

### **Where you stand depends on where you sit: Qualitative inquiry into notions of fire adaptation**

[www.nrfirescience.org/resource/16190](http://www.nrfirescience.org/resource/16190)

Wildfire and the threat it poses to society represents an example of the complex, dynamic relationship between social and ecological systems. Increasingly, wildfire adaptation is posited as a pathway to shift the approach to fire from a suppression paradigm that seeks to control fire to a paradigm that focuses on “living with”...

Author(s): Hannah Brenkert-Smith, James R. Meldrum, Patricia A. Champ, Christopher M. Barth

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](http://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

### **Visions of restoration in fire-adapted forest landscapes: lessons from the collaborative forest landscape restoration program**

[www.nrfirescience.org/resource/15086](http://www.nrfirescience.org/resource/15086)

Collaborative approaches to natural resource management are becoming increasingly common on public lands. Negotiating a shared vision for desired conditions is a fundamental task of collaboration and serves as a foundation for developing management objectives and monitoring strategies. We explore the complex socio-ecological...

Author(s): Lauren S. Urgenson, Clare M. Ryan, Charles B. Halpern, Jonathan D. Bakker, R. Travis Belote, Jerry F. Franklin, Ryan D. Haugo, Cara R. Nelson, Amy E. M. Waltz

Year Published: 2017

Type: Document

Book or Chapter or Journal Article

### **Federal fire managers' perceptions of the importance, scarcity and substitutability of suppression resources**

[www.nrfirescience.org/resource/15491](http://www.nrfirescience.org/resource/15491)

Wildland firefighting in the United States is a complex and costly enterprise. While there are strong seasonal signatures for fire occurrence in specific regions of the United States, spatiotemporal occurrence of wildfire activity can have high inter-annual variability. Suppression resources come from a variety of jurisdictions and...

Author(s): Crystal S. Stonesifer, David E. Calkin, Michael S. Hand

Year Published: 2017

Type: Document

Book or Chapter or Journal Article

### **Effects of wildfire on the value of recreation in western North America**

[www.nrfirescience.org/resource/15023](http://www.nrfirescience.org/resource/15023)

Wildfires play an integral role in forest ecosystems of western North America. In an attempt to measure

the level and value of ecosystem damage caused by wildfires, papers employing nonmarket valuation techniques-stated preference, revealed preference, and combined methods-are reviewed. A systematic review of results shows a portion...

Author(s): Ranjit S. Bawa

Year Published: 2017

Type: Document

Book or Chapter or Journal Article

### **Tamm Review: Shifting global fire regimes: Lessons from reburns and research needs**

[www.nrfirescience.org/resource/15305](http://www.nrfirescience.org/resource/15305)

Across the globe, rising temperatures and altered precipitation patterns have caused persistent regional droughts, lengthened fire seasons, and increased the number of weather-driven extreme fire events. Because wildfires currently impact an increasing proportion of the total area burned, land managers need to better understand...

Author(s): Susan J. Prichard, Camille Stevens-Rumann, Paul F. Hessburg

Year Published: 2017

Type: Document

Book or Chapter or Journal Article

### **Communicator's Guide for Wildland Fire Management: fire education, prevention, and mitigation practices (online version)**

[www.nrfirescience.org/resource/16196](http://www.nrfirescience.org/resource/16196)

Communicator's Guide for Wildland Fire Management introduces ways of communicating about wildland fire issues so we have a basic framework to reach mutual objectives of protecting people and natural resources. This Communicator's Guide is designed to help you address the key elements of effective communication: who says what to whom...

Year Published: 2017

Type: Document

Management or Planning Document

### **Diversity in forest management to reduce wildfire losses**

[www.nrfirescience.org/resource/15210](http://www.nrfirescience.org/resource/15210)

This study investigates how federal, state, and private corporate forest owners in a fire-prone landscape of southcentral Oregon manage their forests to reduce wildfire hazard and loss to high-severity wildfire. We evaluate the implications of our findings for concepts of social-ecological resilience. Using interview data, we...

Author(s): Susan Charnley, Thomas A. Spies, Ana M. G. Barros, Eric M. White, Keith A. Olsen

Year Published: 2017

Type: Document

Book or Chapter or Journal Article

### **Relational risk assessment and management: investigating capacity in wildfire response networks**

[www.nrfirescience.org/resource/14925](http://www.nrfirescience.org/resource/14925)

Relational Risk Assessment and Management (RRAM) is about developing a new set of concepts and rapid assessment tools for assessing risk for problems that occur in inter-agency communication and coordination on complex fire events. Failures in effective communication and coordination within the network of responding organizations...

Author(s): Branda Nowell, Sarah M. McCaffrey, Toddi A. Steelman

Year Published: 2017

Type: Document

### **Social media approaches to modeling wildfire smoke dispersion: spatiotemporal and social scientific investigations**

[www.nrfirescience.org/resource/15552](http://www.nrfirescience.org/resource/15552)

Wildfires have significant effects on human populations, economically, environmentally, and in terms of their general well-being. Smoke pollution, in particular, from either prescribed burns or uncontrolled wildfires, can have significant health impacts. Some estimates suggest that smoke dispersion from fire events may affect the...

Author(s): Sonya Sachdeva, Sarah M. McCaffrey, Dexter Locke

Year Published: 2017

Type: Document

Book or Chapter or Journal Article

### **Effectiveness of public health messaging and communication channels during smoke events: a rapid systematic review**

[www.nrfirescience.org/resource/15062](http://www.nrfirescience.org/resource/15062)

Exposure to smoke emitted from wildfire and planned burns (i.e., smoke events) has been associated with numerous negative health outcomes, including respiratory symptoms and conditions. This rapid review investigates recent evidence (post-2009) regarding the effectiveness of public health messaging during smoke events. The...

Author(s): Jennifer A. Fish, Micah D. J. Peters, Imogen Ramsey, Greg Sharplin, Nadia Corsini, Marion Eckert

Year Published: 2017

Type: Document

Book or Chapter or Journal Article, Synthesis

### **Montana Climate Assessment: collaboration in Seeley Lake marks the way of the future for public forests**

[www.nrfirescience.org/resource/15726](http://www.nrfirescience.org/resource/15726)

This is an article about climate change and political climate for logging in Seeley Lake, Montana.

Year Published: 2017

Type: Document

Research Brief or Fact Sheet

### **Policy scenarios for fire-adapted communities: understanding stakeholder risk-perceptions with Fuzzy Cognitive Maps**

[www.nrfirescience.org/resource/15209](http://www.nrfirescience.org/resource/15209)

Collaborative groups are most effective when the varied stakeholder groups within them understand the risks of wildfire and take proactive steps to manage these risks. Implementing policies for fire risk mitigation and adaptation, however, remains difficult because risks and policy alternatives are not understood or supported...

Author(s): Antonie Jetter, Steven A. Gray, Lisa M. Ellsworth

Year Published: 2017

Type: Document

Technical Report or White Paper

### **Quantifying the human influence on fire ignition across the western USA**

[www.nrfirescience.org/resource/14896](http://www.nrfirescience.org/resource/14896)

Humans have a profound effect on fire regimes by increasing the frequency of ignitions. Although

ignition is an integral component of understanding and predicting fire, to date fire models have not been able to isolate the ignition location, leading to inconsistent use of anthropogenic ignition proxies. Here, we identified fire...

Author(s): Emily J. Fusco, John T. Abatzoglou, Jennifer Balch, John T. Finn, Bethany A. Bradley

Year Published: 2016

Type: Document

Book or Chapter or Journal Article

### **Understanding the effect of large wildfires on residents' well-being: what factors influence wildfire impact?**

[www.nrfirescience.org/resource/13937](http://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

### **Smoke management photographic guide: a visual aid for communicating impacts**

[www.nrfirescience.org/resource/14538](http://www.nrfirescience.org/resource/14538)

Communicating emissions impacts to the public can sometimes be difficult because quantitatively conveying smoke concentrations is complicated. Regulators and land managers often refer to particulate-matter concentrations in micrograms per cubic meter, but this may not be intuitive or meaningful to everyone. The primary purpose of...

Author(s): Joshua C. Hyde, Jarod Blades, Troy E. Hall, Roger D. Ottmar, Alistair M. S. Smith

Year Published: 2016

Type: Document

Technical Report or White Paper

### **Communication under fire: communication efficacy during wildfire incidents**

[www.nrfirescience.org/resource/14170](http://www.nrfirescience.org/resource/14170)

In this study, researchers analyzed the influence of pre-incident familiarity, stakeholder affiliation, and primary wildfire response/functional role on communication frequency and efficacy during three western U.S. wildfires ignited on U.S. Forest Service land. All fires occurred in wildland/urban interface areas, and involved a...

Author(s): Northwest Fire Science Consortium

Year Published: 2016

Type: Document

Technical Report or White Paper

### **Global trends in wildfire and its impacts: perceptions versus realities in a changing world**

[www.nrfirescience.org/resource/14432](http://www.nrfirescience.org/resource/14432)

Wildfire has been an important process affecting the Earth's surface and atmosphere for over 350 million years and human societies have coexisted with fire since their emergence. Yet many consider wildfire as an accelerating problem, with widely held perceptions both in the media and scientific papers of increasing fire occurrence,...

Author(s): Stefan H. Doerr, Cristina Santin

Year Published: 2016

Type: Document

Book or Chapter or Journal Article

### **Recreating forests of the past isn't enough to fix our wildfire problems**

[www.nrfirescience.org/resource/16310](http://www.nrfirescience.org/resource/16310)

There is general agreement that America's landscapes, certainly its wildlands, are out of whack with their fires. Wildfires are bigger, hotter, more savage and more expensive than in the past. There is wide agreement, too, that America's deeper fire problem is not that malignant megafires are crashing into our communities....

Author(s): Stephen Pyne

Year Published: 2016

Type: Document

Research Brief or Fact Sheet

### **Characterizing public tolerance of smoke from wildland fires in communities across the United States**

[www.nrfirescience.org/resource/14813](http://www.nrfirescience.org/resource/14813)

Little is known about public tolerance of smoke from wildland fires. By combining data from two household surveys, we sought to determine whether tolerance of smoke from wildland fires varies with its origin or managerial rationale, to describe geographical variation in tolerance of smoke, and to describe the relationship between...

Author(s): Jesse M. Engebretson, Troy E. Hall, Jarod Blades, Christine Olsen, Eric Toman, Stacey S. Frederick

Year Published: 2016

Type: Document

Book or Chapter or Journal Article

### **U.S. wildfire governance as social-ecological problem**

[www.nrfirescience.org/resource/14736](http://www.nrfirescience.org/resource/14736)

There are fundamental spatial and temporal disconnects between the specific policies that have been crafted to address our wildfire challenges. The biophysical changes in fuels, wildfire behavior, and climate have created a new set of conditions for which our wildfire governance system is poorly suited to address. To address these...

Author(s): Toddi A. Steelman

Year Published: 2016

Type: Document

Book or Chapter or Journal Article

### **Using scientific conferences to engage the public on climate change**

[www.nrfirescience.org/resource/15600](http://www.nrfirescience.org/resource/15600)

Climate change is often perceived as controversial in the public's view. One meaningful way scientists can address this problem is to engage with the public to increase understanding of climate change. Attendees of scientific conferences address climate change within meetings yet rarely interact with the public as part of...

Author(s): Jeffrey A. Hicke, John T. Abatzoglou, Steven Daley-Laursen, Jamie Esler, Lauren E. Parker

Year Published: 2016

Type: Document

Book or Chapter or Journal Article

### **Facilitating knowledge transfer between researchers and wildfire practitioners about trust: an international case study**

[www.nrfirescience.org/resource/14605](http://www.nrfirescience.org/resource/14605)

The importance of knowledge transfer between researchers, policy makers and practitioners is widely recognized. However, barriers to knowledge transfer can make it difficult for practitioners to apply the results of scientific research. This paper describes a project that addressed barriers to knowledge transfer by involving...

Author(s): Tara K. McGee, Allan Curtis, Bonita McFarlane, Bruce A. Shindler, Amy Christianson, Christine Olsen, Sarah M. McCaffrey

Year Published: 2016

Type: Document

Book or Chapter or Journal Article

### **First approximations of prescribed fire risks relative to other management techniques used on private lands**

[www.nrfirescience.org/resource/13593](http://www.nrfirescience.org/resource/13593)

Fire is widely recognized as a critical ecological and evolutionary driver that needs to be at the forefront of land management actions if conservation targets are to be met. However, the prevailing view is that prescribed fire is riskier than other land management techniques. Perceived risks associated with the application of fire...

Author(s): Dirac Twidwell, Carissa L. Wonkka, Michael T. Sindelar, John R. Weir

Year Published: 2015

Type: Document

Book or Chapter or Journal Article

### **Effect of fire prevention programs on accidental and incendiary wildfires on tribal lands in the United States**

[www.nrfirescience.org/resource/13177](http://www.nrfirescience.org/resource/13177)

Humans cause more than 55% of wildfires on lands managed by the USDA Forest Service and US Department of the Interior, contributing to both suppression expenditures and damages. One means to reduce the expenditures and damages associated with these wildfires is through fire prevention activities, which can include burn permits,...

Author(s): Karen L. Abt, David T. Butry, Jeffrey P. Prestemon, Samuel Scranton

Year Published: 2015

Type: Document

Book or Chapter or Journal Article

### **Community Mitigation Assistance Team: National pilot highlights**

[www.nrfirescience.org/resource/13555](http://www.nrfirescience.org/resource/13555)

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

Research Brief or Fact Sheet

### **Tribal Engagement roadmap**

[www.nrfirescience.org/resource/16168](http://www.nrfirescience.org/resource/16168)

The U.S. Department of Agriculture (USDA), Forest Service is recognized as a leader among Federal land management agencies in partnering collaboratively with American Indian and Alaska Native governments and indigenous communities. The Forest Service Research and Development (R&D)

Deputy Area recognizes that working with tribes...

Year Published: 2015

Type: Document

Technical Report or White Paper

### **A study of wildfire ignition by rifle bullets**

[www.nrfirescience.org/resource/15780](http://www.nrfirescience.org/resource/15780)

Experiments were conducted to examine the potential for rifle bullets to ignite organic matter after impacting a hard surface. The tests were performed using a variety of common cartridges (7.62 × 51 [.308 Winchester (The use of tradenames is provided for informational purposes only and does not constitute an endorsement by the U.S...

Author(s): Mark A. Finney, Sara S. McAllister, Trevor B. Maynard, Ian J. Grob

Year Published: 2015

Type: Document

Book or Chapter or Journal Article

### **Collaborative fuels reduction and restoration - Experiences from the Southwestern Crown of the Continent**

[www.nrfirescience.org/resource/13064](http://www.nrfirescience.org/resource/13064)

Forests that historically burned in mixed-severity fire regimes prove difficult to manage, especially when they border homes and prized recreation areas. This management challenge was the focus of the Fuels Reduction and Restoration in Mixed-Conifer Forests of the Southwestern Crown of the Continent field trip, following the May...

Author(s): Corey L. Gucker

Year Published: 2015

Type: Document

Research Brief or Fact Sheet

### **The ecological importance of mixed-severity fire: nature's phoenix**

[www.nrfirescience.org/resource/16303](http://www.nrfirescience.org/resource/16303)

If you are a curious reader with a knack for the analytical, you may be asking yourself, Why start a book about fire ecology with a mythological figure? And if you are a tried-and-true scientist, like we are, you may also be asking, Isn't it a bit risky to mix myth with science, fact with fiction, observation with mystique, nature...

Year Published: 2015

Type: Document

Book or Chapter or Journal Article

### **Strengthening syntheses on fire: increasing their usefulness for managers**

[www.nrfirescience.org/resource/13443](http://www.nrfirescience.org/resource/13443)

A synthesis for fire managers summarizes and interprets a body of information, presents its meaning in an objective, unbiased way, and describes its implications for decisionmakers. Following are suggestions for ways to strengthen syntheses on fire and on other natural resource issues: Include managers, scientists, and science...

Author(s): Jane Kapler Smith

Year Published: 2015

Type: Document

Book or Chapter or Journal Article, Synthesis

**Local ecological knowledge and fire management: what does the public understand?**

[www.nrfirescience.org/resource/13415](http://www.nrfirescience.org/resource/13415)

As fire management agencies seek to implement more flexible fire management strategies, local understanding and support for these strategies become increasingly important. One issue associated with implementing more flexible fire management strategies is educating local populations about fire management and identifying...

Author(s): John M. Diaz, Toddi A. Steelman, Branda Nowell

Year Published: 2015

Type: Document

Book or Chapter or Journal Article

### **A systematic review of the physical health impacts from non-occupational exposure to wildfire smoke**

[www.nrfirescience.org/resource/13262](http://www.nrfirescience.org/resource/13262)

Climate change is likely to increase the threat of wild fires, and little is known about how wild fires affect health in exposed communities. A better understanding of the impacts of the resulting air pollution has important public health implications for the present day and the future. Method: We performed a systematic search to...

