

Potentials and limitations of remote fire monitoring in protected areas

www.nrfirescience.org/resource/17289

Protected areas (PAs) play an important role in maintaining the biodiversity and ecological processes of the site. One of the greatest challenges for the PA management in several biomes in the world is wildfires. The objective of this work was to evaluate the potentialities and limitations of the use of data obtained by orbital...

Author(s): João Flávio Costa dos Santos , Joyce Machado Nunes Romeiro , José Batuira de Assis, Fillipe Tamiozzo Pereira Torres, José Marinaldo Gleriani

Year Published: 2018

Type: Document

Book or Chapter or Journal Article

Fine-scale spatial climate variation and drought mediate the likelihood of reburning

www.nrfirescience.org/resource/16808

In many forested ecosystems, it is increasingly recognized that the probability of burning is substantially reduced within the footprint of previously burned areas. This self-limiting effect of wildland fire is considered a fundamental emergent property of ecosystems and is partly responsible for structuring landscape heterogeneity...

Author(s): Sean A. Parks, Marc-Andre Parisien, Carol Miller, Lisa M. Holsinger, Scott L. Baggett

Year Published: 2018

Type: Document

Book or Chapter or Journal Article

Black carbon on coarse woody debris in once- and twice-burned mixed-conifer forest

www.nrfirescience.org/resource/16739

One important outcome of wildfire is the production of charcoal. Charcoal is highly resistant to decomposition and its physical and chemical properties enhance soil fertility and influence nutrient cycling. We compared the amount of black C (the carbon fraction of charcoal) on coarse woody debris (CWD; >7.6 cm diameter) and total...

Author(s): Aspen Ward, C. Alina Cansler, Andrew J. Larson

Year Published: 2017

Type: Document

Book or Chapter or Journal Article

Temporal trends in burn severity in Selway Bitterroot Wilderness 1880-2012

www.nrfirescience.org/resource/17662

Multidecadal trends in areas burned with high severity shape ecological effects of fires, but most assessments are limited to <30 years of satellite data. We analysed the proportion of area burned with high severity, the annual area burned with high severity, the probability areas burned with high severity and also the area...

Author(s): Penelope Morgan, Andrew T. Hudak, Ashley Wells, Sean A. Parks, Scott L. Baggett, Benjamin C. Bright, Patricia Green

Year Published: 2017

Type: Document

Book or Chapter or Journal Article

Weather, fuels, and topography impede wildland fire spread in western US landscapes

www.nrfirescience.org/resource/14716

As wildland fire activity continues to surge across the western US, it is increasingly important that we understand and quantify the environmental drivers of fire and how they vary across ecosystems. At daily to annual timescales, weather, fuels, and topography are known to influence characteristics such

as area burned and fire...

Author(s): Lisa M. Holsinger, Sean A. Parks, Carol Miller

Year Published: 2016

Type: Document

Book or Chapter or Journal Article

Wilderness in the 21st Century: A framework for testing assumptions about ecological intervention in wilderness using a case study of fire ecology in the Rocky Mountains

www.nrfirescience.org/resource/14471

Changes in the climate and in key ecological processes are prompting increased debate about ecological restoration and other interventions in wilderness. The prospect of intervention in wilderness raises legal, scientific, and values-based questions about the appropriateness of possible actions. In this article, we focus on the role...

Author(s): Cameron Naficy, Eric G. Keeling, Peter Landres, Paul F. Hessburg, Thomas T. Veblen, Anna Sala

Year Published: 2016

Type: Document

Book or Chapter or Journal Article

Wildland fire: nature's fuel treatment (spotlight)

www.nrfirescience.org/resource/16056

RMRS Scientists have evaluated more than 40 years of satellite imagery to determine what happens when a fire burns into a previously burned area. Results from this research are helping land managers to assess whether a previous wildland fire will act as a fuel treatment based on the length of time since the previous fire occurred,...

