Project ID: **11-S-3-2** Status: **Completed**

Title: **Northern Rockies Fire Science Network (NRFSN)**

Principal Investigator: **Vita X. Wright**

Agency/Organization: **Forest Service, RMRS-Human Factors & Risk Management RD&A**

Annual Report Instructions

Reporting Year: **2023**

Table 1 - Participation by Organization (as shown from your mailing list subscribers)	
Organization	**Unique Total Number of Participants**
Tribal Nations	33
States	115
Counties/Burroughs/Parishes	22
Cities and Local Communities	16
Regional Authorities	3
Private Landowner	16
Private Associations	12
Companies	58
Consultants	29
International	101
University and College Faculty or Researchers	119
University and College Students	60
Prescribed Fire Councils	1
Fire Learning Network and The Nature Conservancy	14
Non-Governmental Organization (not listed above)	56
Bureau of Indian Affairs	15
Bureau of Land Management	43
Fish and Wildlife Service	8
Forest Service (National Forests, Grasslands, State and Private Forestry)	394

Forest Service Research	71
Geological Survey	6
National Park Service	32
Natural Resources Conservation Service	8
US Bureau of Reclamation	0
National Oceanic and Atmospheric Administration and National Weather Service	20
Agricultural Research Service	2
National Aeronautics and Space Administration	1
Department of Defense including Coast Guard	2
United States Fire Administration	0
Federal Emergency Management Agency	0
Environmental Protection Agency	0
Media	0
Other:	0

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Table 2 - Participation by Activity

Activity (conducted, hosted, organized, facilitated, sponsored or produced)	Completed Activities (current year)	Estimated Total Number of Participants (current year)
Talks and Personal Briefings About The Exchange	4	350
Newsletters Produced	3	4665
Fact Sheets and Handouts Produced	5	1590
Tweets	50	12548
Facebook Postings	0	0
Other Social Media (please identify)	0	0
Blog Posts	0	0
Webinars	6	921
Guidelines or Guidebooks	0	0
Syntheses	0	0
Database	2	263
Conferences/Workshops	1	19
Conference or Symposia Presentation (note participants are for the talk not the entire conference)	0	0
Poster Presentation (note persons engaged not the entire conference)	0	0
Short Courses and Continuing Education Units	0	0
Academic Credit Courses	0	0
Bibliography or Annotated Bibliography	0	0

Northern Rockies Fire Science Network

Annual Report FY 2023

Section 1: During FY023, the Northern Rockies Fire Science Network (NRFSN) focused activities on the following fire science topics: 1) vegetation; 2) postfire recovery and management; 3) fire behavior; 4) fire regimes; 5) fuels management; 6) prescribed fire; 7) smoke, air quality and health; 8) firefighter safety and incident management; and 9) indigenous knowledge.

Section 2: The following are three NRFSN success stories:

Selway-Bitterroot Wilderness and Frank-Church River of No Return Wilderness Fire Science Workshop

Key fire science topics: Postfire recovery and management, fire behavior, fire regimes, fuels management, prescribed fire

Impacts: Conceptual, Capacity Building, Connectivity, Socio-environmental

The Selway-Bitterroot Wilderness and Frank Church-River of No Return Wilderness Fire Science Workshop was a two-day event that addressed issues including post-fire effects, prescribed fire, aquatic systems, fire messaging, and the social issues around fire in the wilderness. Day one of the workshop consisted of speaker presentations, breakout group discussions, and prioritizing research needs. Participants then traveled out to the historic Magruder Ranger Station for a soggy cookout and night of camping. The second day field trip allowed participants to explore recent wilderness burns and included lively discussions about fire effects and the barriers and opportunities for wilderness fire management.

In addition to the Northern Rockies Fire Science Network, the planning team for this event included the Pacific Northwest Research Station, the Rocky Mountain Research Station Fire Lab, the University of Montana Wilderness Institute, the Aldo Leopold Wilderness Research Institute, and the West Fork Ranger District of the Bitterroot National Forest.

