

Opportunity Title: Human Health and Exposure Pre-Doc

Opportunity Reference Code: EPA-NSSC-0005-18

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-NSSC-0005-18

How to Apply Click [HERE](#) to apply!

Description The EPA National Student Services Contract has an immediate opening for a part-time (10-20 hours per week) Human Health and Exposure Pre-Doc position with the Office of Research and Development at the EPA facility in Chapel Hill, 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.

Part of the work done within PHESD focuses on the adverse public health impacts of environmental exposures. The research utilizes human subjects data and publicly available databases to investigate the human health effects of air and water pollutants and other environmental exposures. Researchers have created an Environmental Quality Index (EQI) for all counties across the U.S. for the time period 2000-2005. Five environmental domains were created: air, water, land, sociodemographic and built. The researchers are currently updating the index for 2006-2010 and also exploring different spatial aggregations (e.g., census tract, neighborhood). The researchers have used the EQI as an exposure metric in health outcome research utilizing health databases with millions of records.

What experience and skills will you gain?

As a team member, you will assist an EPA researcher with analytical, management and administrative responsibilities and communication responsibilities required to support and maintain a robust research program, including the administration and management of large geospatial data sets.

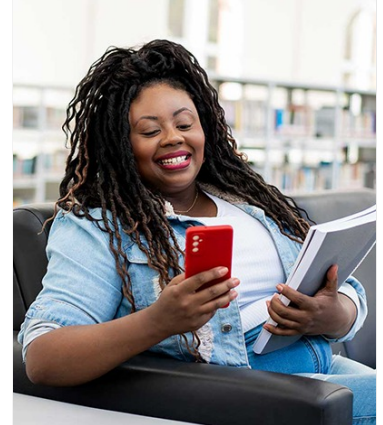
How you will apply your skills

Analytical responsibilities

- Developing geospatial datasets of ambient environmental exposures;
- Extracting large publicly available datasets to investigate environmental



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ecological conditions, goods, and services and adverse health outcomes;

- Using large geospatial datasets to map, analyze, present in relation to environmental exposures linking with health data; and
- Developing and running code for geospatial and statistical analyses.

Management and administrative responsibilities

- Extracting, cleaning, linking, merging, documenting and managing large complex geospatial databases from both environmental quality (e.g., EPA air quality system, Safe Drinking Water Information System, Toxic Release Inventory) and health data (e.g., National Center for Health Statistics natality and linked birth certificate/infant death certificate databases, National Birth Defects Prevention Network data, mortality data) platforms;
- Organizing electronic and hardcopy geospatial records and files;
- Researching and summarizing information relating to the spatial implications with environmental quality and health outcomes; and
- Maintaining records of meetings, correspondence, and action documents, and maintain a system to track projects in progress.

Communications responsibilities

- Assisting in the logistics and coordination activities for briefings, meetings, workshops, and other collaborative efforts;
- Assisting the team in developing oral presentations results and impacts using graphics and other interactive formats;
- Assisting in developing summary analysis documents of results and impacts from geospatial data analyses;
- Assisting in writing study results in manuscripts, presentations, and fact sheets; and
- Creating abstracts for scientific meetings and presenting work at meetings.

Required Knowledge, Skills, Work Experience, and Education

- Education and/or experience in advanced geospatial methods, analyses, programming and techniques and demonstrate that you can apply the geospatial data for epidemiologic and statistical methods with an emphasis on large (millions of records) datasets;
- Proficiency in working with very large (millions of records) geospatial databases in extracting and cleaning;
- Education and/or experience in using database software (e.g., MS Access, SQL, etc.);
- Experience in administration support functions (i.e., recordkeeping, filing), managing and organizing records (electronic and hardcopy), and management of extremely large (millions of records) databases; and
- Strong written, oral and electronic communication skills.

Location: This job will be located EPA's facility in Chapel Hill, NC.

Salary: Selected applicant will become a temporary employee of ORAU

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and will receive an hourly wage of \$35.59 for hours worked.

Hours: Part-time (10-20 per week)






Travel: Occasional overnight travel may be required.

Expected start date: The position is full time and expected to begin May 2021. 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 option periods.

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

- Qualifications**
- Be at least 18 years of age **and**
 - Be enrolled in an accredited U.S. college or university as a pre-doctoral student in one of the following disciplines: geography, environmental sciences, epidemiology, public health, statistics, social sciences, biostatistics, or a closely related field of study **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:** Doctoral Degree.
 - **Discipline(s):**
 - **Earth and Geosciences** ([21](#) )
 - **Environmental and Marine Sciences** ([14](#) )
 - **Life Health and Medical Sciences** ([46](#) )
 - **Mathematics and Statistics** ([10](#) )
 - **Social and Behavioral Sciences** ([29](#) )

Affirmation I certify that I am at least 18 years of age; currently enrolled in an accredited U.S. college or university as a pre-doctoral student in one of the following disciplines: geography, environmental sciences, epidemiology, public health, statistics, social sciences, biostatistics, or a closely related field of study; 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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