Characterising resource use and potential inefficiencies during large-fire suppression in the western US
www.nrfirescience.org/resource/15492
Currently, limited research on large-fire suppression effectiveness suggests fire managers may over-allocate resources relative to values to be protected. Coupled with observations that weather may be more important than resource abundance to achieve control objectives, resource use may be driven more by risk aversion than...
Author(s): Hari Katuwal, Christopher J. Dunn, David E. Calkin
Year Published: 2017
Type: Document
Book or Chapter or Journal Article

Impacts of salvage logging on biodiversity – A meta-analysis
www.nrfirescience.org/resource/15274
Logging to ‘salvage’ economic returns from forests impacted by natural disturbances has become increasingly prevalent globally. Despite potential negative effects on biodiversity, salvage logging is often conducted, even in areas otherwise excluded from logging and reserved for nature conservation, inter alia because...
Author(s): Simon Thorn, Claus Bassler, Roland Brandl, Philip J. Burton, John L. Campbell, Rebecca Cahall, Jorge Castro, Chang-Yong Choi, Tyler Cobb, Daniel C. Donato, Ewa Durska, Joseph B. Fontaine, Sylvie Gauthier, Christian Hebert, Torsten Hothorn, Richard L. Hutto, Eun-Jae Lee, Alexandro B. Leverkus, David B. Lindenmayer, Martin K. Obrist, Josep Rost, Sebastian Seibold, Rupert Seidl, Dominik Thom, Kaysandra Waldron, Beat Wermelinger, Maria-Barbara Winter, Michal Zmihorski, Jorg Muller
Year Published: 2017
Type: Document
Book or Chapter or Journal Article

Mixed-severity fire and salvage logging in dry forests of Oregon's western Cascades
www.nrfirescience.org/resource/15054
Interest in PNW forests is shifting from a focus on old-growth forests alone to include the ecological value and processes of early-seral communities. However, focusing on the alpha and omega states of a linear successional model does not account for the suite of conditions derived from mixed-severity fire common in many forests....
Author(s): Christopher J. Dunn, John D. Bailey
Year Published: 2017
Type: Document
Technical Report or White Paper

Seed Production Estimation for Mountain Big Sagebrush (Artemisia tridentata ssp. vaseyana)
www.nrfirescience.org/resource/16095
Seed production is an essential component of post disturbance recovery for mountain big sagebrush (Artemisia tridentata Nutt. ssp vaseyana [Rydb] Beetle; MBS). We tested a method for rapid estimation of MBS seed production using measurements of inflorescence morphology. We measured total stem length, stem length from first branchlet...
Author(s): Melissa L. Landeen, Loreen Allphen, Stanley G. Kitchen, Stephen L. Petersen
Year Published: 2017
Type: Document
Book or Chapter or Journal Article

The influence of incident management teams on the deployment of wildfire suppression

resources
www.nrfirescience.org/resource/15494
Despite large commitments of personnel and equipment to wildfire suppression, relatively little is known about the factors that affect how many resources are ordered and assigned to wildfire incidents and the variation in resources across incident management teams (IMTs). Using detailed data on suppression resource assignments for...
Year Published: 2017
Type: Document
Book or Chapter or Journal Article

Response of native versus exotic plant guilds to cattle and elk herbivory in forested rangeland
www.nrfirescience.org/resource/13843
Are exotic plant species favoured by non-native ungulate herbivores and disadvantaged by native herbivores in forested rangelands? Do the impacts of ungulates on exotic vs native plants depend on forest management activities such as prescribed fire and stand thinning? Location: Northeastern Oregon, USA. Methods: We recorded changes...
Author(s): Burak K. Pekin, Michael J. Wisdom, Catherine G. Parks, Bryan A. Endress, Bridgett J. Naylor
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

Rapid-response tools and datasets for post-fire remediation: linking remote sensing and process-based hydrological models
www.nrfirescience.org/resource/14641
Post-wildfire flooding and erosion can threaten lives, property and natural resources. Increased peak flows and sediment delivery due to the loss of surface vegetation cover and fire-induced changes in soil properties are of great concern to public safety. Burn severity maps derived from remote sensing data reflect fire-induced...
Author(s): Mary Ellen Miller, William J. Elliot, Peter R. Robichaud, Kevin A. Endsley
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

Post-fire logging produces minimal persistent impacts on understory vegetation in northeastern Oregon, USA
www.nrfirescience.org/resource/14354
Post-fire forest management commonly requires accepting some negative ecological impacts from management activities in order to achieve management objectives. Managers need to know, however, whether ecological impacts from post-fire management activities are transient or cause long-term ecosystem degradation. We studied the long-...
Author(s): David W. Peterson, Erich K. Dodson
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

The integrated rangeland fire management strategy actionable science plan
www.nrfirescience.org/resource/14697
The Integrated Rangeland Fire Management Strategy (hereafter Strategy, DOI 2015) outlined the need for coordinated, science-based adaptive management to achieve long-term protection, conservation, and restoration of the sagebrush (Artemisia spp.) ecosystem. A key component of this management approach is the...

Author(s): Integrated Rangeland Fire Management Strategy Actionable Science Plan Team
Year Published: 2016
Type: Document
Management or Planning Document

Soil heating during the complete combustion of mega-logs and broadcast burning in central Oregon USA pumice soils
www.nrfirescience.org/resource/14604
The environmental effect of extreme soil heating, such as occurs with the complete combustion of large downed wood during wildfires, is a post-fire management concern to forest managers. To address this knowledge gap, we stacked logs to create ‘mega-log’ burning conditions and compared the temperature, duration and penetration...
Author(s): Jane E. Smith, Ariel D. Cowan, Stephen A. Fitzgerald
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

Effects of post-fire logging on fuel dynamics in a mixed-conifer forest, Oregon, USA: a 10-year assessment
www.nrfirescience.org/resource/14429
Removal of fire-killed trees (i.e. post-fire or salvage logging) is often conducted in part to reduce woody fuel loads and mitigate potential reburn effects. Studies of post-salvage fuel dynamics have primarily used chronosequence or modelling approaches, with associated limitations; longitudinal studies tracking fuels over time...
Author(s): John L. Campbell, Daniel C. Donato, Joseph B. Fontaine
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

Rapid response tools and datasets for post-fire modeling: linking earth observations and process-based hydrological models to support post-fire remediation
www.nrfirescience.org/resource/15538
Post-wildfire flooding and erosion can threaten lives, property and natural resources. Increased peak flows and sediment delivery due to the loss of surface vegetation cover and fire-induced changes in soil properties are of great concern to public safety. Burn severity maps derived from remote sensing data reflect fire-induced...
Author(s): Mary Ellen Miller, Michael Billmire, William J. Elliot, Kevin A. Endsley, Peter R. Robichaud
Year Published: 2016
Type: Document
Book or Chapter or Journal Article

Hillslope erosion two and three years after wildfire, skyline salvage logging, and site preparation in southern Oregon, USA
www.nrfirescience.org/resource/16306
Harvest of dead timber following wildfire is contentious because of a perception that the benefits are outweighed by environmental costs. One primary concern is the potential for increased erosion susceptibility associated with timber extraction (i.e. salvage logging) and site preparation. We measured erosion at the Timbered Rock...
Author(s): Robert A. Slesak, Stephen H. Schoenholtz, Daniel Evans
Year Published: 2015
Type: Document

