

**Opportunity Title:** USFS Landscape Ecology Internship at the Pacific Northwest Research Station

**Opportunity Reference Code:** USDA-USFS-2023-0154

**Organization** U.S. Department of Agriculture (USDA)

**Reference Code** USDA-USFS-2023-0154

**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. 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** 6/23/2023 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) at the Pacific Northwest Research Station (PNWRS) located in Wenatchee, Washington.

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.

**Research Project:** This appointment will be filled through the ORISE recent graduates fellowship program. The successful candidate will conduct research on a dynamic research team investigating landscape level changes and future trajectories of western US forest ecosystems. This appointment is well suited for those who have expertise and interest in forest landscape models, fire ecology, landscape ecology, carbon dynamics, climate effects, and decision support modeling. The appointment is located at the USDA Forest Service Research Lab in Wenatchee, Washington (<http://wenatchee.org/>), and will be co-mentored by Dr. Paul Hessburg (PNWRS), Dr. Nicholas Povak (PSWRS), and Dr.

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Tucker Furniss (University of Wyoming).

The appointment provides modeling, coding, and database expertise in support of a complex, multi-model ecological forecasting workflow. The appointment co-leads model development, calibration, and synthesis of the forest succession, fire severity, and climate change components of this workflow. The appointment involves interfacing with collaborators at the Pacific Northwest National Lab to simulate snowpack and hydrology dynamics with landscape hydrology modeling software, and developing and implementing future management scenarios based on input from local tribes, community stakeholders, and land managers. The appointment requires someone who can operate independently while participating in the collaborative culture of the team.

Additional research activities include:

- Gathers, analyzes, and interprets spatial ecological data. Performs quality assurance/quality control assessments. Generates future landscape forecasts and interprets model performance. Calibrates models and develops model applications in new geographies. Develops proposals, writes internal progress reports, and publishes findings in the peer-reviewed literature.
- Incorporates ecological datasets into statistical modeling workflows including multivariate statistics, regression modeling, and machine learning for prediction, interpretation, and synthesis.
- Provides technical advice and expertise on related projects. Keeps updated with latest developments in the ecological literature, relevant modeling literature, computer technology, and landscape management challenges. Assists in developing workflow improvements via program development and scripting routines.

**Learning Objectives:** As a result of this training the participant will improve their skills in ecological simulation modeling, scenario planning, wildfire modeling, landscape ecology, decision support tools, and co-production with stakeholder groups.

**Mentor:** The mentor(s) for this opportunity are Dr. Paul Hessburg ([phessburg@fs.fed.us](mailto:phessburg@fs.fed.us)), Dr. Nicholas Povak ([nicholas.povak@usda.gov](mailto:nicholas.povak@usda.gov)), and Dr. Tucker Furniss. If you have questions about the nature of the research, please contact the mentor.

**Anticipated Appointment Start Date:** As soon as a qualified candidate is identified; start date is flexible (earlier or later).

**Appointment Length:** The appointment will initially be for one year 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.

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**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](mailto:USForestService@orise.orau.gov) and include the reference code for this opportunity.




**Funding Code:** IAA 23-IA-11261925-032

**Qualifications** The qualified candidate should have received a master's or doctoral degree in one of the relevant fields (Forest Ecology, Landscape Ecology, Fire Ecology). Degree must have been received within the past three years.

**Preferred Skills:**

- Experience with ecological modeling, spatial analysis and statistics, GIS software, R coding, and leading published research.
- Familiarity with forest landscape modeling software such as LANDIS-II is preferred, but not required.
- Self-motivated and with a high capacity for writing, research communication, and publication.

**Eligibility Requirements**

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree received within the last 36 month(s).
- **Academic Level(s):** Postdoctoral or Post-Master's.
- **Discipline(s):**
  - **Environmental and Marine Sciences** (4 )
  - **Life Health and Medical Sciences** (2 )
  - **Mathematics and Statistics** (2 )