

**Opportunity Title:** USFS Postgraduate Research Opportunity Evaluating Forest Carbon Models for Policy Development

**Opportunity Reference Code:** USDA-USFS-2023-0122

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

**Reference Code** USDA-USFS-2023-0122

**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. Click [Here](#) for detailed information about acceptable transcripts.
- A current resume/CV, including Cover Letter (please upload with CV/resume)
- 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** 6/9/2023 3:00:00 PM Eastern Time Zone

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

**USFS Office/Lab and Location:** This fellowship is available with the US Department of Agriculture (USDA) Forest Service's (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. The PNW Research Station engages in research to assist all landowners in understanding forest ecosystems and managing them in the face of natural and anthropogenic threats (<https://www.fs.usda.gov/research/pnw>). One of the current research initiatives for the Station is advancing our knowledge of how, and why, forest carbon stocks are changing and how they might change in the future (<https://www.fs.usda.gov/research/pnw/centers/cdri>).

**Research Project:** The agency's monitoring of sequestration and emissions of carbon from forest lands has led to a need for managers and policy-makers to evaluate alternative approaches to managing and regulating forests on the West Coast. The selected participant(s) will collaborate with staff to synthesize recent research on drivers of carbon change on the west coast, assist with improving estimates of key ecosystem components, identify the strengths, weaknesses, and data requirements of alternative simulation models of forest carbon; compare the projections from alternative models with current status and dynamics of regional forests from Forest Inventory and Analysis (FIA) measurements; and help formulate recommendations for a modeling framework that builds on the extensive carbon inventories in the region.

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Under the guidance of a mentor, the participant will be given the opportunity to (1) continue their professional development through immersion in carbon projections to meet regional land management challenges, (2) inform and contribute to decisions regarding forest, watershed, soil, and fire evaluation and management, (3) gain an understanding of complex natural systems and their representation in models, and (4) pursue research related to the intersection of natural resource management and carbon storage in forests and forest products.

**Learning Objectives:** The learning objectives for the project include: understanding the implicit goals and data requirements of alternative state-of-the-art forest ecosystem carbon models, learning to run one or more vegetation dynamics models in contrasting landscapes, and gaining experience in the analysis of large-scale multi-attribute data from permanent inventory plots.

**Mentor:** The mentor for this opportunity is Andrew Gray ([andrew.gray@usda.gov](mailto:andrew.gray@usda.gov)). If you have questions about the nature of the research, please contact the mentor.

**Anticipated Appointment Start Date: 2023.** 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 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.

**Citizenship Requirements:** This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the [Guidelines for Non-U.S. Citizens Details](#) page of the program website for information about the valid immigration statuses that are acceptable for program participation.

**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.

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**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 before July 1, 2024. Degree must have been received within the past five years.

Preferred skills:

- Experience in analyzing forest ecosystem vegetation dynamics
- Demonstrated computing skills for analyzing complex datasets and interpreting output.
- Strong written and verbal communication skills
- Experience in sharing technical natural resource information with decision-makers and researchers through print and presentations

**Eligibility Requirements**

- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or anticipated to be received by 7/1/2024 12:00:00 AM.
- **Academic Level(s):** Graduate Students, Postdoctoral, or Post-Master's.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** ([6](#))
  - **Environmental and Marine Sciences** ([14](#))
  - **Life Health and Medical Sciences** ([3](#))
  - **Mathematics and Statistics** ([3](#))
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).