

Opportunity Title: USFS Fire Ecology Postdoctoral Fellowship: Causes of Fire-Caused Tree Mortality for Successful Prescribed Burning

Opportunity Reference Code: USDA-USFS-RMRS-2024-0072

Organization U.S. Department of Agriculture (USDA)

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A complete application package consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Selected candidate must provide proof of completion of the degree before the appointment can start. Click [Here](#) for detailed information about acceptable transcripts.
- A current resume/CV
- Two educational or professional recommendations. At least one recommendation must be submitted in order for the mentor to view your application.

All documents must be in English or include an official English translation.

Application Deadline 6/7/2024 3:00:00 PM Eastern Time Zone

Description *Applications will be reviewed on a rolling-basis.

USFS Office/Lab and Location: A fellowship opportunity is available with the US Department of Agriculture (USDA) Forest Service (USFS) within the Rocky Mountain Research Station (RMRS located in Missoula, Montana).

At the heart of the U.S. Forest Service's mission is their purpose. Everything they do is intended to help sustain forests and grasslands for present and future generations. Why? Because their stewardship work supports nature in sustaining life. This is the purpose that drives the agency's mission and motivates their work across the agency. It's been there from the agency's very beginning, and it still drives them. To advance the mission and serve their purpose, the U.S. Forest Service balances the short and long-term needs of people and nature by: working in collaboration with communities and our partners; providing access to resources and experiences that promote economic, ecological, and social vitality; connecting people to the land and one another; and delivering world-class science, technology and land management.

The Program conducts national and international cutting-edge work in wildland fire research. The Program's scientists, technicians, and support staff continue a 60+ year legacy of proactively conducting the research we need tomorrow and into the future. By improving fundamental understanding of wildland fire and developing tools and applications, the Fire Sciences Laboratory's research increases the safety and effectiveness of fire, fuel, and smoke management and helps increase the health of our wildlands.

Research Project: This research opportunity will support projects to increase understanding of fire-caused small tree mortality to foster

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successful prescribed burning and identify burning considerations to meet tree mortality-related objectives. Prescribed fire is an important tool for both initial entry and maintenance of treatments intended to reduce risk of high-severity fire. However, tree mortality related concerns can be a major barrier to prescribed burning implementation. This 2-year project will:

- Investigate how climate influences post-fire mortality in small trees;
- Develop fire resistance guidelines for small trees;
- Investigate how fire resistance changes with phenology to influence post-fire tree mortality; and
- Develop predictive mortality models that incorporate drought and season of burn in fire effects decision support systems

We will address these questions by analyzing existing datasets and collecting additional field data. The post-doctoral fellow will research and assist in research design, field data collection, data analysis, and manuscript preparation of results. The post-doctoral fellow will coordinate closely with National Forest System personnel for site selection and feedback.

Learning Objectives: As a result of this training, the participant will improve their knowledge and skills related to forestry, tree physiology, dendroecology, and applied fire ecology and fuels management.

Mentor: The mentor for this opportunity is Sharon Hood (sharon.hood@usda.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: **May 1, 2024.** Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for two years, but may be extended upon recommendation of USFS and is contingent on the availability of funds.

Level of Participation: The appointment is full time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. **The stipend is \$70,000/year plus medical insurance.**

Citizenship Requirements: This opportunity is available to U.S. citizens only.

ORISE Information: This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and USFS. Participants do not become employees of USDA, USFS, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

Questions: Please visit our [Program Website](#). After reading, if you have

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additional questions about the application process please email ORISE.USFS.RMRS@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should be currently pursuing or have received a doctoral degree in the one of the relevant fields (e.g. forest ecology, fire ecology and/or tree physiology). Degree must have been received within the past five years or is anticipated to be received by 5/17/2024.

Preferred skills:

- A background in forest ecology, fire ecology and/or tree physiology and experience or interest in applied ecology and collaborating with natural resource managers
- The ideal candidate will have experience conducting field research
- Demonstrated experience with statistical data analysis in R and scientific manuscript preparation
- Familiarity with forestry field methods, dendrochronology, and/or fire ecology or fuels management and experience leading field crews is preferred

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 5/17/2024 12:00:00 AM.
 - **Overall GPA:** 3.50
 - **Discipline(s):**
 - **Environmental and Marine Sciences** ([5](#))
 - **Life Health and Medical Sciences** ([5](#))
 - **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).