Author(s): Sean A. Parks, Carol Miller

Year Published: 2016

Type: Document

Research Brief or Fact Sheet

The passing of the Lolo Trail, with an introduction by Andrew J. Larson

www.nrfirescience.org/resource/14325

In 1935, Elers Koch argued in a Journal of Forestry article that a minimum fire protection model should be implemented in the backcountry areas of national forests in Idaho, USA. As a USDA Forest Service Supervisor and Assistant Regional Forester, Koch had led many major fire-fighting campaigns in the region, beginning with...

Author(s): Elers Koch

Year Published: 2016

Type: Document

Book or Chapter or Journal Article

Using risk analysis to reveal opportunities for the management of unplanned ignitions in wilderness

www.nrfirescience.org/resource/16049

A goal of fire management in wilderness is to allow fire to play its natural ecological role without intervention. Unfortunately, most unplanned ignitions in wilderness are suppressed, in part because of the risk they might pose to values, outside of the wilderness. We capitalize on recent advances in fire risk analysis to...

Author(s): Kevin M. Barnett, Carol Miller, Tyron J. Venn

Year Published: 2016

Type: Document

Book or Chapter or Journal Article

Time shows wisdom of letting some wilderness fires roam freely

www.nrfirescience.org/resource/14472

In August of 1972, the small Bad Luck Fire signaled the start of returning fire to the wilderness for the USDA Forest Service. Forty-three years later, the wisdom of allowing perhaps the most important of the "forces of nature" to prevail has been proven time and again. While climate change challenges fire managers across the...

Author(s): Dave Campbell, Robert W. Mutch

Year Published: 2016

Type: Document

Book or Chapter or Journal Article

Progress in wilderness fire science: embracing complexity

www.nrfirescience.org/resource/14470

Wilderness has played an invaluable role in the development of wildland fire science. Since Agee's review of the subject 15 years ago, tremendous progress has been made in the development of models and data, in understanding the complexity of wildland fire as a landscape process, and in appreciating the social factors that...

Author(s): Carol Miller, Gregory H. Aplet

Year Published: 2016

Type: Document

Book or Chapter or Journal Article

A synthesis of the economic values of wilderness

www.nrfirescience.org/resource/14168

Early applications of wilderness economic research demonstrated that the values of natural amenities and commodities produced from natural areas could be measured in commensurate terms. To the surprise of many, the economic values of wilderness protection often exceeded the potential commercial values that might result from resource...

Author(s): Thomas P. Holmes, Jeffrey Englin, J. M. Bowker, Evan Hjerpe, John B. Loomis, Spencer Phillips, Robert Richardson

Year Published: 2016

Type: Document

Book or Chapter or Journal Article, Synthesis

Wildland fire deficit and surplus in the western United States, 1984-2012

www.nrfirescience.org/resource/13740

Wildland fire is an important disturbance agent in the western US and globally. However, the natural role of fire has been disrupted in many regions due to the influence of human activities, which have the potential to either exclude or promote fire, resulting in a "fire deficit" or "fire surplus", respectively. In this study, we...

Author(s): Sean A. Parks, Carol Miller, Marc-Andre Parisien, Lisa M. Holsinger, Solomon Z. Dobrowski, John T. Abatzoglou

Year Published: 2015

Type: Document

Book or Chapter or Journal Article

Keeping it wild 2: an updated interagency strategy to monitor trends in wilderness character across the National Wilderness Preservation System

www.nrfirescience.org/resource/13591

Keeping It Wild 2 is an interagency strategy to monitor trends in selected attributes of wilderness character based on lessons learned from 15 years of developing and implementing wilderness character monitoring across the National Wilderness Preservation System. This document updates and replaces Keeping It Wild: An Interagency...

Author(s): Peter Landres, Chris Barns, Steve Boutcher, Tim Devine, Peter Dratch, Adrienne Lindholm, Linda Merigliano, Nancy Roeper, Emily Simpson

Year Published: 2015

Type: Document

Technical Report or White Paper

40 years of wilderness fire in the Selway-Bitterroot and Frank Church-River of No Return

www.nrfirescience.org/resource/12777

Wilderness fire, its history, challenges, teachings, and future management were the focus of discussions and presentations during the 40 Years of Wilderness Fire in the Selway-Bitterroot field trip at the May 2014 Large Wildland Fires Conference. The trip took participants to observe recent fire patterns in the region between the...