Book or Chapter or Journal Article

Rapid response tools and datasets for post-fire modeling: linking earth observations and process-based hydrological models to support post-fire remediation
www.nrfirescience.org/resource/13466
Preparation is key to utilizing Earth Observations and process-based models to support post-wildfire mitigation. Post-fire flooding and erosion can pose a serious threat to life, property and municipal water supplies. Increased runoff and sediment delivery due to the loss of surface cover and fire-induced changes in soil...
Author(s): Mary Ellen Miller, Michael Billmire, William J. Elliot, Kevin A. Endsley, Peter R. Robichaud
Year Published: 2015
Type: Document
Conference Proceedings

Assessing soil and vegetation recovery following the 2005 School Fire, Umatilla National Forest - 10-year update
www.nrfirescience.org/resource/12811
Following the 2005 School Fire which burned ~ 50,000 acres across forest and grasslands, managers were particularly concerned with treating severely burned areas to mitigate weed spread and to limit soil erosion. Various mulching treatments (wheat straw, wood strand, and hydromulch) were implemented to control...
Author(s): Peter R. Robichaud, Penelope Morgan, Leigh B. Lentile, Sarah A. Lewis, Andrew T. Hudak, Deborah S. Page-Dumroese
Year Published: 2015
Type: Document
Research Brief or Fact Sheet

Ecological Effects of Post-fire Salvage Logging in the Pacific Northwest
www.nrfirescience.org/resource/15729
Post-fire salvage logging is typically proposed as a means of recovering some of the lost economic value in dead or damaged trees. The ecological consequences of salvage, however, are often considered negative from the perspective of soils, hydrology, and wildlife habitat resources, although species responses do vary. Early...
Author(s): Matthew J. Reilly, Thomas A. Spies, Paul F. Hessburg
Year Published: 2015
Type: Document
Research Brief or Fact Sheet

Post-fire logging reduces surface woody fuels up to four decades following wildfire
www.nrfirescience.org/resource/16307
Severe wildfires create pulses of dead trees that influence future fuel loads, fire behavior, and fire effects as they decay and deposit surface woody fuels. Harvesting fire-killed trees may reduce future surface woody fuels and related fire hazards, but the magnitude and timing of post-fire logging effects on woody fuels have not...
Author(s): David W. Peterson, Erich K. Dodson, Richy J. Harrod
Year Published: 2015
Type: Document
Book or Chapter or Journal Article

Effects of post-fire salvage logging and a skid trail treatment on ground cover, soils, and

sediment production in the interior western United States
www.nrfirescience.org/resource/12829
Post-fire salvage logging adds another set of environmental effects to recently burned areas, and previous studies have reported varying impacts on vegetation, soil disturbance, and sediment production with limited data on the underlying processes. Our objectives were to determine how: (1) ground-based post-fire logging affects...
Author(s): Joseph W. Wagenbrenner, Lee H. MacDonald, Robert N. Coats, Peter R. Robichaud, Robert E. Brown
Year Published: 2015
Type: Document
Book or Chapter or Journal Article

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

Vegetation response to burn severity, native grass seeding, and salvage logging
www.nrfirescience.org/resource/13422
As the size and extent of wildfires has increased in recent decades, so has the cost and extent of post-fire management, including seeding and salvage logging. However, we know little about how burn severity, salvage logging, and post-fire seeding interact to influence vegetation recovery long-term. We sampled understory plant...
Author(s): Penelope Morgan, Marshell Moy, Christine A. Droske, Leigh B. Lentile, Sarah A. Lewis, Peter R. Robichaud, Andrew T. Hudak, Christopher Jason Williams
Year Published: 2015
Type: Document
Book or Chapter or Journal Article

Quantifying restoration effectiveness using multi-scale habitat models: implications for sage-grouse in the Great Basin
www.nrfirescience.org/resource/12947
A recurrent challenge in the conservation of wide-ranging, imperiled species is understanding which habitats to protect and whether we are capable of restoring degraded landscapes. For Greater Sage-grouse (Centrocercus urophasianus), a species of conservation concern in the western United States, we approached this problem by...
Author(s): Robert S. Arkle, David S. Pilliod, Steven E. Hanser, Matthew L. Brooks, Jeanne C. Chambers, James B. Grace, Kevin C. Knutson, David A. Pyke, Justin L. Welty, Troy A. Wirth
Year Published: 2014
Type: Document
Book or Chapter or Journal Article

Semiarid rangeland is resilient to summer fire and postfire grazing utilization
www.nrfirescience.org/resource/12050
Most wildfires occur during summer in the northern hemisphere, the area burned annually is increasing, and fire effects during this season are least understood. Understanding plant response to grazing

following summer fire is required to reduce ecological and financial risks associated with wildfire. Forty 0.75-ha plots were...
Author(s): Lance T. Vermeire, Jessica L. Crowder, David B. Wester
Year Published: 2014
Type: Document
Book or Chapter or Journal Article

Is proportion burned severely related to daily area burned?
www.nrfirescience.org/resource/13018
The ecological effects of forest fires burning with high severity are long-lived and have the greatest impact on vegetation successional trajectories, as compared to low-to-moderate severity fires. The primary drivers of high severity fire are unclear, but it has been hypothesized that wind-driven, large fire-growth days play a...
Author(s): Donovan Birch, Penelope Morgan, Crystal A. Kolden, Andrew T. Hudak, Alistair M. S. Smith
Year Published: 2014
Type: Document
Book or Chapter or Journal Article

Using resistance and resilience concepts to reduce impacts of invasive annual grasses and altered fire regimes on the sagebrush ecosystem and greater sage-grouse: a strategic multi-scale approach
www.nrfirescience.org/resource/12989
This Report provides a strategic approach for conservation of sagebrush ecosystems and Greater Sage- Grouse (sage-grouse) that focuses specifically on habitat threats caused by invasive annual grasses and altered fire regimes. It uses information on factors that influence (1) sagebrush ecosystem resilience to disturbance and...
Author(s): Jeanne C. Chambers, David A. Pyke, Jeremy D. Maestas, Michael L. Pellant, Chad S. Boyd, Steven B. Campbell, Shawn Espinosa, Douglas W. Havlina, Kenneth E. Mayer, Amarina Wuenschel
Year Published: 2014
Type: Document
Management or Planning Document

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

Prescribed fire effects on resource selection by cattle in mesic sagebrush steppe. part 1: spring grazing
www.nrfirescience.org/resource/12148
Prescribed fire is commonly applied world-wide as a tool for enhancing habitats and altering resource-selection patterns of grazing animals. A scientific basis for this practice has been established in some ecosystems but its efficacy has not been rigorously evaluated on mesic sagebrush steppe. Beginning in 2003, resource-selection...
Author(s): Patrick E. Clark, Jaechoul Lee, Kyungduk Ko, Ryan M. Nielson, Douglas E. Johnson, David

