

**Opportunity Title:** USFS Post-Fire Stream Biogeochemistry Research

**Opportunity Reference Code:** USDA-USFS-RMRS-2024-0036

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

**Reference Code** USDA-USFS-RMRS-2024-0036

**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** 2/16/2024 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) within the Rocky Mountain Research Station (RMRS) 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 primary goal of this project is to support post-fire watershed rehabilitation research.** There is a need for an experienced research technician to assist with biogeochemical research. The candidate shall have experience with field research in ecosystem ecology, disturbance ecology, soil or hydrology. The candidate should have demonstrated capacity to collect, synthesize and communicate research. Expertise or demonstrated interest in soil nutrient cycling, plant ecology, ecosystem restoration or wildfire studies are assets. The candidate will sample stream




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streamwater, soil, and soil solution for nutrients and carbon. Install, sample, and maintain sample monitoring wells, ISCO stream samplers and stream sensors within burned and restored stream reaches. Streamwater sampling will involve both periodic grab samples and storm event sampling. Soil and streamwater biogeochemical patterns will be compared with nearby unburned reference areas and sites at the Fraser Experimental Forest.

**Primary Duties:**

- Collection, preparation and analysis of stream water, ash, and soil samples
- Stream sampling with ISCO samples and other sensors, and streamflow measurements
- Surveying the effects of wildfire and prescribed burn treatments throughout watersheds

**Learning Objectives:** The participant will have the opportunity to build number of skills in watershed biogeochemistry, ecosystem ecology and land management. The participant will have the opportunity to gain hands-on skills constructing, installing, managing and repairing ISCO streamwater samplers, CDOM sensors, stream stage sensors, data loggers and associated data collection and management tools as well as various statistical analysis and data management approaches. The participant will have the opportunity to contribute to on-going research that will lead to technical reports, 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: March 4, 2024.** Start date is flexible and will depend on a variety of factors.

**Appointment Length:** The appointment will initially be for 7 months 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 of \$3,360- \$3,840 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

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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](mailto:ORISE.USFS.RMRS@orau.org) and include the reference code for this opportunity.

**Qualifications** The qualified candidate should have received a bachelor's degree in one of the relevant fields (hydrology, soils, forestry, ecology, biology). Degree must have been received within the past five years.

**Preferred skills:**

- Ability to prepare detailed, accurate and legible field notes and labels.
- Familiarity with handheld stream monitoring sensors, 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.
- Research requires strenuous physical exertion, such as hiking with heavy field gear over steep forested terrain. Research is often done in remote, isolated areas and in inclement (rainy, cold, and hot) weather conditions. Individuals will practice safe research guidelines according to the USFS Covid-19 policies.

- Eligibility Requirements**
- **Degree:** Bachelor's Degree received within the last 60 month(s).
  - **Discipline(s):**
    - **Environmental and Marine Sciences** ([Z](#) [👁](#))
    - **Life Health and Medical Sciences** ([Z](#) [👁](#))
  - **Age:** Must be 18 years of age
  - **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).