Author(s): Jia C. Liu, Gavin Pereira, Sarah A. Uhl, Mercedes Bravo, Michelle L. Bell

Year Published: 2015

Type: Document

Synthesis

### **Forecasting integrated lightning and fuels ignition potentials in a system with real-time analysis of fire weather prediction accuracy**

[www.nrfirescience.org/resource/15557](http://www.nrfirescience.org/resource/15557)

Weather forecasts can help identify environmental conditions conducive to prescribed burning or to increased fire danger. These conditions are important components of fire management tools such as fire ignition potential maps, fire danger rating systems, fire behavior predictions, and smoke dispersion modeling. Fire managers use...

Author(s): Miriam L. Rorig, Stacy Drury

Year Published: 2015

Type: Document

Technical Report or White Paper

### **What information do people use, trust, and find useful during a disaster? Evidence from five large wildfires**

[www.nrfirescience.org/resource/13211](http://www.nrfirescience.org/resource/13211)

The communication system through which information flows during a disaster can be conceived of as a set of relationships among sources and recipients who are concerned about key information characteristics. The recipient perspective is often neglected within this system. In this article, we explore recipient perspectives related to...

Author(s): Toddi A. Steelman, Sarah M. McCaffrey, Anne-Lise Knox Velez, Jason Alexander Briefel

Year Published: 2015

Type: Document

Book or Chapter or Journal Article

### **'Put the wet stuff on the hot stuff': the legacy and drivers of conflict surrounding wildfire suppression**

[www.nrfirescience.org/resource/13584](http://www.nrfirescience.org/resource/13584)

Existing research demonstrates that wildfire events can lead to conflict among local residents and outside professionals involved in wildfire management or suppression. What has been missing in the



wildfire literature is a more explicit understanding of the social dynamics that influence such conflict in rural or agricultural...

Author(s): Travis B. Paveglio, Matthew S. Carroll, Troy E. Hall, Hannah Brenkert-Smith

Year Published: 2015

Type: Document

Book or Chapter or Journal Article

### **Community experiences with wildfire: actions, effectiveness, impacts, and trends**

[www.nrfirescience.org/resource/13068](http://www.nrfirescience.org/resource/13068)

This paper explores community experiences with and perceptions of local wildfire preparedness by summarizing results from two recent surveys. These surveys, one conducted at the county scale and one at the community scale, were completed by wildfire planning participants and community leaders in places...

Author(s): Autumn Ellison, Melanie Knapp, Jesse Abrams, Max W. Nielsen-Pincus, Travis B. Paveglio, Cassandra Moseley

Year Published: 2015

Type: Document

Technical Report or White Paper

### **Smartphone applications for data collection, dynamic modeling, and visualization in the wildland fire environment**

[www.nrfirescience.org/resource/13749](http://www.nrfirescience.org/resource/13749)

Rapid advances in cellular phone technology have transformed portable telephones into "smart" phones; powerful, portable personal computers equipped with Global Positioning System (GPS), cameras, and a suite of tools for accessing and storing information. Smartphones offer the ability to...

Author(s): Jim Riddering, Zachary A. Holden, William Matt Jolly, Allen Warren

Year Published: 2015

Type: Document

Book or Chapter or Journal Article

### **Catching fire? Social interactions, beliefs, and wildfire risk mitigation behaviors**

[www.nrfirescience.org/resource/13419](http://www.nrfirescience.org/resource/13419)

Social interactions are widely recognized as a potential influence on risk-related behaviors. We present a mediation model in which social interactions (classified as formal/informal and generic/fire-specific) are associated with beliefs about wildfire risk and mitigation options, which in turn shape wildfire mitigation behaviors....

Author(s): Patricia A. Champ, Katherine L. Dickinson, Hannah Brenkert-Smith, Nicholas Flores

Year Published: 2015

Type: Document

Book or Chapter or Journal Article

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

[www.nrfirescience.org/resource/13725](http://www.nrfirescience.org/resource/13725)

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  
Book or Chapter or Journal Article

### **Community wildfire preparedness: a global state-of-the-knowledge summary of social science research**

[www.nrfirescience.org/resource/13274](http://www.nrfirescience.org/resource/13274)

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

Synthesis

### **American Fire History, 1960-2013**

[www.nrfirescience.org/resource/15567](http://www.nrfirescience.org/resource/15567)

With support from the U.S. Forest Service, Department of the Interior, and Joint Fire Science Program, I have written a fire history of America from 1960 to 2013. The project will result in two books. Between Two Fires: A Fire History of Contemporary America relates the basic narrative. To the Last Smoke assembles anthologies of...

Author(s): Stephen Pyne, Heidi Neeley

Year Published: 2015

Type: Document

Technical Report or White Paper

### **One-hundred years of wildfire research: a legacy of the Priest River, Deception Creek, and Boise Basin Experimental Forests of Idaho**

[www.nrfirescience.org/resource/13104](http://www.nrfirescience.org/resource/13104)

The 1910 fires, which burned more than 1.3 million ha of northern Rocky Mountain forests, provided a mission and management objectives for the newly created Forest Service. By 1911, the Priest River Experimental Station (Forest- PREF) was established in northern Idaho to help meet the needs of the Forest Service. Harry T. Gisborne,...

Author(s): Russell T. Graham, Theresa B. Jain, Kathy L. Graham, Robert Denner, Colin C. Hardy

Year Published: 2014

Type: Document

Book or Chapter or Journal Article

### **The Bitterroot Valley fires of 2000 - Revisiting experiences and fire effects 13 years later**

[www.nrfirescience.org/resource/12673](http://www.nrfirescience.org/resource/12673)

During the Fires of 2000 field trip, held as part of the May 2014 Large Wildland Fires Conference, researchers, managers, residents, and stakeholders shared their experiences around the unprecedented number and size of fires that burned in the Bitterroot Valley in the summer of 2000. Topics discussed included fire history, fire...

Author(s): Corey L. Gucker

Year Published: 2014

Type: Document

Research Brief or Fact Sheet

### **Building trust, establishing credibility, and communicating fire issues with the public**

[www.nrfirescience.org/resource/12385](http://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

### **From research to policy: The White Cap Wilderness Fire Study**

[www.nrfirescience.org/resource/16135](http://www.nrfirescience.org/resource/16135)

On August 18, 1972, an aerial patrol reported a snag burning deep in the Selway-Bitterroot Wilderness in Idaho. Bob Mutch, then a young research forester, traveled to the site the following day for an on-the-ground assessment. It was, Mutch later recalled, a little "nothing fire" that posed no threat. And he was right. Growing to...

Author(s): Diane M. Smith

Year Published: 2014

Type: Document

Book or Chapter or Journal Article

### **Learning to coexist with wildfire**

[www.nrfirescience.org/resource/15326](http://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

Year Published: 2014

Type: Document

Book or Chapter or Journal Article

### **Smoke management of wildland and prescribed fire: understanding public preferences and trade-offs**

[www.nrfirescience.org/resource/13012](http://www.nrfirescience.org/resource/13012)

Smoke from forest fires is a serious and increasing land management concern. However, a paucity of information exists that is specific to public perceptions of smoke. This study used conjoint analysis, a multivariate technique, to evaluate how four situational factors (i.e., smoke origin, smoke duration, health impact, and advanced...

Author(s): Jarod Blades, Steven R. Shook, Troy E. Hall

Year Published: 2014

Type: Document

Book or Chapter or Journal Article

### **Trust: a planning guide for wildfire agencies and practitioners - An international collaboration drawing on research and management experience in Australia, Canada, and the United States**

[www.nrfirescience.org/resource/12551](http://www.nrfirescience.org/resource/12551)

This planning guide is the outcome of an international collaboration of researchers and practitioners/field managers working in communities at risk of wildfire in three countries. Initially, the

team of social scientists from Australia, Canada, and the United States utilized the collective research literature to examine factors that...

Author(s): Bruce A. Shindler, Christine Olsen, Sarah M. McCaffrey, Bonita McFarlane, Amy Christianson, Tara K. McGee, Allan Curtis, Emily Sharp

Year Published: 2014

Type: Document

Technical Report or White Paper

### **Exploring how deliberation on scientific information shapes stakeholder perceptions of forest management and climate change - Final Report to the Joint Fire Science Program**

[www.nrfirescience.org/resource/12967](http://www.nrfirescience.org/resource/12967)

Climate change has resulted in rapid biophysical changes in forests of the western US and has prompted the need for an increased understanding of potential impacts and adaptation measures. Land managers, policy makers, and community officials lack locally relevant climate change science and are urgently calling for research to inform...

Author(s): Troy E. Hall, Jarod Blades

Year Published: 2014

Type: Document

Technical Report or White Paper

### **Perverse incentives: the case of wildfire smoke regulation**

[www.nrfirescience.org/resource/14235](http://www.nrfirescience.org/resource/14235)

Wildfire is on the rise. The United States is witnessing a spectacular increase in acres lost to catastrophic wildfires, a phenomenon fed by the generally hotter and dryer conditions associated with climate change. In addition to losses in lives, property, and natural resources, wildfires contribute thousands of tons of air...

Author(s): Kirsten H. Engel

Year Published: 2014

Type: Document

Book or Chapter or Journal Article

### **Northern Rocky Mountain Experimental Forests: settings for science, management, and education alliances**

[www.nrfirescience.org/resource/12911](http://www.nrfirescience.org/resource/12911)

Society's view of forests and what they produce changed considerably during the latter part of the 20th century. Prior to the 1970s, society believed that forests in the western United States provided a seemingly infinite supply of natural resources and economic prosperity. The public trusted experts to make forest management...

Author(s): Theresa B. Jain, Michael A. Battaglia, Russell T. Graham

Year Published: 2014

Type: Document

Book or Chapter or Journal Article

### **Communicating about smoke from wildland fire: challenges and opportunities for managers**

[www.nrfirescience.org/resource/12982](http://www.nrfirescience.org/resource/12982)

Wildland fire and associated management efforts are dominant topics in natural resource fields. Smoke from fires can be a nuisance and pose serious health risks and aggravate pre-existing health conditions. When it results in reduced visibility near roadways, smoke can also pose hazardous driving conditions and reduce the scenic...

Author(s): Christine Olsen, Danielle K. Mazzotta, Eric Toman, A. Paige Fischer

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](http://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

### **Best practices in risk and crisis communication: implications for natural hazards management**

[www.nrfirescience.org/resource/8359](http://www.nrfirescience.org/resource/8359)

As societies evolve, often the most appropriate response to the hazard must also evolve. However, such shifts in appropriate response to a hazard, whether at the individual or at the societal level, are rarely straightforward: Closing the gap between desired practice and current practice requires effective communication. Although...

Author(s): Toddi A. Steelman, Sarah M. McCaffrey

Year Published: 2013

Type: Document

Book or Chapter or Journal Article

### **The merits of prescribed fire outweigh potential carbon emission effects**

[www.nrfirescience.org/resource/12426](http://www.nrfirescience.org/resource/12426)

While North American ecosystems vary widely in their ecology and natural historical fire regimes, they are unified in benefitting from prescribed fire when judiciously applied with the goal of maintaining and restoring native ecosystem composition, structure, and function. On a modern landscape in which historical fire regimes...

Author(s): Association for Fire Ecology, International Association of Wildland Fire, Tall Timbers Research Station, The Nature Conservancy

Year Published: 2013

Type: Document

Technical Report or White Paper

### **Communicating science in politicized environments**

[www.nrfirescience.org/resource/12605](http://www.nrfirescience.org/resource/12605)

Many members of the scientific community attempt to convey information to policymakers and the public. Much of this information is ignored or misinterpreted. This article describes why these outcomes occur and how science communicators can achieve better outcomes. The article focuses on two challenges associated with communicating...

Author(s): Arthur Lupia

Year Published: 2013

Type: Document

Book or Chapter or Journal Article, Synthesis

### **Combustion efficiency and emission factors for wildfire-season fires in mixed conifer forests of**

### **the northern Rocky Mountains, US**

[www.nrfirescience.org/resource/13481](http://www.nrfirescience.org/resource/13481)

In the US, wildfires and prescribed burning present significant challenges to air regulatory agencies attempting to achieve and maintain compliance with air quality regulations. Fire emission factors (EF) are essential input for the emission models used to develop wildland fire emission inventories. Most previous studies quantifying...

Author(s): Shawn P. Urbanski

Year Published: 2013

Type: Document

Book or Chapter or Journal Article

### **Assessing social vulnerability to climate change in human communities near public forests and grasslands: a framework for resource managers and planners**

[www.nrfirescience.org/resource/14673](http://www.nrfirescience.org/resource/14673)

Public land management agencies have incorporated the concept of vulnerability into protocols for assessing and planning for climate change impacts on public forests and grasslands. However, resource managers and planners have little guidance for how to address the social aspects of vulnerability in these assessments and plans....

Author(s): A. Paige Fischer, Travis B. Paveglio, Matthew S. Carroll, Daniel Murphy, Hannah Brenkert-Smith

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](http://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

### **FIRE Up: youth working with communities to adapt to wildfire**

[www.nrfirescience.org/resource/12008](http://www.nrfirescience.org/resource/12008)

Around the world, youth are recognized as playing an important role in reducing the risk of disasters and promoting community resilience. Youth are participating in disaster education programs and carrying home what they learn; their families, in turn, are disseminating knowledge into the community. Youth are also collecting data...

Author(s): Victoria Sturtevant, Gwyneth Myer

Year Published: 2013

Type: Document

Research Brief or Fact Sheet

### **Social and ecological factors influencing attitudes toward the application of high-intensity prescribed burns to restore fire adapted grassland ecosystems**

[www.nrfirescience.org/resource/12401](http://www.nrfirescience.org/resource/12401)

Fire suppression in grassland systems that are adapted to episodic fire has contributed to the recruitment of woody species in grasslands worldwide. Even though the ecology of restoring these fire

prone systems back to grassland states is becoming clearer, a major hurdle to the reintroduction of historic fires at a landscape scale...

Author(s): David Toledo, Michael G. Sorice, Urs P. Kreuter

Year Published: 2013

Type: Document

Book or Chapter or Journal Article

### **Wildfire risk and optimal investments in watershed protection**

[www.nrfirescience.org/resource/16172](http://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

### **Trial by fire: Community Wildfire Protection Plans put to the test**

[www.nrfirescience.org/resource/12430](http://www.nrfirescience.org/resource/12430)

Research has found that community wildfire protection planning can make significant contributions to wildfire mitigation and preparedness, but can the planning process and resulting Community Wildfire Protection Plans make a difference to wildfire response and recovery? In case studies conducted in four USA communities with...

Author(s): Pamela J. Jakes, Victoria Sturtevant

Year Published: 2013

Type: Document

Book or Chapter or Journal Article

### **Developing standardized strategic response categories for fire management units**

[www.nrfirescience.org/resource/16165](http://www.nrfirescience.org/resource/16165)

We undertook an exploration of these data (FMUs) to better understand how fire management objectives and corresponding planned incident responses vary across landscapes and ownerships. By capturing common themes across FMUs, we were able to establish a broad set of four standard response categories for purposes of classification. In...

Author(s): Matthew P. Thompson, Crystal S. Stonesifer, Robert C. Seli, Marlena Hovorka

Year Published: 2013

Type: Document

Book or Chapter or Journal Article

### **Public perceptions of smoke from wildfire, prescribed fire, and fire use**

[www.nrfirescience.org/resource/13483](http://www.nrfirescience.org/resource/13483)

Managers and policy-makers across broad disciplines and organizations are calling for a better understanding of public opinion on natural resource issues. One such issue is that of fire and its role in the management of our forests and rangelands. Public perceptions of fuel reduction techniques, with a particular emphasis on using...

Author(s): Stacey S. Frederick

Year Published: 2013

Type: Document

Dissertation or Thesis

### **Wildfire smoke and health impacts: a closer look at fire attributes and their marginal effects**

[www.nrfirescience.org/resource/12143](http://www.nrfirescience.org/resource/12143)

Existing studies on the economic impact of wildfire smoke have focused on single fire events or entire seasons without considering the marginal effect of daily fire progression on downwind communities. In addition, neither approach allows for an examination of the impact of even the most basic fire attributes, such as distance and...

Author(s): K. Moeltner, Man-Kuen Kim, E. Zhu, W. Yang

Year Published: 2013

Type: Document

Book or Chapter or Journal Article

### **Bridging natural resource communication boundaries: public perceptions of smoke from wildland fires and forest managers' perspectives of climate change science**

[www.nrfirescience.org/resource/13479](http://www.nrfirescience.org/resource/13479)

Land managers of the northern Rocky Mountains and south-central U.S. are challenged with numerous social and ecological changes, many of which are linked to climate change. The work presented here focuses on two important research gaps: 1) managers do not understand public opinions toward smoke from prescribed fires (a necessary...

Author(s): Jarod Blades

Year Published: 2013

Type: Document

Dissertation or Thesis

### **Living in a tinderbox: wildfire risk perceptions and mitigating behaviours**

[www.nrfirescience.org/resource/14672](http://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

### **Public perceptions and tolerance of smoke from wildland fire - draft**

[www.nrfirescience.org/resource/13699](http://www.nrfirescience.org/resource/13699)

Land managers and officials need to understand the diverse public opinions toward smoke from wildland fires; however, a very limited amount of research has been conducted on this topic. Hence, land and fire managers are largely uncertain about society's willingness to tolerate smoke in the short-term for long-term benefits, and they...