C. Ganskopp, Joe Chigbrow, Frederick B. Pierson, Stuart P. Hardegree
Year Published: 2014
Type: Document
Book or Chapter or Journal Article

A synthesis of post-fire Burned Area Reports from 1972 to 2009 for western US Forest Service lands: trends in wildfire characteristics and post-fire stabilisation treatments and expenditures
www.nrfirescience.org/resource/13010
Over 1200 post-fire assessment and treatment implementation reports from four decades (1970s-2000s) of western US forest fires have been examined to identify decadal patterns in fire characteristics and the justifications and expenditures for the post-fire treatments. The main trends found were: (1) the area burned by wildfire...
Author(s): Peter R. Robichaud, Hakjun Rhee, Sarah A. Lewis
Year Published: 2014
Type: Document
Book or Chapter or Journal Article, Synthesis

Post-fire mulching for runoff and erosion mitigation; Part I: effectiveness at reducing hillslope erosion rates
www.nrfirescience.org/resource/11994
Mulch treatments often are used to mitigate post-fire increases in runoff and erosion rates but the comparative effectiveness of various mulches is not well established. The ability of mulch treatments to reduce sediment yields from natural rainfall and resulting overland flow was measured using hillslope plots on areas burned at...
Author(s): Peter R. Robichaud, Sarah A. Lewis, Joseph W. Wagenbrenner, Louise E. Ashmun, Robert E. Brown
Year Published: 2013
Type: Document
Book or Chapter or Journal Article

Effectiveness of post-fire Burned Area Emergency Response (BAER) road treatments: results from three wildfires
www.nrfirescience.org/resource/12142
Wildland fires often cause extreme changes in the landscape that drastically influence surface runoff and soil erosion, which can impact forest resources, aquatic habitats, water supplies, public safety, and forest access infrastructure such as forest roads. Little information is available on the effectiveness of various post-fire...
Author(s): Randy B. Foltz, Peter R. Robichaud
Year Published: 2013
Type: Document
Technical Report or White Paper

Does seeding after wildfires in rangelands reduce erosion or invasive species?
www.nrfirescience.org/resource/12132
Mitigation of ecological damage caused by rangeland wildfires has historically been an issue restricted to the western United States. It has focused on conservation of ecosystem function through reducing soil erosion and spread of invasive plants. Effectiveness of mitigation treatments has been debated recently. We reviewed recent...
Author(s): David A. Pyke
Year Published: 2013
Type: Document

Book or Chapter or Journal Article, Synthesis

Perspectives on disconnects between scientific information and management decisions on post-fire recovery in western US
www.nrfirescience.org/resource/12035
Environmental regulations frequently mandate the use of 'best available' science, but ensuring that it is used in decisions around the use and protection of natural resources is often challenging. In the Western US, this relationship between science and management is at the forefront of post-fire land management decisions. Recent...
Author(s): Xiaoli Chen, Nathan Emery, Elizabeth S. Garcia, Erin J. Hanan, Heather E. Hodges, Tyronne Martin, Matthew A. Meyers, Lindsey E. Peavey, Hui Peng, Jaime Sainz Santamaria, Kellie A. Uyeda, Sarah E. Anderson, Christina Tague
Year Published: 2013
Type: Document
Book or Chapter or Journal Article

Using native annual plants to restore post-fire habitats in western North America
www.nrfirescience.org/resource/12139
Increasing fire frequencies and uncharacteristic severe fires have created a need for improved restoration methods across rangelands in western North America. Traditional restoration seed mixtures of native perennial mid- to late-seral plant species may not be suitable for intensely burned sites that have been returned to an early-...
Author(s): Christopher M. Herron, Jayne L. Jonas, Paul J. Meiman, Mark W. Paschke
Year Published: 2013
Type: Document
Book or Chapter or Journal Article

Climate change, forests, fire, water, and fish: building resilient landscapes, streams, and managers
www.nrfirescience.org/resource/11270
Fire will play an important role in shaping forest and stream ecosystems as the climate changes. Historic observations show increased dryness accompanying more widespread fire and forest die-off. These events punctuate gradual changes to ecosystems and sometimes generate stepwise changes in ecosystems. Climate vulnerability...
Author(s): Charles H. Luce, Penelope Morgan, Kathleen A. Dwire, Daniel J. Isaak, Zachary A. Holden, Bruce E. Rieman
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
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

Utility of remotely sensed imagery for assessing the impact of salvage logging after forest fires
www.nrfirescience.org/resource/8352
Remotely sensed imagery provides a useful tool for land managers to assess the extent and severity of post-wildfire salvage logging disturbance. This investigation uses high resolution QuickBird and National Agricultural Imagery Program (NAIP) imagery to map soil exposure after ground-based salvage operations. Three wildfires with...
Author(s): Sarah A. Lewis, Peter R. Robichaud, Andrew T. Hudak, Brian Austin, Robert J. Liebermann
Year Published: 2012
Type: Document
Book or Chapter or Journal Article

Assessing the success of postfire reseeding in semiarid rangelands using terra MODIS
www.nrfirescience.org/resource/11489
Successful post-fire reseeding efforts may aid rangeland ecosystem recovery by rapidly establishing a desired plant community and thereby reducing the likelihood of infestation by invasive plants. While the success of post-fire remediation is critical, few efforts have been made to leverage existing geospatial technologies to...
Author(s): Fang Chen, Keith T. Weber, John L. Schnase
Year Published: 2012
Type: Document
Book or Chapter or Journal Article

Effects of post-fire salvage logging on cavity-nesting birds and small mammals in southeastern Montana
www.nrfirescience.org/resource/12052
We investigated how post-fire salvage logging of Ponderosa Pine (Pinus ponderosa) affected populations of cavity-nesting birds and small mammals in southeastern Montana in 2004 and 2005. We examined two salvage and two control plots with three point-count stations and one small mammal trap site randomly distributed across each plot...
Author(s): William J. Kronland, Marco Restani
Year Published: 2011
Type: Document
Book or Chapter or Journal Article

Recent trends in post-wildfire seeding in western US forests: costs and seed mixes
www.nrfirescience.org/resource/8284
Broadcast seeding is one of the most commonly used post-fire rehabilitation treatments to establish ground cover for erosion control and mitigation of non-native plant species invasions. Little quantitative information is available on overall trends of post-fire seeding expenditures and seed mixes used over time in forested...
Author(s): Donna Peppin, Peter Z. Fule, Carolyn Hull Sieg, Jan L. Beyers, Molly E. Hunter, Peter R. Robichaud
Year Published: 2011
Type: Document
Book or Chapter or Journal Article, Synthesis

Greater sage-grouse: Ecology and conservation of a landscape species and its habitats
www.nrfirescience.org/resource/15406
The greater sage-grouse is at the center of a complex challenge to conserve sagebrush ecosystems. The species has declined across much of its range, including 11 western states and 2 Canadian provinces, mostly due to loss of critical sagebrush habitat. Agriculture, roads, development of energy

resources, wildfire, and invasive...
Author(s): Steve Knick, John W. Connelly
Year Published: 2011
Type: Document
Book or Chapter or Journal Article

