

**Opportunity Title:** USDA-ARS Postdoctoral Fellowship in Hydrology

**Opportunity Reference Code:** USDA-ARS-2021-0106

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

**Reference Code** USDA-ARS-2021-0106

**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 consists of:

- An application
- Transcripts – [Click here for detailed information about acceptable transcripts](#)
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional recommendations

All documents must be in English or include an official English translation.

**Application Deadline** 6/15/2021 3:00:00 PM Eastern Time Zone

**Description** *\*Applications are reviewed on a rolling-basis and this posting could close before the deadline.*

**ARS Office/Lab and Location:** A postdoctoral research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS) located in Oxford, Mississippi.

The Agricultural Research Service (ARS) is the U.S. Department of Agriculture's chief scientific in-house research agency with a mission to find solutions to agricultural problems that affect Americans every day from field to table. ARS will deliver cutting-edge, scientific tools and innovative solutions for American farmers, producers, industry, and communities to support the nourishment and well-being of all people; sustain our nation's agroecosystems and natural resources; and ensure the economic competitiveness and excellence of our agriculture. The vision the agency is to provide global leadership in agricultural discoveries through scientific excellence.

**Research Project:** The research is expected to advance knowledge of water management and agroecosystem sustainability in the Lower Mississippi River Basin. Research will improve understanding of water and gas fluxes from different management regimes within agricultural systems and utilize geospatial and remote sensing datasets to assess agroecosystem sustainability at the regional scale.

Appointment activities will include:

- Collaborating with USDA-ARS research scientists to maintain eddy-covariance towers at several research sites. The participant will analyze data from towers to answer research questions about agroecosystem sustainability.
- Utilizing geospatial and remote sensing datasets to evaluate research questions related to weather and climate patterns, agricultural production, and environmental sustainability in the Lower Mississippi River Basin
- Participating in the Long Term Agroecosystem Research (LTAR) Network in the eddy flux and remote sensing/GIS working groups

**Learning Objectives:**



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- Gain valuable experience collaborating with an interdisciplinary research team addressing the sustainability and environmental aspects of agriculture
- Develop skills in experimental design, data collection, and data management in ecohydrology

**Mentor(s):** The mentor for this opportunity is Lindsey Yasarer ([lindsey.yasarer@usda.gov](mailto:lindsey.yasarer@usda.gov)). If you have questions about the nature of the research please contact the mentor(s).

**Anticipated Appointment Start Date:** May 2021. Start date is flexible and will depend on a variety of factors.

**Appointment Length:** The appointment will initially be for one year, but may be renewed upon recommendation of ARS 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 and Lawful Permanent Residents (LPR) 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 ARS. Participants do not become employees of USDA, ARS, 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 [USDA-ARS@ornl.gov](mailto:USDA-ARS@ornl.gov) and include the reference code for this opportunity.



## Qualifications

The qualified candidate should have received a doctoral degree in one of the relevant fields.

Preferred skills:

- Use of R Programming Language, Python or other statistical analysis software/language
- Use of Geographic Information Systems, geostatistical techniques
- Operation and utilization of GPS systems for navigation
- Operation and utilization of eddy-covariance sensors and data loggers
- Planning and execution of soil, climate, and hydrologic data collection using a variety of field methodologies





## Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (1 )
  - **Earth and Geosciences** (8 )

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- **Engineering** (4 )
- **Environmental and Marine Sciences** (5 )
- **Life Health and Medical Sciences** (4 )
- **Physics** (1 )