

**Opportunity Title:** USFS Post-Fire Watershed Restoration Research Fellowship

**Opportunity Reference Code:** USDA-USFS-2023-0121

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

**Reference Code** USDA-USFS-2023-0121

**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, 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) Rocky Mountain Research Station, located in Fort Collins, Colorado.

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 US Forest Service's Rocky Mountain Research Station's Water and Watersheds Program provides scientific and technical information services to all Forest Service personnel and their partners across the country. Sustained delivery of clean water from forest watersheds depends on protective cover from intact forest vegetation and organic soil horizons and thus, post-fire watershed recovery depends on the pace of revegetation. The primary goal of this project is to support post-fire watershed rehabilitation research.

Core participant activities include collection, preparation and analysis of stream water, ash, soil and vegetation sample. Additionally, the participant



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will measure the growth and survival of planted trees and the recovery of plant cover and biomass in burned watersheds. The participant will measure streamflow, install and maintain stream water monitoring equipment and manage stream and soil data loggers to track seasonal abiotic and chemical changes in field sites and laboratory trials.

**Learning Objectives:** The participant will have the opportunity to build a number of skills in watershed biogeochemistry, ecosystem ecology and land management. The participant will have the opportunity gain quantitative skills in field design of experiments, statistical analysis, data management, chemical analysis.

The participant will have the opportunity to contribute to on-going research that will lead to peer-review scientific publications and application of research findings to land management decisions. The participant will have the opportunity to gain skills in analysis and presentation of scientific findings, written and verbal communication of scientific outcomes.

**Mentor:** The mentor for this opportunity is Charles Rhoades ([charles.c.rhoades@usda.gov](mailto:charles.c.rhoades@usda.gov)). If you have questions about the nature of the research, please contact the mentor.

**Anticipated Appointment Start Date:** May 2023. Start date is flexible and will depend on a variety of factors.

**Appointment Length:** The appointment will initially end in October 2023, 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 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 bachelor's, master's, or doctoral degree in one of the relevant fields, or be currently pursuing one of

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the degrees.

**Appropriate Skills:**

- Enrollment/completion of BS degree in hydrology, soils, forestry, ecology, biology, or related field.
- Experience with field research associated with some aspect of ecosystem ecology, soil or hydrology.
- Demonstrated capacity to conduct, synthesize and communicate research.
- Expertise or demonstrated interest in soil nutrient cycling, water quality, streamflow, plant ecology, ecosystem restoration or wildfire monitoring or research are assets.
- Ability to prepare detailed, accurate and legible field notes and labels.
- Familiarity with handheld GPS units and mapping software.
- Punctuality, dependability, attention to detail.
- Excellent physical condition and experience and interest in hiking, backcountry travel and first aid.
- Valid driver's license. Experience operating and recovering 4-wheel drive vehicles is preferred.

This research opportunity requires strenuous physical exertion, such as hiking with heavy field gear over steep forested terrain. Field research is conducted in remote, isolated areas and in inclement (rainy, cold, and hot) weather conditions. Activities will require daily travel to field sites with potential for overnight camping. Participants will practice safe work guidelines according to the USFS Covid-19 policies.

**Eligibility Requirements**

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree.
- **Academic Level(s):** Graduate Students, Post-Bachelor's, Postdoctoral, Post-Master's, or Undergraduate Students.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** ([3](#))
  - **Earth and Geosciences** ([3](#))
  - **Environmental and Marine Sciences** ([6](#))
  - **Life Health and Medical Sciences** ([7](#))