Opportunity Title: EPA Fellowship in Regional Global Change Research
Opportunity Reference Code: EPA-ORD-CPHEA-PHESD-2024-02

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-ORD-CPHEA-PHESD-2024-02

How to Apply

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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 8/2/2024 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: Climate change, land use, and population change play a critical role in influencing cumulative impacts by exacerbating their individual and synergistic components and should be actively and proactively considered in community, ecosystem health, and ecosystem services research. Different research and decision-making applications may need data summaries at different spatial and temporal scales and stakeholders need guidance on which datasets are appropriate for varying research/decision context questions.

This research opportunity aims to include future climate, population and land use data for the US States and Territories within and beyond continental US in the EPA tool-EnviroAtlas.This project will help accelerate resilience and adaptation efforts in communities and will help researchers understand the role of climate change as it influences cumulative impacts.The project will involve updates and modifications to

existing EnviroAtlas climate projections data and metadata, and will involve expanding the future scenarios scenario database. The project will involve developing new methods to translate the climate data into spatial data.

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

- Expand on their coding skills and get comfortable with scientific method.
- Learn about the development of new geo-spatial and statistical techniques.
- Conduct a literature review.
- Process the global change data.
- Develop new methods to synthesize the data.
- Design new methods of displaying them in public tools.
- Write and create communication and educational materials to promote the data.
- Write, prepare, and present scientific publications and presentations.

Mentor(s): The mentor for this opportunity is Jeremy Baynes (baynes.jeremy@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).

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 degree in one of the relevant fields or be currently pursuing with degree completion before the appointment start date.

Preferred skills/experience:

- Statistical computing and methods skills that integrate large data sets from long-term field hydro-meteorological observations and regional modeling (e.g., WRF).
- Programming skills: R or Python and Unix/Linux-based systems.
- Excellent writing skills.
- Evaluating outputs from the regional meteorological and/or regional climate models.
- Manipulating large data sets (i.e., terabytes) in standard formats (such as netCDF).
- Geographic Information System (GIS) data management, analysis and mapping (ArcGIS,R).
- Quality control of geospatial data.
- Creation of metadata and fact sheets supporting the data products.
- Literature review.

The participant will be part of an interdisciplinary team of physical scientists, geographers, economists, and social scientists at EPA. Attention to detail and record keeping is desired and prior experience or desire to collaborate with stakeholder groups would also be beneficial.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree received within the last 60 months or currently pursuing.
- **Academic Level(s):** Graduate Students or Post-Master's.

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- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (2 👁)
  - **Earth and Geosciences** (2 👁)
  - **Environmental and Marine Sciences** (4 👁)
  - **Life Health and Medical Sciences** (2 👁)
  - **Mathematics and Statistics** (2 👁)