

Opportunity Title: EPA Long Island Sound Study Support Clean Waters

Fellowship

Opportunity Reference Code: EPA-REG2-2023-01

Organization

U.S. Environmental Protection Agency (EPA)

Reference Code

EPA-REG2-2023-01

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

8/18/2023 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 postgraduate research opportunity is available at the U.S. Environmental Protection Agency's (EPA) Region 2 office in New York, N.Y. This research opportunity is with the Water Division's Long Island Sound Program. The Long Island Sound Program Office is in Stamford, CT. The position can be located in either location.

The EPA has designated the Long Island Sound as an "Estuary of National Significance" and has joined with the states of Connecticut (CT) and New York (NY) to form the Long Island Sound Study (LISS) Management Conference, a partnership of federal, interstate, state, and local agencies, industry, community groups, and the public.

The LISS Management Conference coordinates science and management activities to protect and restore the Sound, an estuary impaired by decades of pollution and habitat loss. Unlike traditional regulatory approaches to environmental protection, the LISS Management Conference works to address a broad range of issues and encourages coordinated solutions through public-private partnerships.

To fulfill the vision of a restored and protected Long Island Sound, the partner agencies of the Long Island Sound Study have adopted a Comprehensive Conservation and Management Plan (CCMP). The Plan seeks to achieve four primary goals under four themes:

- 1) Clean Waters and Healthy Watersheds – Improve water quality by reducing contaminant and nutrient loads from the land and the waters impacting Long Island Sound.
- 2) Thriving Habitats and Abundant Wildlife – Restore and protect the Sound's ecological balance in a healthy, productive, and resilient state for the benefit of both people and the natural environment.
- 3) Sustainable and Resilient Communities – Support vibrant, informed, and engaged communities that use, appreciate, and help protect Long Island Sound
- 4) Sound Science and Inclusive Management – Manage Long Island Sound using sound science and cross-jurisdictional governance that is inclusive, adaptive, innovative, and accountable.

Throughout the four themes, the CCMP incorporates integrative principles that have emerged as key challenges and environmental priorities. The CCMP also sets ambitious, but achievable, long-term targets for the Sound. These ecosystem targets are intended to drive progress toward attaining CCMP goals. Measuring, tracking, and reporting on program implementation and environmental

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indicators of each ecosystem target provides information to assess progress and refine and adapt management as needed.

Research Project: The Long Island Sound Office of U.S. EPA Region 2 is seeking a biogeochemist with knowledge of coastal and estuarine ecosystems to contribute to the development of water quality models for Long Island Sound (LIS). The participant will collaborate on projects involving analysis of water quality data and application of numerical models to support ongoing development of process-based water quality models for LIS open waters. Model output will be used to guide management decisions that safeguard water quality and living resources against pressures of population growth and climate change, including evaluating existing limits for nitrogen loading set by the LIS TMDL established in 2000. Under the guidance of a mentor, the research participant will have the opportunity to collaborate with LISS staff as well as state and local partners to improve LIS water quality models.

Learning Objectives: Under the guidance of a mentor, the participant will synthesize and analyze existing datasets to evaluate numerical models and parameters that best capture observed plankton and nutrient dynamics.

Research activities may include:

- Comparing spatial and temporal trends in observed and modeled water quality parameters, such as dissolved oxygen and chlorophyll a
- Validating modeled rate processes under varying external forcing conditions
- Evaluating sensitivity of biogeochemical models to changes in plankton community structure
- Evaluating future changes in plankton dynamics and water quality driven by climate change

The participant will develop technical documents and manuscripts of their research for outreach to the LIS scientific community as well as to the wider field. The participant will also assist with the development of analyses and technical insights and findings in support of management decision-making.

Mentor(s): The mentor for this opportunity is Mark Tedesco (Tedesco.mark@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: September 2023. 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 may 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. 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.REG@orau.org and include the reference code for this opportunity.

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Qualifications

The qualified candidate should have received a master's or doctoral degree in one of the relevant fields (i.e., **Marine Science**), or be currently pursuing one of the degrees with completion by the appointment start date. Degree must have been received within five years of the appointment start date.

Preferred skills/experience:

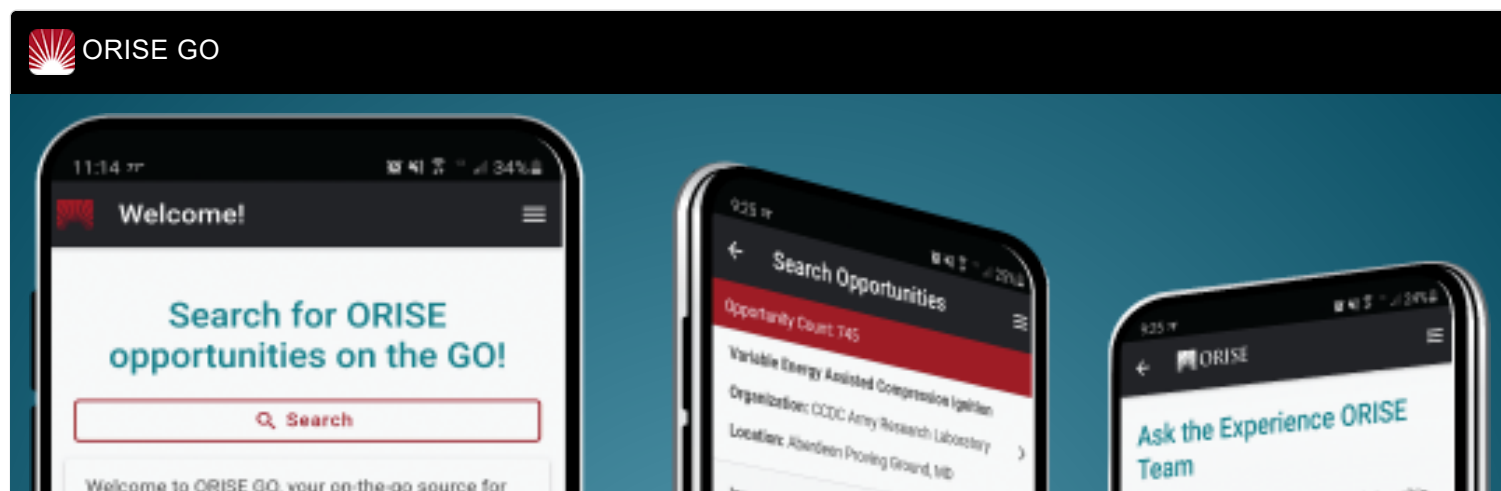
- Knowledge of biogeochemical processes in estuarine and coastal systems
- Ability to synthesize, analyze, and interpret large environmental datasets for use by a broad audience
- Familiarity with traditional and modern statistical techniques
- Knowledge of at least one scripting language (R, Python, Matlab)
- Record of peer-reviewed research and scholarship commensurate with experience
- Excellent written and verbal communication skills
- Strong quantitative skills and demonstrated knowledge of biogeochemical processes in coastal and estuarine ecosystems is desired.
- Experience in numerical modeling is preferred

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or anticipated to be received by 9/30/2022 11:59:00 PM.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** ([4](#) )
 - **Computer, Information, and Data Sciences** ([4](#) )
 - **Earth and Geosciences** ([4](#) )
 - **Engineering** ([7](#) )
 - **Environmental and Marine Sciences** ([13](#) )
 - **Life Health and Medical Sciences** ([4](#) )
 - **Mathematics and Statistics** ([3](#) )
 - **Physics** ([2](#) )

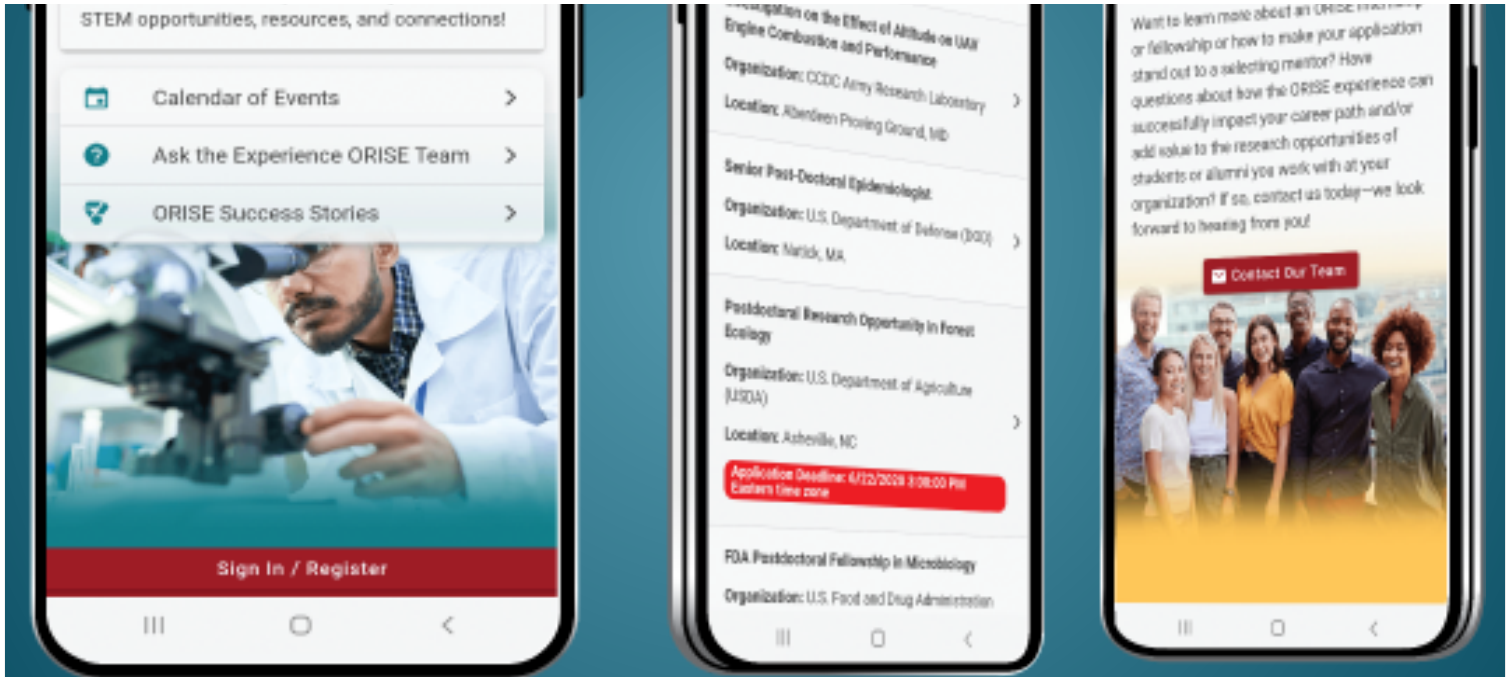


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