Author(s): Corey L. Gucker

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

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

Northern Rockies pyrogeography: an example of fire atlas utility

www.nrfirescience.org/resource/12923

We demonstrated the utility of digital fire atlases by analyzing forest fire extent across cold, dry, and mesic forests, within and outside federally designated wilderness areas during three different fire management periods: 1900 to 1934, 1935 to 1973, and 1974 to 2008. We updated an existing atlas with a 12,070,086 ha recording...

Author(s): Penelope Morgan, Emily K. Heyerdahl, Carol Miller, Aaron M. Wilson, Carly E. Gibson

Year Published: 2014

Type: Document

Book or Chapter or Journal Article

The contribution of natural fire management to wilderness fire science

www.nrfirescience.org/resource/16052

When the federal agencies established policies in the late 1960s and early 1970s to allow the use of natural fires in wilderness, they launched a natural fire management experiment in a handful of wilderness areas. As a result, wildland fire has played more of its natural role in wilderness than anywhere else. Much of what we...

Author(s): Carol Miller

Year Published: 2014
Type: Document
Book or Chapter or Journal Article

Escape probability: an alternative risk metric to support and evaluate wilderness fire management decisions

www.nrfirescience.org/resource/13478

A goal of fire management in wilderness is to allow fire to play its natural ecological role without intervention. Unfortunately, most unplanned ignitions in wilderness are suppressed, in part because of the risk they might pose to values outside of the wilderness. Although the fire management community has embraced the concept of...

Author(s): Kevin M. Barnett

Year Published: 2013

Type: Document

Dissertation or Thesis

Response of highly valued resources and assets to wildfire within Grand Teton National Park and Bridger-Teton National Forest

www.nrfirescience.org/resource/12744

Grand Teton National Park (GTNP) and the Bridger-Teton National Forest (BTNF) cover approximately 3.7 million acres within the Greater Yellowstone Ecosystem. The majority of this land base is fairly remote, much of it either designated Wilderness or roadless, and composed of fire-adapted ecosystems. To add complexity to the fire...

Author(s): Joe H. Scott, Don Helmbrecht, Martha A. Williamson

Year Published: 2013

Type: Document

Technical Report or White Paper

Wilderness shapes contemporary fire size distributions across landscapes of the western United States

www.nrfirescience.org/resource/12682

In many U.S. federally designated wilderness areas, wildfires are likely to burn of their own accord due to favorable management policies and remote location. Previous research suggested that limitations on fire size can result from the evolution of natural fire regimes, specifically in places where fuels were...

Author(s): Sandra L. Haire, Kevin McGarigal, Carol Miller

Year Published: 2013

Type: Document

Book or Chapter or Journal Article

Latent resilience in ponderosa pine forest: effects of resumed frequent fire

www.nrfirescience.org/resource/12018

Ecological systems often exhibit resilient states that are maintained through negative feedbacks. In ponderosa pine forests, fire historically represented the negative feedback mechanism that maintained ecosystem resilience; fire exclusion reduced that resilience, predisposing the transition to an alternative ecosystem state upon...

Author(s): Andrew J. Larson, R. Travis Belote, C. Alina Cansler, Sean A. Parks, Matthew S. Dietz

Year Published: 2013

Type: Document

Book or Chapter or Journal Article

Quantifying the threat of unsuppressed wildfires reaching the adjacent wildland-urban interface on the Bridger-Teton National Forest, Wyoming, USA

www.nrfirescience.org/resource/8349

An important objective for many federal land management agencies is to restore fire to ecosystems that have experienced fire suppression or exclusion over the last century. Managing wildfires for resource objectives (i.e., allowing wildfires to burn in the absence of suppression) is an important tool for restoring such fire-adapted...

Author(s): Joe H. Scott, Don Helmbrecht, Sean A. Parks, Carol Miller

Year Published: 2012

Type: Document

Book or Chapter or Journal Article

Traditional wisdom – protecting wilderness as a cultural landscape

www.nrfirescience.org/resource/17482

Interviews of tribal and nontribal residents of the Flathead Indian Reservation in Montana, U.S., were conducted to contrast the meanings that different cultures attach to the Mission Mountains Tribal Wilderness. Legislation that created a national system of wilderness areas (in 1964 and still growing) was conceived, supported, and...

