

Opportunity Title: USDA-ARS Fellowship in Assessments of Soil Health and Water Quality in the Lower Mississippi River Basin

Opportunity Reference Code: USDA-ARS-SE-2023-0473A

Organization U.S. Department of Agriculture (USDA)

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A complete application 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. 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 3/1/2024 3:00:00 PM Eastern Time Zone

Description *Applications are reviewed on a rolling-basis.

ARS Office/Lab and Location: A 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 of the agency is to provide global leadership in agricultural discoveries through scientific excellence.

Research Project: The research mission of the USDA-ARS Water Quality and Ecology Research Unit is to study impacts of agricultural practices and conservation measures on water and soil quality, as well as ecosystem services. The research is expected to advance knowledge of soil health from samples within the Lower Mississippi River Basin. Research will improve knowledge of soil nutrients and their transport to improve water quality in the Gulf of Mexico.

- The participant will collaborate with USDA-ARS research scientists to collect and analyze soil and sediment samples from several field and watershed research sites. Participant will dry and grind samples and analyze for physical and chemical characteristics.
- The participant will be trained to conduct greenhouse gas emission

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sample collection and analyses to support soil health assessments.

- The participant will collaborate on a long-term agroecosystem study examining changes in soil health among fields with various conservation practices.
- The participant will collect and/or analyze water samples for nutrient and/or pesticide analyses from research sites.

Learning Objectives:

- The participant will gain valuable experience with an interdisciplinary research team addressing the sustainability and environmental aspects of soil health.
- The participant will develop skills in experimental design, data collection, and data management in soil science, biogeochemistry, and ecology.

Mentor(s): The mentor for this opportunity is Matt Moore (matt.moore@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: **Early 2024.** 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 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 ORISE.ARS.Southeast@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should currently be pursuing a bachelor's degree and have studied or have interest in one of the relevant disciplines.

Preferred skills:

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- Time management: punctual and able to devote hours to assigned tasks
- Dependable: thorough, trustworthy, and provide a high level of attention to detail
- Able to perform research independently under the guidance of a mentor
- Willing and capable of being trained in appropriate soil health assessment and water quality techniques

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Currently pursuing a Bachelor's Degree.
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([2](#))
 - **Engineering** ([1](#))
 - **Environmental and Marine Sciences** ([3](#))
 - **Life Health and Medical Sciences** ([6](#))