Woodpecker habitat after the fire
www.nrfirescience.org/resource/13508
Public land managers are asked to minimize fuel levels after fires, including using techniques such as salvage logging. They are also responsible for maintaining suitable wildlife habitat, especially for species of concern to state and federal agencies. An area where these responsibilities could conflict is in the use of salvage...
Author(s): Victoria A. Saab
Year Published: 2011
Type: Document
Research Brief or Fact Sheet

Does seeding after severe forest fires in western USA mitigate negative impacts on soils and plant communities?
www.nrfirescience.org/resource/11501
Broadcast seeding is one of the most widely used post-wildfire emergency response treatments intended to reduce soil erosion, increase vegetative ground cover, and minimize establishment and spread of non-native plant species. However, seeding treatments can also have negative effects such as competition with recovering native...
Author(s): Donna Peppin, Peter Z. Fule, Jan L. Beyers, Carolyn Hull Sieg, Molly E. Hunter
Year Published: 2011
Type: Document
Synthesis, Technical Report or White Paper

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

Using native annual plant species to suppress weedy invasive species in post-fire habitats - Final Report to the Joint Fire Science Program
www.nrfirescience.org/resource/11467
Increasing fire frequencies and uncharacteristic severe fires have created a need for improved restoration methods across rangelands in western North America. Traditional restoration seed mixtures of perennial mid- to late-seral plant species may not be suitable for intensely burned sites that have been returned to an early-seral...
Author(s): Mark W. Paschke, Paul J. Meiman, William H. Romme, Cynthia S. Brown
Year Published: 2011
Type: Document

Technical Report or White Paper

Getting results: measuring post-wildfire erosion control treatment effectiveness
www.nrfirescience.org/resource/11031
In the past decade, wildfires around the world have continued to increase in size, severity, and cost. The number of people living in wildland areas has also increased, putting public safety, homes, roads, public infrastructure, water quality, and valued natural resources at risk from wildfire and secondary fire effects. Major...
Author(s): Peter R. Robichaud, Robert E. Brown, Peter M. Wohlgemuth, Joseph W. Wagenbrenner
Year Published: 2011
Type: Document
Conference Proceedings

The myth of "catastrophic" wildfire - a new ecological paradigm of forest health
www.nrfirescience.org/resource/16302
Every fire season in the western United States, we see on television the predictable images of 100-foot flames spreading through tree crowns, while grim-faced news anchors report how many acres of forest were “destroyed” by the latest “catastrophic” fire. The reaction is understandable. For decades, countless Smokey the Bear...
Author(s): Chad T. Hanson
Year Published: 2010
Type: Document
Technical Report or White Paper

Post-fire treatment effectiveness for hillslope stabilization
www.nrfirescience.org/resource/12594
This synthesis of post-fire treatment effectiveness reviews the past decade of research, monitoring, and product development related to post-fire hillslope emergency stabilization treatments, including erosion barriers, mulching, chemical soil treatments, and combinations of these treatments. In the past ten years, erosion barrier...
Author(s): Peter R. Robichaud, Louise E. Ashmun, Bruce D. Sims
Year Published: 2010
Type: Document
Synthesis, Technical Report or White Paper

Continued evaluation of post-fire recovery and treatment effectiveness for validation of the ERMiT erosion model (combined proposals P07-2-2-10 and P07-2-3-06) - Final Report to the Joint Fire Science Program
www.nrfirescience.org/resource/11227
The use and cost of post-fire emergency stabilization treatments continues to grow. To help maximize the impact of these treatments, many assessment teams use the Erosion Risk Management Tool (ERMiT) erosion model to predict postfire erosion and mitigation effects. However, despite several completed JFSP projects, the long-term...
Author(s): Peter R. Robichaud, William J. Elliot, Joseph W. Wagenbrenner, Sarah A. Lewis, Louise E. Ashmun, Peter M. Wohlgemuth, Robert E. Brown
Year Published: 2010
Type: Document
Technical Report or White Paper

Post-wildfire seeding in forests of the western United States: an evidence-based review

www.nrfirescience.org/resource/12595
Broadcast seeding is one of the most widely used post-wildfire emergency response treatments intended to reduce soil erosion, increase vegetative ground cover, and minimize establishment and spread of non-native plant species. We conducted an evidence-based review to examine the effectiveness and effects of post-wildfire seeding...
Author(s): Donna Peppin, Peter Z. Fule, Carolyn Hull Sieg, Jan L. Beyers, Molly E. Hunter
Year Published: 2010
Type: Document
Book or Chapter or Journal Article, Synthesis

Delaying sheep grazing after wildfire in sagebrush steppe may not affect vegetation recovery
www.nrfirescience.org/resource/11439
Although many land managers prohibit grazing for 2 years after a fire, little research has been conducted to determine the interaction of grazing with vegetation recovery after fire. In a study conducted in sagebrush steppe rangelands after a 2000 wildfire at the United States Sheep Experiment Station in Idaho, the influence of...
Author(s): Lovina Roselle, Steven S. Seefeldt, Karen Launchbaugh
Year Published: 2010
Type: Document
Book or Chapter or Journal Article

Effects of timber harvest following wildfire in western North America
www.nrfirescience.org/resource/11122
Timber harvest following wildfire leads to different outcomes depending on the biophysical setting of the forest, pattern of burn severity, operational aspects of tree removal, and other management activities. Fire effects range from relatively minor, in which fire burns through the understory and may kill a few trees, to severe, in...
Author(s): David L. Peterson, James K. Agee, Gregory H. Aplet, Dennis P. Dykstra, Russell T. Graham, John F. Lehmkuhl, David S. Pilliod, Donald F. Potts, Robert F. Powers, John D. Stuart
Year Published: 2009
Type: Document
Technical Report or White Paper

A synthesis of postfire road treatments for BAER teams: methods, treatment effectiveness, and decisionmaking tools for rehabilitation
www.nrfirescience.org/resource/12622
We synthesized post-fire road treatment information to assist BAER specialists in making road rehabilitation decisions. We developed a questionnaire; conducted 30 interviews of BAER team engineers and hydrologists; acquired and analyzed gray literature and other relevant publications; and reviewed road rehabilitation procedures and...
Author(s): Randy B. Foltz, Peter R. Robichaud, Hakjun Rhee
Year Published: 2009
Type: Document
Synthesis, Technical Report or White Paper

Listening to the message of the Black-backed Woodpecker, a hot fire specialist
www.nrfirescience.org/resource/11083
The Black-backed Woodpecker is an uncommon bird of the northern coniferous forests of North America. It is one of several species of fauna that are considered fire specialists. This woodpecker nests in cavities it creates in dead standing trees and feeds on wood-boring beetles and their larvae, which are also attracted to stressed...

