

Opportunity Title: USFS Postdoctoral Fellowship in Forest Ecosystems

Opportunity Reference Code: USDA-USFS-2022-0081



**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. 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** 2/24/2022 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 U.S. Forest Service (USFS), Pacific Northwest Research Station (PNW), Juneau Forest Sciences Lab located in Juneau, Alaska. The mission of the PNW Research Station is to develop and deliver knowledge and innovative technology to improve the health and use of the Nation's forests and rangelands.

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:** The fellow will collaborate with a multi-disciplinary Alaska-based team investigating how climate influences the spatial and temporal patterns of insect defoliation across southeast Alaska forests by assessing historic and future impacts and effects of defoliation on regional forest ecosystems. An improved understanding of the extent, timing, and climatic drivers of insect outbreaks, accompanied by projections of possible outbreak activity under future climate conditions, will be critical for land managers to anticipate and respond appropriately to ongoing and future defoliation events. Patterns and effects of insect population irruption will be determined using land cover, forest health protection, remote sensing, and sub-annual to decadal climate datasets and modeled into the future using climate change projections. The goal of the team is to promote collaboration across disciplines and engage in research on southeast Alaska forest health issues.

**Learning Objectives:** The fellow will have the opportunity to enhance their project management, analytical, and communication skills by planning work tasks and setting project timelines, performing multi-scale geospatial data analyses, presenting research findings to scientists and land managers at local and national professional meetings, drafting peer-review manuscripts, and contributing to a web-based storyboard of research findings. The fellow will report to the Research Forester at the Juneau Forest Sciences Lab and be mentored by a vibrant multi-disciplinary team. The fellow may explore professional development and training

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opportunities, including travel to meetings, workshops, and conferences (once it is safe to do so).

**Mentor:** The mentor for this opportunity is Kellen Nelson ([Kellen.nelson@usda.gov](mailto:Kellen.nelson@usda.gov)). If you have questions about the nature of the research please contact the mentor.

**Anticipated Appointment Start Date:** April 2022. Start date is flexible and will depend on a variety of factors.

**Appointment Length:** The appointment will initially be for one year, but may be extended an additional year 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. **An annual stipend of \$72,299 will be provided. A health insurance allowance, a travel/training allowance, and \$3,000 for relocation costs will also be provided.**

**COVID-19 Requirements:** The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility, including but not limited to, COVID-19 requirements (e.g. facial covering, physical distancing, testing, vaccination).

**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.

## Qualifications

The qualified candidate should have received a doctoral degree in natural sciences (ecology, biology, environmental science, forestry, or similar), earth sciences, or one of the relevant fields, or be currently pursuing the degree with completion by the start of their appointment. Degree must have been received within the past five years.

Preferred skills:

- Extensive knowledge related to climate effects on populations, communities, and ecosystems.
- Programming experience in R, Python, and possibly with GoogleEarth Engine.
- Extensive experience in GIS/remote sensing including database design and management, and analytical methods such as supervised and unsupervised classification, spatial statistics, time series analysis, machine learning (Random Forest or similar), and parametric and nonparametric statistical modeling.
- A record of publishing scientific articles in peer-review journals.
- Ability to communicate highly technical information to non-technical audiences.
- Strong organizational skills and the ability to balance multiple projects simultaneously.
- Ability to effectively synthesize scientific information, to generate new ideas and methods to accomplish project goals, and a willingness to learn new techniques.
- A collegial and collaborative working style.






## Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 5/31/2022 11:59:00 PM.

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- **Discipline(s):**
  - **Earth and Geosciences** (6 )
  - **Environmental and Marine Sciences** (6 )
  - **Life Health and Medical Sciences** (7 )
  - **Physics** (1 )
  - **Social and Behavioral Sciences** (1 )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).