

Opportunity Title: EPA Fellowship in Remote Sensing for Water Quality Modeling

Opportunity Reference Code: EPA-ORD-CEMM-WECD-2021-11

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 2/9/2022 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: Two research opportunities are available at the U.S. Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Environmental Measurements and Modeling Division (CEMM). The appointment is with the Watershed and Ecosystem Characterization Division (WECD), Multimedia Methods Branch (MMB) located in Research Triangle Park, North Carolina.

Research Project: Data from satellite remote sensing can address and inform communities on water quality changes that impact societal uses, such as consumption and recreation.

This research project explores issues relevant to understanding the general utility of remotely sensed data for cyanobacteria monitoring using satellite remote sensing technologies and forecast modeling. This research project focuses on the development of scientific approaches for mainstreaming satellite water quality capabilities into U.S. fresh and estuarine water quality management decisions. Please visit www.epa.gov/cyanoproject for details. This project is on the cutting edge of water quality monitoring and applied satellite operations transitioning to high performance and cloud computing resources. The research participant could be involved in geospatial statistics, computer coding, and ecological/human health related research.

The research participant may be involved the following activities:

- developing and testing of a national forecast model for cyanobacterial harmful algal blooms;
- demonstrating new satellite applications for water quality monitoring;



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- contributing to other research efforts related to water quality satellite remote sensing, such as seagrass monitoring or sensor development.

Learning Objectives: The research participant will have the opportunity to interact with multiple federal agencies and academic universities involved in a broader research effort addressing various issues related to satellite water quality research for inland waters and estuaries. The research participant will have the opportunity to gain experience using data and tools developed by multiple federal agencies and academic institutions. The research participant will also have an opportunity to gain experience in problem formulation, data analysis and interpretation, statistical and mathematical programming, and technical communication. The research participant will be encouraged to participate in manuscripts and presentations based on their experience and comfort level.

Mentor(s): The mentor for this opportunity is Blake Schaeffer (schaeffer.blake@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: Spring 2022. All start dates are flexible and vary depending on numerous factors. Click [ere](#) for detailed information about start dates.

Appointment Length: The appointment will initially be for one year and may be renewed up to four 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 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 ORISE.EPA.ORD@ornl.gov and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a master's degree in one of the relevant fields, or be currently pursuing the degree with completion by the end of August 2022. Degree must have been

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received within five years of the appointment start date.

Preferred skills/experience:

- Prior experience in applying computer coding knowledge and GIS skills
- Good statistical skill set
- Relevant ecology or similar background
- Knowledge and experience in a computer coding language such as Python or R (similar languages are ok)

**Eligibility
Requirements**

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree received within the last 60 months or anticipated to be received by 8/31/2022 11:59:00 PM.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#) 👁)
 - **Communications and Graphics Design** ([1](#) 👁)
 - **Computer, Information, and Data Sciences** ([17](#) 👁)
 - **Earth and Geosciences** ([21](#) 👁)
 - **Engineering** ([27](#) 👁)
 - **Environmental and Marine Sciences** ([14](#) 👁)
 - **Life Health and Medical Sciences** ([46](#) 👁)
 - **Mathematics and Statistics** ([10](#) 👁)
 - **Physics** ([16](#) 👁)
 - **Social and Behavioral Sciences** ([29](#) 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).