

Post-fire Vegetation Management

Impact: Instrumental, Conceptual, Capacity Building, Connectivity

Webinars: After our successful May 2021 [Salvage Science Summit 1](#) webinar series, we again partnered with the Northwest Fire Science Consortium, the Southern Rockies Fire Science Network, and the USDA Forest Service Rocky Mountain Research Station to produce a second webinar series, [Salvage Science Summit 2: Technology and Ecology](#). During this two-day event in December 2021, over 400 participants first viewed pre-recorded presentations then came together for virtual panel discussions. The presentations and recordings of the panel discussion are available on our past event [webpage](#).

Hot Topic: In conjunction with the workshop, we updated our [Post-fire Salvage Logging Hot Topic](#) developed in partnership with the University of Idaho. This website curates the latest in publications, videos, and webinars on this topic.

Research Briefs: In the past year, NRFSN partnered on four Research Briefs that explore core aspects of post-fire vegetation recovery and management:

- **Seed Source:** In the research brief [Effects of seed source pattern on post-fire tree recovery](#), author Jamie L. Peeler (University of Montana) describes how seed source pattern, scale, traits, and terrain interact to shape post-fire tree recovery. This information can help managers strategically delegate resources to burn sites not restocking naturally and ultimately support fire-resilient landscapes.
- **Microclimate:** In [Wildfire effects on microclimate conditions and tree regeneration in mixed conifer forests](#), authors Kyra D. Wolf, Kimberley T. Davis and Philip E. Higuera (all University of Montana) explore how seedling-level microclimate factors impact forest regeneration. They also identify best practices for reforestation, and considerations for post-fire forest management that might help moderate microclimate extremes.
- **Invasive Species:** Non-native, invasive forbs can spread after fire, but fire is sometimes used to control them. In [Fire ecology and management of spotted knapweed, diffuse knapweed, and yellow starthistle](#), author Robin J. Innes (Rocky Mountain Research Station) summarizes Fire Effects Information System species reviews regarding the biology and ecology of these species, how fire affects them, and how they respond to fire.
- **Repeated Fires (Reburns):** In subalpine forests, postfire tree recovery may be limited by climate conditions and fire return intervals that exceed the range of conditions under which these forests evolved. In [Short-interval high-severity reburns change the playing field for forest recovery](#), authors Tyler Hoeker and Monica G. Turner (University of Wisconsin-Madison) discuss how species-level fire-adaptive traits, microclimate conditions, and fire interval can shape ecosystem responses to reburns.

A Short-interval fire



B Long-interval fire



Figure 2 from [Short-interval high-severity reburns change the playing field for forest recovery.](#)

Statements provided in recent NRFSN Evaluation Survey: These statements were provided in response to a question about how NRFSN activities or products have been used by our members. These particular responses addressed post-fire management.

“The field-based workshop in Yellowstone after the Maple fire of 2016 there provided an excellent opportunity to connect with the preeminent researchers in the field of lodgepole pine resiliency and the impacts of a warming climate on future forest cover. These relationships are lasted and strengthened since then.”

“Because of the workshops and field trips we have participated in we have a much stronger collaboration with researchers on what questions fire managers (we) have and how they (researchers) can help us answer them. We now speak frequently with researchers and work together to understand what ecosystem resilience in the GYA [Greater Yellowstone Area] means and how fire fits into it.”

Logic Model Outcomes addressed: Scientists are more aware of fire managers' science and science delivery needs (short-term); Scientists and fire managers communicate more often about challenges and science to support them (medium-term); Fire managers and scientists collaborate to build ecosystem resilience and fire adapted communities that protect life and highly-valued resources and assets (long-term).