**Model Predictions of Postwildfire Woody Fuel Succession and Fire Behavior Are Sensitive to Fuel Dynamics Parameters**
www.nrfirescience.org/resource/22784
Computer models used to predict forest and fuels dynamics and wildfire behavior inform decisionmaking in contexts such as postdisturbance management. It is imperative to understand possible uncertainty in model predictions. We evaluated sensitivity of the Fire and Fuels Extension to the Forest Vegetation Simulator predictions to...
Author(s): Maureen C. Kennedy, Morris C. Johnson, Sarah C. Harrison
Year Published: 2021
Type: Document
Book or Chapter or Journal Article

**Tracking rates of post-fire conifer regeneration distinct from deciduous vegetation recovery across the western USA**
www.nrfirescience.org/resource/22956
Post?fire shifts in vegetation composition will have broad ecological impacts. However, information characterizing post?fire recovery patterns and their drivers are lacking over large spatial extents. In this analysis we used Landsat imagery collected when snow cover (SCS) was present, in combination with growing season (GS)...
Author(s): Melanie K. Vanderhoof, Todd J. Hawbaker, Andrea Ku, Kyle E. Merriam, Erin Berryman, Megan E. Cattau
Year Published: 2021
Type: Document
Book or Chapter or Journal Article

**Future dominance by quaking aspen expected following short?interval, compounded disturbance interaction**
www.nrfirescience.org/resource/22560
The spatial overlap of multiple ecological disturbances in close succession has the capacity to alter trajectories of ecosystem recovery. Widespread bark beetle outbreaks and wildfire have affected many forests in western North America in the past two decades in areas of important habitat for native ungulates. Bark beetle outbreaks...
Author(s): Robert A. Andrus, Sarah J. Hart, Niko Tutland, Thomas T. Veblen
Year Published: 2021
Type: Document
Book or Chapter or Journal Article

**Does burn severity affect plant community diversity and composition in mixed conifer forests of the United States Intermountain West one decade post fire?**
www.nrfirescience.org/resource/19868
Background: Wildfire is an important ecological process in mixed conifer forests of the Intermountain West region of the USA. However, researchers and managers are concerned because climate warming has led to increased fire activity in recent decades. More area burned will result in larger land areas in early successional stages and...
Author(s): Eva K. Strand, K.L. Satterberg, Andrew T. Hudak, John C. Byrne, Azad Henareh Khalyani, Alistair M. S. Smith
Year Published: 2019
Type: Document
Book or Chapter or Journal Article

**Long-term evidence for fire as an ecohydrologic threshold-reversal mechanism on**

**woodland?encroached sagebrush shrublands**
www.nrfirescience.org/resource/19828
Encroachment of sagebrush (Artemisia spp.) shrublands by pinyon (Pinus spp.) and juniper (Juniperus spp.) conifers (woodland encroachment) induces a shift from biotic?controlled resource retention to abiotic?driven loss of soil resources. This shift is driven by a coarsening of the vegetation structure with increasing dominance...
Author(s): C. Jason Williams, Frederick B. Pierson, Sayjro K. Nouwakpo, Patrick R. Kormos, Osama Z. Al-Hamdan, Mark A. Weltz
Year Published: 2019
Type: Document
Book or Chapter or Journal Article

**The survival of Pinus ponderosa saplings subjected to increasing levels of fire behavior and impacts on post?fire growth**
www.nrfirescience.org/resource/19852
Improved predictions of tree species mortality and growth metrics following fires are important to assess fire impacts on forest succession, and ultimately forest growth and yield. Recent studies have shown that North American conifers exhibit a 'toxicological dose-response' relationship between fire behavior and the resultant...
Author(s): Wade D. Steady, Raquel Partelli Feltrin, Daniel M. Johnson, Aaron M. Sparks, Crystal A. Kolden, Alan F. Talhelm, James A. Lutz, Luigi Boschetti, Andrew T. Hudak, Andrew S. Nelson, Alistair M. S. Smith
Year Published: 2019
Type: Document
Book or Chapter or Journal Article

**The survival of Pinus ponderosa saplings subjected to increasing levels of fire behavior and impacts on post-fire growth**
www.nrfirescience.org/resource/19648
Improved predictions of tree species mortality and growth metrics following fires are important to assess fire impacts on forest succession, and ultimately forest growth and yield. Recent studies have shown that North American conifers exhibit a 'toxicological dose-response' relationship between fire behavior and the resultant...
Author(s): Wade D. Steady, Raquel Partelli Feltrin, Daniel M. Johnson, Aaron M. Sparks, Crystal A. Kolden, Alan F. Talhelm, James A. Lutz, Luigi Boschetti, Andrew T. Hudak, Andrew S. Nelson, Alistair M. S. Smith
Year Published: 2019
Type: Document
Book or Chapter or Journal Article

**Annual climate impacts on tree growth and post-fire regeneration in ponderosa pine and Douglas-fir in the northern Rocky Mountains**
www.nrfirescience.org/resource/18153
This thesis includes two studies focused on quantifying the impacts of climate change, climate variability, and wildfires on forest dynamics. In Chapter 1, I compared the accuracy of field-based methods to precise dendrochronological techniques to age ponderosa pine and Douglas-fir seedlings sampled from three study regions across...
Author(s): Lacey Hankin
Year Published: 2018
Type: Document
Dissertation or Thesis