Author(s): Alan E. Watson, Roian Matt, Katie Knotek, Daniel R. Williams, Laurie Yung

Year Published: 2011

Type: Document

Book or Chapter or Journal Article

Wilderness fire management in a changing environment

www.nrfirescience.org/resource/15694

Two major factors affecting wilderness fire regimes and their management are climate variability and surrounding land use. Patterns in climate and housing densities are expected to change dramatically in the next several decades (IPCC 2007; Theobald and Romme 2007) with important implications for fire management and policy (Dombeck...

Author(s): Carol Miller, John T. Abatzoglou, Timothy J. Brown, Alexandra D. Syphard

Year Published: 2011

Type: Document

Book or Chapter or Journal Article

Six-year post-fire mortality and health of relict ponderosa pines in the Bob Marshall Wilderness Area, Montana

www.nrfirescience.org/resource/16050

In 2003, lightning-caused fires burned through relict ponderosa pine (*Pinus ponderosa*) stands in the Bob Marshall Wilderness, Montana, after decades of fire exclusion. Since many trees in these stands had Native American bark-peeling scars, concern arose about the adverse fire effects on this cultural and ecological resource. In...

Author(s): Signe B. Leirfallom, Robert E. Keane

Year Published: 2011

Type: Document

Technical Report or White Paper

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

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

Technical guide for monitoring selected conditions related to wilderness character

www.nrfirescience.org/resource/12437

The purpose of monitoring wilderness character is to improve wilderness stewardship by providing managers a tool to assess how selected actions and conditions related to wilderness character are changing over time. Wilderness character monitoring provides information to help answer two key questions about wilderness character and...

Author(s): Peter Landres, Steve Boutcher, Liese Dean, Troy E. Hall, Tamara Blett, Terry Carlson, Ann Mebane, Carol Hardy, Susan Rinehart, Linda Merigliano, David N. Cole, andy leach, Pam Wright, Deb Bumpus

Year Published: 2009
Type: Document
Technical Report or White Paper

Recreation visitor attitudes towards management-ignited prescribed fires in the Bob Marshall Wilderness Complex, Montana

www.nrfirescience.org/resource/16051

Research at the Bob Marshall Wilderness Complex in Montana explored differences in recreation visitors' attitudes towards the use of management-ignited prescribed fires in the wilderness. A mail-back survey of visitors (n = 291) during the 2004 season revealed that over half of visitors would accept prescribed fires in wilderness...

Author(s): Katie Knotek, Alan E. Watson, William T. Borrie, Joshua G. Whitmore, David Turner
Year Published: 2008

Type: Document
Book or Chapter or Journal Article

Wildland fire use barriers and facilitators

www.nrfirescience.org/resource/16055

The Forest Service authorizes broad scale wildland fire use (WFU) both inside and outside wilderness areas in many western forests; but, will agency authorization alone lead to implementation? Understanding barriers and facilitators to WFU implementation is critical for establishing realistic program expectations and providing a...

Author(s): Anne E. Black, Martha A. Williamson, Dustin Doane
Year Published: 2008

Type: Document
Book or Chapter or Journal Article

Factors in United States Forest Service district rangers' decision to manage a fire for resource benefit

www.nrfirescience.org/resource/8204

United States wildland fire policy and program reviews in 1995 and 2000 required both the reduction of hazardous fuel and recognition of fire as a natural process. Despite the fact that existing policy permits managing natural ignitions to meet resource benefits, or Wildland Fire Use (WFU), most fuel reduction projects rely on...

Author(s): Martha A. Williamson

Year Published: 2007
Type: Document
Book or Chapter or Journal Article

Traditional ecological knowledge: applying principles of sustainability to wilderness resource management

www.nrfirescience.org/resource/12545

Traditional ecological knowledge within specific cultural and geographical contexts was explored during an interactive session at the 8th World Wilderness Congress to identify traditional principles of sustainability. Participants analyzed the traditional knowledge contained in ten posters from Canada and...

