Opportunity Title: USDA-FS Fellowship in Forest Restoration Modeling
Opportunity Reference Code: USDA-FS-PSWRS-2025-0059

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-FS-PSWRS-2025-0059

How to Apply ***To submit your application, scroll to the bottom of this opportunity and click APPLY.***

A complete application 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.
  Click here for detailed information about acceptable transcripts.
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional recommendations.

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

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Application Deadline 7/25/2025 3:00:00 PM Eastern Time Zone

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

USDA Forest Service Office/Lab and Location: A fellowship opportunity is available with the US Department of Agriculture (USDA) Forest Service (FS) within the Pacific Southwest Research Station (PSWRS). **This opportunity is remote.**

At the heart of the USDA 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 USDA 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.

Research Project: This research fellowship will use long-term (2002-2019) experimental data from the Goosenest Adaptive Management Area, a study of fuels reduction and forest restoration alternatives for managing east-side ponderosa pine/mixed-conifer forests. The treatments included group selection management to promote structural complexity, making them a useful test of different modeling approaches in the Forest Vegetation

Simulator (FVS). Currently FVS users, which largely consist of federal land managers, have a few different way of modeling complex restoration treatments in the software. However there is not much guidance on which is most accurate, or how examples of calibrating the model to improve its performance This project will A) help calibrate the FVS growth and mortality models and b) advance the modeling of complex treatments to save agencies time and money.

The research fellow's main focus will be performing the FVS runs to compare observed vs. predicted values the 20 year span of the experiment. The fellow would contribute to completing a manuscript in preparation, have a chance to interact with regional land managers to share results, and pursue original research with this dataset. Possible independent research projects include quantifying the biomass benefits of proactive forest management, and quantifying how treatments improved outcomes after the 2021 Antelope Fire which burned over this study. Data are already proofed and formatted with a draft FVS workflow, preparing the fellow for success.

The fellowship would run from June-September 2025. Fellows are not U.S. government employees but instead paid interns through the Oak Ridge of Science and Engineering hosted by the USDA-FS. Due to the short tenure of the fellowship, remote participation is accepted but depending on location the selected candidate may opt for office space in Placerville, Vallejo, Redding, Riverside, or Arcata, California.

Learning Objectives:

- Improve knowledge of issues and science surrounding forest restoration and hazardous fuels reduction
- Advance skills for modeling silvicultural treatments in industry-standard software
- Learn how to communicate the benefits of active forest management in terms of ecosystem services
- Gain advanced data analysis skills in linear modeling and visualization
- Experience collaborating as a key member of a research project team
- Learn about science leadership by pursuing original research

Mentor: The mentor for this opportunity is Christopher Looney (christopher.looney@usda.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: June 1, 2025. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for four months but may be extended upon recommendation of USDA Forest Service 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 anticipated**

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stipend is $5,678 monthly. Fellows receive an additional $680 monthly stipend for health, vision, and dental insurance. The fellow would also have a $500 budget for travel or local conference attendance, such as the California Society of American Forester's Summer Meeting.

Citizenship Requirements: This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR) 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 USDA Forest Service. Participants do not become employees of USDA, USDA Forest Service, 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 ORISE.USFS.PSWRS@orau.org and include the reference code for this opportunity.

Qualifications

The qualified candidate should have received a master's degree in one of the relevant fields (Forestry, Natural Resources, Ecology, Environmental Science, or a related field). Degree must have been received within the past five years.

Candidates with a master's in a different field and a bachelor's degree in one of the above fields are also encouraged to apply.

Preferred skills:

- At least one degree in forestry
- Knowledge of fire-dependent forest ecosystems and management
- Education or experience with the Forest Vegetation Simulator
- Knowledge of data management and analysis
- Experience or interest in learning scientific writing and data analysis a plus
- Education or experience in data management, analysis, and visualization in R a plus

The USDA-FS expects to mentor the fellow to help further develop their skills in these areas.

Point of Contact

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Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Bachelor's Degree or Master's Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Environmental and Marine Sciences** (7 👁)
  - **Life Health and Medical Sciences** (10 👁)

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- **Mathematics and Statistics** (1 👁)
- **Social and Behavioral Sciences** (2 👁)