**Site preparation severity influences lodgepole pine plant community composition, diversity, and succession over 25 years**
www.nrfirescience.org/resource/16474
Lodgepole pine (Pinus contorta var. latifolia Engelm.) ecosystems of central British Columbia face cumulative stresses, and management practices are increasingly scrutinized. We addressed trade-offs between “light-on-the-land” versus more aggressive silvicultural approaches by examining plant communities and indicator species (...
Author(s): Sybille Haeussler, Torsten Kaffanke, Jacob O. Boateng, John McClarnon, Lorne Bedford
Year Published: 2017
Type: Document
Book or Chapter or Journal Article

**Forest succession along a productivity gradient following fire exclusion**
www.nrfirescience.org/resource/16658
Numerous studies have documented significant change in conifer forests of the American West following the cessation of recurrent fire at the end of the 19th century. But the successional dynamics that characterize different forested settings in the absence of fire remain poorly understood. This study reconstructs structural and...
Author(s): James D. Johnston
Year Published: 2017
Type: Document
Book or Chapter or Journal Article

**Achievable future conditions as a framework for guiding forest conservation and management**
www.nrfirescience.org/resource/13788
We contend that traditional approaches to forest conservation and management will be inadequate given the predicted scale of social-economic and biophysical changes in the 21st century. New approaches, focused on anticipating and guiding ecological responses to change, are urgently needed to ensure the full value of forest ecosystem...
Author(s): Stephen W. Golladay, Katherine L. Martin, James M. Vose, David N. Wear, Alan P. Covich, Richard J. Hobbs, Kier D. Klepzig, Gene E. Likens, Robert J. Naiman, Allan W. Shearer
Year Published: 2016
Type: Document
Book or Chapter or Journal Article, Synthesis

**Paths of recovery: landscape variability in forest structure, function, and fuels after the 1988 Yellowstone Fires**
www.nrfirescience.org/resource/13720
Understanding the rates, trajectories, and spatial variability in succession following severe wildfire is increasingly important for forest managers in western North America and critical for anticipating the resilience or vulnerability of forested landscapes to changing environmental conditions. However, few long-term...
Author(s): Monica G. Turner, William H. Romme, Daniel B. Tinker, Daniel C. Donato, Brian J. Harvey
Year Published: 2015
Type: Document
Technical Report or White Paper

**Climate change and United States forests**
www.nrfirescience.org/resource/12393
This volume offers a scientific assessment of the effects of climatic variability and change on forest

resources in the United States. Derived from a report that provides technical input to the 2013 U.S. Global Change Research Program National Climate Assessment, the book serves as a framework for managing U.S. forest resources in...
Author(s): David L. Peterson, James M. Vose, Toral Patel-Weynand
Year Published: 2014
Type: Document
Book or Chapter or Journal Article

**Fire ecology in Rocky Mountain landscapes**
www.nrfirescience.org/resource/15378
Fire Ecology in Rocky Mountain Landscapes brings a century of scientific research to bear on improving the relationship between people and fire. In recent years, some scientists have argued that current patterns of fire are significantly different from historical patterns, and that landscapes should be managed with an eye toward...
Author(s): William L. Baker
Year Published: 2009
Type: Document
Book or Chapter or Journal Article

**The influence of fire interval and serotiny on postfire lodgepole pine density in Yellowstone National Park**
www.nrfirescience.org/resource/8259
The time interval between stand-replacing fires can influence patterns of initial postfire succession if the abundance of postfire propagules varies with prefire stand age. We examined the effect of fire interval on initial postfire lodgepole pine (Pinus contorta var. latifolia Engelm.) density in Yellowstone National Park (YNP)...
Author(s): Tania L. Schoennagel, Monica G. Turner, William H. Romme
Year Published: 2003
Type: Document
Book or Chapter or Journal Article

**Yellowstone fires: a decade later**
www.nrfirescience.org/resource/18476
Atop a ridge in Yellowstone National Park in 1984, a freak summer wind—perhaps a tornado or a downburst from a thunderstorm—leveled an ancient lodge-pole pine forest, piling up a head-high maze of logs. In the notorious summer of 1988, when wildfires burned one-third of the park, a fire front swept across the same ridge,...
Author(s): Y. Baskin
Year Published: 1999
Type: Document
Book or Chapter or Journal Article

**Vegetation development of boreal riparian plant communities after flooding, fire, and logging, Peace River, Canada**
www.nrfirescience.org/resource/18681
In this study vegetation development is compared and contrasted following natural and logging disturbances in a major boreal river valley in Alberta. Permanent sample plots and releves were established and sampled for vegetation and landscape attributes in the Peace River Lowlands, Wood Buffalo National Park (now a UNESCO World...
Author(s): Kevin P. Timoney, George Peterson, Ross W. Wein
Year Published: 1997

Type: Document
Book or Chapter or Journal Article