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Opportunity Title: MAR Research Support at EPA
Opportunity Reference Code: EPA-NSSC-0008-53

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-NSSC-0008-53

How to Apply Click HERE to apply!

Description The EPA National Student Services Contract has an immediate opening for a full time MAR Research Support at EPA position with the Office of Research and Development at the EPA facility in Ada, OK.

The Office of Research and Development at the EPA supports high-quality research to improve the scientific basis for decisions on national environmental issues and help EPA achieve its environmental goals. Research is conducted in a broad range of environmental areas by scientists in EPA laboratories and at universities across the country.

What the EPA project is about

The Center for Environmental Solutions and Emergency Response (CESER) plans, coordinates and conducts an applied, customer-driven, national research and development program to improve decision making by EPA, federal, state, tribal and local agencies, when faced with challenging environmental problems in the built environment. Within CESER, the Groundwater Characterization and Remediation Division (GCRD) located in Ada, Oklahoma conducts basic and applied research to understand processes affecting the quality and availability of groundwater and to evaluate and develop strategies and technologies to protect groundwater resources. Scientists conduct research to evaluate groundwater flow and factors influencing the fate and transport of anthropogenic and naturally occurring contaminants in the subsurface and the potential for water reuse. Scientists also conduct research focused on ecosystem processes and manipulations that can be used to achieve restoration goals. Researchers also provide technical support to federal and state environmental regulators on issues regarding subsurface contamination, contaminant fluxes to other media (such as surface water and air), and ecosystem restoration.

To support these activities, laboratories are equipped with state-of-the-art analytical instrumentation for chemical characterization of ground water and surface water. The analytical function of the Division is critical to supporting the research and technical assistance mission of the laboratory. Currently a research effort for GCRD is understanding the effects of managed aquifer recharge (MAR) on groundwater quantity and quality, in addition to understanding the fate of contaminants infiltrating into and through the vadose zone. Nationally MAR is becoming a viable option for augmenting groundwater protecting against saltwater intrusion. MAR is like aquifer storage and recovery (ASR) however, MAR typically uses natural processes to infiltrate a source water into the subsurface. The Arbuckle-Simpson aquifer (ASA) has been identified as a candidate for MAR and ASR. Under the Safe and Sustainable Water Resources (SSWR) program GCRD will evaluate the impact of MAR on groundwater quality and quantity in the ASA. The objectives of this research effort are:

- Determine the magnitude and impact of direct recharge of overland surface runoff on groundwater quality and quantity in a rural karst setting.
- Evaluate the use of relatively simple and easily transferable hydrogeologic methods and geophysical techniques to estimate the overall contribution of the managed recharge to groundwater.
- Determine and evaluate changes in groundwater quality.

EPA has developed a quality assurance plan for the project. The team member will adhere to quality assurance and quality control plan of the project (QAPP Title: Evaluation of Enhanced Aquifer Recharge Using Hydrogeologic, Geophysical (Surface and Borehole) and Geochemical Methods in the Arbuckle-Simpson Aquifer)"

What experience and skills will you gain?

As a team member, you will assist the CESER MAR research team with the research and administrative duties required to fulfill its commitments to MAR and stormwater research areas under the SSWR program.

How you will apply your skills

Research responsibilities will include:

- General assistance in the laboratory, including preparation for field trips; log in/receipt of samples for processing after field trips; help maintain laboratories; help maintain equipment.
- Collecting water and soil/sediment samples, hydrogeological data, and geophysical data.
- Conducting analysis of soil/sediment samples, water samples, hydrogeologic and geophysical data.
- Data management activities.
- Document methods and quality assurance/quality control procedures employed in a laboratory notebook.
- Draft written material (including text, tables and figures) to describe the methods and results of the scientific process undertaken to address key research questions.

Management and Administrative responsibilities will include:

- Gather information and develop tables, spreadsheets, presentations, and graphics in response to needs of the research team.
- Assist the mentor in addressing a variety of research team needs using expertise and ability to collaborate with colleagues and other researchers in a professional environment.
- Establish and maintain a variety of electronic files and laboratory/field notebooks.
- Take and document all required training courses, including laboratory safety, Quality Assurance/Quality Control, and EPA mandatory training courses. QA orientation shall be provided by the EPA Division QAM.

Other responsibilities will include:

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- Assist in responding to requests that require short turn-around times and attention to detail.
- Work with the research team to gather information when required, perform a variety of analyses using computer programs, and communicate results clearly to other collaborators.
- Attend meetings, provide requested feedback on data calls, and communication with the research team.

Required Knowledge, Skills, Work Experience, and Education

- Demonstrated course work in one or more of the following areas: field camp, geochemistry, carbonate geology, analytical chemistry, pedology, soil chemistry, soil physics, surveying, hydraulics or aquatic chemistry;
- Demonstrated experience conducting laboratory/field sample collection, sample preparation and analysis for water and soil/ sediment;
- Proficiency in oral and written communication in English;
- Demonstrated ability to work independently and conduct data analysis and evaluation;
- Demonstrated familiarity with PC computers and experience with Microsoft Word, Excel, and PowerPoint;
- Highly organized; experienced in administration support functions (i.e., recordkeeping, meeting organization) and managing records (electronic and paper);
- Demonstrated ability to collaborate with others as part of a team; and
- Must be able to lift and carry 50 pounds over uneven terrain.

Location: This job will be located EPA's facility in Ada, OK.

Salary: Selected applicant will become a temporary employee of ORAU and will receive an hourly wage of $23.13 for hours worked.

Hours: Full-time.

Travel: It is anticipated that travel by the team member may be required, including overnight travel.

Expected start date: The position is full time and expected to begin September 2024. The selected applicant will become a temporary employee of ORAU working as a contractor to EPA.

For more information, contact EPANSSC@orau.org*. Do not contact EPA directly.*

Qualifications

- Be at least 18 years of age **and**
- Have earned at least a BS degree in geology (geochemistry, hydrogeology, or geophysics), chemistry (analytical chemistry), soil science (soil chemistry, soil physics, or soil processes), or environmental engineering (water related disciplines). from an accredited university or college within the last 24 months **and**
- Be a citizen of the United States of America or a Legal Permanent Resident.

EPA ORD employees, their spouses, and children are not eligible to

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participate in this program.

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Bachelor's Degree received within the last 24 month(s).
- **Overall GPA:** 2.00
- **Discipline(s):**
  - **Business** (11 👁)
  - **Chemistry and Materials Sciences** (12 👁)
  - **Communications and Graphics Design** (6 👁)
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Life Health and Medical Sciences** (51 👁)
  - **Mathematics and Statistics** (11 👁)
  - **Other Non-Science & Engineering** (13 👁)
  - **Physics** (16 👁)
  - **Science & Engineering-related** (2 👁)
  - **Social and Behavioral Sciences** (30 👁)

Affirmation I certify that I am at least 18 years of age; a recent graduate with at least a BS degree in geology (geochemistry, hydrogeology, or geophysics), chemistry (analytical chemistry), soil science (soil chemistry, soil physics, or soil processes), or environmental engineering (water related disciplines).from an accredited university or college within the last 24 months; a citizen or a Legal Permanent Resident of the United States of America; and not a current employee of EPA ORD or the spouse or child of an EPA ORD employee.

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