use,...
Author(s): Kristen E. Meyer, Kathleen A. Dwire, Patricia A. Champ, Sandra E. Ryan, Gregg M. Riegel, Timothy A. Burton
Year Published: 2012
Type: Document
Book or Chapter or Journal Article

Quantifying the threat of unsuppressed wildfires reaching the adjacent wildland-urban interface on the Bridger-Teton National Forest, Wyoming, USA
www.nrfirescience.org/resource/8349
An important objective for many federal land management agencies is to restore fire to ecosystems that have experienced fire suppression or exclusion over the last century. Managing wildfires for resource objectives (i.e., allowing wildfires to burn in the absence of suppression) is an important tool for restoring such fire-adapted...
Author(s): Joe H. Scott, Don Helmbrecht, Sean A. Parks, Carol Miller
Year Published: 2012
Type: Document
Book or Chapter or Journal Article

Reducing fuels in the wildland-urban interface: community perceptions of agency fuels treatments
www.nrfirescience.org/resource/11452
Wildland fires and resulting effects have increased in recent years. Efforts are under way nationwide to proactively manage vegetative conditions to reduce the threat of wildland fires. Public support is critical to the successful implementation of fuels reduction programs, particularly at the wildland-urban interface. This study...
Author(s): Eric Toman, Melanie Stidham, Bruce A. Shindler, Sarah M. McCaffrey
Year Published: 2011
Proceedings of the Second Conference on the Human Dimensions of Wildland Fire
www.nrfirescience.org/resource/17808
This proceedings contains articles, posters, and abstracts of presentations from the second Human Dimensions of Wildland Fire Conference held 27-29 April 2010 in San Antonio, Texas. The conference covered the social issues at the root of wildland fire management's most serious challenges. Specific topics included: firefighter and...
Year Published: 2011
Type: Document
Conference Proceedings

How fuel treatments saved homes from the 2011 Wallow fire
www.nrfirescience.org/resource/17699
This is a fuel treatment effectiveness assessment report from Region 3 about the success of fuel treatments in protecting several communities from the recent Wallow fire in Arizona and New Mexico. The report narrative and graphics point to the success of good forest management and good community assistance to protect life, property...
Author(s): Pam Bostwick, James P. Menakis, Tim Sexton
Year Published: 2011
Type: Document
Technical Report or White Paper

Outreach programs, peer pressure, and common sense: what motivates homeowners to mitigate wildfire risk?
www.nrfirescience.org/resource/8335
In recent years, altered forest conditions, climate change, and the increasing numbers of homes built in fire prone areas has meant that wildfires are affecting more people. An important part of minimizing the potential negative impacts of wildfire is engaging homeowners in mitigating the fire hazard on their land. It is therefore...
Author(s): Sarah M. McCaffrey, Melanie Stidham, Eric Toman, Bruce A. Shindler
Year Published: 2011
Type: Document
Book or Chapter or Journal Article

Understanding homeowner preparation and intended actions when threatened by a wildfire
www.nrfirescience.org/resource/11138
As wildland fires affect more houses, increasing attention is being paid to how homeowners in affected areas respond to the wildfire threat. Most research on homeowner responses to wildfire has focused on actions homeowners take before a fire to mitigate their fire risk, particularly vegetation management. Less attention has been...
Author(s): Sarah M. McCaffrey, Greg Winter
Year Published: 2011
Type: Document
Technical Report or White Paper

Public engagement in neighbourhood level wildfire mitigation and preparedness: case studies from Canada, the US and Australia
www.nrfirescience.org/resource/12432
This study examined neighbourhood level wildfire mitigation programs being implemented in
neighbourhoods in Canada (FireSmart-ForestWise), Australia (Community Fireguard) and the US
(Firewise Communities). Semi-structured interviews were completed with 19 residents participating in
the programs. A wide range of activities were...

