

Opportunity Title: Coastal Hydrodynamic and Water Quality Modeling

Opportunity Reference Code: EPA-ORD-NHEERL-GED-2020-01-A

Organization U.S. Environmental Protection Agency (EPA)

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How to Apply **This is a repost of a previous posting. If you previously submitted your application to this reference code without the “-A” at the end, then you do not need to reply. Example: If you applied to “EPA-ORD-NERL-IO-2020-13” you do not need to reapply to “EPA-ORD-NERL-IO-2020-13-A”.**

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

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

If you have questions, send an email to EPArpp@ora.u.org. Please include the reference code for this opportunity in your email.

Application Deadline 6/1/2020 3:00:00 PM Eastern Time Zone

Description *Applications will be reviewed on a rolling-basis.


A research opportunity is currently available with the Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Environmental Measurement and Modeling (CEMM) located in Gulf Breeze, Florida. EPA ORD recently reorganized and these are the newly named Centers/Divisions/Branches. This was formerly in ORD's National Health and Environmental Effects Research Laboratory (NHEERL) Gulf Ecology Division (GED).


The EPA Center for Environmental Measurement and Modeling (CEMM), conducts research related to understanding and predicting the impacts of anthropogenic nutrient pollution on coastal marine ecosystems to support and inform water quality management decision-making. Current research combines existing data and ongoing field and laboratory research with applications of EFDC/WASP and other water quality models. The research participant will have the opportunity to interact with a multidisciplinary research team to develop and implement hydrodynamic and/or water quality models to examine questions related to the spatial and temporal distribution of primary production, ecosystem metabolism, hypoxia, their relationships to nutrient loading, and their potential impacts to coastal marine species. Research may utilize numerical simulations of hydrodynamics, water quality, and/or benthic ecosystem processes using EFDC, WASP, ROMS or similar models. Modeling research will also develop new methods and strategies for using simulation models to support environmental decision making. The research participant will have the opportunity to engage with field teams and participate in field work collecting samples and deploying sensors in estuarine coastal ecosystems. The research participant with appropriate skills and interest may receive further training in hydrodynamic and water quality modeling. The research participant will also gain experience with managing and visualizing environmental data in computing environments such as MATLAB or R. The research participant will have the opportunity to interact with research




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scientists and professionals who translate research results for use in environmental decision-making.

The mentor for this opportunity is Brandon Jarvis (jarvis.brandon@epa.gov) / (850) 934-9356).

Anticipated Appointment Start Date: May 1, 2020

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. The initial appointment is for one year, but may be renewed upon recommendation of EPA and is contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time at EPA in the Gulf Breeze, Florida, area. Participants do not become employees of EPA, DOE or the program administrator, and there are no employment-related benefits.







Completion of a successful background investigation by the Office of Personnel Management (OPM) is required for an applicant to be on-boarded at EPA. OPM can complete a background investigation only for individuals, including non-US Citizens, who have resided in the US for the past three years.

Qualifications The qualified candidate should have received a doctoral 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:

- Knowledge or practical experience evaluating hydrodynamic and/or eutrophication-related biogeochemical processes in coastal ecosystems
- Previous numerical modeling experience, including development and analysis of hydrodynamic and/or water quality models
- Strong analytical skills, including analysis of large datasets in computing environments such as MATLAB or R
- Strong written and oral communication skills
- Ability to comfortably interact with both internal and external stakeholders to communicate research results

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 6/1/2020 11:59:00 PM.
- **Academic Level(s):** Graduate Students or Postdoctoral.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** (1 )
 - **Earth and Geosciences** (2 )
 - **Engineering** (1 )
 - **Environmental and Marine Sciences** (7 )
 - **Life Health and Medical Sciences** (4 )
 - **Physics** (1 )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).