

Opportunity Title: EPA Narragansett Bay Water Quality Internship

Opportunity Reference Code: EPA-ORD-CEMM-ACESD-2020-06

Organization U.S. Environmental Protection Agency (EPA)

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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.

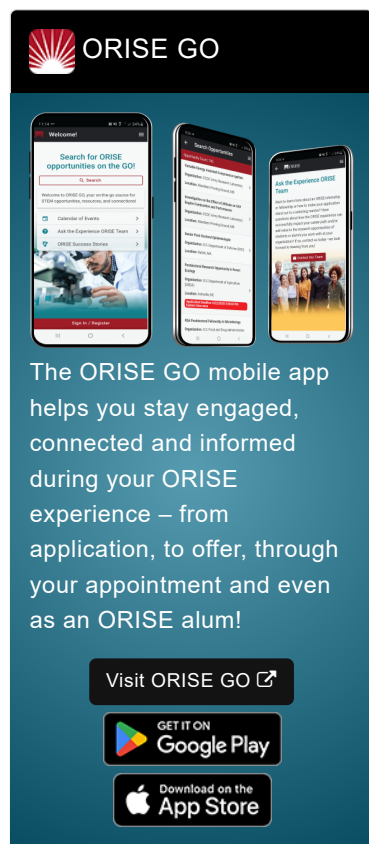
All documents must be in English or include an official English translation.

Application Deadline 12/16/2020 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 Environmental Measurement and Modeling (CEMM), Atlantic Coastal Environmental Sciences Division (ACESD), Ecosystem Management and Restoration Branch (EMRB) located in Narragansett, Rhode Island.


Research Project: This research project is focused on ecological studies of Narragansett Bay ecosystem dynamics. Narragansett Bay has undergone dramatic nutrient reductions over the past decade. The predominant source of N to the bay is sewage, with 82% of the sewage coming directly into the head of the bay. Tertiary treatment upgrades have led to sewage N reductions from 16-20 mg/l to <8 mg/l. This research project is to understand how water quality responds to the recent nutrient reductions. Current research includes detecting and evaluating the responses of sensitive ecological parameters to nutrient reductions associated with the transition from cesspools to sewers in Wickford Harbor, RI. EPA researchers currently have both a monthly monitoring program, where water quality research stations are accessed via kayak, as well as more detailed surveys of dissolved oxygen, and some assessments of groundwater contributions. Researchers also monitor and measure nutrient concentrations and stable isotopes in Narragansett Bay. This research is primarily conducted during monthly surveys of the Bay, with the goal of documenting ecosystem responses to the wastewater treatment facility upgrades. Other efforts include evaluating how the benthic invertebrate




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community has responded to these nutrient reductions. Previous benthic surveys starting in 2004 provide a baseline for this research. Other research activities will involve summer sampling of benthos, sediment and water quality. Benthic data will be paired with continuous buoy water quality measurements and other ancillary data.

Under the guidance of a mentor, the participant may be involved in the following activities:

- Field collection of data, including biological, physical, and chemical measurements in boats and kayaks
- Learning to perform laboratory experiments
- Learning to prepare samples for physical and chemical analysis within the laboratory
- Learning to conduct analysis of data, and prepare reports and presentations
- Learning how to perform maintenance of equipment, resources, and instrumentation within the laboratory that insures the generation of high quality data
- Learning to follow quality assurance and quality control guidelines to create and maintain research databases

Learning Objectives: The research participant will have the opportunity to gain knowledge by collaborating with a diverse, multidisciplinary team of EPA researchers. Through regular interactions with this team, the research participant will gain insight into the process of conducting field work, collecting samples, performing laboratory experiments, analyzing samples, analyzing data, laboratory management, following quality assurance protocols, and preparing reports and presentations. The research participant will have an opportunity to communicate their finding through publication of manuscripts and participation in scientific conferences. The researcher is encouraged to collaborate on writing of manuscripts for publication and project reports. This research opportunity will also allow the candidate to learn and develop laboratory skill sets and proficiency on various scientific equipment, e.g. fluorometer, grain size analyzer, and isotope ratio mass spectrometer.

Mentor(s): The mentors for this opportunity are Autumn Oczkowski (oczkowski.autumn@epa.gov) and Peg Pelletier (pelletier.peg@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: ~January 2021. 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 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

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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.

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

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

Preferred skills:

- Background in the environmental sciences and some experience and knowledge of coastal ecosystem processes
- Ecology courses or some other research experience in the field of coastal ecology
- Previous experience collecting ecological samples in the field
- Ability to work well in groups as well as independently and be interested in developing their research experience collaboratively with their mentors

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Bachelor's Degree received within the last 60 months or anticipated to be received by 1/1/2021 11:59:00 PM.
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([2](#) )
 - **Earth and Geosciences** ([1](#) )
 - **Environmental and Marine Sciences** ([14](#) )
 - **Life Health and Medical Sciences** ([3](#) )
 - **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).