Opportunity Title: Estuary Data Mapper GIS and Data Analys
Opportunity Reference Code: EPA-ORD-NHEERL-AED-2017-01

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-ORD-NHEERL-AED-2017-01

How to Apply A complete application consists of:

- An application
- Transcripts – 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 references

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

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

Description A research opportunity is currently available at the U.S. Environmental Protection Agency's (EPA) Office of Research and Development (ORD)/National Health and Environmental Effects Research Laboratory (NHEERL). This appointment will be served with the Atlantic Ecology Division (AED) in Narragansett, RI.

This research will provide an opportunity to be involved in EPA teams compiling, generating and providing access to data on coastal watersheds and estuarine systems to support decision-making and environmental management applications. The participant may be involved in two projects, 1) the Integrated Nitrogen Management (INM) Project within the EPA Office of Research and Development (ORD) Safe and Healthy Communities Program, and 2) the Watershed Resilience, Recovery Potential and Sustainability Project (WRRPS) within the EPA ORD Safe and Sustainable Waters Research Program. Within the INM project, the ORISE participant's research may involve preparing geospatial information on coastal watersheds and estuaries for inclusion within the EPA's Estuarine Data Mapper application (www2.epa.gov/edm). The Estuary Data Mapper is a stand-alone application that facilitates environmental data discovery, visualization and geospatial data download for coastal watershed and estuarine systems. Examples of information include historic and projected future nutrient loads and source allocations, nutrient sinks, indicators of estuarine vulnerability to nitrogen loads, groundwater vulnerability and contact times, future scenarios of development and nutrient, sediment loading for the Chesapeake Bay Watershed based on alternative growth strategies, historic and projected future atmospheric nitrogen loads, distribution of natural and constructed green infrastructure best management practices in coastal watersheds, watershed model outputs supporting EPA's Watershed Management Optimization Support Tool (WMOST), data supporting seagrass habitat models, and estuarine ecosystem services. The participant may also have an opportunity to evaluate future loadings to estuarine systems based on sensitivity analyses and projected changes in load components. Within the WRRPS Project, the

Opportunity Title: Estuary Data Mapper GIS and Data Analys
Opportunity Reference Code: EPA-ORD-NHEERL-AED-2017-01

participant's research may involve extracting, obtaining and preparing geospatial information on coastal watersheds and estuaries from a variety of sources including EPA's Estuarine Data Mapper, EPA's National Coastal Assessment, NHD+, a recently developed watershed sustainability coverages, other state and federal databases and the scientific literature. Examples of information include residence time and residence time surrogates, freshwater flow into estuaries, geomorphology of estuaries, tidal range in estuaries, as well as watershed variables such as land use/cover, slope, etc. These data will be used to build models to predict watershed condition and resilience.

This program, administered by ORAU through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education, was established through an interagency agreement between DOE and EPA.

Qualifications Applicants must have received a master's degree in geography, environmental sciences, oceanography, geology, hydrology, or a closely related field of study within five years of the desired start date. Training in the use of geographic information systems and experience using ArcGIS, including Spatial Analyst, 3D Analyst, and ArcHydro extensions and use of ModelBuilder and/or Python scripts are desired. .

This appointment is full time for one year and may be renewed upon recommendation of EPA and contingent on the availability of funds. The participant will receive a monthly stipend. Funding may be made available to reimburse the participant's travel expenses to present the results of his/her research at scientific conferences. No funding will be made available to cover travel costs for pre-appointment visits, relocation costs, tuition and fees, or participant's health insurance. The participant must show proof of health and medical insurance. **The participant does not become an EPA employee**.

The mentor for this project is Naomi Detenbeck (detenbeck.naomi@epa.gov). The desired start date is June 1, 2017.

Eligibility Requirements

- **Degree:** Master's Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (1 👁)
  - **Computer, Information, and Data Sciences** (1 👁)
  - **Earth and Geosciences** (5 👁)
  - **Engineering** (1 👁)
  - **Environmental and Marine Sciences** (13 👁)
  - **Life Health and Medical Sciences** (2 👁)
  - **Other Non-Science & Engineering** (1 👁)
  - **Social and Behavioral Sciences** (2 👁)