

Opportunity Title: EPA Nutrient Pollution Management Fellowship

Opportunity Reference Code: EPA-ORD-CESER-LRTD-2021-01

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 5/10/2021 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.

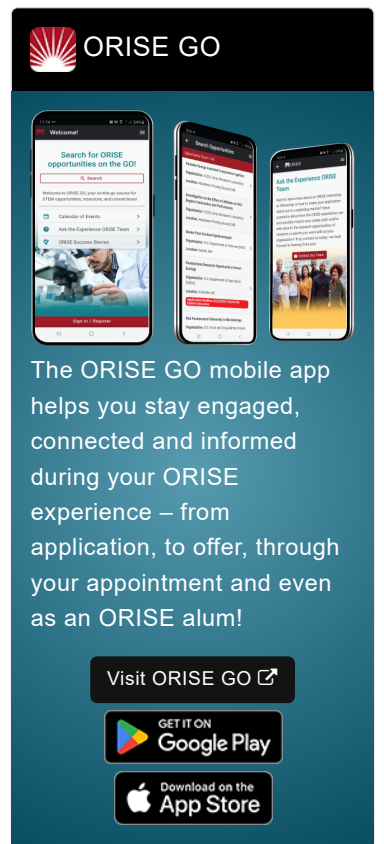
EPA Office/Lab and Location: A research opportunity is currently available at the Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Environmental Solutions and Emergency Response (CESER), Land Remediation and Technology Division (LRTD) located in Cincinnati, Ohio.

Research Project: Anthropogenic nutrient pollution, primarily consisting of nitrogen and phosphorus, is one of the most widespread water quality problems facing the U.S., which originates from excess nutrient runoff from agricultural land, improperly managed farming operations, and point sources such as wastewater treatment plants. Some nutrient pollution impacts include harmful algal blooms (HABs), hypoxia, and eutrophication.

More efficient nutrient source management would aid in reducing nutrient pollution, and subsequent effects on watersheds and waterbodies which pose quality of life challenges, ecological impairments, and economic impacts. This phenomenon involves multiple scales and is tightly linked to the topography of the landscape surrounding water bodies, the timing of nutrient releases, and regional nutrient imbalances.


To better understand the best practices in managing nutrients and sources, the research participant may conduct research utilizing models, tools, and databases to identify locations for nutrient-rich material storage and transportation; design and evaluate technologies for nutrient and energy recovery; nutrient transport to consider time and location of nutrient flow releases to water bodies; nutrient impacts; and assess ecosystem responses (e.g., HABs). In collaboration with EPA scientists, the research participant may contribute to the preparation of peer-reviewed manuscripts and reports from the conducted research.


Learning Objectives: The research participant will acquire training experience in diverse topics that include geographic information system datasets, nutrient pollution, management, recovery,




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and legacy, watershed and waterbody management, bioenergy generation, life cycle nutrient assessment, performance indicators, among others. This ORISE training opportunity will provide the research participant with state-of-the-art knowledge and networking opportunities to exchange ideas, experiences and best practices in managing nutrients, policies, environmental impacts and energy.

Mentor(s): The mentor for this opportunity is Gerardo Ruiz-Mercado (ruiz-mercado.gerardo@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: May 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 three months 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@orau.org and include the reference code for this opportunity.

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

A background in supply chain development, end-of-life material management, sustainable energy, computer programming, learning-from-data approaches, big data engineering, process synthesis and optimization, multi-criteria decision-making tools, and/or geographic information system (GIS) data is desirable.

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or currently pursuing.
 - **Discipline(s):**
 - **Computer, Information, and Data Sciences** ([1](#))
 - **Earth and Geosciences** ([2](#))
 - **Engineering** ([7](#))
 - **Environmental and Marine Sciences** ([2](#))
 - **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).

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