Author(s): Jarod Blades, Troy E. Hall, Sarah M. McCaffrey

Year Published: 2013

Type: Document

Book or Chapter or Journal Article

### **The rising Great Plains fire campaign: citizens' response to woody plant encroachment**

[www.nrfirescience.org/resource/12011](http://www.nrfirescience.org/resource/12011)

Despite years of accumulating scientific evidence that fire is critical for maintaining the structure and function of grassland ecosystems in the US Great Plains, fire has not been restored as a fundamental grassland process across broad landscapes. The result has been widespread juniper encroachment



and the degradation of the...

Author(s): Dirac Twidwell, William E. Rogers, Samuel D. Fuhlendorf, Carissa L. Wonkka, David M. Engle, John R. Weir, Urs P. Kreuter, Charles A. Taylor

Year Published: 2013

Type: Document

Book or Chapter or Journal Article

### **American voters' views on wildfires**

[www.nrfirescience.org/resource/12435](http://www.nrfirescience.org/resource/12435)

Just under half (44%) of U.S. voters say 'uncontrollable wildfires that destroy property and forests 'is a serious problem, facing the nation - with one-in-four calling it an 'extremely' or 'very' serious problem. This is the highest proportion to register this view since 2007.

Author(s): National Forest Foundation

Year Published: 2013

Type: Document

Research Brief or Fact Sheet

### **Wildfire triage: targeting mitigation based on soicial, economic, and ecological values**

[www.nrfirescience.org/resource/16178](http://www.nrfirescience.org/resource/16178)

Evaluating the risks of wildfire relative to the valuable resources found in any managed landscape requires an interdisciplinary approach. Researchers at the Rocky Mountain Research Station and Western Wildland Threat Assessment Center developed such a process, using a combination of techniques rooted in fire modeling and ecology,...

Author(s): Karl Malcolm, Matthew P. Thompson, David E. Calkin, Mark A. Finney, Alan A. Ager

Year Published: 2012

Type: Document

Research Brief or Fact Sheet

### **The Missoula Fire Sciences Laboratory: a 50-year dedication to understanding wildlands and fire**

[www.nrfirescience.org/resource/16347](http://www.nrfirescience.org/resource/16347)

In 1960, the USDA Forest Service established the Northern Forest Fire Laboratory (now the Missoula Fire Sciences Laboratory) to find scientific solutions for better managing the nation's wildland resources and to research ways to improve forest fire prevention and suppression. This new state-of-the-art research facility did not...

Author(s): Diane M. Smith

Year Published: 2012

Type: Document

Technical Report or White Paper

### **Influencing public perceptions of smoke management and prescribed burning programs: an analysis of opportunities existing in communication tactics, community-based partnerships and interagency decision making**

[www.nrfirescience.org/resource/13507](http://www.nrfirescience.org/resource/13507)

Historical fire suppression efforts have led to the alteration of forest structure and fuel conditions across the United States. Correspondingly, managers are now faced with higher fuel loads and denser vegetation as well as growing forest communities and wildland-urban interface. While managers recognize the ecological benefits of...

Author(s): Danielle K. Mazzotta

Year Published: 2012

Type: Document

**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](http://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 this information early when...

Author(s): Richard D. Stratton

Year Published: 2012

Type: Document

Technical Report or White Paper

**Wildland fire in ecosystems: effects of fire on cultural resources and archaeology**

[www.nrfirescience.org/resource/141](http://www.nrfirescience.org/resource/141)

This state-of-knowledge review provides a synthesis of the effects of fire on cultural resources, which can be used by fire managers, cultural resource (CR) specialists, and archaeologists to more effectively manage wildland vegetation, fuels, and fire. The goal of the volume is twofold: (1) to provide cultural resource/...

Year Published: 2012

Type: Document

Synthesis

**How can we span the boundaries between wildland fire science and management in the United States?**

[www.nrfirescience.org/resource/12614](http://www.nrfirescience.org/resource/12614)

In 2009, the federal Joint Fire Science Program (JFSP) initiated a national network of boundary organizations, known as regional fire science consortia, to accelerate the awareness, understanding, and use of wildland fire science. Needs assessments conducted by consortia in eight regions of the United States are synthesized here...

Author(s): Susan D. Kocher, Eric Toman, Sarah F. Trainor, Vita Wright, Jennifer S. Briggs, Charles P. Goebel, Eugenie M. MontBlanc, Annie Oxarart, Donna Peppin, Toddi A. Steelman, Andrea E. Thode, Thomas A. Waldrop

Year Published: 2012

Type: Document

Book or Chapter or Journal Article, Synthesis

**Research perspectives on the public and fire management: a synthesis of current social science on eight essential questions**

[www.nrfirescience.org/resource/12601](http://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

### **A case for developing place-based fire management strategies from traditional ecological knowledge**

[www.nrfirescience.org/resource/16101](http://www.nrfirescience.org/resource/16101)

Sustainability science promotes place-based resource management because natural processes vary among ecosystems. When local science is limited, land managers may be forced to generalize from other ecosystems that function differently. One proposed solution is to draw upon the traditional ecological knowledge that indigenous groups...

Author(s): Lily A. Ray, Crystal A. Kolden, F. Stuart Chapin

Year Published: 2012

Type: Document

Book or Chapter or Journal Article

### **The role of experimental forests in science and management**

[www.nrfirescience.org/resource/12913](http://www.nrfirescience.org/resource/12913)

Happy 100 years to the Priest River Experimental Forest (PREF)! PREF, which is managed by the Research and Development Branch of the USDA Forest Service, celebrated its centennial in September 2011. It was established in northern Idaho to provide useful information that would improve forest management in the western part of District...

Author(s): Theresa B. Jain

Year Published: 2012

Type: Document

Book or Chapter or Journal Article

### **Public perceptions and tolerance of smoke from prescribed and wildland fire**

[www.nrfirescience.org/resource/15554](http://www.nrfirescience.org/resource/15554)

A literature synthesis on public perceptions and tolerance of smoke. Topics explored include personal values and beliefs about smoke, beliefs about the controllability of fire and smoke, agency trust, individual characteristics related to perceptions and tolerance of smoke, and future research.

Author(s): Jarod Blades, Troy E. Hall

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](http://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

### **Public engagement in neighbourhood level wildfire mitigation and preparedness: case studies from Canada, the US and Australia**

[www.nrfirescience.org/resource/12432](http://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

### **Reducing fuels in the wildland-urban interface: community perceptions of agency fuels treatments**

[www.nrfirescience.org/resource/11452](http://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

Type: Document

Book or Chapter or Journal Article

### **Community wildfire protection planning: is the Healthy Forests Restoration Act's vagueness genius?**

[www.nrfirescience.org/resource/8273](http://www.nrfirescience.org/resource/8273)

The Healthy Forests Restoration Act of 2003 (HFRA) encourages communities to develop community wildfire protection plans (CWPPs) to reduce their wildland fire risk and promote healthier forested ecosystems. Communities who have developed CWPPs have done so using many different processes, resulting in plans with varied form and...

Author(s): Pamela J. Jakes, Kristen C. Nelson, Sherry A. Enzler, Sam Burns, Anthony S. Cheng, Victoria Sturtevant, Daniel R. Williams, Alexander N. Bujak, Rachel F. Brummel, Stephanie A. Grayzeck-Souter, Emily Staychock

Year Published: 2011

Type: Document

Book or Chapter or Journal Article

### **A synthesis of current knowledge on forests and carbon storage in the United States**

[www.nrfirescience.org/resource/12598](http://www.nrfirescience.org/resource/12598)

Using forests to mitigate climate change has gained much interest in science and policy discussions. We examine the evidence for carbon benefits, environmental and monetary costs, risks and trade-offs for a variety of activities in three general strategies: (1) land use change to increase forest area (afforestation) and avoid...

Author(s): Duncan C. McKinley, Michael G. Ryan, Richard A. Birdsey, Christian P. Giardina, Mark E. Harmon, Linda S. Heath, Richard A. Houghton, Robert B. Jackson, James F. Morrison, Brian C. Murray, Diane E. Pataki, Kenneth E. Skog

Year Published: 2011

Type: Document

Book or Chapter or Journal Article

### **The exposure index: developing firefighter safety performance measures**

[www.nrfirescience.org/resource/16182](http://www.nrfirescience.org/resource/16182)

A cornerstone of effective institutional learning and accountability is the development, tracking, and analysis of informative performance measures. In a previous issue of Fire Management Today ("A New Look at Risk Management," Winter 2011), a series of articles highlighted the importance of organizational safety and risk management...

Author(s): David E. Calkin, John Phipps, Thomas P. Holmes, Jon D. Rieck, Matthew P. Thompson  
Year Published: 2011  
Type: Document  
Book or Chapter or Journal Article

**Human relationships to fire prone ecosystems: mapping values at risk on contested landscapes**  
[www.nrfirescience.org/resource/13510](http://www.nrfirescience.org/resource/13510)

A key problem in developing a better understanding of different responses to landscape level management actions, such as fuel treatments, is being able to confidently record and accurately spatially delineate the meanings stakeholders ascribe to the landscape. To more accurately understand these relationships with the Bitterroot...

Author(s): Kari Gunderson, Stephen J. Carver, Brett Davis  
Year Published: 2011  
Type: Document  
Conference Proceedings

**Understanding homeowner preparation and intended actions when threatened by a wildfire**  
[www.nrfirescience.org/resource/11138](http://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

**Alternatives to evacuation during wildland fire: exploring adaptive capacity in one Idaho community**

[www.nrfirescience.org/resource/11993](http://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

**Utilization of the Native American talking circle to teach incident command system to tribal community health representatives**

[www.nrfirescience.org/resource/16106](http://www.nrfirescience.org/resource/16106)

The public health workforce is diverse and encompasses a wide range of professions. For tribal communities, the Community Health Representative (CHR) is a public health paraprofessional whose role as a community health educator and health advocate has expanded to become an integral part of the health delivery system of most tribes....

Author(s): Brenda Granillo, Ralph Renger, Jessica Wakelee, Jefferey L. Burgess  
Year Published: 2010  
Type: Document  
Book or Chapter or Journal Article

### **Fire Effects Information System: New engine, remodeled interior, added options**

[www.nrfirescience.org/resource/16134](http://www.nrfirescience.org/resource/16134)

Some of today's firefighters weren't even born when the Fire Effects Information System (FEIS) "hit the streets" in 1986. Managers might remember using a dial-up connection in the early 1990s to access information on biology, ecology, and fire offered by FEIS.

Author(s): Jane Kapler Smith

Year Published: 2010

Type: Document

Book or Chapter or Journal Article

### **Field guide for mapping post-fire soil burn severity**

[www.nrfirescience.org/resource/15310](http://www.nrfirescience.org/resource/15310)

Following wildfires in the United States, the U.S. Department of Agriculture and U.S. Department of the Interior mobilize Burned Area Emergency Response (BAER) teams to assess immediate post-fire watershed conditions. BAER teams must determine threats from flooding, soil erosion, and instability. Developing a postfire soil burn...

Author(s): Annette Parson, Peter R. Robichaud, Sarah A. Lewis, Carolyn Napper, Jess T. Clark

Year Published: 2010

Type: Document

Book or Chapter or Journal Article

### **The economic cost of adverse health effects from wildfire: a review**

[www.nrfirescience.org/resource/14534](http://www.nrfirescience.org/resource/14534)

The economic costs of adverse health effects associated with exposure to wildfire smoke should be given serious consideration in determining the optimal wildfire management policy. Unfortunately, the literature in this research area is thin. In an effort to better understand the nature of these economic costs, we review and...

Author(s): Ikuho Kochi, Geoffrey H. Donovan, Patricia A. Champ, John B. Loomis

Year Published: 2010

Type: Document

Book or Chapter or Journal Article

### **Fire intensity, fire severity and burn severity: a brief review**

[www.nrfirescience.org/resource/16309](http://www.nrfirescience.org/resource/16309)

Several recent papers have suggested replacing the terminology of fire intensity and fire severity. Part of the problem with fire intensity is that it is sometimes used incorrectly to describe fire effects, when in fact it is justifiably restricted to measures of energy output. Increasingly, the term has created confusion because...

Author(s): Jon E. Keeley

Year Published: 2009

Type: Document

Book or Chapter or Journal Article

### **The Fire Effects Information System - serving managers since before the Yellowstone fires**

[www.nrfirescience.org/resource/16133](http://www.nrfirescience.org/resource/16133)

This presentation will describe the current status of the Fire Effects Information System (FEIS) and explore lessons learned from this 23-year-old project about the application of science to fire management issues. FEIS contains literature reviews covering biology and fire ecology for approximately 1,100 species in North America:...

Author(s): Jane Kapler Smith, Janet L. Fryer, Kristin L. Zouhar

Year Published: 2009  
Type: Document  
Conference Proceedings

### **Mapping tradeoffs in values at risk at the interface between wilderness and non-wilderness lands**

[www.nrfirescience.org/resource/11063](http://www.nrfirescience.org/resource/11063)

On the Flathead Indian Reservation in Montana, U.S., the Mission Mountains Tribal Wilderness is bordered by a buffer zone. To successfully improve forest health within that buffer zone and restore fire in the wilderness, the managing agency and the public need to work together to find solutions to increasingly threatening fuel...

Author(s): Alan E. Watson, Roian Matt, Tim Waters, Kari Gunderson, Stephen J. Carver, Brett Davis

Year Published: 2009

Type: Document

Conference Proceedings

### **Willingness-to-pay function for two fuel treatments to reduce wildfire acreage burned: a scope test and comparison of white and hispanic households**

[www.nrfirescience.org/resource/11065](http://www.nrfirescience.org/resource/11065)

We estimate a marginal benefit function for using prescribed burning and mechanical fuel reduction programs to reduce acres burned by wildfire in three states. Since each state had different acre reductions, a statistically significant coefficient on the reduction in acres burned is also a split sample scope test frequently used as...

Author(s): John B. Loomis, Le Trong Hung, Armando Gonzalez-Caban

Year Published: 2009

Type: Document

Conference Proceedings, Technical Report or White Paper

### **Communicating about fire with tribal organizations**

[www.nrfirescience.org/resource/16111](http://www.nrfirescience.org/resource/16111)

The key to working effectively with tribes is the ability to build trust and to respect differences. Unfortunately, all too often, fire managers make critical mistakes when dealing with tribal governments, tribal people, and tribal fire teams. It is easy to assume that the same ways of seeing things and communicating—the same...

Author(s): Germaine White, Pat McDowell

Year Published: 2009

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](http://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

### **Contingent valuation of fuel hazard reduction treatments**

[www.nrfirescience.org/resource/11988](http://www.nrfirescience.org/resource/11988)

This chapter presents a stated preference technique for estimating the public benefits of reducing wildfires to residents of California, Florida, and Montana from two alternative fuel reduction programs: prescribed burning, and mechanical fuels reduction. The two fuel reduction programs under study are quite relevant to people...

Author(s): John B. Loomis, Armando Gonzalez-Caban

Year Published: 2008

Type: Document

Book or Chapter or Journal Article

### **Wildfire smoke: a guide for public health officials**

[www.nrfirescience.org/resource/12451](http://www.nrfirescience.org/resource/12451)

Smoke rolls into town, blanketing the city, turning on streetlights, creating an eerie and choking fog. Switchboards light up as people look for answers. Citizens want to know what they should do to protect themselves. School officials want to know if outdoor events should be cancelled. The news media want to know how dangerous the...

Author(s): Michael Lipsett, Barbara Materna, Susan Lyon Stone, Shannon Therriault, Robert Blaisdell, Jeff Cook

Year Published: 2008

Type: Document

Technical Report or White Paper

### **Whitebark ecosystem displayed indoors**

[www.nrfirescience.org/resource/11091](http://www.nrfirescience.org/resource/11091)

If you had never seen a high-elevation whitebark pine community, if you had never picked up a whitebark cone emptied by nutcrackers, if you had never stepped over (or into) a bear scat full of pine nut shells, how could you appreciate the intricacy of whitebark pine habitat? How could you care about this beautiful, imperiled...

Author(s): Jane Kapler Smith

Year Published: 2007

Type: Document

Research Brief or Fact Sheet

### **Big and black sagebrush landscapes**

[www.nrfirescience.org/resource/15405](http://www.nrfirescience.org/resource/15405)

Perhaps no plant evokes a common vision of the semi-arid landscapes of western North America as do the sagebrushes. A collective term, sagebrush is applied to shrubby members of the mostly herbaceous genus, *Artemisia* L. More precisely, the moniker is usually restricted to members of subgenus *Tridentatae*, a collection of some 20...

Author(s): Stanley G. Kitchen, E. Durant McArthur

Year Published: 2007

Type: Document

Conference Proceedings

### **Climate Change: what it means for us, our children, and our grandchildren**

[www.nrfirescience.org/resource/15711](http://www.nrfirescience.org/resource/15711)

Most of us are familiar with the terms climate change and global warming, but not too many of us understand the science behind them. We don't really understand how climate change will affect us, and for that reason we might not consider it as pressing a concern as, say, housing prices or the quality



of local education. This book...