Author(s): Tara K. McGee
Year Published: 2011
Type: Document
Book or Chapter or Journal Article

A comparison of landscape fuel treatment strategies to mitigate wildland fire risk in the urban
interface and preserve old forest structure
www.nrfirescience.org/resource/12725
We simulated fuel reduction treatments on a 16,000 ha study area in Oregon, US, to examine tradeoffs
between placing fuel treatments near residential structures within an urban interface, versus treating
stands in the adjacent wildlands to meet forest health and ecological restoration goals. The treatment
strategies were evaluated...
Author(s): Alan A. Ager, Nicole M. Vaillant, Mark A. Finney
Year Published: 2010
Type: Document
Book or Chapter or Journal Article

Alternatives to evacuation during wildland fire: exploring adaptive capacity in one Idaho
community
www.nrfirescience.org/resource/11993
The use of alternatives to evacuation during wildfire events continues to be an intensely debated
strategy in the professional and policy circles of numerous fire-prone countries. The most recent
chapter comes in response to the Black Saturday Fires in Australia, which has led to policy changes
concerning alternatives to evacuation...
Author(s): Travis B. Paveglio, Matthew S. Carroll, Pamela J. Jakes
Year Published: 2010
Type: Document
Book or Chapter or Journal Article

National Fire Plan fuels treatments target the wildland-urban interface in the western United
States
www.nrfirescience.org/resource/8351
The article 'Implementation of National Fire Plan treatments in the wildland-urban interface in the
western United States' (1) is misleading because it is based on wildland-urban interface (WUI)
designations not used by federal agencies or their state and local partners. Moreover, by omitting any
examination of the allotment of...
Author(s): Allan Fitzsimmons
Year Published: 2009
Type: Document
Book or Chapter or Journal Article

Implementation of National Fire Plan fuel treatments near the wildland-urban interface in the
western United States
www.nrfirescience.org/resource/8225
Because of increasing concern about the effects of catastrophic wildland fires throughout the western
United States, federal land managers have been engaged in efforts to restore historical fire behavior
and mitigate wildfire risk. During the last 5 years (2004-2008), 44,000 fuels treatments were
implemented across the western...
Author(s): Tania L. Schoennagel, Cara R. Nelson, David M. Theobald, Gunnar C. Carnwath, Teresa B. Chapman
Year Published: 2009
Type: Document
Book or Chapter or Journal Article

Potential for future development on fire-prone lands
www.nrfirescience.org/resource/12009
Most studies of wildland fire and residential development have focused on the cost of firefighting and solutions such as fuel reduction and fire-safe home building. Although some studies quantify the number of homes being built near forests, little research has indicated the potential magnitude of the problem in the future. This...
Author(s): Patricia Gude, Ray Rasker, Jeff van den Noort
Year Published: 2008
Type: Document
Book or Chapter or Journal Article

The homeowner view of thinning methods for fire hazard reduction: more positive than many think
www.nrfirescience.org/resource/11486
With the focus of the National Fire Plan on decreasing fire risk in the wildland-urban interface, fire managers are increasingly tasked with reducing the fuel load in areas where mixed public and private ownership and a growing number of homes can make most fuel reduction methods problematic at best. In many of these intermix areas...
Author(s): Sarah M. McCaffrey
Year Published: 2008
Type: Document
Conference Proceedings, Technical Report or White Paper

Temporal and spatial structure in a daily wildfire-start data set from the western United States (1986-96)
www.nrfirescience.org/resource/8201
The temporal and spatial structure of 332 404 daily fire-start records from the western United States for the period 1986 through 1996 is illustrated using several complimentary visualisation techniques. We supplement maps and time series plots with Hovmiller diagrams that reduce the spatial dimensionality of the daily data in order...
Author(s): Patrick J. Bartlein, Steven W. Hostetler, Sarah L. Shafer, J. O. Holman, Allen M. Solomon
Year Published: 2008
Type: Document
Book or Chapter or Journal Article

