

**Opportunity Title:** Geocomputation Assessment Specialist

**Opportunity Reference Code:** EPA-NSSC-0008-24

**Organization** U.S. Environmental Protection Agency (EPA)

**Reference Code** EPA-NSSC-0008-24

**How to Apply** Ready to send share your interest with EPA scientists?

- Submit application and supporting documents by clicking on Apply Now button.
- *For more information, contact* EPAjobs@orau.org. Do not contact EPA directly.
- Check out our website at: <https://www.orau.org/epa/jobs.html>

**Description** The EPA National Student Services Contract has an immediate opening for a full time Geocomputation Assessment Specialist position with the Office of Research and Development at the EPA facility in Cincinnati, OH.

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**

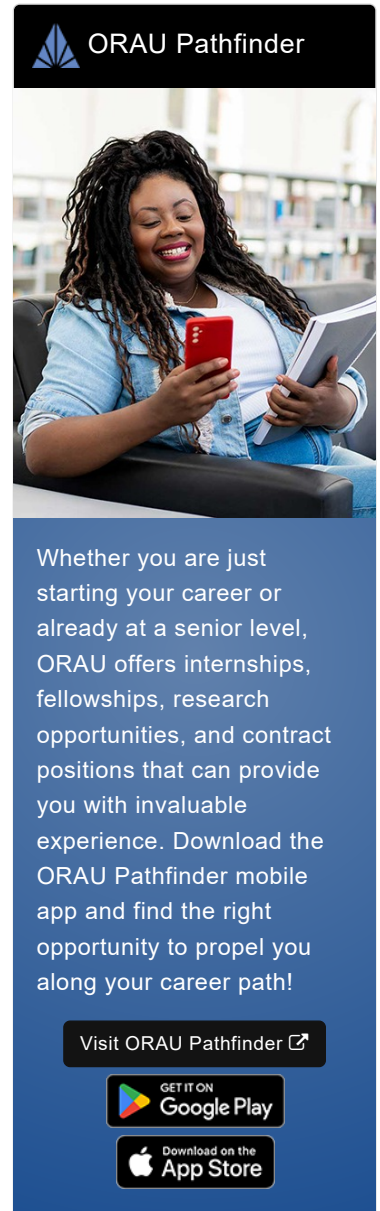
The Center for Environmental Solutions and Emergency Response (CESER) plans, coordinates and conducts an applied, customer-driven, national research and development program to improve decision making by EPA, federal, state, tribal and local agencies, when faced with challenging environmental problems in the built environment. Within CESER, the Land Remediation and Technology Division (LRTD) plans, coordinates and conducts an applied, national, customer-driven research program that delivers innovative and effective technologies, guidance, and tools to manage the nation's land resources in a more sustainable and productive manner.

One research program in LRTD focuses on managing contamination from underground storage tanks. There are more than 550,000 active Underground Storage Tanks (USTs) nationwide storing petroleum and other hazardous substances, and about 55,000 leaking underground storage tanks. Releases from underground storage tanks pose a threat to ground water and drinking water supplies nationally. Additionally, this infrastructure is especially vulnerable to extreme precipitation events.

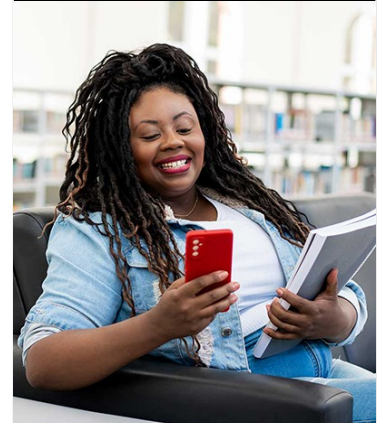
#### **What experience and skills will you gain?**

Controlling contamination from UST sites is conditional on a number of factors.


These factors have been included in the DRASTIC model. This model is built on seven geospatial data layers that include Depth of water, net Recharge, Aquifer media, Soil media, Topography, Impact of vadose zone, and hydraulic Conductivity. This research will build on this model to better understand contaminant transport and options in controlling contamination,



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under a range of conditions, including extreme precipitation events. This vulnerability model will provide a dynamic representation of the relative risk to ground water from an UST release. Additionally, this model will enhance the conceptual and predictive capabilities in understanding the role of flooding on contaminant transport and impact to water supplies. These risks include potential impacts to public ground water wells and private domestic wells. The model will be validated through empirical plume length, depth, and attenuation rate data and field studies. Improvements in this model will allow the assessment of an UST contaminant release for a hydrogeological setting to be systematically evaluated by state and tribal partners.

### **How you will apply your skills**

As a team member, you will assist LRTD staff with the duties required to support and maintain projects on the characterization and control of contamination from underground storage tank sites by completing the research activities described below:

- Assisting in developing improvements to the DRASTIC model;
- Assessing influence of extreme precipitation events and flooding on contaminant transport;
- Incorporating extreme weather events and contaminant transport in the DRASTIC model;
- Performing geocomputational analysis and data visualization;
- Data analysis using spreadsheets, graphical software and modelling; and
- Assisting with developing products such as presentations and technical manuscripts.

You will perform duties, as requested, according to specifications and instructions provided by the mentor. All necessary instructions and training will be provided by the EPA mentor.

### **Required Knowledge, Skills, Work Experience, and Education**

- Proficiency in geocomputation and data visualization;
- Proficiency in GIS, R and Python;
- Experience in methods for geolocation of private domestic wells;
- Demonstrated leadership skills and experience working in teams; and
- Proficiency with Microsoft Office applications (i.e., Excel, PowerPoint, Word and Outlook), desktop publishing.

**Location:** This job will be located EPA's facility in Cincinnati, OH.

**Salary:** Selected applicant will become a temporary employee of ORAU and will receive an hourly wage of \$35.86 for hours worked.

**Hours:** Full-time

**Travel:** Occasional overnight travel may be required.

**Expected start date:** The position is full time and expected to begin July

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2020. The selected applicant will become a temporary employee of ORAU working as a contractor to EPA. The initial project is through May 14, 2021, with up to 4 additional potential optional periods.

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- Qualifications**
- Be at least 18 years of age **and**
  - Must be pursuing a PhD (Pre-Doc) in geography, or a closely related field of study 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 participate in this program.*

- Eligibility Requirements**
- **Citizenship:** LPR or U.S. Citizen
  - **Degree:** Master's Degree or Doctoral Degree received within the last 24 months or anticipated to be received by 7/13/2020 11:59:00 PM.
  - **Overall GPA:** 2.00
  - **Discipline(s):**
    - **Computer, Information, and Data Sciences** ([7](#))
    - **Earth and Geosciences** ([21](#))
    - **Engineering** ([27](#))
    - **Environmental and Marine Sciences** ([14](#))
    - **Life Health and Medical Sciences** ([45](#))
    - **Mathematics and Statistics** ([2](#))
    - **Physics** ([16](#))

**Affirmation** I certify that I am at least 18 years of age; pursuing a PhD (Pre-Doc) in geography, or a closely related field of study 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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