Opportunity Title: Hydrologist/Water Quality Research Postdoctoral Opportunity
Opportunity Reference Code: ARS-DWMRU-2015-0056

Organization U.S. Department of Agriculture (USDA)

Reference Code ARS-DWMRU-2015-0056

How to Apply A complete application package consists of:

- A complete application
- Official academic transcript(s) – scanned copies are acceptable
- A current resume/CV

If you have questions, please send an email to USDA-ARS@orau.org.

Description A Hydrologist Postdoctoral Research opportunity is available with the U.S. Department of Agriculture (USDA) Agricultural Research Service (ARS) Delta Watershed Management Research Unit (DWMRU) in Jonesboro, Arkansas. The selected applicant will conduct water quality research on agricultural production fields. This includes but is not limited to:

- deploying, troubleshooting and maintaining field sensors
- analyzing laboratory results
- using existing water quality models (eg. APEX, AnAGNPS) to verify and validate data collected
- authoring peer-reviewed journal articles related to research findings
- presenting findings at national and international meetings
- modeling of water quality dynamics with existing models

Results of research will increase current understanding of nutrient management practices in row crop agriculture common in the Lower Mississippi River Basin. The long term objective of this research is to develop an improved understanding of nutrient movement from edge-of-field to local and regional waterways through field validation and improved modeling. Ultimately, knowledge obtained from this research will facilitate the development of sound, science-based management strategies that will improve production efficiency, minimize costs, and contribute to sustained row crop production. Research will yield a series of documentable additions to knowledge of production practices on water quality in refereed journals that are of considerable interest to the scientific community and farmers.

The appointment is full time for one year and may be renewed upon the recommendation of ARS and the availability of funding. The participant must show proof of health and medical insurance. Health insurance may be obtained through ORAU/ORISE. **The participant does not become an employee of ARS or ORISE.**

While participants will not enter into an employment relationship with ARS, this position requires a pre-employment check and full background investigation.

This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals.

This is an equal opportunity program open to all qualified individuals without regard to race, color, age, sex, religion, national origin, mental or

physical disability, generic information, sexual orientation, or covered veteran's status.

For additional information about the ARS Research Participation Program, please visit http://www.orise.orau.gov/usda-ars.

Qualifications

To be eligible, applicants must have received a doctorate degree in engineering, environmental sciences, water quality, hydrology or related field (all but dissertation will be considered) within five years of the desired starting date.

Preferred skills include:

- Complexity of the research requires the incumbent to possess a multidisciplinary approach and a broad understanding of both applied and basic scientific principles and techniques.
- The research assignment further requires an extensive knowledge of engineering, geology, hydrology, water quality, environmental science, biology, and chemistry.
- The selected applicant must have the ability to successfully interact with a variety of people.
- The selected applicant will employ sophisticated, basic and applied research techniques including deploying, troubleshooting and maintaining field sensors; analyzing laboratory results; using water quality models; and shows evidence of manuscript preparation and publication.

Eligibility Requirements

- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (1)
  - **Earth and Geosciences** (7)
  - **Engineering** (6)
  - **Environmental and Marine Sciences** (6)
  - **Life Health and Medical Sciences** (6)
  - **Physics** (2)