Northern Inland West land/homeowner perceptions of fire risk and responsibility in the wildland-urban interface
www.nrfirescience.org/resource/8338
The issue of sorting through who should bear responsibility for mitigating wildfire risk in the wildland-urban interface of the northern Inland West was approached using focus groups. The groups were selected to reflect a variety of stakeholders in the study area population for whom interface issues are relevant. Most participants...
Author(s): Brad R. Weisshaupt, Pamela J. Jakes, Matthew S. Carroll, Keith A. Blatner
Year Published: 2007
Development of initial Wildland Fire Use documentation for Charles M. Russell National Wildlife Refuge
www.nrfirescience.org/resource/11077
The Charles M. Russell National Wildlife Refuge manages ecosystems that depend on fire for their maintenance. Fire is abundant in and adjacent to the refuge where lightning and human ignitions can rapidly spread in grass and shrub fuels. Farm and ranch land which would be adversely impacted by fire, pose a significant logistical...
Author(s): Bill Clark, Doug Stephen, Pat Stephen, Laurie L. Kurth, Ken Kerr
Year Published: 2006
Type: Document
Management or Planning Document

Managing for fire in the interface: challenges and opportunities
www.nrfirescience.org/resource/157
Fire managers define the wildland-urban interface as all areas were flammable wildland fuels are adjacent to homes and communities. With this definition, the wild-land-urban interface may encompass a much broader landscape than traditionally perceived. For example, the Tunnel Fire in the Oakland hills in 1991 included a large area...
Author(s): Alan J. Long, Dale D. Wade, Frank C. Beall
Year Published: 2005
Type: Document
Book or Chapter or Journal Article

Acceptability of smoke from prescribed forest burning in the northern inland west: a focus group approach
www.nrfirescience.org/resource/8393
Focus groups were used to gauge tolerance of smoke from broadcast prescribed forest burning in the wildland-urban interface of the northern Inland West. Focus group participants worked through issues surrounding prescribed burning as a management tool to determine if the origin of smoke made a difference in the acceptance of that...
Author(s): Brad R. Weisshaupt, Matthew S. Carroll, Keith A. Blatner, William D. Robinson, Pamela J. Jakes
Year Published: 2005
Type: Document
Book or Chapter or Journal Article

New technology for fuel breaks and green strips in urban interface and wildland areas
www.nrfirescience.org/resource/11039
Threat from wildfire can be greatly minimized through proactive efforts that reduce and slow spread through use of green strips or fuel breaks, and decrease fire volatility by reducing fuel load. This results in greater safety to fire fighters and protection to key urban interface areas or wildlife habitat. The fight against western...
Author(s): Jennifer L. Vollmer
Year Published: 2005
Type: Document
Conference Proceedings
Red Lodge, Montana: steps to improve community preparedness for wildfire
www.nrfirescience.org/resource/11104
This is a government publication outlining the steps to wildfire preparedness in Red Lodge, MT. The key features include homeowners' associations, which lead in fuel reduction around properties; USFS recreation residences, which conduct fuel reduction projects; evacuation plans and fuel breaks; regulations; and relationships, which...
Author(s): Victoria Sturtevant, Linda E. Kruger
Year Published: 2004
Type: Document
Research Brief or Fact Sheet

A collaborative fire hazard reduction/ecosystem restoration stewardship project in a Montana mixed ponderosa pine/Douglas-fir/western larch wildland-urban interface
www.nrfirescience.org/resource/11009
Forest Service managers and researchers designed and evaluated alternative disturbance-based fire hazard reduction/ecosystem restoration treatments in a greatly altered low-elevation ponderosa pine/Douglas-fir/western larch wildland urban interface. Collaboratively planned improvement cutting and prescribed fire treatment...
Author(s): Steve Slaughter, Laura Ward, Michael Hillis, Jimmie D. Chew, Becky McFarlan
Year Published: 2003
Type: Document
Conference Proceedings