Products: The recordings of speaker presentations from the first day are available here on our past events page. In addition, we created a Workshop Summary, recap of research priorities, and a video of field day discussions.

Attendance: There were 49 attendees at the event, with the majority of participants attending both the workshop and the field trip days. The majority of participants were from the USFS but with a good mix of researchers.

Feedback: All survey participants said they made new relationships or strengthened existing relationships at the workshop that will help them in their job. 94% agreed that the workshop helped them understand the challenges and opportunities related to wilderness fire management. Some of the survey comments included:

"Having the field trip portion of the workshop put it over the top for me. We attend trainings and lectures without ever going to the field to see real life examples. There should be opportunities to have field visits during these types of events."

"It was fantastic to hear from fire folks as well as researchers, scientists and decision makers. The field trip was a great opportunity to get out to sites and continue conversations that had started the day before. A really worthwhile experience. Thanks for your hard work organizing!"

"Great workshop - I learnt a lot and thoroughly appreciated the connection between research and operations."

"I thought it was great! I could see a lot of great discussions and connections were made throughout both days."

Logic Model Outcomes addressed: Scientists are more aware of fire managers' science and science delivery needs (short-term); Fire managers have information and tools to communicate relevant fire science to public (short-term); Scientists and fire managers communicate more often about challenges and science to support them (medium-term); Fire managers integrate scientific information and tools into fire and fuels management (long-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); Barriers to the access, understanding, and use of science by fire practitioners are reduced and facilitators are promoted (long-term); The science used in fire management decisions and actions is understood by the public (long-term).

Landscape Fuel Treatment Effectiveness Webinar

Key fire science topics: Fire regime, fuels management, prescribed fire

Impacts: Conceptual, Capacity Building

The Landscape Fuel Treatment Effectiveness Webinar was an event in which four Rocky Mountain Research Station scientists presented their latest research based on a recent report, followed by a panel discussion and Q&A. The presentation covered how maximizing the effectiveness of fuel treatments at the landscape scale is a key research need and management need given the inability to treat all areas at risk from wildfire, and discussed the growing body of scientific literature assessing this need.

The webinar occurred on April 5, 2023 and was a joint event organized by the Northern Rockies Fire Science Network, Southern Rockies Fire Science Network, Great Basin Fire Science Exchange, Northwest Fire Science Consortium, Southwest Fire Science Consortium, and the Rocky Mountain Research Station.

Products: A recording of the webinar is available here on our past events page. In addition, we created a Connected Science Fact Sheet in collaboration with the Rocky Mountain Research Station, available here.

Attendance: There were 1,001 registrants for the webinar, with 517 unique viewers accounted for. Attendees were largely from the United States but there were some participants from other countries including: Greece, Spain, Canada and the Netherlands.

Feedback: Almost 90% of webinar participants either agreed or strongly agreed that the concepts presented were applicable to them and their work. 60% responded that they would apply the information from this webinar to their work immediately and 77% agreed that the webinar enhanced their knowledge of this fire topic. Some survey comments included:

"This information and data was honestly very helpful. Any metrics and evidence we can use to present to the public, interest groups, IDTs and partners to tell the message of what fuels work is useful."

"This information was great. I will pass it on to my classmates in Fire Ecology at New Mexico Highlands University of Dr. Blanca Cespedes. Thanks."

"This is a new topic for the agency that I work for and we are starting to build a workforce around these concepts. Great to hear and learn what we are building will be beneficial."

Logic Model Outcomes addressed: Fire managers have information and tools to communicate relevant fire science to public (short-term); The NRFSN is a primary resource for fire managers interested in learning about science and for scientists interested in disseminating science (short-term); Fire managers access relevant science more easily, increase their knowledge of science, and share scientific products with colleagues (medium-term); Policy makers increase their knowledge of fire science and share scientific information with colleagues (medium-term); Fire managers integrate scientific information and tools into fire and fuels management (long-term).

