

**Opportunity Title:** EPA Research Internship Assessing Carbon Sequestration Potential of Coastal Natural Infrastructure  
**Opportunity Reference Code:** EPA-ORD-CPHEA-HEEAD-2022-06

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

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**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** 1/16/2023 3:00:00 PM Eastern Time Zone

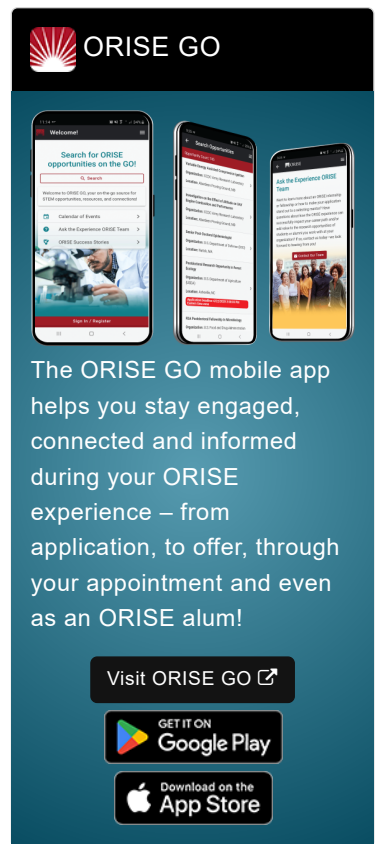
**Description** \*Applications may be reviewed on a rolling-basis and this posting could close before the deadline. Click [here](#) for information about the selection process.

**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), Health & Environmental Effects Assessment Division (HEEAD) located in Washington, D.C.

**Research Project:** The research participant will have the opportunity to participate in a research project focused on assessing the carbon sequestration (or "blue carbon") potential of coastal natural infrastructure that benefits coastal resiliency in the Chesapeake Bay. The project seeks to further current understanding of the adaptation and climate-mitigating properties of coastal natural infrastructure, including submerged aquatic vegetation and wetlands. The research project is part of a larger effort to work with coastal communities impacted by climate change, and help provide information for community decision making and coastal resilience planning.


The research participant will collaborate with a team of federal, state, and academic researchers, as well as local stakeholders. Results of this research project will inform ongoing community coastal adaptation and resiliency planning in the Chesapeake Bay, as well as address fundamental scientific questions on the current status and future scenarios of blue carbon resources. Research activities may include:


1. Engaging and collaborating with relevant researchers and stakeholders to the research project through meetings, public




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presentations, and information gathering.

- 2. Compilation and synthesis of existing research efforts, knowledge, and datasets that could be used to inform blue carbon assessments of natural infrastructure.
- 3. Collaborating with government and academic researchers to help develop and/or apply hydrodynamic, biogeochemical, and/or ecological models for assessing blue carbon dynamics in the Chesapeake Bay
- 4. Conducting research to assess how blue carbon resources will be impacted by future climate change, including sea level rise, ocean warming,
- 5. Contributing to scientific presentations and manuscripts on this research project, including opportunities for presenting at scientific conferences.

**Learning Objectives:** The research participant will have the opportunity to gain knowledge by collaborating with a multidisciplinary team of EPA, state, and academic researchers. Additionally, the research participant will engage with local and regional partners and stakeholders throughout the project in order to solicit feedback for research project design, as well as communicating the applicability and utility of research project results. The research participant will gain experience with community-driven science, gathering and synthesizing large datasets, preparing presentations and scientific papers, coastal resiliency planning, blue carbon research, and scientific communication with stakeholders. The research participant is encouraged to collaborate on writing of manuscripts for project reports and peer-reviewed publications.

**Mentor(s):** The mentor(s) for this opportunity are Stephen Pacella ([pacella.stephen@epa.gov](mailto:pacella.stephen@epa.gov)) and Lana Kashuba ([Kashuba.Roxolana@epa.gov](mailto:Kashuba.Roxolana@epa.gov)). If you have questions about the nature of the research please contact the mentor(s).

**Anticipated Appointment Start Date:** **December 1, 2022.** 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 up to three or four additional years 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. 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

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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@oraui.org](mailto:ORISE.EPA.ORD@oraui.org) and include the reference code for this opportunity.

**Qualifications** The qualified candidate should be currently pursuing or have received a bachelor's or master's degree in one of the relevant fields. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Experience in the fields of marine and/or estuarine plant ecology, sediment science, biogeochemistry, environmental science, climate science, and other similar and relevant fields.
- Prior experience with research on blue carbon resources, including seagrasses and wetlands
- Experience with literature synthesis, organization of large datasets, data quality assurance procedures, data analysis, technical/statistical software packages (e.g. R, GIS, Python, Matlab), environmental modeling, spatial mapping, remote sensing techniques, and their application to environmental science research

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
  - **Degree:** Bachelor's Degree or Master's Degree received within the last 60 months or currently pursuing.
  - **Discipline(s):**
    - **Chemistry and Materials Sciences** ([12](#))
    - **Communications and Graphics Design** ([1](#))
    - **Computer, Information, and Data Sciences** ([17](#))
    - **Earth and Geosciences** ([21](#))
    - **Engineering** ([27](#))
    - **Environmental and Marine Sciences** ([14](#))
    - **Life Health and Medical Sciences** ([48](#))
    - **Mathematics and Statistics** ([11](#))
    - **Physics** ([16](#))
    - **Social and Behavioral Sciences** ([29](#))

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