Author(s): J.F.C. DiMento, P. Doughman

Year Published: 2007

Type: Document

Book or Chapter or Journal Article

### **Improving wildfire preparedness: lessons from communities across the US**

[www.nrfirescience.org/resource/7947](http://www.nrfirescience.org/resource/7947)

Communities across the U.S. have been taking action to adapt to the wildfire risk they face. In a series of case studies conducted in 15 communities, researchers identified and described four elements that form the foundation for community wildfire preparedness: landscape, government, citizens, and community.

Author(s): Pamela J. Jakes, Linda E. Kruger, Martha C. Monroe, Kristen C. Nelson, Victoria Sturtevant

Year Published: 2007

Type: Document

Book or Chapter or Journal Article

### **A comparison of CVM response rates, protests, and willingness to pay of Native Americans and general population for fuels reduction policies**

[www.nrfirescience.org/resource/7932](http://www.nrfirescience.org/resource/7932)

A contingent valuation method (CVM) study was used to compare survey response rates, protest refusals to pay, and median willingness-to-pay (WTP) of Native American communities in Montana compared to Montana's general population for two wildland fire mitigation strategies. Understanding differences in response rates, protest...

Author(s): Armando Gonzalez-Caban, John B. Loomis, Andrea Rodriguez, Hayley Hesseln

Year Published: 2007

Type: Document

Book or Chapter or Journal Article

### **The what, how, and when of social reliance and cooperative risk management**

[www.nrfirescience.org/resource/132](http://www.nrfirescience.org/resource/132)

A study of the relationship between public trust and management actions taken by the US Forest Service. This chapter focuses on an analysis of the definitions 'social reliance' and 'trust,' then applies them to various examples, one of which is the cooperative management of US National Forests.

Author(s): George T. Cvetkovich, Patricia L. Winter

Year Published: 2007

Type: Document

Book or Chapter or Journal Article

### **Managing the unexpected: resilient performance in an age of uncertainty**

[www.nrfirescience.org/resource/15972](http://www.nrfirescience.org/resource/15972)

Thousands of firefighters across the United States have been influenced by the first edition of "Managing the Unexpected". In this second edition, the authors continue their analysis of high reliability organizations (HRO's), which are organizations that routinely operate in high risk environments (where the consequences of...

Author(s): Karl E. Weick, Kathleen Sutcliffe

Year Published: 2007

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](http://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

Type: Document

Book or Chapter or Journal Article

### **The next catastrophe: reducing our vulnerabilities to natural, industrial, and terrorist disasters**

[www.nrfirescience.org/resource/15885](http://www.nrfirescience.org/resource/15885)

Perrow, developer of normal accident theory, argues here that we must reduce the size of targets that are vulnerable to disasters because organizations, including political ones, cannot completely prevent all the risks associated with the potential disasters that a society might face. A basic tenant of Perrow's argument is that...

Author(s): Charles Perrow

Year Published: 2007

Type: Document

Book or Chapter or Journal Article

### **Understanding the influence of local and landscape conditions on the occurrence and abundance of Black-backed Woodpeckers in burned forest patches**

[www.nrfirescience.org/resource/15635](http://www.nrfirescience.org/resource/15635)

Wildfire is the predominant disturbance agent in the Northern Rockies. The nearly annual occurrence of wildfire at some point in a larger landscape has served as the environmental backdrop against which our native wildlife species have evolved. A number of native species have, in fact, become dependent on wildfires or wildfire-...

Author(s): Richard L. Hutto, Deborah Austin, Sallie Hejl

Year Published: 2007

Type: Document

Technical Report or White Paper

### **Social science informing forest management — bringing new knowledge to fuels managers**

[www.nrfirescience.org/resource/15006](http://www.nrfirescience.org/resource/15006)

To improve access, interpretability, and use of the full body of research, a pilot project was initiated by the USDA Forest Service to synthesize relevant scientific information and develop publications and decision support tools that managers can use to inform fuels treatment plans. This article provides an overview of the work of...

Author(s): Pamela J. Jakes

Year Published: 2007

Type: Document

Book or Chapter or Journal Article

### **A look inside the dynamics of trust: a guide for managers**

[www.nrfirescience.org/resource/12542](http://www.nrfirescience.org/resource/12542)

In the United States, federal public land managers are tasked with serving as stewards of land, but also as stewards of the relationships that people have with the land. By assessing the public's trust in the actions of land managers, insight can be gained into how good of a job managers are doing. This paper

outlines a number of...

Author(s): Adam Liljeblad, Alan E. Watson, William T. Borrie

Year Published: 2007

Type: Document

Conference Proceedings

### **Collaborative planning to reduce risk**

[www.nrfirescience.org/resource/138](http://www.nrfirescience.org/resource/138)

Wildland fire knows no political boundaries, nor should efforts to address its risk. Collaboration is not a new idea; many examples of natural resource managers and community groups working together can be found in forest management planning, watershed restoration, and wildland fire suppression (Sturtevant et al. 2005). Direction...

Author(s): Victoria Sturtevant, Pamela J. Jakes

Year Published: 2007

Type: Document

Book or Chapter or Journal Article

### **Wildland fire and fuel management: principles for effective communication**

[www.nrfirescience.org/resource/11437](http://www.nrfirescience.org/resource/11437)

In this paper we discuss four principles identified through recent research for effective citizen-agency communication and examine their use in accomplishing fire management objectives. Principles include the following: (1) effective communication is a product of effective planning; (2) both unidirectional (one-way) and interactive...

Author(s): Eric Toman, Bruce A. Shindler

Year Published: 2006

Type: Document

Technical Report or White Paper

### **Social science to improve fuels management: a synthesis of research relevant to communicating with homeowners about fuels management**

[www.nrfirescience.org/resource/15007](http://www.nrfirescience.org/resource/15007)

A series of syntheses were commissioned by the USDA Forest Service to aid in fuels mitigation project planning. This synthesis focuses on how managers can most effectively communicate with the public about fuels management efforts. It summarizes what is known about the techniques of persuasive communication programs and provides an...

Author(s): Martha C. Monroe, Lisa Pennisi, Sarah M. McCaffrey, Dennis Mileti

Year Published: 2006

Type: Document

Synthesis, Technical Report or White Paper

### **A national study of the consequences of fire and fire surrogate treatments**

[www.nrfirescience.org/resource/15633](http://www.nrfirescience.org/resource/15633)

We provide highlights of some of the results thus far for the National Fire and Fire Surrogate study (FFS). Highlights summarize work that has been published within the last four years (2003-2006), primarily in theses, proceedings, general technical reports, and peer-reviewed journals (<http://www.fs.fed.us/ffs/>). In the summary, we...

Author(s): James D. McIver, Phil Weatherspoon

Year Published: 2006

Type: Document

Technical Report or White Paper

### **Understanding place meanings on the Bitterroot National Forest - A landscape-level assessment of personal and community values**

[www.nrfirescience.org/resource/7934](http://www.nrfirescience.org/resource/7934)

Information about human relationships with wilderness is important for wilderness management decisions, including decisions pertaining to the use of wildland fire. In a study about meanings attached to a national forest, local residents were asked to identify places they valued on the forest, why they valued them, and how fuel...

Author(s): Kari Gunderson, Alan E. Watson

Year Published: 2006

Type: Document

Book or Chapter or Journal Article

### **Organizational characteristics that contribute to success in engaging the public to accomplish fuels management at the wilderness/non-wilderness interface**

[www.nrfirescience.org/resource/10984](http://www.nrfirescience.org/resource/10984)

In the fall of 2003, the Rocky Mountain Ranger District of the Lewis and Clark National Forest initiated a multi-year, large-scale prescribed burn in the Scapegoat Wilderness. The objectives of this burn were to make the non-wilderness side of the wilderness boundary more defensible from wildfire and to establish conditions that...

Author(s): Katie Knotek, Alan E. Watson

Year Published: 2006

Type: Document

Conference Proceedings

### **Trust in wildland fire and fuel management decisions**

[www.nrfirescience.org/resource/12541](http://www.nrfirescience.org/resource/12541)

Public land managers are stewards of public lands and of the relationship between the public and these lands. Maintaining one aspect of this relationship, trust in the agency, can be challenging. Lack of trust can influence public response to management decisions, including about wildland fire use. By considering the factors that...

Author(s): Adam Liljeblad, William T. Borrie

Year Published: 2006

Type: Document

Book or Chapter or Journal Article

### **Using focus groups to involve citizens in resource management - investigating perceptions of smoke as a barrier to prescribed forest burning**

[www.nrfirescience.org/resource/11214](http://www.nrfirescience.org/resource/11214)

Participants in a series of focus groups discussed how their tolerance for smoke varied by the source of the smoke and found their opinions changing as they talked with other participants. Even those opposed to smoke from agricultural burning eventually found smoke from prescribed forest burning would be acceptable under appropriate...

Author(s): Brad R. Weisshaupt, Matthew S. Carroll, Keith A. Blatner, Pamela J. Jakes

Year Published: 2006

Type: Document

Technical Report or White Paper

### **The roles of natural and human disturbances in forest soil erosion**

[www.nrfirescience.org/resource/8170](http://www.nrfirescience.org/resource/8170)

Forests provide numerous benefits for society, including fibre, wildlife and recreation. Forest managers

are challenged to balance ecosystem health with maintaining public forest lands for multiple uses. During the first half of the last century, public forest management emphasized the harvesting of forest resources. In recent years...

Author(s): William J. Elliot

Year Published: 2006

Type: Document

Book or Chapter or Journal Article

### **Managing fire-prone forests in the Western United**

[www.nrfirescience.org/resource/16308](http://www.nrfirescience.org/resource/16308)

The management of fire-prone forests is one of the most controversial natural resource issues in the US today, particularly in the west of the country. Although vegetation and wildlife in these forests are adapted to fire, the historical range of fire frequency and severity was huge. When fire regimes are altered by human activity,...

Author(s): Reed F. Noss, Jerry F. Franklin, William L. Baker, Tania L. Schoennagel, Peter B. Moyle

Year Published: 2006

Type: Document

Book or Chapter or Journal Article

### **Trends in public attitudes towards the use of wildland fire**

[www.nrfirescience.org/resource/10983](http://www.nrfirescience.org/resource/10983)

This paper summarizes a select set of research studies conducted over the past 40 years, drawing conclusions on trends in public attitudes about the use of wildland fire in federally designated Wilderness. The research includes trend studies conducted with visitors to Wilderness areas in Washington, Oregon, California, Idaho and...

Author(s): Katie Knotek

Year Published: 2006

Type: Document

Conference Proceedings

### **Understanding social influences on wilderness fire stewardship decisions**

[www.nrfirescience.org/resource/7954](http://www.nrfirescience.org/resource/7954)

Federal land managers and the public engage in many decisions about stewardship of wilderness in the United States, including decisions about stewardship of fire. To date, social science research lacks a holistic examination of the decision-making context of managers and the public about stewardship of fire inside wilderness and...

Author(s): Katie Knotek

Year Published: 2006

Type: Document

Book or Chapter or Journal Article

### **Prescribed fire: what influences public approval?**

[www.nrfirescience.org/resource/8440](http://www.nrfirescience.org/resource/8440)

Except in remote areas, most prescribed fires will have some effect on members of the public. It is therefore important for land managers to work with the public before, during, and after a prescribed burn. To do this effectively, managers need to have an accurate idea of what people do and do not think about prescribed fire and...

Author(s): Sarah M. McCaffrey

Year Published: 2006

Type: Document

Technical Report or White Paper

### **Shared mindfulness in cockpit crisis situations**

[www.nrfirescience.org/resource/15912](http://www.nrfirescience.org/resource/15912)

Research reveals that human error contributes 60 to 80 percent of error in aviation accidents and disasters. Thus, despite innovations in technology and safety materials, individuals must be able to make speedy yet intelligent decisions and be able to communicate those decisions in an efficient manner. Krieger explores the...

Author(s): Janice L. Krieger

Year Published: 2005

Type: Document

Book or Chapter or Journal Article

### **Federal Implementation Plans Under the Clean Air Act for Indian Reservations in Idaho, Oregon and Washington; Final Rule**

[www.nrfirescience.org/resource/12014](http://www.nrfirescience.org/resource/12014)

The Environmental Protection Agency (EPA) is taking final action on these Federal Implementation Plans (FIPs) under the Clean Air Act (CAA) for Indian reservations in Idaho, Oregon, and Washington. The FIPs put in place basic air quality regulations to protect health and welfare on Indian reservations located in the Pacific...

Author(s): U.S. Environmental Protection Agency

Year Published: 2005

Type: Document

Management or Planning Document

### **Social science to improve fuels management: a synthesis of research on assessing social acceptability of fuels treatments**

[www.nrfirescience.org/resource/15014](http://www.nrfirescience.org/resource/15014)

A series of syntheses were commissioned by the USDA Forest Service to aid in fuels mitigation project planning. This synthesis focuses on research for assessing the social acceptability of fuels treatments. The synthesis is structured around six important considerations for any social acceptability assessment: defining the fuels...

Author(s): Terry C. Daniel, Michael Valdiserri, Carrie R. Daniel, Susan C. Barro, Pamela J. Jakes

Year Published: 2005

Type: Document

Synthesis, Technical Report or White Paper

### **Acceptability of smoke from prescribed forest burning in the northern inland west: a focus group approach**

[www.nrfirescience.org/resource/8393](http://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

### **Human aspects of fire and fuels management in the Northern Rockies**

[www.nrfirescience.org/resource/11499](http://www.nrfirescience.org/resource/11499)

Humans are a part of forest and grassland ecosystems where we live, recreate, work, obtain timber products, and seek spiritual solace, among many other uses. Therefore, it's important to consider the human aspects of sustainable management of these ecosystems. BEMRP social scientists are working to understand meanings people assign...

Author(s): Katie Knotek

Year Published: 2005

Type: Document

Research Brief or Fact Sheet

### **Eighth international wildland firefighter safety summit: 10 years later**

[www.nrfirescience.org/resource/15458](http://www.nrfirescience.org/resource/15458)

These files contain the proceedings and poster papers from the International Association of Wildland Fire's Wildland Fire Safety Summit™ held in Missoula, Montana April 26-28, 2005. These proceedings contain the papers as submitted by the authors. Except for some editing to try and instill a common format, these papers are as...

Year Published: 2005

Type: Document

Conference Proceedings

### **Social science to improve fuels management: a synthesis of research on collaboration**

[www.nrfirescience.org/resource/15016](http://www.nrfirescience.org/resource/15016)

A series of syntheses were commissioned by the USDA Forest Service to aid in fuels mitigation project planning. This synthesis focuses on collaboration research, and offers knowledge and tools to improve collaboration in the planning and implementation of wildland fire and fuels management projects. It covers a variety of topics...

Author(s): Victoria Sturtevant, Margaret Ann Moote, Pamela J. Jakes, Anthony S. Cheng

Year Published: 2005

Type: Document

Synthesis, Technical Report or White Paper

### **Evaluating communication strategies and local partnerships: methods for reducing fuels, sharing responsibility, and building trust - Final Report to the Joint Fire Science Program**

[www.nrfirescience.org/resource/11398](http://www.nrfirescience.org/resource/11398)

The purpose of this project is to help identify and prioritize the elements of successful communication strategies so that agency personnel can adapt them to their own situation for meeting management objectives. Preferred outcomes include partnerships with local organizations for reducing fuels, shared responsibility for making...

Author(s): Bruce A. Shindler

Year Published: 2005

Type: Document

Technical Report or White Paper

### **Social science to improve fuels management: a synthesis of research on aesthetics and fuels management**

[www.nrfirescience.org/resource/15009](http://www.nrfirescience.org/resource/15009)

A series of syntheses were commissioned by the USDA Forest Service to aid in fuels mitigation project planning. This synthesis focuses on research addressing aesthetic considerations of fuels management. A general finding is that fuels management activities can contribute to the visual quality of a landscape. Topics covered in the...

Author(s): Robert L. Ryan

Year Published: 2005  
Type: Document  
Synthesis, Technical Report or White Paper

**Wildland fire in ecosystems: effects of fire on soils and water**

[www.nrfirescience.org/resource/12596](http://www.nrfirescience.org/resource/12596)

This state-of-knowledge review about the effects of fire on soils and water can assist land and fire managers with information on the physical, chemical, and biological effects of fire needed to successfully conduct ecosystem management, and effectively inform others about the role and impacts of wildland fire. Chapter topics...

Author(s): Daniel G. Neary, Kevin C. Ryan, Leonard F. DeBano

Year Published: 2005

Type: Document

Technical Report or White Paper

**Fuels planning: science synthesis and integration; social issues fact sheet 4: three critical topics to cover when talking about hazards**

[www.nrfirescience.org/resource/14952](http://www.nrfirescience.org/resource/14952)

The amount of science applicable to the management of wildfire hazards is increasing daily. In addition, the attitudes of landowners and policymakers about fire and fuels management are changing. This fact sheet discusses three critical keys to communicating about wildfire hazards.