Author(s): Nancy C. Ratner, Davin L. Holen
Year Published: 2007
Type: Document
Conference Proceedings

CCE fire regimes and their management

www.nrfirescience.org/resource/8369

A spectacular forest in the center of the Crown of the Continent Ecosystem (CCE) cuts a 15- by 5-km swath along the Flathead River's South Fork around Big Prairie in the middle of the Bob Marshall Wilderness Area in Montana (Figure 13- 1). This wide valley bottom, which contains two patches (of about 1,000 ha each) of the last...

Author(s): Robert E. Keane, Carl H. Key
Year Published: 2007
Type: Document
Book or Chapter or Journal Article

Understanding social influences on wilderness fire stewardship decisions

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

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

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

Trends in public attitudes towards the use of wildland fire

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

Barriers to wildland fire use: a preliminary problem analysis

www.nrfirescience.org/resource/16054

American society has a general cultural bias toward controlling nature (Glover 2000) and, in particular, a strong bias for suppressing wildfire, even in wilderness (Saveland et al. 1988). Nevertheless, the Federal Wildland Fire Management Policy directs managers to 'allow lightning-caused fires to play, as nearly as possible, their...

Author(s): Dustin Doane, Jay O'Laughlin, Penelope Morgan, Carol Miller

Year Published: 2006

Type: Document

Book or Chapter or Journal Article

Effects of fire exclusion on forest structure and composition in unlogged ponderosa pine/Douglas-fir forests

www.nrfirescience.org/resource/7928

Research to date on effects of fire exclusion in ponderosa pine (*Pinus ponderosa*) forests has been limited by narrow geographical focus, by confounding effects due to prior logging at research sites, and by uncertainty from using reconstructions of past conditions to infer changes. For the work presented here, reference stands in...

Author(s): Eric G. Keeling, Anna Sala, Thomas H. DeLuca

Year Published: 2006

Type: Document

Book or Chapter or Journal Article

Frequent fire alters nitrogen transformations in ponderosa pine stands of the inland Northwest

www.nrfirescience.org/resource/7919

Recurrent, low-severity fire in ponderosa pine (*Pinus ponderosa*)/interior Douglas-fir (*Pseudotsuga menziesii* var. *glauca*) forests is thought to have directly influenced nitrogen (N) cycling and availability. However, no studies to date have investigated the influence of natural fire intervals on soil processes in undisturbed forests...

Author(s): Thomas H. DeLuca, Anna Sala

Year Published: 2006

Type: Document

Book or Chapter or Journal Article

Wilderness fire management in a changing world

www.nrfirescience.org/resource/7963

Several strategies are available for reducing accumulated forest fuels and their associated risks, including naturally or accidentally ignited wildland fires, management ignited prescribed fires, and a variety of mechanical and chemical methods (Omi 1996). However, a combination of policy, law, philosophy, and logistics suggest...

Author(s): Carol Miller
Year Published: 2006
Type: Document
Book or Chapter or Journal Article

The complexity of managing fire-dependent ecosystems in wilderness: relict ponderosa pine in the Bob Marshall Wilderness

www.nrfirescience.org/resource/7953

Isolated wilderness ecosystems with a history of frequent, low-severity fires have been altered due to many decades of fire exclusion and, as a result, are difficult to restore for philosophical and logistical reasons. In this paper, we describe the successional conditions of ponderosa pine (*Pinus ponderosa*) communities along the...

Author(s): Robert E. Keane, Stephen F. Arno, Laura J. Dickinson
Year Published: 2006
Type: Document
Book or Chapter or Journal Article

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

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

Can behavioral decision theory explain risk-averse fire management decisions?

www.nrfirescience.org/resource/12719

Organizations managing forest land often make fire management decisions that seem overly risk-averse in relation to their stated goals for ecosystem restoration, protection of sensitive species and habitats, and protection of water and timber resources. Research in behavioral decision theory has shown that people faced with...

