



# USDA Forest Service Pacific Southwest Research Station

## Outreach Notice

### Research Hydrologist, GS-1315-12/13

The USDA Forest Service, Pacific Southwest Research Station (PSW) is seeking a candidate for a Research Hydrologist within the Water, Air, and Soil Team of the Ecosystem Function and Health (EFH) Program. The scientist will provide expertise to identify and characterize the impacts of land management practices and vegetation composition on hydrological processes in forest and shrubland habitats. The primary geographic focus of the scientist's research program will be the Southern Sierra Nevada and Southern California landscapes.

This is a permanent, full-time position. The position will be located at the Pacific Southwest Research Station in Davis or Riverside California. The position requires a PhD degree in hydrology, forest hydrology, biogeochemistry, or related field, with postdoctoral experience preferred. The purpose of this Outreach Notice is to inform prospective applicants of this upcoming opportunity. To express interest in this position, please complete the attached voluntary Outreach Interest Notice and return to Megan Manoguerra by close of business on July 10, 2019. For questions about the position please contact Dr. Chrissy Howell, 510-883-8839 or [chrissy.a.howell@usda.gov](mailto:chrissy.a.howell@usda.gov)

#### **Brief description of duties associated with this position:**

The scientist will provide expertise to identify and characterize the impacts of land management practices, harvesting, vegetation composition, and fire on streamflow, sedimentation, and associated hillslope and watershed processes in forest and shrubland habitats. The scientist serves as part of a research team and contributes to each of the EFH problem areas. The assigned areas of research are comprised of: (1) determining the controls on streamwater sources, flowpaths, and water quality, (2) measuring, understanding, and modeling basic hydrologic processes such as transpiration and streamflow, and (3) developing hydrologic models to scale hillslope and watershed hydrologic and biogeochemical processes in time from hours to decades and in space from plots to catchments. The scientist is an authority on watershed hydrology, and large-scale hydrologic modeling. Research includes: (1) assessing the sources and residence times of water and sediment in headwater catchments, (2) assessing vegetation and topographic controls on the hydrograph, including the importance of fire and forest tree species loss on water quantity and biogeochemical cycling, (3) assessing the impact of increasing hydroclimatic variability on water quality and quantity, and (4) applying existing measurements and modeling approaches for analysis of the impacts of land use on water, sediment and nutrient fluxes. The research involves a combination of field studies and the development of analytical, conceptual, and physical models. Responsibility for implementing the research and communicating and transferring the results rests with the scientist with guidance from the supervisor.

Long-term research in the Sierra Nevada and Southern California are a core component of PSW's watershed research. The scientist is an expert on tools and technology required to monitor climate and hydrologic parameters, and oversees long-term research projects where high quality data are collected. The scientist oversees research efforts on on-going studies in California including instrumented

watersheds on the Kings River Experimental Watersheds (KREW), on the Sierra National Forest in the southern Sierra Nevada, and the San Dimas Experimental Forest on the Angeles National Forest in southern California. The scientist also conducts research projects in the western United States on forest and shrubland hydrology, particularly the effects of forest harvesting and landscape management practices on streamflow sedimentation, as well as biological and chemical processes in watersheds. Previous watershed studies have examined the effects of forest restoration treatments on water quality, soils, and ecohydrology which have provided a wealth of information to help evaluate and understand environmental impacts in western forests and shrublands. Results are used regularly by state and federal agencies charged with regulating forest practices, along with university researchers, private consultants, non-governmental organizations, timber companies, and the public.

The scientist collaborates in the design and implementation of new large-scale experiments to assess the long-term health of watersheds, as well as the interactions among forest restoration activities, modern forestry practices, long- and short-term climatic variation, and post-treatment responses. The assignment includes collaboration with scientists on other hydrologic studies as appropriate.

**About PSW:**

PSW is one of several research stations in the research and development (R&D) arm of the Forest Service, a component of the U.S. Department of Agriculture, and works at the forefront of science to improve the health and use of our Nation's forests and grasslands. The work focuses on informing policy and land-management decisions, whether it addresses invasive plants and insects, degraded river ecosystems, or sustainable ways to manage forests, shrublands, and grasslands. Our researchers work independently and with a range of partners, including other agencies, academia, nonprofit groups, and industry. The information and technology produced through basic and applied science programs is available to the public for its benefit and use.

**How to apply:**

The purpose of this Outreach Notice is to determine the potential applicant pool for this position and to establish the appropriate recruitment method and area of consideration for the advertisement. ***If you are interested in applying for this position***, complete the attached Outreach Notice Response Form and return it to Megan Manoguerra by close of business July 10, 2019. Email:

[megan.v.manoguerra@usda.gov](mailto:megan.v.manoguerra@usda.gov)

***This outreach form does not constitute an application.*** The vacancy announcement will appear on the [USAJOBS website](#). USDA is an equal opportunity provider and employer.



# Outreach Response Sheet

**Research Hydrologist GS-1315-12/13**

**USDA Forest Service, Pacific Southwest Research Station**

800 Buchanan Street, Albany, CA 94710. Please submit outreach response to Megan Manoguerra by close of business July 10, 2019. Email: [megan.v.manoguerra@usda.gov](mailto:megan.v.manoguerra@usda.gov) Phone: 530-759-1725

Name:

Date:

Mailing Address:

Phone:

E-Mail:

List all duty Locations you are interested in (Davis or Riverside):

Are you a current Federal employee?  Yes  No

If you answered "yes" to the question above:

Current agency employed with:

Enter your current position title:

Series:

Grade:

Location:

Indicate the type of appointment you are currently under:

(Career, Career-Conditional, Excepted, Excepted VRA, Temporary, Term, PWD, Other)

If you answered "no" to the question above:

Current employer:

Enter your current position title:

How did you find out about this outreach notice?

If you are not a current permanent (Career or Career-Conditional) employee, are you eligible to be hired under any of the following special authorities?

- |   |   |
|---|---|
| <input type="checkbox"/> Person with disabilities   | <input type="checkbox"/> Disabled veteran with 30% compensable disability |
| <input type="checkbox"/> Veterans Recruitment Act   | <input type="checkbox"/> Veterans Employment Opportunities Act of 1998    |
| <input type="checkbox"/> Pathways Program   | <input type="checkbox"/> Former peace Corps Volunteer                     |
| <input type="checkbox"/> Other special hiring authorities (please state the appointment you are eligible for) |   |

**Thank you for your interest in our vacancy.**

USDA is an equal opportunity provider and employer.