Author(s): Dennis Mileti

Year Published: 2004

Type: Document

Research Brief or Fact Sheet

**Fuels planning: science synthesis and integration; social issues fact sheet 2: developing personal responsibility for fuels reduction: types of information to encourage proactive behavior**

[www.nrfirescience.org/resource/14949](http://www.nrfirescience.org/resource/14949)

Fuels management responsibilities may include providing local property owners with the information for taking responsibility for reducing fuels on their land. This fact sheet discusses three different types of information that may be useful in programs to engage property owners in fuel reduction activities.

Author(s): Martha C. Monroe, Lisa Pennisi

Year Published: 2004

Type: Document

Research Brief or Fact Sheet

**Blue mountain nature trail: a fire story**

[www.nrfirescience.org/resource/12935](http://www.nrfirescience.org/resource/12935)

In 2003, on Black Mountain just to the northwest, lightning ignited a wildfire that eventually burned across 7,000 acres ending here at the Blue Mountain Nature Trail. Because of this event, we have a unique chance to observe close-up how fire affects a ponderosa pine and Douglas-fir forest...

Author(s): U.S. Department of Agriculture, Forest Service

Year Published: 2004

Type: Document

Research Brief or Fact Sheet

**Red Lodge, Montana: steps to improve community preparedness for wildfire**

[www.nrfirescience.org/resource/11104](http://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

### **FireWorks educational program and its effectiveness**

[www.nrfirescience.org/resource/11010](http://www.nrfirescience.org/resource/11010)

FireWorks is an educational program that provides interactive, hands-on activities for studying fire behavior, fire ecology, and human influences on three fire-dependent forest types-ponderosa pine (*Pinus ponderosa*), interior lodgepole pine (*P. contorta* var. *latifolia*), and whitebark pine (*P. albicaulis*). Wildland fire provides a rich...

Author(s): Jane Kapler Smith, Nancy E. McMurray

Year Published: 2004

Type: Document

Conference Proceedings

### **Fuels planning: science synthesis and integration; social issues fact sheet 3: developing personal responsibility for fuels reduction: more ways to catch and hold people's attention**

[www.nrfirescience.org/resource/14950](http://www.nrfirescience.org/resource/14950)

Other fact sheets discuss the different types of information that are useful in explaining to property owners the importance of taking personal responsibility for fuels management on their land. However, for some property owners, new information is not enough-they may need more information in order to understand that change is...

Author(s): Martha C. Monroe, Lisa Pennisi

Year Published: 2004

Type: Document

Research Brief or Fact Sheet

### **Fuels planning: science synthesis and integration; social issues fact sheet 1: developing personal responsibility for fuels reduction: building a successful program to engage property owners**

[www.nrfirescience.org/resource/14948](http://www.nrfirescience.org/resource/14948)

In the course of work as a land manager, you will no doubt be involved in developing programs to achieve various objectives, including the improvement of fuels management on private lands. This fact sheet describes six steps that will help you plan and conduct a successful program.

Author(s): Martha C. Monroe, Lisa Pennisi

Year Published: 2004

Type: Document

Research Brief or Fact Sheet

### **Keys to community preparedness for wildfire**

[www.nrfirescience.org/resource/11403](http://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

**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](http://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

**The effects of fire on hiking demand: a travel cost study of Colorado and Montana**

[www.nrfirescience.org/resource/10968](http://www.nrfirescience.org/resource/10968)

Surveys were conducted on 33 sites within National Forests in Colorado and Montana to test how forest fires affected recreation demand in the two states. Data were collected on the actual number of visits and on the intended number of visits if the area had been subject to a recent high intensity crown fire, a recent prescribed fire...

Author(s): Hayley Hessel, John B. Loomis, Armando Gonzalez-Caban

Year Published: 2003

Type: Document

Conference Proceedings

**Microsimulation of neighborhood evacuations in the urban-wildland interface**

[www.nrfirescience.org/resource/11491](http://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

**Inviting disaster: lessons from the edge of technology**

[www.nrfirescience.org/resource/15873](http://www.nrfirescience.org/resource/15873)

While technology has provided the means for achieving unprecedented control over land, air, and sea, it has also become increasingly complex. As a result of this complexity, disasters are difficult to predict, and they are even more difficult to prevent. This book exposes many common mistakes that have culminated in unnecessary...

Author(s): James R. Chiles

Year Published: 2002

Type: Document

Book or Chapter or Journal Article

**Ponderosa pine ecosystems restoration and conservation: steps toward stewardship; April 25-27, 2000; Flagstaff, AZ**

[www.nrfirescience.org/resource/11888](http://www.nrfirescience.org/resource/11888)

This volume is divided into three sections: (1) Ecological, Biological, and Physical Science; (2) Social and Cultural; and (3) Economics and Utilization. Effective ecological restoration requires a combination of science and management. The authors of the first section exemplified this integration in the course of addressing a broad...

Author(s): Regina K. Vance, Carleton B. Edminster, W. Wallace Covington, Julie A. Blake

Year Published: 2001

Type: Document

Conference Proceedings

**Educational program about wildland fire integrates plant science into curriculum**

[www.nrfirescience.org/resource/8386](http://www.nrfirescience.org/resource/8386)

A science fiction story by Edmond Hamilton entitled 'Alien Earth' (Hamilton 1949) describes the experience of a young scientist in a tropical country. The scientist obtains a potion that slows his physiology to a rate at which he can perceive plant growth and interactions between plants in rapid, aggressive, even violent motion. He...

Author(s): Jane Kapler Smith, Nancy E. McMurray, Garon C. Smith

Year Published: 2001

Type: Document

Book or Chapter or Journal Article

**The dynamic path of recreational values following a forest fire: a comparative analysis of states in the Intermountain West**

[www.nrfirescience.org/resource/7924](http://www.nrfirescience.org/resource/7924)

This analysis examines the dynamic path of recreational values following a forest fire in three different states in the intermountain western United States. The travel cost demand analysis found that annual recreation values after a fire follow a highly nonlinear intertemporal path. The path is S-shaped, providing a range of...

Author(s): Jeffrey Englin, John B. Loomis, Armando Gonzalez-Caban

Year Published: 2001

Type: Document

Book or Chapter or Journal Article

**Are old forests underestimated as global carbon sinks?**

[www.nrfirescience.org/resource/7916](http://www.nrfirescience.org/resource/7916)

Old forests are important carbon pools, but are thought to be insignificant as current atmospheric carbon sinks. This perception is based on the assumption that changes in productivity with age in complex, multiaged, multispecies natural forests can be modelled simply as scaled-up versions of individual trees or even-aged stands....

Author(s): Elieen V. Carey, Anna Sala, Robert E. Keane, Ragan M. Callaway

Year Published: 2001

Type: Document

Book or Chapter or Journal Article

**Testing transferability of forest recreation demand in three intermountain states with application to forest fire effects**

[www.nrfirescience.org/resource/11052](http://www.nrfirescience.org/resource/11052)

Surveys of visitors to National Forests in Colorado, Idaho, and Wyoming were conducted to determine whether non-motorized recreation visitation responded to different fire ages and fire intensities. Actual

and intended behavior data was combined using a negative binomial count data travel cost model. The intended behavior trip...

Author(s): John B. Loomis, Jeffrey Englin, Jared McDonald, Armando Gonzalez-Caban

Year Published: 2000

Type: Document

Conference Proceedings

### **FireWorks: hands-on learning about fire ecology**

[www.nrfirescience.org/resource/8149](http://www.nrfirescience.org/resource/8149)

The perpetuation of fire-dependent forests requires an understanding of fire ecology and fire behavior not only by scientists and managers, but also by the public (U.S. Department of Interior and U.S. Department of Agriculture, 1995). FireWorks is a plastic trunk that contains educational materials and lessons designed to increase...

Author(s): Jane Kapler Smith

Year Published: 2000

Type: Document

Book or Chapter or Journal Article

### **Building consensus: legitimate hope or seductive paradox?**

[www.nrfirescience.org/resource/11186](http://www.nrfirescience.org/resource/11186)

To understand how participants in a natural resource planning situation described the nature of consensus, we interviewed scientists, agency planners and managers, and public representatives in two planning processes on the Bitterroot National Forest in west-central Montana. While most interviewees felt the agency had included...

Author(s): Stephen F. McCool, Kathleen Guthrie, Jane Kapler Smith

Year Published: 2000

Type: Document

Technical Report or White Paper

### **The Bitterroot Ecosystem Management Research Project: what we have learned, symposium proceedings; May 18-20, 1999; Missoula, MT**

[www.nrfirescience.org/resource/11890](http://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

### **Agencies within communities, communities within ecosystems**

[www.nrfirescience.org/resource/8415](http://www.nrfirescience.org/resource/8415)

Can scientific information and intensive, extensive public involvement through facilitated meetings be expected to lead to agreement on natural resource issues? Communications and research in the Bitterroot Ecosystem Management Research Project indicate that, where people's values differ greatly, consensus is not a realistic goal...

Author(s): Jane Kapler Smith, Kerry McMenus

Year Published: 2000

Type: Document

Conference Proceedings

### **FireWorks curriculum featuring ponderosa, lodgepole, and whitebark pine forests**

[www.nrfirescience.org/resource/11238](http://www.nrfirescience.org/resource/11238)

FireWorks is an educational program for students in grades 1-10. The program consists of the curriculum in this report and a trunk of laboratory materials, specimens, and reference materials. It provides interactive, hands-on activities for studying fire ecology, fire behavior, and the influences of people on three fire-dependent...

Author(s): Jane Kapler Smith, Nancy E. McMurray

Year Published: 2000

Type: Document

Technical Report or White Paper

### **Smoke exposure at western wildfires**

[www.nrfirescience.org/resource/11193](http://www.nrfirescience.org/resource/11193)

Smoke exposure measurements among firefighters at wildfires in the Western United States between 1992 and 1995 showed that altogether most exposures were not significant, between 3 and 5 percent of the shift-average exposures exceeded occupational exposure limits for carbon monoxide and respiratory irritants. Exposure to benzene and...

Author(s): Timothy E. Reinhardt, Roger D. Ottmar

Year Published: 2000

Type: Document

Technical Report or White Paper

### **Behavioral and cognitive evaluation of FireWorks education trunk**

[www.nrfirescience.org/resource/8411](http://www.nrfirescience.org/resource/8411)

This study assessed the effectiveness of FireWorks, an educational trunk about wildland fire, in increasing student understanding, enabling students to apply classroom learning in a field setting, and improving the learning environment. Students who were in classrooms using the FireWorks educational trunk demonstrated more knowledge...

Author(s): Linda R. Thomas, James A. Walsh, Jane Kapler Smith

Year Published: 2000

Type: Document

Conference Proceedings

### **Risk management for ecological stewardship**

[www.nrfirescience.org/resource/15896](http://www.nrfirescience.org/resource/15896)

This comprehensive chapter documents, from a management perspective, the knowledge base on risk assessments and risk management. The previous chapter in the book is a companion article that provides the scientific foundation for the concepts and terminology used by Cleaves and Haynes. In this chapter, Cleaves and Haynes provide a...

Author(s): D.A. Cleaves, R. W. Haynes

Year Published: 1999

Type: Document

Book or Chapter or Journal Article

### **Effects of fire on the economic value of forest recreation in the Intermountain West: preliminary results**

[www.nrfirescience.org/resource/11051](http://www.nrfirescience.org/resource/11051)

Visitors to National Forests in Colorado, Idaho, and Wyoming were asked how their visitation rates would change with the presence of a high-intensity crown fire, prescribed fire, and a 20-year-old high-

intensity fire at the area they were visiting. By using pairwise t-tests, visitors to forests in Colorado showed a statistically...

Author(s): John B. Loomis, Jeffrey Englin, Armando Gonzalez-Caban

Year Published: 1999

Type: Document

Conference Proceedings, Technical Report or White Paper

### **Dialogue and the art of thinking together**

[www.nrfirescience.org/resource/16219](http://www.nrfirescience.org/resource/16219)

In this book, Isaacs argues that we should learn to kindle and sustain a new conversational spirit in our relationships, organizations, and communities. A conversational spirit will help us in times of frustration and conflict and help us work together to a more promising future. Isaacs discusses what encourages and discourages such...

Author(s): William Isaacs

Year Published: 1999

Type: Document

Book or Chapter or Journal Article

### **Interim air quality policy on wildland and prescribed fires**

[www.nrfirescience.org/resource/12446](http://www.nrfirescience.org/resource/12446)

This policy statement has been prepared in response to plans by some Federal, tribal and State wildland owners/managers to significantly increase the use of wildland and prescribed fires to achieve resource benefits in the wildlands. Many wildland ecosystems are considered to be unhealthy as a result of past management strategies....

Author(s): U.S. Environmental Protection Agency

Year Published: 1998

Type: Document

Technical Report or White Paper

### **Managing environmental uncertainty with legitimate authority: a comparative analysis of the Mann Gulch and Storm King Mountain Fires**

[www.nrfirescience.org/resource/15893](http://www.nrfirescience.org/resource/15893)

Alder recognizes two decisions common to both the Mann Gulch and Storm King Mountain fires that influenced the behavior of firefighters during critical moments: 1) failing to question authority and 2) failing to obey authority. He argues that these failures are based on individual perceptions of legitimate authority. There are four...

Author(s): G. Stoney Alder

Year Published: 1997

Type: Document

Book or Chapter or Journal Article

### **Man-made disasters**

[www.nrfirescience.org/resource/15889](http://www.nrfirescience.org/resource/15889)

To understand and avoid future calamities, decision makers must have a more accurate way of understanding past calamities. Most of what we know about calamities comes from eye witness accounts that favor relief efforts and damage reports rather than the specific events that come together initially to form a disaster. This suggests...

Author(s): Barry A. Turner, Nick F. Pidgeon

Year Published: 1997

Type: Document

Book or Chapter or Journal Article

**The ecological implications of fire in Greater Yellowstone, proceedings of the second biennial conference on the Greater Yellowstone Ecosystem**

[www.nrfirescience.org/resource/11989](http://www.nrfirescience.org/resource/11989)

Proceedings of the second biennial conference on the Greater Yellowstone Ecosystem.

Author(s): Jason Greenlee

Year Published: 1996

Type: Document

Conference Proceedings

**Dealing with public concerns in restoring fire to the forest**

[www.nrfirescience.org/resource/11253](http://www.nrfirescience.org/resource/11253)

Public support is important to all restoration efforts on public lands. Some types of restoration activities are easier for the public to support than others. Restoring wetlands, habitat restoration for salmon or burrowing owls, and vegetative rehabilitation are generally acceptable practices. Most restoration projects and...

Author(s): Leslie A. C. Weldon

Year Published: 1996

Type: Document

Technical Report or White Paper

**Causes of disaster: sloppy management**

[www.nrfirescience.org/resource/15891](http://www.nrfirescience.org/resource/15891)

Turner argues that while the best way to avoid disasters is primarily "for managers to establish, to strengthen, and then to assert control," management control only addresses part of the problem, and there are limitations that affect management in disaster situations. Turner advocates examining three interrelated factors in a...

Author(s): Barry Turner

Year Published: 1994

Type: Document

Book or Chapter or Journal Article

**Organizational communication imperatives: lessons of the space program**

[www.nrfirescience.org/resource/15970](http://www.nrfirescience.org/resource/15970)

Drawing upon experience working for NASA during the Apollo Missions and his studies of organizational communication, Tompkins illustrates that taking a communication perspective can help with understanding organizational problems. This book takes a narrative approach in which Tompkins discusses his visits to the Marshall Space...

Author(s): Phillip K. Tompkins

Year Published: 1993

Type: Document

Book or Chapter or Journal Article

**Preventing chaos in a crisis: strategies for prevention, control and damage limitation**

[www.nrfirescience.org/resource/15914](http://www.nrfirescience.org/resource/15914)

This early work of Lagadec's, though it is nearly a decade and half old, continues to provide a helpful summary of guidelines managers can use during a crisis. The book, targeted specifically for decision makers, is organized into three parts that answer three main questions: What is a crisis? How do you manage a crisis? How do you...

Author(s): Patrick Lagadec

Year Published: 1993  
Type: Document  
Book or Chapter or Journal Article

### **The textual approach: risk and blame in disaster sensemaking**

[www.nrfirescience.org/resource/16261](http://www.nrfirescience.org/resource/16261)

This article investigates responses to a gas pipeline explosion as a means of uncovering the methods that organizations and other participants use to make sense during disaster and to change situations. Sensemaking deals with how organizations and individuals explain or “make sense of” what goes on around them. Gephart is...

Author(s): Robert P. Gephart Jr.  
Year Published: 1993  
Type: Document  
Book or Chapter or Journal Article

### **Effects of the Gates Park Fire on recreation choices**

[www.nrfirescience.org/resource/11094](http://www.nrfirescience.org/resource/11094)

The 1988 Gates Park Fire, along the North Fork of the Sun River in the Bob Marshall Wilderness, provided an opportunity to explore fire effects on wilderness visitor choices. Recreation visitors along the North and South Fork drainages were interviewed to assess the effects of 1988 fires on their 1989 visits. The Gates Park fire had...

Author(s): Timothy G. Love, Alan E. Watson  
Year Published: 1992  
Type: Document  
Research Brief or Fact Sheet

### **Yellowstone media myths: print and television coverage of the 1988 fires**

[www.nrfirescience.org/resource/12422](http://www.nrfirescience.org/resource/12422)

This paper draws on comments from 89 reporters who covered the fires, on comments from 146 of their news sources, and on evaluations of network television coverage by four groups of wildfire experts. The research also incorporates a content analysis of stories about the fires that appeared in Yellowstone-area and elite newspapers....