Author(s): Elise LeQuire
Year Published: 2009
Type: Document
Research Brief or Fact Sheet

Nest-site selection by cavity-nesting birds in relation to postfire salvage logging
www.nrfirescience.org/resource/8383
Large wildfire events in coniferous forests of the western United States are often followed by postfire timber harvest. The long-term impacts of postfire timber harvest on fire-associated cavity-nesting bird species are not well documented. We studied nest-site selection by cavity-nesting birds over a 10-year period (1994-2003),...
Author(s): Victoria A. Saab, Robin E. Russell, Jonathan G. Dudley
Year Published: 2009
Type: Document
Book or Chapter or Journal Article

Emergency post-fire rehabilitation treatment effects on burned area ecology and long-term restoration
www.nrfirescience.org/resource/12591
The predicted continuation of strong drying and warming trends in the southwestern United States underlies the associated prediction of increased frequency, area, and severity of wildfires in the coming years. As a result, the management of wildfires and fire effects on public lands will continue to be a major land management...
Author(s): Peter R. Robichaud, Sarah A. Lewis, Robert E. Brown, Louise E. Ashmun
Year Published: 2009
Type: Document
Book or Chapter or Journal Article, Synthesis

Effectiveness of aerial seeding and straw mulch for reducing post-wildfire erosion, north-western Montana, USA
www.nrfirescience.org/resource/8200
Various methods are available to reduce post-wildfire erosion, but there is limited quantitative information on the relative effectiveness of these techniques. We used rainfall simulations to compare the erosion and runoff rates from adjacent 0.5-m2 plots treated with aerial grass seeding and straw mulch with untreated control plots...
Author(s): Amy H. Groen, Scott W. Woods
Year Published: 2008
Type: Document
Book or Chapter or Journal Article

Wildland fire in ecosystems: fire and nonnative invasive plants
www.nrfirescience.org/resource/12531
This state-of-knowledge review of information on relationships between wildland fire and nonnative invasive plants can assist fire managers and other land managers concerned with prevention, detection, and eradication or control of nonnative invasive plants. The 16 chapters in this volume synthesize ecological and botanical...
Year Published: 2008
Type: Document
Synthesis, Technical Report or White Paper

Measuring effectiveness of three postfire hillslope erosion barrier treatments, western Montana, USA
www.nrfirescience.org/resource/8389
After the Valley Complex Fire burned 86 000 ha in western Montana in 2000, two studies were conducted to determine the effectiveness of contour-felled log, straw wattle, and hand-dug contour trench erosion barriers in mitigating postfire runoff and erosion. Sixteen plots were located across a steep, severely burned slope, with a...
Author(s): Peter R. Robichaud, Frederick B. Pierson, Robert E. Brown, Joseph W. Wagenbrenner
Year Published: 2008
Type: Document
Book or Chapter or Journal Article

Evaluating the effectiveness of contour-felled log erosion barriers as a post-fire runoff and erosion mitigation treatment in the western United States
www.nrfirescience.org/resource/8167
Between 1998 and 2002, six sites were established immediately after large wildfires in the western United States to determine the effectiveness of contour-felled log erosion barriers in mitigating post-wildfire runoff and erosion. In each pair of matched, burned, and small watersheds (1-13 ha), one was treated with contour-felled...
Author(s): Peter R. Robichaud, Joseph W. Wagenbrenner, Robert E. Brown, Peter M. Wohlgemuth, Jan L. Beyers
Year Published: 2008
Type: Document
Book or Chapter or Journal Article

Predicting postfire erosion and mitigation effectiveness with a web-based probabilistic erosion model
www.nrfirescience.org/resource/8138
The decision of where, when, and how to apply the most effective postfire erosion mitigation treatments requires land managers to assess the risk of damaging runoff and erosion events occurring after a fire. To meet this challenge, the Erosion Risk Management Tool (ERMiT) was developed. ERMiT is a web-based application that uses the...
Author(s): Peter R. Robichaud, William J. Elliot, Frederick B. Pierson, David E. Hall, Corey A. Moffet
Year Published: 2007
Type: Document
Book or Chapter or Journal Article

Delayed Conifer Tree Mortality Following Fire in California
www.nrfirescience.org/resource/16311
Fire injury was characterized and survival monitored for 5,246 trees from five wildfires in California that occurred between 1999 and 2002. Logistic regression models for predicting the probability of mortality were developed for incense-cedar, Jeffrey pine, ponderosa pine, red fir and white fir. Two-year post-fire preliminary...
Author(s): Sharon M. Hood, Sheri L. Smith, Danny R. Cluck
Year Published: 2007
Type: Document
Technical Report or White Paper

Nest densities of cavity-nesting birds in relation to postfire salvage logging and time since wildfire
www.nrfirescience.org/resource/8145

We monitored the nest densities and nest survival of seven cavity-nesting bird species, including four open-space foragers (American Kestrel [Falco sparverius], Lewis's Woodpecker [Melanerpes lewis], Western Bluebird [Sialia mexicana], and Mountain Bluebird [S. currucoides]) and three wood-foragers (Hairy Woodpecker [Picoides...
Author(s): Victoria A. Saab, Robin E. Russell, Jonathan G. Dudley
Year Published: 2007
Type: Document
Book or Chapter or Journal Article

Managing fire-prone forests in the Western United
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

The effects of postfire salvage logging on cavity-nesting birds
www.nrfirescience.org/resource/12933
We investigated the effects of postfire salvage logging on cavity-nesting birds by comparing nest densities and patterns of nest reuse over a three-year period in seven logged and eight unlogged patches of mixed-conifer forest in the Blackfoot-Clearwater Wildlife Management Area, Montana. We found 563 active nests of 18 cavity-...
Author(s): Richard L. Hutto, Susan M. Gallo
Year Published: 2006
Type: Document
Book or Chapter or Journal Article

Snag longevity in relation to wildfire and postfire salvage logging
www.nrfirescience.org/resource/8142
Snags create nesting, foraging, and roosting habitat for a variety of wildlife species. Removal of snags through postfire salvage logging reduces the densities and size classes of snags remaining after wildfire. We determined important variables associated with annual persistence rates (the probability a snag remains standing from 1...
Author(s): Robin E. Russell, Victoria A. Saab, Jonathan G. Dudley, Jay J. Rotella
Year Published: 2006
Type: Document
Book or Chapter or Journal Article

Post-fire logging debate ignores many issues
www.nrfirescience.org/resource/14599
Recent controversy concerning post-fire logging in Oregon is emblematic of the problems of "salvage logging" globally. Although tree regenernation after disturbances in forested areas is important, a narrow view of this issue ignores important ecologial lessons, especially the role of disturbances in diversifying and rejuvenating...
Author(s): Dominick A. DellaSala, James R. Karr, Tania L. Schoennagel, David A. Perry, Reed F. Noss, David B. Lindenmayer, Robert L. Beschta, Richard L. Hutto, Mark E. Swanson, Jon Evans
Year Published: 2006

Type: Document
Book or Chapter or Journal Article

Wildfire, timber salvage, and the economics of expediency
www.nrfirescience.org/resource/8124
Administrative planning rules and legal challenges can have significant economic impacts on timber salvage programs on public lands. This paper examines the costs of the delay in salvage caused by planning rules and the costs associated with the volume reductions forced by legal challenges in one case study. The fires on the...
Author(s): Jeffrey P. Prestemon, David N. Wear, Fred J. Stewart, Thomas P. Holmes
Year Published: 2006
Type: Document
Book or Chapter or Journal Article

