

Opportunity Title: EPA Fellowship in Geospatial Data Science - Carbon Storage and Sequestration in Wetlands and Upland Forests

Opportunity Reference Code: EPA-ORD-CPHEA-PHESD-2024-03

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-ORD-CPHEA-PHESD-2024-03

How to Apply *Connect with ORISE...on the GO!* Download the new ORISE GO mobile app in the [Apple App Store](#) or [Google Play Store](#) to help you stay engaged, connected, and informed during your ORISE experience and beyond!

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. All transcripts must be in English or include an official English translation. 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. Click [here](#) for detailed information about recommendations.

All documents must be in English or include an official English translation.

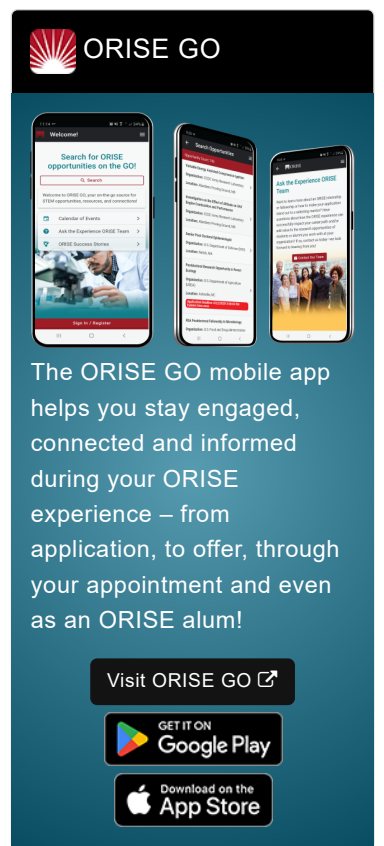
Application Deadline 8/16/2024 3:00:00 PM Eastern Time Zone

Description ***Applications may be reviewed on a rolling-basis and this posting could close before the deadline.** Click [here](#) for information about the selection process.

EPA Office/Lab and Location: A research opportunity is available at the Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Public Health Environmental Assessment (CPHEA), Public Health and Environmental Systems Division (PHESD) in Research Triangle Park, North Carolina.

Research Project: Under the guidance of a mentor, the research participant will have the opportunity to conduct research and collaborate with a team of EPA scientists towards developing above and below-ground estimates of carbon storage in freshwater wetlands and upland forests for EPA's Region 3. The Region encompasses Delaware, Maryland, Pennsylvania, Virginia, West Virginia, Washington, D.C., and seven Tribal Nations. The goal of the research will be to create geospatial estimates (i.e., one data point for each wetland or forested 30 by 30 or X by X meters grid cell on the ground). The research may also result in providing preliminary estimates of lost carbon sequestration potential associated with land use changes. The participant's research will include developing novel methods for estimating carbon storage and sequestration from existing data sources such as satellite imagery, gridded land cover data, forest canopy products, etc. by leveraging statistical methods such as generalized linear models, random forest, or deep learning. The research participant will interact with a team of scientists and with Region 3 partners who will ultimately be using the resulting products.

The data resulting from this research will be made available through



Opportunity Title: EPA Fellowship in Geospatial Data Science - Carbon Storage and Sequestration in Wetlands and Upland Forests

Opportunity Reference Code: EPA-ORD-CPHEA-PHESD-2024-03

EnviroAtlas and this project will provide an opportunity to interact with the EPA's EnviroAtlas Team and learn about the application of social and ecological spatial data in EnviroAtlas.

Learning Objectives: Under the guidance of a mentor, the research participant will have the opportunity to:

- Learn through interactions with individuals and teams collaborating with multiple Centers and Divisions within EPA's Office of Research and Development (ORD) and with multiple Divisions from Region 3.
- Have latitude in exercising independent initiative and judgment in the research commensurate with the level of training.
- Learn about developing, managing, and analyzing spatial datasets according to intended use.
- Attend research team meetings and will be involved in all aspects of the research.
- Develop, present, and publish research.

Mentor(s): The mentor for this opportunity is Anne Neale (neale.anne@epa.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: Spring/Summer 2024. All start dates are flexible and vary depending on numerous factors. Click [here](#) for detailed information about start dates.

Appointment Length: The appointment will initially be for one year and may be renewed upon EPA recommendation and subject to availability of funding.

Level of Participation: The appointment is full-time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. A travel/training allowance will be provided to the candidate to present project-related research data and results at scientific meetings (e.g., conferences and workshops). Click [here](#) for detailed information about full-time stipends.

EPA Security Clearance: Completion of a successful background investigation by the Office of Personnel Management (OPM) is required for an applicant to be on-boarded at EPA.

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 EPA. Participants do not become employees of EPA, 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.

ORISE offers all ORISE EPA graduate students and Postdocs a free 5-year membership to the National Postdoctoral Association (NPA).

Opportunity Title: EPA Fellowship in Geospatial Data Science - Carbon Storage and Sequestration in Wetlands and Upland Forests

Opportunity Reference Code: EPA-ORD-CPHEA-PHESD-2024-03





The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility, including but not limited to, COVID-19 requirements (e.g. facial covering, physical distancing, testing, vaccination).

Questions: Please see the [FAQ section](#) of our website. After reading, if you have additional questions about the application process, please email ORISE.EPA.ORD@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a Master's or Doctoral degree in one of the relevant fields, or be currently pursuing with degree completion before the appointment start date.

Preferred skills/experience:

- Quantitative data management and analysis, including Geographic Information System (GIS) data management, analysis and mapping; statistical analysis and scripting (e.g., R, Python, Javascript).
- Knowledge and experience in working with spatial ecological data.
- Knowledge of biogeochemistry as it relates to carbon cycling.
- Attention to detail for organization and record keeping.
- Communication skills.
- Ability to conduct research effectively as part of a team.

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or currently pursuing.
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([1](#) )
 - **Computer, Information, and Data Sciences** ([2](#) )
 - **Earth and Geosciences** ([4](#) )
 - **Environmental and Marine Sciences** ([6](#) )
 - **Life Health and Medical Sciences** ([6](#) )
 - **Social and Behavioral Sciences** ([1](#) )