Keys to community preparedness for wildfire
www.nrfirescience.org/resource/11403
Assessments of a community's vulnerability to wildfires often focus on landscape conditions or ecological factors such as forest type, age distribution, forest health, topography, or hydrology. However, vulnerability is also a function of a variety of social factors. We need to understand both the social and ecological factors that...
Author(s): Linda E. Kruger, Shruti Agrawal, Martha C. Monroe, Erika A. Lang, Kristen C. Nelson, Pamela J. Jakes, Victoria Sturtevant, Sarah M. McCaffrey, Yvonne Everett
Year Published: 2003
Type: Document
Conference Proceedings, Technical Report or White Paper

Microsimulation of neighborhood evacuations in the urban-wildland interface
www.nrfirescience.org/resource/11491
Residential development in fire-prone wildlands is occurring at an unprecedented rate. Community-based evacuation planning in many areas is an emerging need. In this paper we present a method for using microscopic traffic simulation to develop and test neighborhood evacuation plans in the urban-wildland interface. The method...
Author(s): Thomas J. Cova, Justin P. Johnson
Year Published: 2002
Type: Document
Book or Chapter or Journal Article

The Bitterroot Ecosystem Management Research Project: what we have learned, symposium proceedings; May 18-20, 1999; Missoula, MT
www.nrfirescience.org/resource/11890
The varied topics presented in these symposium proceedings represent the diverse nature of the Bitterroot Ecosystem Management Research Project (BEMRP). Separated into six sections, the papers
cover the different themes researched by BEMRP collaborators as well as brief overviews of five other ecosystem management projects. The...
Author(s): Helen Y. Smith
Year Published: 2000
Type: Document
Conference Proceedings

Preventing disaster: home ignitability in the wildland-urban interface
www.nrfirescience.org/resource/159
Wildland-urban interface (W-UI) fires are a significant concern for federal, state, and local land management and fire agencies. Research using modeling, experiments, and W-UI case studies indicates that home ignitability during wildland fires depends on the characteristics of the home and its immediate surroundings. These findings...
Author(s): Jack D. Cohen
Year Published: 2000
Type: Document
Book or Chapter or Journal Article

A site-specific approach for assessing the fire risk to structures at the wildland/urban interface
www.nrfirescience.org/resource/12423
The essence of the wildland/urban interface fire problem is the loss of homes. The problem is not new, but is becoming increasingly important as more homes with inadequate adherence to safety codes are built at the wildland/urban interface. Current regulatory codes are inflexible. Specifications for building and site characteristics...
Author(s): Jack D. Cohen
Year Published: 1991
Type: Document
Conference Proceedings, Technical Report or White Paper

Protecting people and homes from wildfire in the interior West: proceedings of the symposium and workshop
www.nrfirescience.org/resource/11968
Includes 25 invited papers and panel discussions, 6 workshop reports, and 15 poster papers that focus on the escalating problem of wildfire in wildland residential areas throughout the western United States and Canada.
Author(s): William C. Fischer, Stephen F. Arno
Year Published: 1988
Type: Document
Conference Proceedings, Technical Report or White Paper

Drought Tolerance in Trees- Improving Tree Selection for Challenging Urban Sites
www.nrfirescience.org/resource/16341
Looking for trees that can establish and survive in challenging urban environments? Of course you are! In this webinar, Dr. Andrew Hirons will explain how drought tolerance is one of the most important determinants of a tree's ability to survive in the urban forest. You will gain an understanding of the basic mechanisms of drought...
Type: Media
Webinar

Wildland fire ignition pathway
There are many potential pathways for wildland fires to ignite buildings within the WUI. These pathways (including both fire and ember exposure) depend on the characteristics of the wildland (e.g., fuels, terrain, weather, etc.), the characteristics of the community (e.g., construction materials, building designs, housing density,...

Webinar

**Fire operations in the wildland-urban interface**

During this presentation, Chief Veneris discusses firefighting operations in the wildland-urban interface from a California perspective. He uses information and products from both his department, the California Department of Forestry and Fire Protection (CAL FIRE) as well as the latest publications from Firefighting Resources of...

Webinar

**Living with Fire - Wildland Fire Science**

In this 3 minute video released by Oregon State University, fire science experts discuss the impact of fire on wildland as well as society's changing perception of the importance of fire and fire safety. Oregon State is conducting world-class research into all aspects of fire including the immediate and long-term effects of...