Author(s): Lynn A. Maguire, Elizabeth A. Albright
Year Published: 2005
Type: Document
Book or Chapter or Journal Article

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

www.nrfirescience.org/resource/11890

The varied topics presented in these symposium proceedings represent the diverse nature of the Bitterroot Ecosystem Management Research Project (BEMRP). Separated into six sections, the papers cover the different themes researched by BEMRP collaborators as well as brief overviews of five other ecosystem management projects. The...

Author(s): Helen Y. Smith
Year Published: 2000
Type: Document
Conference Proceedings

Wilderness fire science: a state of knowledge review

www.nrfirescience.org/resource/14386

Wilderness fire science has progressed since the last major review of the topic, but it was significantly affected by the large fire events of 1988. Strides have been made in both fire behavior and fire effects, and in the issues of scaling, yet much of the progress has not been specifically tied to wilderness areas or funding....

Author(s): James K. Agee

Year Published: 2000

Type: Document

Conference Proceedings

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

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

Twentieth-century fire patterns in the Selway-Bitterroot Wilderness Area, Idaho/ Montana, and the Gila/Aldo Leopold Wilderness Complex, New Mexico

www.nrfirescience.org/resource/11001

Twentieth century fire patterns were analyzed for two large, disparate wilderness areas in the Rocky Mountains. Spatial and temporal patterns of fires were represented as GIS-based digital fire atlases compiled from archival Forest Service data. We find that spatial and temporal fire patterns are related to landscape features and...

Author(s): Matthew G. Rollins, Thomas W. Swetnam, Penelope Morgan

Year Published: 2000

Type: Document

Conference Proceedings

Mixed-severity fire regimes in the Northern Rocky Mountains: consequences of fire exclusion and options for the future

www.nrfirescience.org/resource/8426

Findings from fire history studies have increasingly indicated that many forest ecosystems in the northern Rocky Mountains were shaped by mixed-severity fire regimes, characterized by fires of variable severities at intervals averaging between about 30 and 100 years. Perhaps because mixed-severity fire regimes and their resulting...

Author(s): Stephen F. Arno, David J. Parsons, Robert E. Keane

Year Published: 2000

Type: Document

Conference Proceedings, Synthesis

Effects of the Gates Park Fire on recreation choices

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

Some thoughts on prescribed natural fires

www.nrfirescience.org/resource/12420

Wildland fire is a significant component of nearly all North American ecosystems. High intensity, stand-replacement fires are normal in certain ecosystems, especially in the northern Rocky Mountains.

Wilderness fire managers are obligated to let fire operate as a natural influence to the extent that this is possible. Where...

Author(s): Jack D. Cohen

Year Published: 1991

Type: Document

Technical Report or White Paper

Visitor attitudes toward wilderness fire management policy - 1971-84

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

Fire-dependent forests in the Northern Rocky Mountains

www.nrfirescience.org/resource/7935

One objective of wilderness and parkland fire ecology research is to describe the relationships between fire and unmanaged ecosystems, so that strategies can be determined that will provide a more nearly natural incidence of fire. More than 50 years of efforts directed toward exclusion of wildland fires in the Northern Rocky...

Author(s): James R. Habeck, Robert W. Mutch

Year Published: 1973

Type: Document

Book or Chapter or Journal Article

Predicting Burn Severity Patterns in Yosemite National Park and the Douglas Complex Fires in Oregon

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

Managing wildfire: blazing the trail in the Southwest

www.nrfirescience.org/resource/15595

Recent changes in federal fire management policy have given fire managers increased flexibility to manage wildfires for multiple objectives. Fire managers can allow one flank of a fire to continue burning through remote backcountry, while actively suppressing another flank that threatens homes, infrastructure, or other values. Fire...

Type: Media

Video

The structure of fire size distributions: a broad view of interacting gradients in wilderness management, spatial climate, and topography in three western regions

www.nrfirescience.org/resource/12813

Determining the effects of land management on fire regime characteristics is complicated by the interaction of several factors that vary in space and time. First, fire size and frequency are linked to climate conditions, including drought, as well as wind and temperature that define weather conditions during burning. Second,...