Traditional Knowledge and Fire Events

Key fire science topics: Fuels management, prescribed fire, soil

Impacts: Conceptual, connectivity, socio-environmental

The Northern Rockies Fire Science Network produced and collaborated on a number of events and projects that broadly fall under this category. Working with the Spokane Tribal Network, NRFSN produced a video in which Spokane Tribal community members and partners describe the importance of cultural burning to community wellness and food sovereignty and demonstrate their burning and gardening practices on the Spokane tribal Network Food Sovereignty Garden.

Additionally, an interagency workshop made a field visit to the Spokane Food Sovereignty Garden where participants learned about the process of monitoring cultural burns for desired objectives. This was one of two field days that took place for an annual hybrid fire/fuels monitoring workshop that is co-coordinated by the Northern Rockies Fire Science Network, Northwest Fire Science Consortium, Bureau of Indian Affairs NW Region, and United States Forest Service Region 6 Ecology Program. Training like this helps build relationships and capacity by learning together, sharing knowledge and resources, and helping each other achieve the objectives defined by that community and agency. Monique Wynecoop (USFS, now NW BIA), Melodi Wynne (Spokane Tribal Network), Heather Heward Thibo (University of Idaho), and Sarah Flanary (Rocky Mountain Research Station) all offered their time, knowledge, and guidance to the group regarding the best science surrounding fire effects monitoring, best practices and recommendations for monitoring the effectiveness of meeting cultural objectives of a Tribal community, as well cultural plant and local knowledge.

Products: The video produced by NRFSN titled “Healing the People by Healing the Land with Fire” is available on our website. A blogpost from the Department of the Interior’s Office of Wildland Fire describes the collaboration between NRFSN and the Spokane Tribe. The ongoing bi-annual Newsletter, “TK & Fire in the Northern Rockies and Pacific Northwest” was sent out this August 2023.

Attendance: There were approximately 35 participants attending the workshop, with a majority of the participants being from Tribal agency fuels and food sovereignty programs in NE WA and Northern Idaho. The bi-annual newsletter has an audience of 392.

Feedback: The NW interagency monitoring training field day at the Spokane Tribe Food Sovereignty Garden was a huge success. The field day participants shared a lot of positive feedback throughout

the day, especially sharing interest in helping with cultural burns in the future and of cultural stories from their own tribes surrounding fire and cultural objectives. The relationship building between the different agencies and programs was invaluable and all participants said they learned something new that day. Melodi Wynne, one of our cultural fire practitioners and speakers at the field day, shared that she learned a lot from the field day and participants as well.

Logic Model Outcomes addressed: The NRFSN is a primary resource for fire managers interested in learning about science and for scientists interested in disseminating science (short-term); Tribal and non-tribal fire managers increase awareness of fire-related issues of tribal significance (short-term); Fire scientists and translators increase understanding of the science application process, barriers, and facilitators (short-term); Tribal and non-tribal fire managers communicate more often on cross-jurisdictional fire and fuels management (medium-term); Fire scientists and translators use techniques to deliver science that address barriers to the access, understanding, and use of science (medium-term); Tribal and non-tribal fire managers collaborate to include tribal cultural values in fire and fuels management (long-term).

Section 3: The NRFSN works to connect outcomes following our logic model. For each of the above success stories, we have outlined how we have addressed logic model outcomes. Additionally, feedback as part of our NRFSN survey of participants does not suggest we need to adjust regional priorities.

Video/Vimeo productions	3	559
Requests for Information, Assistance, or Referrals	6	6
Field Trip, Tour, Demonstration or Roadshow	1	49
Field Consultations and Expert Cadres	0	0
Training Sessions	0	0
Leadership Briefings	1	1
Podcasts	0	0
Other: Survey	1	215