Author(s): Conrad Smith  
Year Published: 1991  
Type: Document  
Conference Proceedings, Technical Report or White Paper

### **Military misfortunes: the anatomy of failure in war**

[www.nrfirescience.org/resource/15876](http://www.nrfirescience.org/resource/15876)

Military misfortunes are complex and involve not only individual failures in judgment or action, but also organizational failures rooted in the values each military organization upholds. This book uses examples from several military battles to highlight the need for military operations and organizations that: 1) learn from past...

Author(s): Eliot A. Cohen, John Gooch  
Year Published: 1990  
Type: Document  
Book or Chapter or Journal Article

### **Attitudes toward prescribed fire policies**

[www.nrfirescience.org/resource/15182](http://www.nrfirescience.org/resource/15182)



This article discusses social considerations with respect to public wildland forest fire policy. Social attitudes, beliefs and behavioral intentions of wildland fire are described as well as the public's knowledge of the effects of fire. This study details these social issues with regards to the 'let burn' policy and the 1988 fires...

Author(s): Michael J. Manfredi, Martin Fishbein, Glenn E. Haas, Alan E. Watson

Year Published: 1990

Type: Document

Book or Chapter or Journal Article

### **On risk communication as interorganizational control: the case of the aviation safety reporting system**

[www.nrfirescience.org/resource/15969](http://www.nrfirescience.org/resource/15969)

Focusing on the 1974 Trans World Airlines (TWA) Flight 514 crash, Tompkins discusses the National Transportation Safety Board's (NTSB) investigation of the crash and points to communication between the pilot and controllers and communication between airline organizations as principle contributors to the tragedy. Using this...

Author(s): Phillip K. Tompkins

Year Published: 1990

Type: Document

Book or Chapter or Journal Article

### **Protecting people and homes from wildfire in the interior West: proceedings of the symposium and workshop**

[www.nrfirescience.org/resource/11968](http://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

### **Sagebrush over time: A photographic study of rangeland change**

[www.nrfirescience.org/resource/15404](http://www.nrfirescience.org/resource/15404)

This publication is not available online. It will have to be ordered from a library.

Author(s): Kendall L. Johnson

Year Published: 1986

Type: Document

Conference Proceedings

### **Visitor attitudes toward wilderness fire management policy - 1971-84**

[www.nrfirescience.org/resource/11962](http://www.nrfirescience.org/resource/11962)

Visitors to the Selway-Bitterroot Wilderness, MT, were asked about their knowledge of fire effects and attitudes toward fire management in wilderness settings. In comparison to a similar 1971 study, visitors were more knowledgeable about fire effects and more supportive of fire management rather than fire suppression. About half the...

Author(s): Stephen F. McCool, George H. Stankey

Year Published: 1985

Type: Document

Technical Report or White Paper

### **Victims of groupthink: a psychological study of foreign-policy decisions and fiascoes**

[www.nrfirescience.org/resource/16221](http://www.nrfirescience.org/resource/16221)

According to Janis, groupthink occurs when “members of any small cohesive group tend to maintain esprit de corps by unconsciously developing a number of shared illusions and related norms that interfere with critical thinking and reality testing”. Groupthink can lead to group members making faulty decisions together because they...

Author(s): Irving L. Janis

Year Published: 1972

Type: Document

Book or Chapter or Journal Article

### **Fire and smoke in Montana forests**

[www.nrfirescience.org/resource/13133](http://www.nrfirescience.org/resource/13133)

The concept of forest fire is especially difficult to deal with in an objective manner because fire has deep psychological associations for most animals, especially man. Moreover, attitudes toward forest fires have been greatly conditioned by what has been called the most effective advertising campaign in history...

Author(s): William R. Beaufait

Year Published: 1971

Type: Document

Book or Chapter or Journal Article

### **Characteristics of people who start fires...some preliminary findings**

[www.nrfirescience.org/resource/11473](http://www.nrfirescience.org/resource/11473)

Recreationists or city dwellers are usually most often thought of as being responsible for starting forest fires. But a limited study showed that fire starters were more apt to be people who lived near and worked on the National Forests. They were relatively young and undereducated, and had "good reputations" in their communities....

Author(s): John R. Christiansen

Year Published: 1971

Type: Document

Research Brief or Fact Sheet

### **Smoke management: preparing and informing the public**

[www.nrfirescience.org/resource/12859](http://www.nrfirescience.org/resource/12859)

For several months during 2011, wildfires throughout the Southwest Area and Mexico caused air quality impacts on public health across the region, with significant impacts measured hundreds of miles away from individual wildfires. In order to address the emerging issue, a concerted multi-state interagency air quality coordination...

Type: Media

Webinar

### **Just Culture Part 3**

[www.nrfirescience.org/resource/16027](http://www.nrfirescience.org/resource/16027)

In Module 3 of this short course, Prof Dekker explains the promise and potential of restorative justice in your organization.

Type: Media

Video

## **Complex Patterns of the Lolo Peak Fire from Carlton Ridge to Bass Creek**

[www.nrfirescience.org/resource/15792](http://www.nrfirescience.org/resource/15792)

The recent Lolo Peak Fire and associated burnouts and backburns resulted in both expected and unexpected burn patterns related to differences in forest structure, topography, and weather. It also illustrates the "perfect storm" of stifling constraints the Forest Service faces in attempting to implement ecologically-based management...

Type: Media

Seminar

## **The smoke management challenge and the need for leadership**

[www.nrfirescience.org/resource/14096](http://www.nrfirescience.org/resource/14096)

A 50-minute presentation recorded in February 2009 as part of Effective Communication for Smoke Management in a Changing Air Quality Environment. It briefly outlines the rules, policies, and guidance dictating smoke management. This presentation is still applicable, though some of the maps may no longer be current.

Type: Media

Video

## **Braids of truth - Part 3: collaboration challenges**

[www.nrfirescience.org/resource/14447](http://www.nrfirescience.org/resource/14447)

Part 3 of 3. How can agencies, institutions and tribal cultures communicate about issues that relate to ecology and lifeways when the terms can mean different things? Is it learning how to talk or how to listen?

Type: Media

Video

## **The Story Behind the Yellowstone Fires of 198: retro Report**

[www.nrfirescience.org/resource/16084](http://www.nrfirescience.org/resource/16084)

This 11 minute video covers the lessons learned from the summer of 1988 when fires burned nearly one third of Yellowstone National Park. The 1988 fire continue to shape the way we fight wildfires raging across the West today.

Type: Media

Video

## **Smoke Management and Air Quality for Land Managers: An Online Training Resource**

[www.nrfirescience.org/resource/57](http://www.nrfirescience.org/resource/57)

Smoke Management and Air Quality for Land Managers is meant for those who are looking for a tutorial on smoke management and air quality. The refresher is comprised of four lessons, each of which can be completed in about half an hour; however, links and interactions allow further investigation of several topics.

Type: Website

Online Course

## **Dude Fire - Ted Putnam with MTDC**

[www.nrfirescience.org/resource/15999](http://www.nrfirescience.org/resource/15999)

Ted Putnam with the Missoula Technology and Development Center (MTDC) describes fire shelter and personal protective equipment impacts during an investigation of entrapment and death of 6 firefighters in the June 26, 1990 Dude fire.

Type: Media

Video

### **Using social network analysis to evaluate change in a large-scale collaborative management initiative**

[www.nrfirescience.org/resource/15106](http://www.nrfirescience.org/resource/15106)

To design and implement large landscape conservation projects, individuals and agencies are increasingly organizing into networks to facilitate the exchange of ideas, build relationships, identify common interests, and solve problems of mutual interest in a landscape. Coordinating the actions of a diffuse, networked system to...

Type: Media

Webinar

### **Progress in Wilderness Fire Science: Embracing Complexity**

[www.nrfirescience.org/resource/16057](http://www.nrfirescience.org/resource/16057)

Carol Miller, Aldo Leopold Wilderness Research Institute; Greg Aplet, The Wilderness Society; and Dave Campbell, Retired Forest Service District Ranger/Society of Wilderness Stewardship Board Chair, presented state-of-knowledge information and select case studies on recent developments in our understanding of the complexity of...

Type: Media

Webinar

### **Wildland urban legends**

[www.nrfirescience.org/resource/14859](http://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

### **Debunking social myths in wildland fire**

[www.nrfirescience.org/resource/12847](http://www.nrfirescience.org/resource/12847)

As more people live in high fire hazard areas, the active involvement of the public will be central to many efforts to minimize fire risk and improve forest health. One barrier to effectively engaging the public may be that many of the accepted descriptions related to the public and wildfire are based primarily on conventional...

Type: Media

Webinar

### **Just Culture Part 2**

[www.nrfirescience.org/resource/16025](http://www.nrfirescience.org/resource/16025)

In this module, Prof Dekker explains the problems of a retributive just culture and the protections necessary if you want it to work. He covers definitions, retribution, negligence, decision trees, protections, and difference with restorative justice.

Type: Media

Video

### **Proposed smoke management framework allows larger prescribed fires with fewer health risks**

[www.nrfirescience.org/resource/15511](http://www.nrfirescience.org/resource/15511)

Before a single drip torch is lit or blade of grass ignited, fire management staff must consult with state or local air quality control officials to negotiate a fine balance between using fire as a restorative tool on

the landscape with concerns about smoke and its impacts on public health. For years, these determinations have been...

Type: Media

Webinar

### **High-Resolution Modeling of Environmental Transport Processes in Cities and Complex Terrain**

[www.nrfirescience.org/resource/15786](http://www.nrfirescience.org/resource/15786)

Cities are diverse places with heterogeneous landscapes and are home to complex processes occurring over a wide range of length and time scales. Understanding and modeling these process is critical to improved sustainability related to goals of improving urban microclimate, reducing energy and water usage, increasing clean energy...

Type: Media

Seminar

### **Introduction to smoke management**

[www.nrfirescience.org/resource/14089](http://www.nrfirescience.org/resource/14089)

A 36-minute video recorded in February 2009 as part of the Effective Communication for Smoke Management in a Changing Air Quality Environment workshops. A presentation describing a progressive approach and overarching principles of smoke management. Also covers the development of basic and enhanced smoke management programs, and...

Type: Media

Video

### **Diane Hutton- Know When to Go Home**

[www.nrfirescience.org/resource/16045](http://www.nrfirescience.org/resource/16045)

Diane Hutton tells how she and her crew filled in their knowledge gaps while conducting a multi-year burn plan on the Beaverhead National Forest at the Big Hole National Monument battlefield.

Type: Media

Video

### **The Science Behind Forest Fires: How It Happens**

[www.nrfirescience.org/resource/16082](http://www.nrfirescience.org/resource/16082)

When heat, oxygen and dry vegetation come together, the result can be a forest fire. Wildfires destroy millions of acres each year in the United States.

Type: Media

Video

### **Public perceptions of smoke from wildland and prescribed fires**

[www.nrfirescience.org/resource/14312](http://www.nrfirescience.org/resource/14312)

This webinar touched on stakeholder values and perceptions of restoration.

Type: Media

Webinar

### **Creating fire adapted communities:an interactional approach**

[www.nrfirescience.org/resource/14836](http://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

### **Managing the Unexpected - Part 1**

[www.nrfirescience.org/resource/16022](http://www.nrfirescience.org/resource/16022)

Managing the Unexpected - Part 1 - National Advanced Fire and Resource Institute 2005 - - Part 1 - Overview of High Reliability Organizations.

Type: Media

Video

### **Recovery and Adaptation after Wildfire, 2000-2013**

[www.nrfirescience.org/resource/15957](http://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

Webinar

### **Learning From Experts: Reflecting on a Burn Gone Bad - Riva Duncan**

[www.nrfirescience.org/resource/16043](http://www.nrfirescience.org/resource/16043)

Riva Duncan shares her story of being involved in an escaped prescribed fire. Riva explains how, after this event, she changed her methods of writing and implementing prescription burn plans.

Type: Media

Video

### **LCES: Lookouts, Communications, Escape Routes, Safety Zones**

[www.nrfirescience.org/resource/16080](http://www.nrfirescience.org/resource/16080)

This 20 minute video covers lookouts, communications, escape routes, and safety zones. It was presented by the National Wildfire Coordinating Group in 2003 - NFES 2898 - Course S-134.

Type: Media

Video

### **Social network analysis**

[www.nrfirescience.org/resource/14294](http://www.nrfirescience.org/resource/14294)

Recent science communication studies of the federal fire management community suggest managers access research via informal information networks, and that these networks vary by both agency and position. We used a phone survey to understand the informal science communication networks of fire professionals in two of the Joint Fire...

Type: Media

Webinar

### **Network leadership from the field: linking the research to practice**

[www.nrfirescience.org/resource/14746](http://www.nrfirescience.org/resource/14746)

Networked organizations have tremendous potential for tackling complex problems and achieving ambitious goals. They also face great difficulties in coordinating their efforts and providing evidence to show their shared success. Creating a "knowledge map" can help you make the case for your important work. Knowledge mapping also...

Type: Media

Webinar

### **Building a More Effective Learning Organization**

[www.nrfirescience.org/resource/16019](http://www.nrfirescience.org/resource/16019)

Building a More Effective Learning Organization (Shorter Version) - National Advanced Fire and Resource Institute 2005 - - Organizational learning in wildland fire featuring Learning in Action, author David Garvin 2005.

Type: Media

Video

### **Delivering fire science creatively: alternative career for an English teacher**

[www.nrfirescience.org/resource/13769](http://www.nrfirescience.org/resource/13769)

What do scientists need to know about getting their science used? Show how it meets your audience's needs. Make it appealing to your audience. Make it easy to find. Three examples from my career demonstrate these principles: I recently completed a report on producing syntheses for managers in fire and...

Type: Media

Webinar

### **Sagebrush Ecosystems in a Changing Climate: Opportunities for Adaptive Management**

[www.nrfirescience.org/resource/15940](http://www.nrfirescience.org/resource/15940)

Sagebrush steppe rangelands comprise a large fraction of North America, but they are in decline due to increases in wildfire and invasive plants, factors that relate strongly to climate and weather variability. When intact, plant communities in sagebrush steppe appear well adapted to cold wet winters and hot dry summers along with...

Type: Media

Webinar

### **Fire, carbon, and climate: past and future**

[www.nrfirescience.org/resource/13031](http://www.nrfirescience.org/resource/13031)

Fire has a short-term impact on the exchange of carbon between the forest and the atmosphere, but over a cycle of a stand-replacing fire and regrowth, the carbon balance is usually carbon neutral. The only ways to permanently lower forest carbon with fire or any other disturbance are if regeneration does not occur and the forest...

Type: Media

Webinar

### **Learning From The Experts: Margit Bucher - Another Pair of Eyes**

[www.nrfirescience.org/resource/16040](http://www.nrfirescience.org/resource/16040)

In this 9 minute video, Margit Bucher explains how she uses her crew as another pair of eyes and the importance of double checking assumptions that you are working on within the burn plan. The goal of the Learning from the Experts video series is to speed up individual and organizational learning. Project personnel have...

Type: Media

Video

### **Fire behaviour: next gen Canadian Forest Fire Danger Rating System**

[www.nrfirescience.org/resource/16078](http://www.nrfirescience.org/resource/16078)

Mike Wotton from the Canadian Fire Service discussing the next generation Canadian Forest Fire

Danger Rating System at the 2013 Fire Behaviour Symposium.

Type: Media

Video

### **Engaging Stakeholders in Developing Adaptation Strategies**

[www.nrfirescience.org/resource/15856](http://www.nrfirescience.org/resource/15856)

This webinar was presented by Marcie Bidwell (Mountain Studies Institute) and Betsy Neely (The Nature Conservancy) and was part of the Social-Ecological Resilience and Changing Landscapes Webinar Series sponsored by the USDA Forest Service Rocky Mountain Research Station.

Type: Media

Webinar

### **Integration of ecological principals into land management - What has been done over the last decade and what still needs to be done?**

[www.nrfirescience.org/resource/14286](http://www.nrfirescience.org/resource/14286)

A 23-minute video in which Robert Keane and Wendel Hann discuss advances in fire technology, particularly modeling, assessments, and mapping, since 2000, and technological needs for the future, including those that include climate change. Presented at the Fifth International Fire Ecology and Management Congress: Uniting Research,...

Type: Media

Video

### **Little Venus Fire Shelter Deployment - Part 2**

[www.nrfirescience.org/resource/16012](http://www.nrfirescience.org/resource/16012)

This two-part video reviews the 2006 Venus Fire Shelter Deployment — focusing on communication and situational awareness. Part 2 of 2.

Type: Media

Video

### **Science delivery - Approaches and influences on success**

[www.nrfirescience.org/resource/13732](http://www.nrfirescience.org/resource/13732)

Using fire and fuels management as an example, this two pronged webinar will cover current best practices for science delivery and report the results of a study designed to improve future science delivery by understanding potential science users. A survey of 500 fire managers and decision makers in the United States Forest Service,...

