



Northern Rockies Fire Science Network

A JFSP FIRE SCIENCE EXCHANGE NETWORK

2026 NORTHERN ROCKIES FIRE STUDENT SUMMIT

WORKSHOP SUMMARY 5 • NOVEMBER 2026

The inaugural Northern Rockies Fire Student Summit was held October 8-10, 2026, at the Lubrecht Experimental Forest outside of Missoula, MT. The summit brought together 20 students, with attendees hailing from the University of Montana Student Association for Fire Ecology Club (UM-SAFE), the University of Idaho Student Association for Fire Ecology Club (UI-SAFE), Montana State University (MSU), and Salish Kootenai College (SKC). The event was organized by a planning team of students from UM-SAFE, UI-SAFE, and MSU, with support from the Northern Rockies Fire Science Network (NRFSN). The goal was to bring together fire students - the next generation of fire managers and scientists - from across the region to learn about fire research, prescribed fire, and fire aviation while making connections with their peers. Over the course of three days, the students did just that, hearing from leading fire scientists, touring Neptune Aviation Services, and burning 45 piles on the Lubrecht Experimental Forest.

MISSOULA FIRE SCIENCES LABORATORY

Having arrived at Lubrecht the night before with a group dinner and s'mores, the students convened Friday morning to hear from four members of the Missoula Fire Sciences Laboratory who drove out from Missoula to share their work. Signe Leirfallom kicked things off with an overview of the Fire Lab's history and ongoing research. Next, Matt Moody discussed his work on [QES-Fire](#), a microscale wildfire model. Matt discussed how his work is used to model fire behavior in the wildland-urban interface (WUI) and showed a video of a live fire experiment done in the Fire Lab. Next, Russ Parsons shared his work on expanding the toolbox for forestry and fire management through [FastFuels](#), a 3D forest mapping platform. Russ's presentation concluded with an interactive virtual reality simulation, allowing students to try the simulation for themselves. Concluding the morning's indoor session, the group headed outside to hear from Sharon Hood about the Fire and Fire Surrogates study at Lubrecht.



Tour at Lubrecht of Fire-Fire Surrogate study sites, led by Sharon Hood



The Northern Rockies Fire Science Network (NRFSN) serves as a go-to resource for managers and scientists involved in fire and fuels management in the Northern Rockies. Funded by the Joint Fire Science Program, NRFSN is one of 15 Fire Science Exchange Networks across the country. The network facilitates knowledge exchange by bringing people together to strengthen collaborations, synthesize science, and enhance science application around critical management issues.



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FIRE AND FIRE SURROGATES AT LUBRECHT

[The Fire and Fire Surrogates Study \(FFS\)](#) is a long-term study funded by the Joint Fire Science Program to assess the effectiveness and ecological impacts of using mechanical fuel treatments (“surrogates”) instead of fire, or in combination with fire, to restore fire-adapted forests. Lubrecht Experimental Forest is one of the original 12 study sites nationwide, and the FFS plots at Lubrecht are among the longest-running fuel treatment experiments in the country. Sharon Hood is a research ecologist with the Fire Lab and has been involved in the FFS project for many years. She began the tour with an introduction to the study objectives and a discussion of the fire history at the site. From there, we moved through each of the different treatment plots, from thin and burn to the control, then to burn-only, and ending with thin only. At the control plot, Sharon led the students into the densely packed small trees, drawing out observations such as the deep duff and the lack of sunlight. The units had been cut in 2001 and 2023 and burned in 2002 and 2024. At the burn-only site, Sharon noted that the unit might look “messy” now and that we can’t expect one or two prescribed burns to return the forest to pre-colonial conditions. The tour ended at the thin-only treatment site, where we discussed the cost of mastication and fuel treatment projects, particularly in light of changes in the timber industry.



Group at Neptune Aviation with an air tanker designed to carry fire retardant. (NRFSN photo)

NEPTUNE AVIATION

After lunch, the group reconvened in Missoula for a tour of the Neptune Aviation facilities. Neptune has over 200 employees and is one of six companies in the U.S. that contract with the Forest Service to provide large tanker planes to fire operations. The students had the opportunity to enter one of the planes and see the tank that holds fire retardant,

which can be loaded in as little as eight minutes. Students also heard about the different career paths and opportunities to become a tanker pilot or work for Neptune more broadly. In the post-event survey, many students highlighted Neptune Aviation as a highlight from the summit. “It was filled with so much information, let alone new information, that I otherwise would’ve had to do a few dives on research to learn. It was amazing,” wrote one student.



Cole Saunders and Leo Janczak from UM-SAFE demonstrate how to assemble a drip torch. (NRFSN photo)

PILE BURNING AT LUBRECHT

Saturday morning brought rain and cold temperatures to the region, but the weather did not dampen students’ enthusiasm to get outside and burn. Under the guidance and supervision of the UM- SAFE Club, we visited Section 13, an entirely student-managed portion of the forest, where they talked us through the plan for the day. The conditions were not favorable for broadcast burning, but did allow for pile burning. Of the students in attendance, over half had some fire experience, whether that was working as a wildland firefighter, burning with the club, or something similar. Some of the group had no experience with live fire, and Saturday provided them an opportunity to use a drip torch for the first time and participate in a burn.

Cole Saunders and Leo Janczak from UM-SAFE gave a short tutorial on setting up a drip torch and how the burning would unfold for the day. Then it was time to light the piles. Over the next few hours, the students burned 45 piles across the unit. During that time, representatives from the [SMART Fires Program](#) arrived in their smoke van to measure and characterize the smoke emitted from the burn. SMART Fires is a statewide partnership aimed at advancing real-time fire science through the development of smart optical sensors and AI/ML



Pile burning day at the Lubrecht Experimental Forest. Bottom left: group photo, bottom right: SMART Fire Program Smoke Van (NRFSN photos)

tools to understand prescribed fire behavior, smoke impacts, and their effects on communities. Students were able to tour the monitoring equipment in the smoke van and ask questions about the project objectives and outcomes.

PRESENTATIONS & WRAP-UP

Slightly soggy, but with spirits still high, the students gathered inside in the afternoon for a few presentations to conclude the program. First, Ella Hall gave a short introduction to the Northern Rockies Fire Science Network, the broader JFSP Fire Science Exchange Network, and the products and activities that NRFSN produces. That was followed by student presentations from the [Montana State University Paleoecology Lab](#) on long-term fire histories and ongoing student research. Finally, Darcy Hammond led the group in a discussion of undergraduate research opportunities and pathways to graduate school.

In a post-event survey, all respondents said they strongly agreed that they would recommend this event to other students, and all responded positively

about having learned something new about fire and having made new connections to fire students outside their own school. As one student wrote, "The summit was amazing, and the people were even better!" The intent is for this to be a recurring annual event, rotating to different university locations across the region.

"Networking with other students and professionals was my favorite part of the event. I left with connections that will help me in my career. I also loved the hands on prescribed fire experience and the tours."

- Anonymous survey comment

ADDITIONAL RESOURCES:

- [University of Montana SAFE Club](#)
- [University of Idaho SAFE Club](#)
- [Perspectives: Preparing the Next Generation through Student Fire Associations](#)
- [Missoula Fire Sciences Laboratory](#)
- [Fire and Fire Surrogate Studies and SageSTEP: The Benefits of Long-Term Fire Research](#)