Toward meaningful snag-management guidelines for postfire salvage logging in North American conifer forests
www.nrfirescience.org/resource/14507
The bird species in western North America that are most restricted to, and therefore most dependent on, severely burned conifer forests during the first years following a fire event depend heavily on the abundant standing snags for perch sites, nest sites, and food resources. Thus, it is critical to develop and apply appropriate...
Author(s): Richard L. Hutto
Year Published: 2006
Type: Document
Book or Chapter or Journal Article

Protection from erosion following wildfire
www.nrfirescience.org/resource/11053
Erosion in the first year after a wildfire can be up to three orders of magnitude greater than the erosion from undisturbed forests. To mitigate potential postfire erosion, various erosion control treatments are applied on highly erodible areas with downstream resources in need of protection. Because postfire erosion rates generally...
Author(s): Peter R. Robichaud, William J. Elliot
Year Published: 2006
Type: Document
Conference Proceedings

Fire management impacts on invasive plants in the western United States
www.nrfirescience.org/resource/12024
Fire management practices affect alien plant invasions in diverse ways. I considered the impact of six fire management practices on alien invasions: fire suppression, forest fuel reduction, prescription burning in crown-fire ecosystems, fuel breaks, targeting of noxious aliens, and postfire rehabilitation. Most western United States...
Author(s): Jon E. Keeley
Year Published: 2006
Type: Document
Book or Chapter or Journal Article, Synthesis

Salvage logging, ecosystem processes, and biodiversity conservation
www.nrfirescience.org/resource/16297

We summarize the documented and potential impacts of salvage logging—a form of logging that removes trees and other biological material from sites after natural disturbance. Such operations may reduce or eliminate biological legacies, modify rare postdisturbance habitats, influence populations, alter community composition, impair...
Author(s): D.B. Lindenmeyer, Reed F. Noss
Year Published: 2006
Type: Document
Book or Chapter or Journal Article

Postfire logging in riparian ecosystems
www.nrfirescience.org/resource/8126
We reviewed the behavior of wildfire in riparian zones, primarily in the western United States, and the potential ecological consequences of postfire logging. Fire behavior in riparian zones is complex, but many aquatic and riparian organisms exhibit a suite of adaptations that allow relatively rapid recovery after fire. Unless...
Author(s): Gordon H. Reeves, Peter A. Bisson, Bruce E. Rieman, Lee E. Benda
Year Published: 2006
Type: Document
Book or Chapter or Journal Article

Monitoring changes in soil quality from post-fire logging in the inland northwest
www.nrfirescience.org/resource/11015
The wildland fires of 2000, 2002, and 2003 created many opportunities to conduct post-fire logging operations in the Inland Northwest. Relatively little information is available on the impact of post-fire logging on long-term soil productivity or on the best method for monitoring these changes. We present a USDA Forest Service...
Author(s): Deborah S. Page-Dumroese, Martin F. Jurgensen, Ann Abbott, Thomas M. Rice, Joanne M. Tirocke, Sue Farley, Sharon DeHart
Year Published: 2006
Type: Document
Conference Proceedings

Assessing the causes, consequences and spatial variability of burn severity: a rapid response proposal - Final Report to the Joint Fire Science Program
www.nrfirescience.org/resource/11149
In this rapid response project, we have collected data on post-fire effects and pre-fire fuels and vegetation from 10 large fires that burned in 2003 and 2004. We use field and remotely sensed data collected during and soon after wildfires to quantify the interactions and spatial variability in fire effects, fuels, fire behavior,...
Author(s): Penelope Morgan, Andrew T. Hudak, Peter R. Robichaud, Kevin C. Ryan
Year Published: 2005
Type: Document
Technical Report or White Paper

Home range size and foraging habitat of Black-backed Woodpeckers
www.nrfirescience.org/resource/11417
We examined home range size of Black-backed Woodpeckers (Picoides arcticus) in burned ponderosa pine (Pinus ponderosa) / Douglas-fir (Pseudotsuga menziesii) forests of southwestern Idaho during 2000 and 2002 (6 and 8 years following fire). Home range size for 4 adult males during the post-fledging period was 115.6-420.9 ha using the...
Author(s): Jonathan G. Dudley

Year Published: 2005
Type: Document
Dissertation or Thesis

The effects of postfire salvage logging on aquatic ecosystems in the American West
www.nrfirescience.org/resource/16298
Recent changes in the forest policies, regulations, and laws affecting public lands encourage postfire salvage logging, an activity that all too often delays or prevents recovery. In contrast, the 10 recommendations proposed here can improve the condition of watersheds and aquatic ecosystems.
Author(s): James R. Karr, Jonathan J. Rhodes, G. Wayne Minshall, F. Richard Hauer, Robert L. Beschta, Christopher A. Frissell, David A. Perry
Year Published: 2004
Type: Document
Book or Chapter or Journal Article

Lewis's Woodpecker (Melanerpes lewis): a technical conservation assessment
www.nrfirescience.org/resource/11498
Lewis's woodpecker (Melanerpes lewis) is a locally common but patchily distributed woodpecker species usually seen in open forests of western North America. The combination of its sporadic distribution, its diet of adult-stage free-living insects (primarily aerial), its preference to nest in burned landscapes, and its variable...
Author(s): Stephen C. Abele, Victoria A. Saab, Edward O. Garton
Year Published: 2004
Type: Document
Technical Report or White Paper

Monitoring changes in weed populations: post-fire and post-herbicide treatment
www.nrfirescience.org/resource/11040
Description not entered
Author(s): Elaine Kennedy Sutherland
Year Published: 2004
Type: Document
Conference Proceedings

Establishment of aerially seeded big sagebrush following southern Idaho wildfires
www.nrfirescience.org/resource/11412
In the western United States, big sagebrush (Artemisia tridentata) steppe communities dominate approximately 60 million ha (148 million acres) and comprise the largest vegetation type (Wambolt and Hoffman 2001). However, due to the invasion of exotic plants, fire has become a driving force in the ecology and management of sagebrush...
Author(s): Cindy R. Lysne, Michael L. Pellant
Year Published: 2004
Type: Document
Technical Report or White Paper

Postfire seeding for erosion control: effectiveness and impacts on native plant communities
www.nrfirescience.org/resource/7911
Large, high-severity wildfires remove vegetation cover and expose mineral soil, ofen causing erosion and runoff during postfire rain events to increase dramatically. Land-management agencies in the United States are required to assess site conditions after wildfire and, where necessary, implement

emergency watershed rehabilitation...
Author(s): Jan L. Beyers
Year Published: 2004
Type: Document
Book or Chapter or Journal Article, Synthesis

Postfire management on forested public lands of the western United States
www.nrfirescience.org/resource/7913
Forest ecosystems in the western United States evolved over many millennia in response to disturbances such as wildfires. Land use and management practices have altered these ecosystems, however, including fire regimes in some areas. Forest ecosystems are especially vulnerable to postfire management practices because such practices...
Author(s): Robert L. Beschta, Jonathan J. Rhodes, J. Boone Kauffman, Robert E. Gresswell, G. Wayne Minshall, James R. Karr, David A. Perry, F. Richard Hauer, Christopher A. Frissell
Year Published: 2004
Type: Document
Book or Chapter or Journal Article

