

Opportunity Title: USFS Research Fellowship Reconstructing Forest Fire

Regimes

Opportunity Reference Code: USDA-USFS-2021-0141

Organization U.S. Department of Agriculture (USDA)

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How to Apply *Connect with ORISE...on the GO!* Download the new ORISE GO mobile app in the [Apple App Store](#) or [Google Play Store](#) to help you stay engaged, connected, and informed during your ORISE experience and beyond!

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. All transcripts must be in English or include an official English translation. Click [Here](#) for detailed information about acceptable transcripts.
- A current resume/CV
- Two educational or professional recommendations. Applications need at least one recommendation submitted in order to be viewed by the mentor.

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

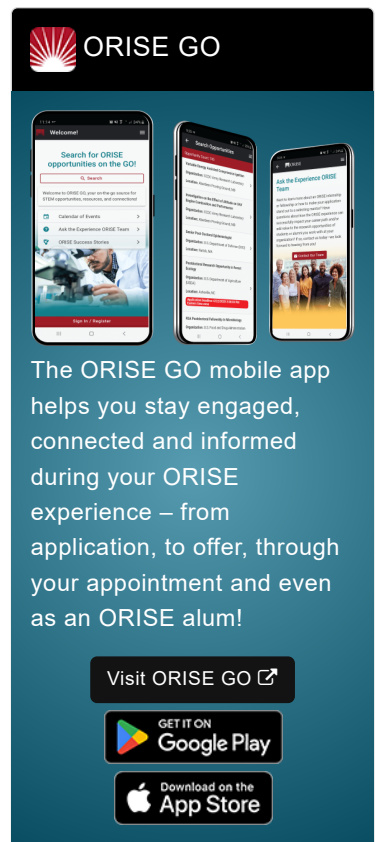
Application Deadline 7/19/2021 3:00:00 PM Eastern Time Zone

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

USFS Office/Lab and Location: A research opportunity is available with the US Forest Service (USFS), Pacific Northwest Research Station located in Corvallis, Oregon.

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 Pacific Northwest (PNW) Research Station is a leader in the scientific study of natural resources. We generate and communicate impartial knowledge to help people understand and make informed choices about natural resource management and sustainability. The Station has 11 laboratories and research centers in Alaska, Oregon, and Washington, as well as 12 active experimental forests, ranges, and watersheds. The PNW Research Station is an integral component of USDA Forest Service Research and Development (R&D), which is the most extensive natural resources research organization in the world. Forest Service R&D is comprised of five regional research stations, the Forest Products



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Laboratory, and the International Institute of Tropical Forestry. For more information about the PNW Research Station, go to <https://www.fs.usda.gov/pnw/>

Research Project: The Fellow will collaborate with a team of PNW scientists to develop a deeper understanding of historical fire regimes across the westside of the Pacific Northwest. There is growing recognition that fire regimes in westside forests are more complex than previously thought and critical uncertainties remain around linkages between historical fire activity and climate. As very few cross-dated fire histories exist across the region, a quantitative knowledge base is needed to guide management decisions around restoration and adaptation strategies for land managers. The fellow will collaborate with the PNWRS team listed below to 1) create cross-dated fire histories from across the western Cascades of Oregon and Washington, 2) characterize variability in fire frequency and stand development patterns across biophysical gradients, and 3) elucidate linkages between climate and fire activity over the last several centuries.

Learning Objectives: The participant will learn advanced techniques in dendroecological reconstructions of historical fire regimes in forests of the western Cascade Mountains in the Pacific Northwest. These techniques include field collection of fire scarred cross-sections and tree cores, development of multi-spatial cross-dated fire chronologies, and statistical analysis of fire-climate relationships. The participant will also learn about the process of federal forest management, the role of partner engagement in collaborative forest restoration, and the coproduction research model with forest managers and key partners in science and research. This partner engagement and research coproduction model will help increase the participants communication and teamwork skills.

The project will provide several opportunities to gain exposure and develop professionally. The fellow will have the opportunity to present at academic conferences, as well as gain regional, national and international exposure. This will allow them to make key connections with researchers working in different forest types around the world and provide broader exposure to fire history and climate research. The fellow will also have the opportunity to share their findings with key partners from local collaborative groups, state and federal land managers engaged in issues surrounding fire in the Pacific Northwest. This opportunity will allow the participant to develop skills in communication and science delivery.

Mentor(s): The mentors for this opportunity are Harold Zald (harold.zald@usda.gov) and Matt Reilly (matthew.reilly@usda.gov). If you have questions about the nature of the research please contact the mentors.

Anticipated Appointment Start Date: July 5, 2021. Start date is flexible and negotiable, and will depend on a variety of factors.

Appointment Length: The appointment will initially be for one year, but may be extended upon recommendation of USFS and is contingent on the

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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 annual stipend will be \$64,649, plus a health insurance stipend. A travel and supplies stipend, and computer will also be provided.**

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 additional questions about the application process please email USForestService@orise.orau.gov and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a master's or doctoral degree in one of the relevant fields, or be currently pursuing one of the degrees with completion by August 31, 2021. Degree must have been received within the past five years.

Candidates must have a valid driver's license.



Preferred skills:

- Demonstrated experience creating cross-dated fire histories in moist, Douglas-fir dominated forests
- Expertise in dendroecological analysis
- Competence in safely using a chainsaw
- Experience with statistical analyses in R
- Demonstrated experience conducting statistical analyses examining climate and tree data
- Evidence of scientific and technical writing for peer-reviewed publication
- Experience conducting ecological field research in forested ecosystems
- Experience communicating with diverse partners and stakeholders

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or anticipated to be received by 8/30/2021 12:00:00 AM.
 - **Overall GPA:** 3.00
 - **Discipline(s):**
 - **Earth and Geosciences** ([1](#)👁)

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- **Environmental and Marine Sciences** ([5](#) )
- **Social and Behavioral Sciences** ([1](#) )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).