Type: Media

Webinar

Integrating wilderness character with land management planning efforts

www.nrfirescience.org/resource/14395

This webinar was hosted by the Arthur Carhart National Wilderness Training Center.

Type: Media

Webinar

The unique legal, scientific, and ethical challenges of restoration in wilderness

www.nrfirescience.org/resource/14392

This webinar presents a preliminary framework to help make defensible decisions regarding restoration in wilderness.

Type: Media

Webinar

Wilderness and fire: lessons learned from wilderness fire and challenges for the next 50 years of wilderness

www.nrfirescience.org/resource/13778

The presentation shows examples and fire history from the 40+ years of Wilderness fire management in the Selway-Bitterroot Wilderness as well as the Frank Church – River of no Return Wilderness focusing on what has been learned and challenges that lay ahead. Climate change as well as public engagement and education are challenges...

Type: Media

Webinar

White Cap Wilderness Fire Study - 45th Anniversary Video

www.nrfirescience.org/resource/17096

The 1971-1974 White Cap Wilderness Fire Study initiated a change in the Forest Service approach to wildfires from fire control to fire management. This is the story about the study as told by some of the researchers, technicians, and managers during their 45th Anniversary reunion.

Type: Media

Video

Wild science: wilderness and fire

www.nrfirescience.org/resource/15519

The Aldo Leopold Wilderness Research Institute presents this short film about the critical importance of wilderness fire science to understanding the complex nature of forest fires, and to informing natural resource management across all landscapes

Type: Media

Video

Wilderness and Accessibility

www.nrfirescience.org/resource/16770

Congressional designated wilderness areas offer unique opportunities for remote area experiences with solitude and self-reliance. How do people who have disabilities fit into those areas? Is a wheelchair mechanical transport? During this webinar, accessibility expert Janet Zeller (Forest Service) gives an overview of what is...

Type: Media

Webinar

The ability of wildfire to act as a fuel treatment

www.nrfirescience.org/resource/12802

This webinar highlighted results from a study investigating the ability of wildfire to act as a fuel treatment. The study evaluated whether or not wildfires limited the occurrence, size, and severity of subsequent wildfires in four large wilderness complexes in Idaho, Montana, and New Mexico. The study focused on protected areas to...

Type: Media

Webinar

Tim Sexton - Terminology: PNF to WFU to WTF

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

Progress in Wilderness Fire Science: Embracing Complexity

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

The foundation and qualities of wilderness character

www.nrfirescience.org/resource/14393

This webinar was hosted by the Arthur Carhart National Wilderness Training Center, precise date of the 2012 webinar is unknown.

Type: Media

Webinar

The next 50 years: opportunities for diversifying the ecological representation of the National Wilderness Preservation System

www.nrfirescience.org/resource/14391

Jocelyn Aycrigg, Department of Fish and Wildlife Sciences, University of Idaho; Matthew Dietz, The Wilderness Society; and James Tricker, University of Montana & Aldo Leopold Wilderness Research Institute, presented a simulation on how adding different types of lands (ex. National Park Service non-wilderness lands, Bureau of...

Type: Media

Webinar

Progress in wilderness fire science: embracing complexity for the 21st century

www.nrfirescience.org/resource/14338

Wilderness has played an invaluable role in the development of wildland fire science. In the last fifteen years, since the last state-of-knowledge review, tremendous progress has been made in the development of models and data, in understanding the complexity of wildland fire as a landscape process, and in...

Type: Media

Webinar

Wilderness Connect: Fire Management Toolbox

www.nrfirescience.org/resource/17815

This toolbox contains resources for managing fire in wilderness. It provides information on agency policy and strategies, wilderness fire planning, fire resource advisor training, research, and other references. The toolbox also includes wilderness fire management aids such as guidelines for MIST and BAER and sample forms and guides...

Type: Website

Website

Fire Management Toolbox

www.nrfirescience.org/resource/17488

This toolbox contains resources for managing fire in wilderness. It provides information on agency policy and strategies, wilderness fire planning, fire resource advisor training, research, and other references. The toolbox also includes wilderness fire management aids such as guidelines for MIST and BAER and sample forms and guides...

Type: Tool

Model or System