Video

**Community wildfire protection planning**

Wildfires have become more intense and frequent as forests thicken with unburned fuels and changes in climate increase uncertainty in future conditions. How can communities in our growing wildland-urban interface prepare for this growing threat? This session will discuss what planners and communities need to know to reduce risks of...

Webinar

**Changing risk in three differing SoCal communities: a GIS-based approach**

This webinar examines how multiple GIS strategies were employed to analyze changes to fire risk in 3 nearby, but demographically different communities in San Diego County. This research simultaneously (1) quantifies expansion of the WUI over time in multiple, dissimilar communities, (2) analyzes temporal changes to risk based on...

Webinar

**Becoming more fire adapted through better understanding of the community**

The final video in a three-part series - "Becoming More Fire Adapted through Better Understanding of the Community" - describes WiR?''s unique approach working with communities-at-risk from wildfire in order to tailor efforts to their specific needs; resulting in increased fire adaptation. Working closely with wildfire mitigation...
Video

**Wildland Urban Interface Fires: An Overview for Responders**

[www.nrfirescience.org/resource/16068](http://www.nrfirescience.org/resource/16068)

This 58 minute video is produced for fire responders to improve knowledge and safety when fighting fires in the wildland-urban interface.

Type: Media

Video

**Mapping evidence of historical and potential wildfire for climate change and fuels mitigation in the montane forests of the Colorado Front Range**

[www.nrfirescience.org/resource/14067](http://www.nrfirescience.org/resource/14067)

Mapping evidence of historical and potential wildfire for climate change and fuels mitigation in the montane forests of the Colorado Front Range. Rosemary Sherriff, Associate Professor, Humboldt State University. Recorded talk from 2013 Restoring the West Conference at Utah State University. The conference focused on forest...

Type: Media

Video

**An Innovative Approach to Understanding Communities**

[www.nrfirescience.org/resource/17056](http://www.nrfirescience.org/resource/17056)

The first of the three videos in the series - "An Innovative Approach to Understanding Communities" - introduces the WiR? Team and explains how they are helping communities adapt to wildfire.

Type: Media

Video

**Wildfire! Preventing Home Ignitions**

[www.nrfirescience.org/resource/16061](http://www.nrfirescience.org/resource/16061)

Wildfire! Preventing Home Ignitions is a 19-minute video available from the Rocky Mountain Research Station. This program tells you how a wildfire can ignite your home. A 'home ignition zone,' the area that includes a home and its immediate surroundings, determines a home's ignition resistance during a severe wildfire. Some of the...

Type: Media

Video

**Effectiveness of wildfire mitigation activities in the wildland-urban interface (WUI)**

[www.nrfirescience.org/resource/14048](http://www.nrfirescience.org/resource/14048)

Each year wildfires damage homes, businesses, communities, watersheds, and forests on millions of acres across the U.S. However there are effective ways to reduce the impact of wildfire. A new report, Evaluating the Effectiveness of Wildfire Mitigation Activities in the Wildland-Urban Interface, shares lessons learned from...

Type: Media

Webinar

**Fuel particle heat exchange**

[www.nrfirescience.org/resource/14336](http://www.nrfirescience.org/resource/14336)

This seminar was recorded by the RMRS Fire Sciences Laboratory.

Type: Media
Seminar

**Rx Fire and Fire Use Lessons Learned**  
[www.nrfirescience.org/resource/16018](http://www.nrfirescience.org/resource/16018)  
Listen to the experiences and lessons learned from seven veteran fire management officers.  
Type: Media

Video

**Fire behavior in the wildland/urban interface**  
[www.nrfirescience.org/resource/14009](http://www.nrfirescience.org/resource/14009)  
The National Wildland/Urban Interface Fire Protection Program (www.firewise.org) Firefighter Safety Series FWC-602-03-DVD. Part 1: Fire Behavior in the Wildland/Urban Interface. The Fire Fighter Safety Series is a multipart instructional package developed for small community fire departments to address the...  
Type: Media