Quick response small catchment monitoring techniques for comparing postfire rehabilitation treatment effectiveness
www.nrfirescience.org/resource/11000
Increased runoff and erosion commonly occur after wildfires with the onset of precipitation events. Various erosion mitigation treatments are often used after wildfires to reduce flooding and sedimentation. The effectiveness of these treatments has not been well documented in the literature; therefore we undertook a rapid response...
Author(s): Peter R. Robichaud, Robert E. Brown
Year Published: 2003
Type: Document
Conference Proceedings

On the impact of fire suppression and BAER restoration on weeds
www.nrfirescience.org/resource/11043
In 2000, wildfires burned more than 200,000 acres on the Bitterroot National Forest of Montana and nearly 1.5 million acres in the Northern and Intermountain Regions. Management activities associated with fire suppression and post-fire restoration have had the unintentional consequence of promoting invasive weeds. As part of fire...
Author(s): Elaine Kennedy Sutherland
Year Published: 2003
Type: Document
Conference Proceedings

Responses of stream benthic macroinvertebrates to fire
www.nrfirescience.org/resource/7964
Synthesis of published research on the responses of stream benthic macroinvertebrates to fire in western United States indicates a consistent pattern of response that can guide resource management and future research. Direct effects of fire generally are minor or indiscernible. Indirect effects, resulting primarily from increased...
Author(s): G. Wayne Minshall
Year Published: 2003
Type: Document
Book or Chapter or Journal Article

Selection of fire-created snags at two spatial scales by cavity-nesting birds
www.nrfirescience.org/resource/11198
We examined the use of snag stands by seven species of cavity-nesting birds from 1994-1998. Selection of snags was studied in logged and unlogged burned forests at two spatial scales: microhabitat (local vegetation characteristics) and landscape (composition and patterning of surrounding vegetation types). We modeled nest occurrence...
Author(s): Victoria A. Saab, Ree Brannon, Jonathan G. Dudley, Larry Donohoo, Dave Vanderzanden, Vicky Johnson, Henry Lachowski
Year Published: 2002
Type: Document
Technical Report or White Paper

Effects of wildfire and post-fire salvage logging on avian communities in conifer-dominated forests of the western United States
www.nrfirescience.org/resource/7956
Description not entered
Author(s): Natasha B. Kotliar, Sallie Hejl, Richard L. Hutton, Victoria A. Saab, C. P. Melcher, Mary E. McFadzen
Year Published: 2002
Type: Document
Book or Chapter or Journal Article

Effects of fire and post-fire salvage logging on avian communities in conifer-dominated forests of the western United States
www.nrfirescience.org/resource/14594
A one-day symposium organized by the editors was held the following year in Portland, Oregon, at the annual meeting of the Cooper Ornithological Society. The central focus of the symposium was to contrast patterns in the western versus eastern United States, and to differentiate and contrast natural...
Author(s): Natasha B. Kotliar, Sallie Hejl, Richard L. Hutto, Victoria A. Saab, C. P. Melcher, Mary E. McFadzen
Year Published: 2002
Type: Document
Conference Proceedings

Evaluating the effectiveness of postfire rehabilitation treatments
www.nrfirescience.org/resource/11194
Spending on postfire emergency watershed rehabilitation has increased during the past decade. A west-wide evaluation of USDA Forest Service burned area emergency rehabilitation (BAER) treatment effectiveness was undertaken as a joint project by USDA Forest Service Research and National Forest System staffs. This evaluation covers...
Author(s): Peter R. Robichaud, Jan L. Beyers, Daniel G. Neary
Year Published: 2000
Type: Document
Technical Report or White Paper

Fire and invasive species within the temperate and boreal coniferous forests of western North America
www.nrfirescience.org/resource/10966
Invasive, nonnative plant species have been a concern of land managers within the temperate and

boreal coniferous forest eco-region for nearly a century. Fire management, timber harvest, grazing, mining, recreation, and agriculture have not only exacerbated invasive species establishment and spread, but have been impacted by such...
Author(s): Richy J. Harrod, Sarah Reichard
Year Published: 2000
Type: Document
Conference Proceedings, Synthesis

Responses of cavity-nesting birds to stand-replacement fire and salvage logging in ponderosa pine/douglas-fir forests of southwestern Idaho
www.nrfirescience.org/resource/11413
From 1994 to 1996, researchers monitored 695 nests of nine cavity-nesting bird species and measured vegetation at nest sites and at 90 randomly located sites in burned ponderosa pine forests of southwestern Idaho. Site treatments included two types of salvage logging, and unlogged controls. All bird species selected nest sites with...
Author(s): Victoria A. Saab, Jonathan G. Dudley
Year Published: 1998
Type: Document
Technical Report or White Paper

Length and timing of grazing on postburn productivity of two bunchgrasses in an Idaho experimental range
www.nrfirescience.org/resource/8213
Plant mortality and productivity in semiarid grasslands may be affected by the length of time grazing is excluded during the postfire regeneration period. The degree of grazing tolerance for the semiarid bunchgrass species, Festuca idahoensis and Agropyron spicatum, exposed to fire, and how the variation in grazing tolerance was...
Author(s): Stephen C. Bunting, Ronald Robberecht, Guillermo E. Defosse
Year Published: 1998
Type: Document
Book or Chapter or Journal Article

Vegetal recovery following wildfire in seeded and unseeded sagebrush steppe
www.nrfirescience.org/resource/11459
Following an August wildfire, sagebrush (Artemisia L.)/grass benchlands adjacent to Pocatello, Ida., were seeded with a mixture of exotic wheatgrasses and forbs by rangeland drill in November 1987. The effects of seeding on vegetation development in the immediate postfire years were evaluated by comparing plant density, vegetal...
Author(s): Teresa D. Ratzlaff, Jay E. Anderson
Year Published: 1995
Type: Document
Book or Chapter or Journal Article

Forest Service Review of Wildfire and Salvage Logging
www.nrfirescience.org/resource/16301
This is a summary of comments by Forest Service reviewers of the Beschta, et al. paper, "Wildfire and Salvage Logging". The paper was reviewed by a diverse and highly qualified group of Forest Service researchers and managers with expertise in a broad range of disciplines pertinent to the subject presented. Thus, the reviews present...
Author(s): Susan G. Conard, Richard L. Everett, Susan Husari, Alan E. Harvey, Gordon H. Reeves, James M. Saveland, Phil Weatherspoon, Robert R. Ziemer

Year Published: 1995
Type: Document
Technical Report or White Paper

Deterioration of fire-killed and fire-damaged timber in the Western United States
www.nrfirescience.org/resource/11159
Fire-killed and fire-damaged timber are an important source of fiber and are becoming more important because of a decrease in the land base available for timber harvest. Forest managers need to know the causes of deterioration and degrade, the expected losses in product volume and value, and the impact of time on deterioration. This...
Author(s): Eini C. Lowell, Susan A. Willits, Robert L. Krahmer
Year Published: 1992
Type: Document
Technical Report or White Paper

