

Opportunity Title: Hydrology Modeling Data Analyst

Opportunity Reference Code: EPA-NSSC-0005-53

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-NSSC-0005-53

How to Apply Click [HERE](#).

Description The EPA National Student Services Contract has an immediate opening for a full time Hydrology Modeling Data Analyst position with the Office of Research and Development at the EPA facility in Research Triangle Park, NC.

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 Public Health and Environmental Assessment (CPHEA) provides the science needed to understand the complex interrelationship between people and nature in support of assessments and policy to protect human health and ecological integrity. Within CPHEA, the Public Health and Environmental Systems Division (PHESD) focuses on the interrelationships between people and their environment, promotes human health and well-being, and fosters healthy and safe communities.

What experience and skills will you gain?

As a team member, you will provide data acquisition, data preparation and data analysis support for the hydrodynamic flood modeling to reconstruct historical extreme events and model their future temporal and spatial extent under anthropogenic stressors: climate change and landscape modifications. The team member will provide evaluation and quality control for the data used in hydrologic modeling, as well as performing qualitative and quantitative analysis of the results under different climate scenarios. The team member will be a member of a multi-disciplinary research team and shall support the climate change research in PHESD in the context of future extreme events, floods and changes in floodplain connectivity.

Data Development and Analysis responsibilities will include:

- Hydrological modeling of historical and future floods in North Carolina watersheds using HEC-HMS and HEC-RAS;
- Model input data preparation;
- Quality control;
- Creation of metadata and fact sheets supporting the data products;
- Examination of the results under different climate scenarios;
- Examination of spatial extent of future floods;
- Analysis of the flood levels risk modifications to nearby communities, infrastructure, and aquatic resources;
- Investigation of past and future extents of 100- and 500-year floodplains and floodplains' connectivity; and



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- Literature review.

Communications-related responsibilities will include:

- Participating as a member of a multi-disciplinary research team;
- Interacting with other members of the development team as well as EPA scientists;
- Documenting methods and database development efforts; and
- Presenting work performed at a scientific conference as required.

Required Knowledge, Skills, Work Experience, and Education

- Scientific background in the following: data analysis, statistical methods, climate change effects on the water cycle and climate modeling;
- Experience with HEC-HMS and HEC-RAS modeling;
- Demonstrated education and/or experience in GIS (geographic information systems), geospatial data compilation and analysis;
- Experience with scientific units used in Earth sciences and unit conversions; and
- Strong written, oral and electronic communication skills.

Desired Knowledge, Skills, Work Experience, and Education

- Experience programming in R or Python and
- Experience with Unix/Linux-based systems

Location: This job will be located EPA's facility in Research Triangle Park, NC.

Salary: Selected applicant will become a temporary employee of ORAU and will receive an hourly wage of \$30.76 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 December 2022. The selected applicant will become a temporary employee of ORAU working as a contractor to EPA. The contract renews each May through 2025.

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

- Qualifications**
- Be at least 18 years of age **and**
 - Have earned at least a Master's degree in the fields of hydrology, climatology or a related field 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:** Master's Degree received within the last 24 month(s).
 - **Overall GPA:** 2.00
 - **Discipline(s):**
 - **Earth and Geosciences** ([21](#)👁)
 - **Environmental and Marine Sciences** ([1](#)👁)

Affirmation I certify that I am at least 18 years of age; a recent graduate with at least a Master's degree in the fields of hydrology, climatology or a related field 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.

Click [HERE](#) to apply.

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