Type: Media

Webinar

### **An Assessment of Temperature and RH from a Variety of Weather Meters**

[www.nrfirescience.org/resource/15934](http://www.nrfirescience.org/resource/15934)

Do you use belt weather kits or electronic handheld weather meters for measuring temperature and relative humidity in the field? Which device do you trust? Belt weather kits for obtaining weather information on prescribed fires and wildfires have been in use since the 1960's and the use of sling psychrometers from these kits has...

Type: Media

Webinar

### **Burn Boss Story: Lessons from the Twin Prescribed Fire Escape**

[www.nrfirescience.org/resource/16037](http://www.nrfirescience.org/resource/16037)



This 37-minute video summarizes Twin Prescribed Fire Burn Boss Trainee James Pettit's "lessons learned" presentation to the 2010 Southern Region Burn Boss Workshop.

Type: Media

Video

### **2015 WFSTAR: Tools for Communication**

[www.nrfirescience.org/resource/16074](http://www.nrfirescience.org/resource/16074)

This 10 minute video covers five communication tools that fire fighters often need to communicate with each other, the public and private sectors, disaster relief victims, co-responders, the media, and others.

Type: Media

Video

### **Rapidly-updating numerical weather prediction for fire weather situational awareness and forecasting: The High-Resolution Rapid Refresh model**

[www.nrfirescience.org/resource/15804](http://www.nrfirescience.org/resource/15804)

The 3-km High-Resolution Rapid Refresh (HRRR) numerical weather prediction model, developed at the NOAA Earth System Research Laboratory and operational since September 2014, is a tool for situational weather awareness and short-range forecasting for a variety of end-user applications, ranging from severe weather prediction to...

Type: Media

Seminar

### **Technology transfer and communication: from the developers and user communities in the 21st Century**

[www.nrfirescience.org/resource/14271](http://www.nrfirescience.org/resource/14271)

Recommendation 4 submitted to the Joint Fire Science Program Governing Board a decade ago stated that "Technology development, transfer, and communication need to be improved between developers and user communities". A decade ago computer technology had advanced to a point that allowed for development of complex prediction models...

Type: Media

Video

### **Dude Fire Staff Ride**

[www.nrfirescience.org/resource/16008](http://www.nrfirescience.org/resource/16008)

Dude Fire Staff Ride - National Advanced Fire and Resource Institute 1998 - - Re-released in 2005 from 1998 fire behavior analyst workshop that focused on this tragedy in a wildland-urban interface wildfire. This was first use of a Staff Ride for examining wildfire fighting and opportunities for learning from the Dude fire...

Type: Media

Video

### **Engaging the public in improving fire outcomes**

[www.nrfirescience.org/resource/13724](http://www.nrfirescience.org/resource/13724)

Recording from a presentation during a webinar of the Fire Adapted Communities Learning Network on December 3, 2015. The presentation covered some recent social science research in three areas: general social dynamics shaping public response to fire management—conventional wisdom vs. reality; firewise behaviors; communication...

Type: Media

Webinar

### **Working in Interdisciplinary Teams to Build Social-Ecological Models**

[www.nrfirescience.org/resource/15922](http://www.nrfirescience.org/resource/15922)

This webinar is part of a larger series on Social-Ecological-Climate resilience in southwestern Colorado.  
Type: Media

Webinar

### **Understanding Human Error Part 5**

[www.nrfirescience.org/resource/16032](http://www.nrfirescience.org/resource/16032)

Sidney Dekker helps you understand a new way of dealing with a perceived 'human error' problem in your organization. In this module, Dekker talks about counterfactual reactions to human error, or what people could have or should have done to prevent the outcome.

Type: Media

Video

### **The fire laboratory: forest restoration on the Gila National Forest**

[www.nrfirescience.org/resource/15596](http://www.nrfirescience.org/resource/15596)

Vast stands of ponderosa pine stretch across the Gila National Forest, a testament to the role of fire in this corner of the Southwest. For decades, fire managers on the Gila have been reintroducing fire back on to the landscape. This video introduces some of the people behind the story of fire on the Gila National Forest.

Type: Media

Video

### **The Watchout Situations (2013 Refresher)**

[www.nrfirescience.org/resource/16069](http://www.nrfirescience.org/resource/16069)

This six minute video covers the history and a story covering the 18 Watchout Situations in wildland firefighting.

Type: Media

Video

### **Wilderness stewardship in response to ecosystem change**

[www.nrfirescience.org/resource/15800](http://www.nrfirescience.org/resource/15800)

No description available. This webinar was presented as part of the RMRS Fire Sciences Laboratory's weekly seminar series for 2016-2017.

Type: Media

Seminar

### **Tending the Wild**

[www.nrfirescience.org/resource/16099](http://www.nrfirescience.org/resource/16099)

Tending the Wild shines light on the environmental knowledge of indigenous peoples across California by exploring how they have actively shaped and tended the land for millennia, in the process developing a deep understanding of plant and animal life. This documentary examines how humans are necessary to live in balance with nature...

Type: Media

Video

### **Cramer Fire Staff Ride**

[www.nrfirescience.org/resource/16005](http://www.nrfirescience.org/resource/16005)

This 48-minute video-a tribute to firefighters Shane Heath and Jeff Allen who lost their lives on the 2003 Cramer Fire-tells the story of the learning and healing that occurred on the 2012 Cramer Fire Staff Ride.  
Type: Media

Video

### **Community preparedness: fire safe councils, county resolutions, and firewise practices**

[www.nrfirescience.org/resource/13318](http://www.nrfirescience.org/resource/13318)

In this video, discussions focused on fire management in the Wildland Urban Interface, firefighter safety, and homeowner responsibilities and safety. Alan Tresemer, Captain, Painted Rocks Fire and Rescue Company, Sonny Stiger, retired USFS Fire and Fuels Management Specialist, Steve Arno, retired USFS research forester, and Bob...

Type: Media

Video

### **The role of prescribed fire councils in restoring the West**

[www.nrfirescience.org/resource/13670](http://www.nrfirescience.org/resource/13670)

Speaker: J. Morgan Varner, Department of Forest Resources & Environmental Conservation, Virginia Tech. Event: Restoring the West Conference 2015 - Restoration and Fire in the Interior West.

Type: Media

Video

### **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

### **David Calkin - What will it take to break the cycle of the wildfire paradox?**

[www.nrfirescience.org/resource/16193](http://www.nrfirescience.org/resource/16193)

This 20 minute presentation was given by David Calkin, research forester with the US Forest Service, at 3rd SW Fire Ecology Conference & 1st Applied Fire Science Workshop in Tucson, Arizona.

Type: Media

Video

### **Understanding Human Error Part 3**

[www.nrfirescience.org/resource/16030](http://www.nrfirescience.org/resource/16030)

Sidney Dekker helps you understand a new way of dealing with a perceived 'human error' problem in your organization . This module covers what new view investigations look at and produce.

Type: Media

Video

### **Living (Dangerously) in an era of megafires**

[www.nrfirescience.org/resource/15593](http://www.nrfirescience.org/resource/15593)

We have all seen the news--hotter summers, and bigger, badder wildfires. What's going on? How did we get here?Paul tells a fast-paced story of western US forests--unintentionally yet massively changed by a century of management. He relates how these changes, coupled with a seriously hotter climate,

have set the stage for this modern...

Type: Media

Video

### **Global and Western US Smoke Chemistry and Impacts: Recent Progress**

[www.nrfirescience.org/resource/15797](http://www.nrfirescience.org/resource/15797)

No description available. This webinar was presented as part of the RMRS Fire Sciences Laboratory's weekly seminar series for 2016-2017.

Type: Media

Seminar

### **Occupy wildfires: the story of the 1%**

[www.nrfirescience.org/resource/14518](http://www.nrfirescience.org/resource/14518)

Jessica Hass discusses how the confluence of society and nature leads to catastrophic wildfires and what we can do to combat them. Wildfires are naturally occurring events with many ecological benefits. However, with more and more people moving into the lands adjacent to fire adapted ecosystems, the probability of catastrophic...

Type: Media

Video

### **Fuel control treatments in the sagebrush steppe**

[www.nrfirescience.org/resource/16091](http://www.nrfirescience.org/resource/16091)

This presentation aired as part of the Great Basin LCC webinar series on November 29, 2017. The presentation was given by Bruce Roundy of Brigham Young University.

Type: Media

Webinar

### **Deployment Story: Little Venus Fire**

[www.nrfirescience.org/resource/16003](http://www.nrfirescience.org/resource/16003)

Fire shelter deployment on the Little Venus Fire.

Type: Media

Video

### **Wildland Urban Interface Fires: An Overview for Homeowners**

[www.nrfirescience.org/resource/16067](http://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

### **Elizabeth Reinhardt - Beyond Hazardous Fuels: Restoring Fire (Opening Plenary)**

[www.nrfirescience.org/resource/16191](http://www.nrfirescience.org/resource/16191)

This 21 minute presentation was given at the 3rd SW Fire Ecology Conference & Applied Fire Science Workshop in Tucson, Arizona by Elizabeth Reinhardt, Retired US Forest Service.

Type: Media

Video

### **Understanding Human Error Part 1**

[www.nrfirescience.org/resource/16028](http://www.nrfirescience.org/resource/16028)

Sidney Dekker helps you understand a new way of dealing with a perceived 'human error' problem in your organization. This module is an introduction to old view vs. new view ways to approach human error.

Type: Media

Video

### **Community wildfire protection planning**

[www.nrfirescience.org/resource/13662](http://www.nrfirescience.org/resource/13662)

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...

Type: Media

Webinar

### **Temporal Dynamics of Wildfire Risk Assessments: Assessing tradeoffs and asking the hard questions**

[www.nrfirescience.org/resource/15794](http://www.nrfirescience.org/resource/15794)

Recent advances in integrating wildfire planning and strategic wildfire response can create more tangible fire outcomes that are better aligned the national cohesive strategy goals of living sustainably with wildfire. By integrating both in-situ and transboundary wildfire risk assessments with potential operations delineations, we...

Type: Media

Seminar

### **Learning from the experts: burning with optimism**

[www.nrfirescience.org/resource/14114](http://www.nrfirescience.org/resource/14114)

Ric Carlson relates one occurrence when his optimism in a burn plan colored his perspective. This video comes from the Wildland Fire Lessons Learned Center.

Type: Media

Video

### **Valley fire case study and lessons learned**

[www.nrfirescience.org/resource/14495](http://www.nrfirescience.org/resource/14495)

This webinar, provided by the Incident Commander on the event, will provide an overview of the 2015 Valley Fire, which destroyed almost 2000 structures as it burned across 76,000 acres in the CAL FIRE Sonoma-Lake-Napa Unit. Chief Green will speak to the circumstances surrounding the incident including the extreme fire behavior...

Type: Media

Webinar

### **S-110 Basic Wildland Fire Orientation**

[www.nrfirescience.org/resource/16085](http://www.nrfirescience.org/resource/16085)

This 14 minute video is an overview of the people and resources needed for wildland firefighting. Video goal is to prepare firefighter for success in their first assignment on a fire.

Type: Media

Video

### **Dude Fire - Perryville Fire Crew Entrapment**

[www.nrfirescience.org/resource/16000](http://www.nrfirescience.org/resource/16000)

Firefighters discuss the entrapment of the Perryville Fire Crew on the 1990 Dude fire. This is raw video footage from News Channel 12.

Type: Media

Video

### **Understanding stakeholder perceptions of fire with mental modelling: a case study from Ashland, OR**

[www.nrfirescience.org/resource/15110](http://www.nrfirescience.org/resource/15110)

Many communities see the need to increase the use of beneficial fire, yet they struggle to find effective approaches that all stakeholders agree upon. We use mental modeling with Fuzzy Cognitive Maps to help stakeholders express their worldviews on fire use and share their insights with other stakeholder groups. Using our experience...

Type: Media

Webinar

### **Firefighter Safety in the Wildland/Urban Interface**

[www.nrfirescience.org/resource/16060](http://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

Video

### **Smoke Management Photographic Guide: a visual aid for communicating smoke impacts.**

[www.nrfirescience.org/resource/14881](http://www.nrfirescience.org/resource/14881)

Communicating emissions impacts to the public can sometimes be difficult because quantitatively conveying smoke concentrations is complicated. Regulators and land managers often refer to particulate-matter concentrations in micrograms per cubic meter, but this may not be intuitive or meaningful to everyone. The Smoke Management...

Type: Media

Webinar

### **On the causes and movements of smoke-induced fog**

[www.nrfirescience.org/resource/12856](http://www.nrfirescience.org/resource/12856)

Smoke from residual combustion in the aftermath of prescribed burns or wildfires can combine with certain atmospheric conditions usually late at night to produce superfog -- a fog reducing visibility to less than 10 feet, and frequently to less than 3 feet. When this smoke/fog is transported across a major roadway, the results are...

Type: Media

Webinar

### **Just Culture Part 4**

[www.nrfirescience.org/resource/16026](http://www.nrfirescience.org/resource/16026)

In Module 4 of this short course, Prof Dekker talks about the second victim.

Type: Media

Video

## **Evaluating the Swiss SNOWPACK modeling system across the Northern Rocky Mountains**

[www.nrfirescience.org/resource/15791](http://www.nrfirescience.org/resource/15791)

Since late 2015, a one dimensional model of snow pack structure, know as SNOWPACK, has been evaluated by the National Weather Service at Missoula, in collaboration with Montana State University. The model is driven by point-based output from a high-resolution numerical model (WRF-ARW).Hourly forecasts of incoming radiation,...

Type: Media

Seminar

## **Introduction to air quality regulations**

[www.nrfirescience.org/resource/14095](http://www.nrfirescience.org/resource/14095)

A 42-minute presentation recorded in February 2009 as part of Effective Communication for Smoke Management in a Changing Air Quality Environment. It provides an Introduction to federal regulations which address smoke management in the context of wildland fire.

Type: Media

Video

## **Who's to blame? Fire management in mixed-ownership landscapes**

[www.nrfirescience.org/resource/15097](http://www.nrfirescience.org/resource/15097)

Fuels are the only component of the fire triangle that forest and fire managers can alter to change fire behavior. There have been numerous studies examining how fuel reduction treatments and salvage logging alter fire behavior, severity, and its' ecological impacts. However, less attention has been paid to how different forest...

Type: Media

Webinar

## **The Nature of Americans: Barriers and opportunities to connect the nation with nature**

[www.nrfirescience.org/resource/16350](http://www.nrfirescience.org/resource/16350)

What is the state of Americans' connection to nature? How do we overcome disconnection? The Nature of Americans National Report: Disconnection and Recommendations for Reconnection reveals important insights from a study of nearly 12,000 adults, children, and parents, and provides recommendations to open the outdoors for all....

Type: Media

Webinar

## **Learning from the Experts: Buzz Williams - How Do You Anticipate Routine Surprises?**

[www.nrfirescience.org/resource/16048](http://www.nrfirescience.org/resource/16048)

Listen to Buzz as he describes how he uses maps to anticipate routine surprises. Buzz's story might help you to think about what processes you can use to anticipate surprise.

Type: Media

Video

## **ScienceCasts: Taking the Wild out of Wildfire**

[www.nrfirescience.org/resource/16083](http://www.nrfirescience.org/resource/16083)

A new NASA-funded tool is taking some of the 'wild' out of wildfires by making it possible for U.S. fire managers to better spot and track direction of dangerous blazes. Visit <http://science.nasa.gov/> for more.

Type: Media

Video

## **Communications under fire: understanding capacity for effective communication during large-scale wild**

[www.nrfirescience.org/resource/14837](http://www.nrfirescience.org/resource/14837)

Communication networks are critical to effective coordination on complex wildfire incidents. This presentation will present research findings examining communication effectiveness in wildfire disaster response networks. Discussion will highlight the role of pre-existing relationships, common institutional affiliations, and...

Type: Media

Webinar

## **Current research on public perceptions of smoke from wildland and prescribed fire to inform communication and outreach**

[www.nrfirescience.org/resource/12817](http://www.nrfirescience.org/resource/12817)

This webinar covered two large, multi-region studies of public perceptions of smoke from wildland and prescribed fire funded by the JFSP. A mail/internet survey conducted by the University of Idaho investigated perceptions of urban and rural residents in the northern Rocky Mountains and south-central U.S. Research investigated...

Type: Media

Webinar

## **Just Culture Part 1**

[www.nrfirescience.org/resource/16024](http://www.nrfirescience.org/resource/16024)

In Module 1 of this short course, Prof Dekker introduces Just Culture.

Type: Media

Video

## **Rangeland Fire Protection Associations in Oregon and Idaho: Implications for Fire Adaptation and Agency-Community Relationships**

[www.nrfirescience.org/resource/15508](http://www.nrfirescience.org/resource/15508)

Rangeland Fire Protection Associations are unique partnerships wherein ranchers and the Bureau of Land Management work together to suppress rangeland wildfires. Using four case studies in Oregon and Idaho, we discuss the value and outcomes of this approach, as well as challenges and future implications for fire adaptation on the...

