

Connected SCIENCE

April 2023

Delivering Timely Fire Science to Managers via Regional Fire Science Exchanges

Fire management is growing increasingly complex in an environment beset by climate change, an ever-growing wildland-urban interface, and difficulties developing and maintaining workforce capacity. Delivery of timely and relevant fire science to managers is imperative, but here, too, there are challenges. Research on fire and fuels management is spread across a great variety of sources and platforms, and managers have limited time to search for relevant information needed for addressing critical management issues.

To address this problem over the past decade, Rocky Mountain Research Station (RMRS) scientists and science delivery specialists have worked with the Joint Fire Science Program (JFSP) as well as agency and university collaborators to support the development of four regional Fire Science Exchanges ([Northern Rockies](#), [Southern Rockies](#), [Great Basin](#), and [Southwest](#)) in the RMRS footprint. These Fire Science Exchanges bring managers and scientists together and share knowledge about the science that addresses important fire and fuels management issues in the region. Through leadership and advisory board participation, RMRS has contributed to the vision and development of the exchanges overall, as well as partnering on specific science delivery products such as manager-oriented publications, webinars, field trips, and workshops.

Nationwide, the Fire Science Exchange Network consists of [15 regional fire science exchanges](#) that provide the latest wildland fire science information to federal, state, tribal, local, and private stakeholders within ecologically similar regions. These partnerships are called “exchanges” to recognize that information is exchanged among participants rather than simply



RMRS Research Forester Andy Hudak (right), university collaborators, and the Northern Rockies Fire Science Network co-host a June 2018 field trip on long-term vegetation recovery and reburn potential following the 2007 East Zone fire in Idaho. USDA Forest Service photo by Vita Wright.

delivered from the scientists to managers. Each Fire Science Exchange develops priority activities and topics based on surveying the needs of managers and scientists in the region. The Fire Science Exchanges address topics such as risk assessment, fire behavior and ecology, smoke and air quality, fire effects, fuel treatment, postfire restoration, wilderness, invasive species, and firefighter health and safety.

In one example, RMRS partnered with three Fire Science Exchanges to facilitate scientist-manager information exchange by hosting two summits on postfire salvage logging ([Summit 1: New Research and Tools](#); [Summit 2: Technology and Ecology](#)). During these virtual summits, participants viewed prerecorded presentations about postfire salvage logging management and planning. Then managers and scientists came together for deeper discussions.

Overall, 280 practitioners and scientists attended the summits, and the recorded webinars have been viewed nearly 15,000 times on YouTube.

According to Vita Wright, long-time RMRS Science Application Specialist and Principal Investigator of the Northern Rockies Fire Science Network, her research on the science of science delivery has shown that “managers are more likely to use research when they have experience with scientists. The Fire Science Exchanges build and strengthen regional networks of managers and scientists, thus, facilitating their communication and collaboration.”



Nationwide, the Fire Science Exchange Network consists of 15 regional Fire Science Exchanges

that provide the most relevant, current wildland fire science information to federal, state, local, tribal, and private stakeholders within ecologically similar regions (graphic by USFS). The exchanges in color depict those that cross the RMRS footprint.

FURTHER READING

Hunter, M.E.; Covalito, M.M.; Wright, V. 2020. [The Use of Science in Wildland Fire Management: A Review of Barriers and Facilitators](#). Current Forestry Reports 6:354–367.

Kocher, S.D.; Toman, E.; Trainor, S.F.; Wright, V. and others. 2012. [How Can We Span the Boundaries between Wildland Fire Science and Management in the United States?](#) Journal of Forestry. 110(8):421–428.

Lake, F.K.; Wright, V.; Morgan, P.; McFadzen, M. and others. 2017. [Returning Fire To The Land: Celebrating Traditional Knowledge And Fire](#). Journal of Forestry 115 (5): 343-353.

Miller, .F.; Chambers, J.C.; Pellant, M. 2015. [A field guide for rapid assessment of post-wildfire recovery potential in sagebrush and pinon-juniper ecosystems in the Great Basin](#). Gen. Tech. Rep. RMRS-GTR-338. Fort Collins, CO: U.S.D.A., Forest Service, Rocky Mountain Research Station. 70 p.

MANAGEMENT IMPLICATIONS

- RMRS has worked with the Joint Fire Science Program (JFSP) to support development of four regional Fire Science Exchanges ([Northern Rockies](#), [Southern Rockies](#), [Great Basin](#), and [Southwest](#)). The exchanges are guided by needs assessments, desired outcomes, and periodic evaluations to determine effectiveness.
- An assessment of the effectiveness of the Fire Science Exchanges reported an increase in fire science use among practitioners, showing that the exchanges have been successful in fostering an awareness of the available research findings.
- Although workshops and field trips are cited as very useful to managers, most managers have limited opportunities to attend these events. The Fire Science Exchanges add capacity by hosting local and regional in-person networking events about regionally important topics.
- Managers can view the [Fire Science Exchange websites](#) and sign up for their newsletters to access new science delivery products and announcements of upcoming workshops, field trips, and webinars.

Featured Contributors

Vita Wright was a Fire Science Application Specialist with the RMRS and led the Northern Rockies Fire Science Network until recently, when she joined the Pacific Northwest Research Station to continue science delivery work in the Northwest. Her research interests include the science of science delivery and organizational learning.

Additional RMRS contributors to the western Fire Science Exchanges over the past decade include [Jeanne Chambers](#) and [Francis Kilkenny](#) (Great Basin Fire Science Exchange steering committee); [Jose Iniguez](#) (Southwest Fire Science Consortium governing board); [Nehalem Clark](#) and predecessor [Sarah Hines](#) (Southern Rockies Fire Science Network’s advisory board); and [Mitch Burgard](#), [Thomas Dzomba](#), [Faith Ann Heinsch](#), Kris Lee, and [Erin Noonan-Wright](#) (Northern Rockies Fire Science Network planning team).

Rocky Mountain Research Station researchers work at the forefront of science to improve the health and use of our Nation’s forests and grasslands. More information about Forest Service research in the Rocky Mountain Region can be found [here](#).

The Joint Fire Science Program (JFSP) provides leadership to the fire science community by identifying high-priority fire science research needs that will enhance the decisionmaking ability of fire and fuels managers, natural resource managers, and others to meet their management objectives. The program also meets the decision needs of those involved in developing and implementing fire-related policy.



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