Video

**Planning to live with fire: designing and retrofitting communities with fire in mind**  
[www.nrfirescience.org/resource/14192](http://www.nrfirescience.org/resource/14192)  
Carol Rice, coauthor of the book ‘Managing Fire in the Urban Wildland Interface,’ discusses appropriate land use policy, community layout, infrastructure, building requirements, and vegetation management in the WUI. This webinar is targeted for local planners, resource managers, property owners, homeowner associations, developers,...  
Type: Media

Webinar

**Restoring fires role in fire adapted communities**  
[www.nrfirescience.org/resource/15918](http://www.nrfirescience.org/resource/15918)  
If you find yourself working in or with a community at risk from wildfire, it’s because fire is a component of the local ecosystems. This means that your community will be confronted with fire at some time, with the main variables being when, and under what conditions. This ‘when not if’ scenario begs the following three questions...  
Type: Media

Webinar

**Landscaping and home design for fire defense**  
[www.nrfirescience.org/resource/13240](http://www.nrfirescience.org/resource/13240)  
Yana Valachovic will discusses the types, placement, and maintenance of landscape plants to reduce risk of home ignition. She will discuss various elements of home design that mitigates home loss during a wildfire.  
Type: Media

Webinar

**How to survive and leverage your wildland fire prevention efforts during a fire using Ready, Set, Go!**  
[www.nrfirescience.org/resource/14189](http://www.nrfirescience.org/resource/14189)  
This webinar will give you the basic history of the READY, SET, GO! (RSG) and how the program is rapidly being adopted across the United States. RSG provides concepts to build fire adapted communities and then how to leverage these tenets for your personal safety and the survivability of
your structure. Chief Roper will provide you...

Webinar

Assessing hazard and risk in the interface: cautions and confessions from a statewide mapping effort
www.nrfirescience.org/resource/14124
This webinar focused on elements required for statewide or regional scale mapping efforts designed to describe and classify ignition exposure to buildings that are associated with wildland (vegetation) fires, and their potential spread into urbanized areas. In addition to covering input data and spatial processing rules, the talk...

Webinar

Recovery and adaptation after wildfire across the United States, 2009-2011
www.nrfirescience.org/resource/15292
Becoming a fire-adapted community that can live with wildfire is envisioned as a continuous, iterative process of adaptation. In eight case study sites across the United States we examined how destructive wildfire affected altered progress towards becoming fire-adapted, focusing on the role of planning and WUI regulations (building...

Webinar

Expert spotlight: Jack D. Cohen
www.nrfirescience.org/resource/14665
No one has done more to define the wildland-urban interface problem and empower homeowners to reduce their risk of wildfire than Jack Cohen. His post-fire field examinations and laboratory-based research on fire dynamics led to the concept of the home ignition zone, a phrase he coined. Cohen also co-developed the U.S. National Fire...

Video

Computer models for wildland and wildland-urban interface fires
www.nrfirescience.org/resource/13808
Hosted by the Northwest Fire Science Consortium. Ruddy Mell from the USFS Pacific Wildland Fire Sciences Lab in Seattle, WA provides an overview of the current state, limitations, and future developments in wildland and wildland-urban interface fire behavior models.

Webinar

Community wildfire protection plans and fire-adapted human communities: trial by fire
www.nrfirescience.org/resource/14082
Community wildfire protection plans have been described as 'one of the most successful tools' for addressing wildland fire management in the WUI. Jakes shares findings from two recently completed studies of CWPPs, one identifying best management practices for developing a CWPP, and the second investigating whether CWPPs...
Wildland urban legends
www.nrfirescience.org/resource/14859
Wildfire and home safety myths and beliefs are put to the test. Wildfire expert Pat Durland determines truth or bunk to questions we all have, drawing upon his long career as a smoke jumper, wildland firefighter, policy maker, insurance consultant, and wildland fire educator.
Type: Media