Type: Media

Webinar

## **An overview of the USFS National Technology and Development Program**

[www.nrfirescience.org/resource/15784](http://www.nrfirescience.org/resource/15784)

In May of 2017 the Missoula, Montana and San Dimas, California Technology and Development Centers emerged from a multi year re-organization effort to form the National Technology and Development Program. Our new organization is guided by the following principles. NTDP Mission: The Forest Service National Technology and Development...

Type: Media

Webinar

## **Building consensus: the Applegate Experience**

[www.nrfirescience.org/resource/14088](http://www.nrfirescience.org/resource/14088)

Partners in the Applegate (Oregon) landscape collaboratively identified values at risk in their forests through a facilitated process, then developed a map that captured a summary of all values. The map is intended to form the basis for management decisions, including treatment prioritization.



Type: Media

Webinar

### **Learning from the Experts: Ric Carlson - Burning with Optimism**

[www.nrfirescience.org/resource/16044](http://www.nrfirescience.org/resource/16044)

Ric Carlson relates one occurrence when his optimism in a burn plan colored his perspective. The video addresses the question of how to guard against the pitfalls of optimism without paralyzing yourself or your unit into inaction.

Type: Media

Video

### **Living with Fire - Wildland Fire Science**

[www.nrfirescience.org/resource/16081](http://www.nrfirescience.org/resource/16081)

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...

Type: Media

Video

### **Myth versus reality: understanding public views of fire management**

[www.nrfirescience.org/resource/14307](http://www.nrfirescience.org/resource/14307)

Presentation by Sarah McCaffrey (USDA Forest Service, Northern Research Station) regarding public attitudes towards fire management.

Type: Media

Webinar

### **Conducting Effective After Action Reviews (AAR) - Part 1**

[www.nrfirescience.org/resource/16020](http://www.nrfirescience.org/resource/16020)

Conducting Effective After Action Reviews (AAR) - Part 1 - National Advanced Fire and Resource Institute 2005 - - Part 1 - The After Action Review of the Horse Creek Prescribed Fire. A simulation exercise video. What was planned? What actually happened? Why did it happen? What can we do next time?

Type: Media

Video

### **Interdisciplinary applications of global terrestrial carbon cycle models**

[www.nrfirescience.org/resource/13772](http://www.nrfirescience.org/resource/13772)

Terrestrial carbon cycle models, or dynamic global vegetation models (DGVMs), have long been used to estimate biogeochemical and biophysical feedbacks to climate. At their core, DGVMs represent vegetation and landscape dynamics using process-based representations of photosynthesis, carbon allocation, stand...

Type: Media

Webinar

### **Bridging the Divide - Video 4: The Future of Our Forests**

[www.nrfirescience.org/resource/15944](http://www.nrfirescience.org/resource/15944)

This video series is a compilation of post-fire interviews, workshops, and research presentations, highlighting the special conditions of the fire and the unique community outcomes. Through

collaboration and partnerships, these mountain communities are learning to live with fire in the landscape. During the summer of 2013 over 1000...

Type: Media

Video

### **Communicating about climate change - From impacts to solutions**

[www.nrfirescience.org/resource/13055](http://www.nrfirescience.org/resource/13055)

Americans are waking up to the reality of extreme weather events and are beginning to connect the dots to climate disruption. Effectively engaging the public as partners in addressing the challenge requires emphasizing local, current and personally relevant impacts and bridging to solutions.

Type: Media

Webinar

### **Learning from the Experts: Ric Carlson - Building a 'Mac Truck' Burn Plan**

[www.nrfirescience.org/resource/16042](http://www.nrfirescience.org/resource/16042)

Ric Carlson describes how he develops the prescription window and uses a process of constant evaluation and updating that helps him avoid the traps always inherent with boundary selection. He addresses the question of how narrowly focused the prescription window in a prescribed burn should be.

Type: Media

Video

### **Minimum Impact Suppression Tactics**

[www.nrfirescience.org/resource/16079](http://www.nrfirescience.org/resource/16079)

This 22 minute video covers what suppression tactics should be based on, including firefighter and public safety, resource benefits, minimum costs, and resource objectives. Past firefighting protection policy primarily emphasized the need to extinguish all wildland fire ignitions. Today's policy offers a full...

Type: Media

Video

### **People and fire**

[www.nrfirescience.org/resource/14293](http://www.nrfirescience.org/resource/14293)

The active involvement and support of the public will be central to efforts to restore resilience and foster fire adapted landscapes. One barrier to effectively engaging the public may be that many of the accepted descriptions related to the public and wildfire are based primarily on conventional wisdoms that may or may not hold....

Type: Media

Video

### **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

### **Using Fire and Grazing to Maintain Productive and Ecologically Resilient Grasslands**

[www.nrfirescience.org/resource/15936](http://www.nrfirescience.org/resource/15936)

Fire, grazing, and climate are the major forces that maintain ecological health in grasslands. Today's

grasslands are increasingly threatened by climate change, habitat loss and fragmentation, and degradation of ecological processes and communities. The effective use of fire and grazing management to conserve remaining grassland...

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

### **Learning from the Experts: Riva Duncan - Got Conversation?**

[www.nrfirescience.org/resource/16038](http://www.nrfirescience.org/resource/16038)

Riva Duncan explains the importance of communication on the fireline. She explains the problems with communication on the Cascade Two Burn where she was the ignition specialist and talks about what should be included in burn plans. She recommends talking with others during the planning process and using high reliability organizing...

Type: Media

Video

### **Firewise Virtual Workshop: Understanding How Embers Ignite Roofs in a Wildland Fire**

[www.nrfirescience.org/resource/16076](http://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

### **These Once (and Future) Conflagrated Prairies**

[www.nrfirescience.org/resource/15848](http://www.nrfirescience.org/resource/15848)

A brief reconnaissance of the Great Plains and fire that will place its fire scene within the national narrative. From the onset of European contact, the grasslands were famous for their fires. They stimulated a debate about the relative roles of climate and humans. They prompted one of America's two national traditions of fire...

Type: Media

Webinar

### **Tools and technology: from the developer to the user community in the 21st Century**

[www.nrfirescience.org/resource/14284](http://www.nrfirescience.org/resource/14284)

Recommendation 3 submitted to the Joint Fire Science Program Governing Board over a decade ago stated that "The process of tool use including comparison, selection, acquisition, training, implementation, evaluation, and support needs national administrative focus, guidance, and support." A decade ago computer technology had advanced...

Type: Media

Video

### **Inside the Shelter**

[www.nrfirescience.org/resource/16011](http://www.nrfirescience.org/resource/16011)

"Fire Shelter Deployments: Stories and Common Insights" is a program developed by the US Forest Service Missoula Technology and Development Center (MTDC) that will help you understand what you may experience in a fire shelter deployment. The video gives first-hand descriptions of what it was like in the fire shelter during a...

Type: Media

Video

### **Prescribed Fire on Private Land - A WLA Practitioner Exchange**

[www.nrfirescience.org/resource/15928](http://www.nrfirescience.org/resource/15928)

As part of our effort to advance policies and practices that sustain working lands, connected landscapes, and native species, WLA is offering this interactive practitioner exchange focused on prescribed fire on private land. We are enlisting a panel of experts from across the West with experience in various aspects of prescribed...

Type: Media

Webinar

### **Standing Accountable - Cerro Grande Interview**

[www.nrfirescience.org/resource/16035](http://www.nrfirescience.org/resource/16035)

In a tv interview, Karen Wade, Reg. Dir., informed the public of Ray Weaver's suspension, covered the next steps in investigation of fire, including a Congressional Senate investigation, and gave a heart-felt message to the people of New Mexico taking responsibility for decisions.

Type: Media

Video

### **2014 WFSTAR: Fireline Leadership**

[www.nrfirescience.org/resource/16073](http://www.nrfirescience.org/resource/16073)

This 20 minute video covers the most essential element for success in the wildland fire service, which is good leadership. This module focuses on the framework, values, and principles that guide wildland fire leaders now and into the future. A portion of a Ted talk by general Stanley McCrystal is included in this video.

Type: Media

Video

### **Fire and Lightning from Space: Using the new GOES-16 Satellite for Fire and Total Lightning Detection**

[www.nrfirescience.org/resource/15802](http://www.nrfirescience.org/resource/15802)

GOES-16 is NOAA's latest earth-observing geostationary satellite, launched Nov 19, 2016. The GOES-16 platform hosts many improved earth-and sun-looking instruments, of which the Advanced Baseline Imager (ABI) and the Geostationary Lightning Mapper (GLM) are the primary earth-pointing instruments. Both instruments take current...

Type: Media

Seminar

### **LANDFIRE fire regime products**

[www.nrfirescience.org/resource/14264](http://www.nrfirescience.org/resource/14264)

LANDFIRE fire regime products characterize reference fire frequency and severity and vegetation departure for the entire U.S. The datasets in this product suite include Biophysical Settings, Succession Class, Fire Regime Group, Mean Fire Return Interval, Reference Fire Severity, Vegetation Departure

and Vegetation Condition Class....

Type: Media

Video

### **Dude Fire Fatality Case Study**

[www.nrfirescience.org/resource/16007](http://www.nrfirescience.org/resource/16007)

In June 1990 a fire in Arizona results in six firefighter fatalities.

Type: Media

Video

### **Evaluation of cultural ecosystem services using social media data**

[www.nrfirescience.org/resource/15234](http://www.nrfirescience.org/resource/15234)

Social media provides unique opportunities to understand how people experience their environments. We're using the Yahoo Flickr Creative Commons (YFCC) 100M dataset, which contains the metadata for 100 million Flickr images, to understand not only where people enjoy the environment, but why. We're using qualitative data analysis...

Type: Media

Webinar

### **Educating the public about the importance of fire**

[www.nrfirescience.org/resource/13323](http://www.nrfirescience.org/resource/13323)

This video with Dr. Dick Hutto, retired ecology professor with the University of Montana, was filmed at an interpretive sign in a burned dry mixed-conifer forest. This was the last stop during the Blue Mountain Fire Effects field trip held during the 2014 Large Wildland Fires Conference. The video highlights ways to educate the...

Type: Media

Video

### **Lessons in creating and maintaining successful prescribed burn associations**

[www.nrfirescience.org/resource/15919](http://www.nrfirescience.org/resource/15919)

A Southern Fire Exchange webinar with John Weir of Oklahoma State University and the Oklahoma Prescribed Burn Association. Are you involved in creating, developing, guiding, or supporting a prescribed burn association (PBA)? Are you interested learning how prescribed burn associations work or how they're successfully sustained?...

Type: Media

Webinar

### **Tim Sexton - Terminology: PNF to WFU to WTF**

[www.nrfirescience.org/resource/16195](http://www.nrfirescience.org/resource/16195)

This 20 minute presentation was given by Tim Sexton at the 3rd SW Fire Ecology Conference & 1st Applied Fire Science Workshop in Tucson, Arizona. It covers wildland fire terminology from the perspective of description, labels, and a 2009 update.

Type: Media

Video

### **Understanding Human Error Part 4**

[www.nrfirescience.org/resource/16031](http://www.nrfirescience.org/resource/16031)

Sidney Dekker helps you understand a new way of dealing with a perceived 'human error' problem in your organization. This module covers why we might revert to the old view.

Type: Media

Video

### **Two sides of fire**

[www.nrfirescience.org/resource/15594](http://www.nrfirescience.org/resource/15594)

Fire is a paradox: good if it is under control, and usually bad if it is wild and out of control. Now we're beginning to realize that we need to reintroduce fire to many ecosystems. It's often an essential management tool needed to maintain stands of fire dependent species in a healthy condition. This video, produced by the...

Type: Media

Video

### **Predicting Burn Severity Patterns in Yosemite National Park and the Douglas Complex Fires in Oregon**

[www.nrfirescience.org/resource/15798](http://www.nrfirescience.org/resource/15798)

Mountainous topography creates fine-scale environmental mosaics that vary in precipitation, temperature, insolation, and slope position. This mosaic in turn influences fuel accumulation, moisture, and forest structure that in turn influence patterns of burn severity. We studied the effects of varying environmental conditions on burn...

Type: Media

Seminar

### **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

### **Relations among cheatgrass driven fire, climate and sensitive status birds**

[www.nrfirescience.org/resource/16094](http://www.nrfirescience.org/resource/16094)

As the distribution and abundance of non-native cheatgrass (*Bromus tectorum*) in the Great Basin has increased, the extent and frequency of fire in the region has increased by as much as 200%. These changes in fire regimes are associated with loss of the sagebrush (*Artemisia tridentata*) and native grasses and forbs in which many...

Type: Media

Webinar

### **Catching fire: prescribed burning in Northern California**

[www.nrfirescience.org/resource/205](http://www.nrfirescience.org/resource/205)

Catching Fire tells a compelling story of how a small but committed group of local, tribal, state and federal land managers are bringing back the use of prescribed fire as a tool to protect communities and ecosystems across Northern California. It examines the use of fire by the Karuk Tribe of California, and the connection between...

Type: Media

Video

### **Cramer Fire Case Study (2013 Refresher)**

[www.nrfirescience.org/resource/16004](http://www.nrfirescience.org/resource/16004)

Part 1: Past fires and lessons learned in the Salmon River Breaks of the Salmon-Challis NF. Part 2: Cramer Fire case study of the fire that killed two helitack crew members on July 22, 2003.

Type: Media

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

### **A century of wildland fire research: contributions to long-term approaches for wildland fire management**

[www.nrfirescience.org/resource/15915](http://www.nrfirescience.org/resource/15915)

The costs of wildland fire in the United States are enormous, not only in terms of the financial impacts of fire suppression and post-fire rehabilitation of property and ecosystems, but also in terms of loss of lives, impacts on physical health of nearby communities, effects on local and regional economies from losses of revenue,...

Type: Media

Webinar

### **Christopher O'Connor (for Dave Calkin) - A systems view of wildfire management (Opening Plenary)**

[www.nrfirescience.org/resource/16192](http://www.nrfirescience.org/resource/16192)

This 25 minute presentation was delivered for Dave Calkin by Kit O'Connor at the 3rd Southwest Fire Ecology Conference & Applied Fire Science Workshop in Tucson, Arizona, on November 29, 2016. It covers management costs of firefighting, modeling of fuels, structure loss, and much more, from a systems approach.

Type: Media

Video

### **Understanding Human Error Part 2**

[www.nrfirescience.org/resource/16029](http://www.nrfirescience.org/resource/16029)

Sidney Dekker helps you understand a new way of dealing with a perceived 'human error' problem in your organization. This module talks about how an investigation of human error with old and new views differs.

Type: Media

Video

### **Public and agency perceptions of smoke from wild and prescribed fire**

[www.nrfirescience.org/resource/13669](http://www.nrfirescience.org/resource/13669)

Speaker: Christine Olsen, Research Social Scientist, Department of Forest Ecosystems and Society, Oregon State University. Event: Restoring the West Conference 2015 - Restoration and Fire in the Interior West.

Type: Media

Video

## **Fire Ecology 2.0**

[www.nrfirescience.org/resource/15796](http://www.nrfirescience.org/resource/15796)

No description available. This webinar was presented as part of the RMRS Fire Sciences Laboratory's weekly seminar series for 2016-2017.

Type: Media

Seminar

## **Wildland fire smoke messaging and perception**

[www.nrfirescience.org/resource/14140](http://www.nrfirescience.org/resource/14140)

The NWCG Smoke Committee (SmoC) hosted this webinar on June 28, 2011. Four presentations and a discussion period examined public perception and messaging about smoke and fire. The webinar was a key initial step in developing needed messaging about wildland fire smoke, and it also served as the Smoke Committee's beginning effort at...

Type: Media

Webinar

## **Simple steps to wildland fire communication**

[www.nrfirescience.org/resource/14499](http://www.nrfirescience.org/resource/14499)

This webinar will cover the basic steps of public information when interacting with communities, general public and media. The link provided is the audio portion of the presentation. For the slides, download the pdf of the PowerPoint file.

Type: Media

Webinar

## **Mid-succession fire effects and reburn potential in model sagebrush ecosystems**

[www.nrfirescience.org/resource/16090](http://www.nrfirescience.org/resource/16090)

Sagebrush steppe ecosystems evolved with periodic fire, but this relationship is altered across much of the arid west by invasive species, land use change, overgrazing, and climate change. While understanding the short-term impacts of fire on these systems, little is known about the longer-term trajectory of recovery. To fill this...

Type: Media

Webinar

## **Little Venus Fire Shelter Deployment - Part 1**

[www.nrfirescience.org/resource/16002](http://www.nrfirescience.org/resource/16002)

This two-part video reviews the 2006 Venus Fire Shelter Deployment — focusing on communication and situational awareness. It covers the problems encountered with radios and not being able to see the location of the fire as the crew started down a drainage. There were no casualties during this deployment. Part 1 of 2.

Type: Media

Video

## **Research insights into effective smoke communication with the public**

[www.nrfirescience.org/resource/15117](http://www.nrfirescience.org/resource/15117)

On November 6-8, 2014, multiple stakeholders gathered to learn about, share and discuss smoke management issues related to wildland fire. The following video is a presentation that occurred during the event, "Wildland fire smoke in the air- What does it mean to ME?" \*Due to videographer limitations during...

Type: Media



Video

**Fire adapted communities: moving from policy to action**

[www.nrfirescience.org/resource/13245](http://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

**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