# PERFORMANCE WORK STATEMENT

**Task Order Title: CEMM Support**

**Task Order Solicitation # 7**

**PWS Title: Harmful Algal Bloom Monitoring and Forecasting**

**PWS #:**

1. **Summary**

|  |  |
| --- | --- |
| **EPA Organization** | ORD/CEMM/ACESD |
| **Location** | Narragansett, RI |
| **Required Level of Education** | Bachelor’s Degree |
| **Average Hours Per Week** | 40 |
| **Number of Students Sought** | 1 |

1. **Agency & Office Mission**

The Office of Research and Development at the EPA supports high-quality research to improve the scientific basis for decisions on national environmental issues and help EPA achieve its environmental goals to protect human and environmental health. Research is conducted in a broad range of environmental areas by scientists in EPA laboratories and at universities across the country.

The Center for Environmental Measurement and Modeling (CEMM) develops, evaluates, and applies measurements and models to characterize the sources, occurrence, transformation, transport and effects of pollutants and stressors in the natural environment. Within CEMM, the Atlantic Coastal Environmental Sciences Division (ACESD) is responsible for coastal watershed, freshwater, estuarine, and coastal ecological research. ACESD scientists develop and evaluate theory, methods, models, and data to better understand and quantify the cumulative effects of multiple anthropogenic stressors and extreme weather events on the coastal waters and watersheds of the Atlantic seaboard.

# Description of Student Services

The student shall conduct field and laboratory work, perform data management, data analysis, report generation, and perform literature reviews. The student will work with experts in several research projects, including, but not limited to, the “Spatial and temporal dynamics of freshwater cyanobacterial HABs” and “Survey of Reservoir Greenhouse Gas Emissions (SuRGE)” research projects. Resulting data shall be entered into project datasets and reports generated. The student shall maintain careful and accurate records in designated laboratory or field notebooks. These notebooks and all other data produced under this order will be the property of the Environmental Protection Agency.

Field work shall include:

* + Travel to and from field locations with federal staff
  + Preparation/clean up of field equipment for water and air quality sampling
  + Water and air sample collection
  + Recording data
  + Shipping and receiving of samples
  + Other field tasks as needed

Laboratory work shall include:

* + Performing analysis of phytoplankton pigments, included sample preparation, filtering, etc.
  + Analyzing samples for cyanotoxins
  + Perform plankton counts
  + Assistance with water chemistry analysis and sample preparation
  + Preparation of analytical calibration and quality control standards
  + Recording data into laboratory databases
  + Other laboratory work as needed
  + Keeping accurate laboratory notebooks.

Data management, analysis, and reporting shall include:

* + Conducting statistical analyses and exploratory data analysis (i.e., summary statistics, correlation/regression, hypothesis testing, data visualization, etc)
  + Creating and assisting with the generation of reports about the project and data
  + Managing data or other information and entering data into datasets using a variety of software (e.g., Microsoft Excel/Word/Access, R, RStudio, etc.)

Literature reviews shall include:

* + Literature searches for scientific communications
  + Enter journal articles into a bibliographic database

# Required Knowledge, Skills, Work Experience, and Education

The student shall have:

* + A Bachelor’s degree in in an environmentally related discipline such as environmental science, biology, ecology, biochemistry, or chemistry.
  + General skills/experience in laboratory work (additional training will be provided as needed)
  + General skills/experience in field work (additional training will be provided as needed)
  + Experience with data entry and descriptive statistical analyses (i.e., mean, standard deviation, minimum, maximum, median, etc) using Excel, R, or other statistical software
  + Strong written, oral and electronic communication skills
  + Basic safety requirements in the laboratory and field (additional safety training will be provided).

# Description of Working Conditions

Work shall be performed at the following location:

U.S Environmental Protection Agency

Atlantic Coastal Environmental Sciences Division

27 Tarzwell Drive

Narragansett, RI

Additional work will be required at various field locations throughout the Northeastern United States. These will occasionally require overnight stays but are usually day trips.

The student shall be supervised by a mentor who will provide day-to-day direction and review the student contractor’s work. The mentor for this position will be a federal EPA employee. The COR will inform the contractor of specific mentor information at the time of award.

# Travel

Occasional travel to field locations is required, with some requiring overnight stays. All sights are within the Northeastern US.

# Duration

The period of performance shall be from the start date through 10 May 2023, plus four (4) additional 12- month option periods.

# Use of Government Vehicles

The student will occasionally ride in Government Vehicles operated by federal employees.