Webinar

Evacuation planning in the wildland-urban interface
www.nrfirescience.org/resource/12818
The 2012 fire season has already resulted in more fire-caused evacuations than many recent years. This webinar will review traditional and contemporary aspects of evacuation planning. Traditional topics to be covered include warning and response, traffic management, contingency planning, and vulnerable populations....
Type: Media

Webinar

Land use planning to reduce wildfire risk: lessons from 5 western cities
www.nrfirescience.org/resource/14542
In the American West, wildfire risk to life and property is accelerating as a result of development trends favoring the region’s Wildland-Urban Interface (WUI). Moreover, extended droughts, unseasonably warm temperatures, and other climate-induced impacts are influencing the frequency and size of wildfires. In response, a number...
Type: Media

Webinar

Experimentally simulating wind-driven firebrand showers in wildland-urban interface (WUI) fires
www.nrfirescience.org/resource/14076
Wind-driven firebrand showers are a major cause of structural ignition in Wildland-Urban Interface (WUI) fires. To address this problem, a new firebrand research area targeted on quantifying structure vulnerabilities to wind-driven firebrand showers has been developed. This type of firebrand research was never possible prior to the...
Type: Media

Webinar

Creating fire adapted communities: an interactional approach
www.nrfirescience.org/resource/14836
A growing body of wildfire research indicates that populations will support or enact different programs, policies and planning approaches to better “live with wildfire.” This presentation builds on one existing conceptual approach for characterizing local socio-ecological conditions that influence how and why populations might...
Type: Media

Webinar

WiR? - Wildfire Research
www.nrfirescience.org/resource/17059
WiR? (Wildfire Research) is an interdisciplinary research collaboration focused on homeowner wildfire risk mitigation and community wildfire adaptedness. This group seeks to improve the bridge between use-inspired research and on-the-ground programs, management, and policy. Research is supported by the U.S. Interagency National...
Firewise Virtual Workshop: Understanding How Embers Ignite Roofs in a Wildland Fire
www.nrfirescience.org/resource/16076
Firewise Virtual Workshop: Understanding How Embers Ignite Roofs in a Wildland Fire and How to Make Your Roof More Survivable
Type: Media

Video

A holistic framework to sustainably manage the wildland-urban interface
www.nrfirescience.org/resource/14071
NOTE: Technical difficulties during this webinar. Skip to 11:50 to start. Chris Dicus provides an introduction to the common problems encountered in managing WUI landscapes, and provides a framework for how to address some of these problems.
Type: Media

Webinar

Applying the WiR? Approach
www.nrfirescience.org/resource/17057
This is the second video in a series of three. "Applying the WiR? Approach" delves into the WiR? Team process of pairing social data from residents living in the wildland urban interface with parcel-level wildfire risk data. Using this community-specific data, the WiR? Team works with local wildfire professionals to understand...
Type: Media

Video

Wildland Urban Interface Fires: An Overview for Homeowners
www.nrfirescience.org/resource/16067
This 58 minute video covers what the wildland-urban interface is and what the public and firefighters need to know about fighting fire in it.
Type: Media

Video

2012 Waldo fire wildland urban interface case study
www.nrfirescience.org/resource/14052
The National Institute of Standards and Technology (NIST) has a suite of research projects addressing risk reduction in Wildland Urban Interface (WUI) communities. The NIST WUI Team and the United States Forest Service, Fire and Environmental Research Applications Team (USFS FERA) were invited by the Colorado Springs Fire...
Type: Media

Webinar

Firefighter Safety in the Wildland/Urban Interface
www.nrfirescience.org/resource/16060
This presentation is a training video produced by The National Wildland/Urban Interface Fire Protection Program. It covers problems encountered in the wildland-urban interface that complicate the work of firefighters.
Type: Media
Improving access for wildland firefighters
www.nrfirescience.org/resource/13338
Join wildland fire stakeholders and residents in this informational workshop and discover how modifications can be made to increase driveway accessibility, improve address visibility and hear what fire personnel look for when making decisions about which homes may be defendable; and receive simple tips on how homeowners can help...
Type: Media

