Opportunity Title: USFS Fellowship on Characterizing Long-Term Trends in Climatic Extremes Using Data from the USDA Forest Service's Experimental Forest and Range Network
Opportunity Reference Code: USDA-USFS-2023-0161

Organization	U.S. Department of Agriculture (USDA)
Reference Code	USDA-USFS-2023-0161
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!

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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	7/31/2023 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) located in Fort Collins, Colorado.

At the heart of the USDA Forest Service's mission is their purpose. Everything they do is intended to help sustain forests and rangelands 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 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 USDA Forest Service's network of Experimental Forests and Ranges (EFRs) is the largest and oldest ecological research network in the United States (https://www.fs.usda.gov/research/forestsandranges). This network of 80+ EFRs has been established progressively since 1908, with many EFRs now over 60 years old.
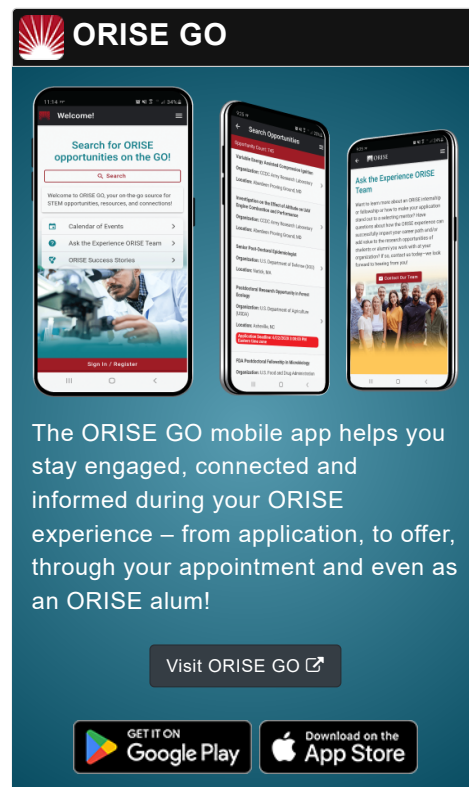
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EFRs are epicenters of research activity, and the vast array of data collected at them has provided critical information to help manage and sustain the Nation's diverse forest and rangeland ecosystems. Climate data in particular are a cornerstone of the collective EFR dataset, with at least 37 EFRs having climate records 20 years long or longer. Stressors such as climate change increase the value of these long-term climate data.

EFR researchers are seeking a Postdoctoral Research Fellow to demonstrate the power of long-term EFR climate data by collaboratively and creatively synthesizing them to characterize climatic change at regional to national scales. A particular focus of the synthesis will be on changes in annual climatic "extremes" (e.g., https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/jgrd.50150), such as maximum and minimum temperature, growing season length, and the maximum number of consecutive rainy and dry days. Other long-term data also abound for many of the EFRs, including hydrology, vegetation, wildlife, and soils data. Another focus of the synthesis will be linking a subset of these additional data to the climate data to shed light on some of the long-term environmental consequences of climatic change.

Learning Objectives: The participant selected for this project will have the opportunity to hone many aspects of their scientific skillset while participating collaboratively with EFR researchers. Activities will include (a) fine-tuning the EFR data synthesis project's objectives and approaches; (b) archiving EFR data in the Forest Service Research Data Archive (https://www.fs.usda.gov/rds/archive/) as needed for the synthesis project; (c) implementing appropriate procedures for managing, standardizing, synthesizing, and visualizing EFR data; (d) running appropriate analyses on EFR data; and (e) leading the writing of two peer-reviewed publications on synthesis results.

Mentor: The mentor for this opportunity is Paula Fornwalt (paula.fornwalt@usda.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: August 2023; start date is flexible (earlier or later).

Appointment Length: The appointment will initially be for two years 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 and will be in the range of $70,000-$75,000 per year.

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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 ORISE.USFS.RMRS@orau.org and include the reference code for this opportunity.

Qualifications

The qualified candidate should have received a doctoral degree in one of the relevant fields (e.g., Ecology, Forestry, Hydrology, Climatology, Soil Science), or be currently pursuing the degree with completion before December31, 2023. Degree must have been received within the past five years.

Preferred Skills:

- Strong analytical skills and demonstrated experience managing, standardizing, synthesizing, analyzing, and visualizing large, disparate natural resources (e.g., climate, hydrology, vegetation, wildlife, soils) data sets with statistical programs such as R and mapping programs such as ArcGIS Pro.
- Strong working knowledge of US forest and rangeland ecosystems.
- Strong writing skills and demonstrated experience lead-authoring peer-reviewed natural resources publications.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 12/31/2023 12:00:00 AM.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (1 👁)
  - **Earth and Geosciences** (14 👁)
  - **Engineering** (1 👁)
  - **Environmental and Marine Sciences** (10 👁)
  - **Life Health and Medical Sciences** (16 👁)
  - **Mathematics and Statistics** (2 👁)
  - **Social and Behavioral Sciences** (1 👁)