

3-year Post-doctoral Research Hydrologist/Geomorphologist in Post-fire Watershed Restoration

We seek a postdoctoral researcher focused on the long-term hydrologic and geomorphic responses to wildfire with and without management interventions. The position will be part of a large team across the western U.S and based at the Forest Service Pacific Southwest Research Station in Arcata, CA. The selectee will synthesize data collected from past post-wildfire experiments and contribute to new lines of research. We anticipate a three-year position, subject to continued funding and selectee's performance.

We expect the selectee to be involved in three components of a widely scoped, well-supported study:

- 1) Synthesis of long-term post-fire recovery of watersheds. This may include:
 - Analysis of post-fire runoff and sediment data across multiple locations and spatial scales.
 - Contributing to data collection and analysis of an ongoing field study.
 - Development of additional studies related to post-fire watershed recovery.
- 2) Understanding impacts of post-fire salvage logging and other post-fire restoration activities on soils, vegetation, runoff, and sediment delivery.
 - Analysis of post-fire surface runoff and sediment delivery data from field studies.
 - Contributing to data collection and analysis of an ongoing field study.
 - Developing user-focused tools or applications stemming from this and related studies.
- 3) Developing new studies to explore applied research questions. This aspect is flexible within the scope of the larger study. Some possibilities:
 - Understanding water balance distribution and dynamics throughout the recovery period and as affected by post-fire watershed restoration activities.
 - Quantifying carbon stores and fluxes in soils and streams across burned, managed, and unburned/unmanaged locations. Opportunities also exist for understanding nutrient (C&N) dynamics following post-fire and meadow restoration.
 - Implementing new studies related to post-fire restoration, post-fire recovery, or wildfire reburns across a range of possible disciplines (hydrology, geomorphology, biogeochemistry, engineering, ecology, modeling, remote sensing) across new or existing (CA, AZ, CO, NM, ID, and WA) sites.
 - Contributing to development of end-user focused applications or tools such as syntheses, runoff and erosion models, or guidance documents.

Other details

The position will be filled at a grade of GS-11 or GS-12. Competitive benefits include salary set by OPM for the location, a well-balanced work-life schedule, paid time off, and insurance. Occasional overnight travel to field sites or conferences will be required. Mentoring opportunities may be available. Results will be reviewed by the supervisor and other project staff prior to their submission for publication or other final product. Alternate duty stations would be considered; include preferred alternate location and explanation in the cover letter if warranted.

Qualifications

U.S. citizenship and a PhD in hydrology, geomorphology, or closely related field are required. Relevant experience analyzing empirical watershed data is also required, and experience drawing conclusions from multi-year data sets from burned watersheds is preferred. We seek someone with strong self-direction and the ability to thrive within the diverse, equitable, and inclusive Forest Service work environment. Additional requirements include a pre-appointment background check, a state motor vehicle license, a clean driving record, and the ability to work extended periods in and travel over rough terrain carrying field gear (up to 40 lbs).

To apply

Please email a single pdf consisting of a: cover letter, CV, research statement (2 pp max), PhD transcripts, and current contact information for three references to Joe Wagenbrenner (joseph.wagenbrenner@usda.gov) by 29 December 2023.