Community risk reduction success stories - Firewise virtual workshop
www.nrfirescience.org/resource/14743
This Firewise webinar features three stories of successful community wildfire risk reduction. The stories come from Colorado, Idaho and Washington (featuring FAC Net member Jerry McAdams from Boise Fire Department and affiliate member Patrick Haggerty from the Cascadia Conservation District).
Type: Media

Firesafe Flathead: Promoting Fire-Adapted Communities
www.nrfirescience.org/resource/17663
Our Mission: Individuals, neighborhoods, organizations, and agency wildfire professionals working to create Fire Adapted Communities in the Flathead area by providing leadership, technical assistance, education, and resources. We: •Are inclusive and welcome all partners interested in creating fire-adapted communities. •...
Type: Website

How effective were fuel treatments in the 2011 Wallow fire?
www.nrfirescience.org/resource/14301
This webinar presents results of an opportunistic study to quantify the performance of thinning and surface fuel treatment in migrating wildfire behavior and severity, as represented by bole char, crown scorch proportion, tree burn severity index, on the largest wildfire in southwest USA history: 2011 Wallow fire. The results...
Type: Media

Recovery and Adaptation after Wildfire, 2000-2013
www.nrfirescience.org/resource/15957
Becoming a fire-adapted community that can live with wildfire is envisioned as a continuous, iterative process of adaptation. We combined national and case study research to examine how experience with wildfire alters the built environment and community- and government-level wildfire mitigation, planning, and regulations. By...
Type: Media

Fire adapted communities: moving from policy to action
www.nrfirescience.org/resource/13245
This webinar discusses tangible and innovative methods in which national Fire Adapted Communities
(FAC's) are moving forward. Over the last few years, many have been introduced to the term Fire Adapted Communities through national policy and programs. Many communities have embraced FAC concepts and are displaying positive results on...

Type: Media

Webinar

**WUI fire: managing the response**

[www.nrfirescience.org/resource/14191](http://www.nrfirescience.org/resource/14191)

In this webinar Dan Turner discusses fire jurisdictions, mutual aid agreements, pre-attack planning, deployment and mobilization plans, agency differences in strategy and tactics, resource prioritization, evacuations and Emergency Operations Center (EOC) coordination. It is geared toward public and private sector individuals...

Type: Media

Webinar

**A Four-Step Approach to Planning for Wildfire in the Wildland-Urban Interface**

[www.nrfirescience.org/resource/15849](http://www.nrfirescience.org/resource/15849)

This talk will focus on a four-step approach to integrating wildfire planning for the wildland-urban interface (WUI) through a variety of planning and implementation processes that work across departments within local governments. Attendees may wish to review the guide on which the talk will be based prior to the session. The talk...

Type: Media

Webinar

**Material and design considerations for building in wildfire prone areas**

[www.nrfirescience.org/resource/14127](http://www.nrfirescience.org/resource/14127)

Home survival in wildfire prone areas depends on a combination of adequate vegetation management in the area surrounding your home (i.e., your ‘defensible space’) and choices regarding building materials and design decisions for the home or building. Steve Quarles has been actively involved in wildfire research and education...

Type: Media

Webinar

**Social motivation in the WUI: effectively engage the public**

[www.nrfirescience.org/resource/13025](http://www.nrfirescience.org/resource/13025)

This webinar provides an overview of what has been learned to date in relation to different aspects of public response to wildfire management including risk perception, social acceptance of prescribed fire and thinning, what makes homeowners more or less willing to create defensible space, and communication dynamics. Developing an...

Type: Media

Webinar

**Firewise communities: a tool for WUI residents**

[www.nrfirescience.org/resource/14083](http://www.nrfirescience.org/resource/14083)

This webinar provides an overview of the Firewise Communities/USA Recognition Program administered by the National Fire Protection Association (NFPA) in partnership with the USDA Forest Service, US Department of the Interior, the California Fire Safe Council, CAL FIRE, and state forestry agencies across the U.S. This program is...

Type: Media
Webinar