Fire's effects on a small bird population
www.nrfirescience.org/resource/11188
Changes in bird populations as a result of a 122 ha forest fire are evaluated. There is little evidence of any drastic effect on numbers of birds, species, or species diversity in the year of the fire or 2 years later.
Author(s): L. Jack Lyon, John M. Marzluff
Year Published: 1985
Type: Document
Technical Report or White Paper

Early postfire revegetation in a western Montana Douglas-fir forest
www.nrfirescience.org/resource/11960
Development of natural vegetation and seeded grasses on a severely burned Douglas-fir forest area is described for the first 5 postfire years. Results are described separately for ravine and upland sites. Results of special studies of moss recovery and tree seedling distribution are also reported.
Author(s): Marilyn F. Crane, James R. Habeck, William C. Fischer
Year Published: 1984
Type: Document
Technical Report or White Paper

The Sleeping Child Burn - 21 years of postfire change
www.nrfirescience.org/resource/11961
In early August 1961, more than 26,000 acres (10,500 ha) of upper montane and subalpine forest on the Bitterroot National Forest burned in a lightning-caused wildfire. At the time, the Sleeping Child Burn represented the single largest forest fire in the Northern Rocky Mountains in more than 20 years. Historically, large wildfires...
Author(s): L. Jack Lyon
Year Published: 1984
Type: Document
Technical Report or White Paper

Vegetal development on the Sleeping Child burn in western Montana, 1961 to 1973
www.nrfirescience.org/resource/11951
In the year following the 1961 Sleeping Child forest fire on the Bitterroot National Forest, Montana, 11 permanent transects were established within the burn. Vegetation development was recorded through

1973, but only four transects were considered indicative of seral forest succession independent of superimposed management...
Author(s): L. Jack Lyon
Year Published: 1976
Type: Document
Technical Report or White Paper

Quaking aspen: a burning desire in an 'asbestos forest'
www.nrfirescience.org/resource/13673
Speaker: Paul Rogers, Director, Western Aspen Alliance, Adjunct Associate Professor, Utah State University. Event: Restoring the West Conference 2015 - Restoration and Fire in the Interior West.
Type: Media

Video

Burned area recovery project: a stakeholder perspective
www.nrfirescience.org/resource/13320
In this video, Larry Campbell, member of Friends of the Bitterroot, spoke about his organization's opposition to the salvage logging component of the BNF's Burned Area Recovery project following the Fires of 2000. This was filmed along Rye Creek, which was one of the stops during the Fires of 2000 field trip that was part of...
Type: Media

Video

Burned area emergency response
www.nrfirescience.org/resource/13309
In this video, Marilyn Wildey, Hydrology Technician with the Bitterroot National Forest, describes the Burned Area Emergency Response following the Bitterroot fires of 2000. This was filmed at the Bitterroot National Forest headquarters in Hamilton, MT, which was one of the stops during the Fires of 2000 field trip that was part of...
Type: Media

Video

Post-fire reforestation considerations
www.nrfirescience.org/resource/13221
Post-fire environments are dynamic and complex and trends of recent fires within the Sierra mixed conifer type include uncharacteristically large areas of high vegetation burn severity. These trends add to the complexity of opportunities and challenges for post-fire restoration efforts - a key component of which is reforestation....
Type: Media

Webinar

Bridging the Divide - Video 3: Forest Management
www.nrfirescience.org/resource/15943
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

Webinar

Post-wildfire seeding in forests of the West: effectiveness, trends over time, and fire management perspectives
www.nrfirescience.org/resource/13037
Dr. Pete Fule presented results from the Joint Fire Science Program (JFSP) project synthesizing existing information on post-wildfire seeding. The webinar covered key findings from an evidence-based systematic review conducted to examine the effectiveness and effects of post-fire seeding treatments on soil stabilization and plant...
Type: Media

Webinar

Post-fire restoration considerations
www.nrfirescience.org/resource/14074
Post-fire environments are dynamic and complex and trends of recent fires within the Sierra mixed conifer type include uncharacteristically large areas of high vegetation burn severity. These trends add to the complexity of opportunities and challenges for post-fire restoration efforts - a key component of which is...
Type: Media

Webinar

Linking basic and applied research, multi-resource management, public education, and enforcement: post-fire archeology on the Shoshone National Forest
www.nrfirescience.org/resource/13738
Especially in remote, Wilderness settings, fires produce a complex array of both direct and indirect impacts to heritage resources that creates a cascade of complex research and management issues and opportunities. Over the last decade we have been working to align goals of academic research programs and...
Type: Media

Video

10 years of post-fire treatment monitoring - Learning about soil and vegetation recovery
www.nrfirescience.org/resource/12937
Following the 2005 School Fire that burned about 50,000 acres of forests and grasslands on the Umatilla National Forest, Washington, managers wanted to limit weed spread and soil erosion in severely burned areas. Various mulch treatments (wheat straw, wood strand, and hydromulch) were used to control erosion on steep slopes above...
Type: Media

Webinar

Who's to blame? Fire management in mixed-ownership landscapes
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

Burned area recovery project: the Bitterroot National Forest experience
www.nrfirescience.org/resource/13312

In this video, Marilyn Wildey, Hydrology Technician with the Bitterroot National Forest, describes the Burned Area Recovery Project proposed after the Bitterroot fires of 2000. This was filmed at the Bitterroot National Forest headquarters in Hamilton, MT, which was one of the stops during the Fires of 2000 field trip that was part...
Type: Media

Video

Ten years of post-fire treatment monitoring - Learning about soil and vegetation recovery
www.nrfirescience.org/resource/13234
Following the 2005 School Fire that burned about 50,000 acres of forests and grasslands on the Umatilla National Forest, Washington, managers wanted to limit weed spread and soil erosion in severely burned areas. Various mulch treatments (wheat straw, wood strand, and hydromulch) were used to control erosion on steep slopes above...
Type: Media

Webinar

Climate, weather, and sagebrush seed sources: experimental insights on challenges and opportunities
www.nrfirescience.org/resource/13219
Matt Germino, Research Ecologist, USGS Snake River Field Station, Boise, ID, discusses experimental insights on challenges and opportunities regarding climate, weather, and sagebrush seed sources.
Type: Media

Webinar

Patterns of Conifer Regeneration following High Severity Wildfire in Ponderosa Pine-Dominated Forests
www.nrfirescience.org/resource/15847
Wildfires in ponderosa pine - dominated forests of the southern Rocky Mountains are increasingly burning with a high severity component that is unprecedented in the available historical record. The ability of ponderosa pine and other co-occurring conifers (e.g., Douglas-fir, Rocky Mountain juniper, Colorado blue spruce) to...
Type: Media

Webinar

Hayman fire: short- and long-term geomorphic change and recovery
www.nrfirescience.org/resource/13027
Lee MacDonald, Professor, Colorado State University, Department of Forest, Rangeland, and Watershed Stewardship, discusses geomorphic changes following the Hayman and Schoonover wildfires at the Hayman Fire Science Symposium: Lessons Learned after Ten Years of Recovery, Rehabilitation, and Restoration.
Type: Media

Webinar

Post-fire tree mortality and management
www.nrfirescience.org/resource/14214
This presentation was recorded during the 2016 State of the State and Forest Health Conference in Corvallis, OR.
Type: Media

Video