

Opportunity Title: EPA Conservation Activities and Nutrient and Water Quality

Research Fellowship

Opportunity Reference Code: EPA-ORD-CPHEA-PESD-2020-03

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 6/1/2021 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 training opportunity is available at the Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Public Health and Environmental Assessment (CPHEA), Pacific Ecological Systems Division (PESD) in Corvallis, Oregon.

Research Project: Each year, federal, state and local entities spend millions to fund activities on the ground designed to minimize the release of nutrient pollutants to the environment, yet the scope of monitoring often is not adequate to determine the effectiveness of these efforts. This interdisciplinary research project combines approaches to compile, analyze, and share complex databases on landscape characteristics, management actions, pollutant loads and sources, and water quality.

The goal of this research project is to compile existing monitoring data from the US EPA [National Aquatic Resource Surveys (NARS; <https://www.epa.gov/national-aquatic-resource-surveys>), Safe Drinking Water Information System, EnviroAtlas, StreamCat, LakeCat, National Nutrient Inventory and the Toxics Release Inventory] together with spatial databases of N and P input inventories and with federal and state databases on conservation activities across the US in order to better understand the impacts and effectiveness of conservation



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activities in reducing release of nutrients to aquatic ecosystems.

Ongoing research within EPA-CPHEA has assembled large datasets to examine nutrient release to the environment and subsequent impacts on surface waters, groundwater, and drinking water. This research project will evaluate the scope of conservation activities in achieving pollutant reductions, and study whether these conservation programs have led to changes in water body nutrient levels or loads. The research will move across scales, and the research participant will have the opportunity to conduct research to inform local to national management questions related to nutrients and water quality.

With guidance from the mentor, the research participant may be involved in any or all of the following research activities:

1. Assembling a national dataset on conservation practices applied over time within the conterminous US;
2. Using GIS to examine the relationships between watershed characteristics and aquatic chemistry;
3. Collaborating on related national mapping activities; and
4. Conducting scientific synthesis, data analysis, manuscript preparation, and literature searches.

Learning Objectives: The research participant will be mentored by EPA-CPHEA scientists as part of a national EPA program in the impacts of nutrient release to the environment within EPA's Safe and Sustainable Water Research and Sustainable and Healthy Communities Research Programs. The research participant will have the opportunity to learn about EPA's research program on the impacts of watershed management on water pollution, to conduct research on national geospatial data sets, and to apply watershed analyses and aquatic data.

Mentor(s): The mentors for this opportunity are Jana Compton (compton.jana@epa.gov) and Anne Neale (neale.anne@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: **Spring 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 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

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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 EPArpp@ornl.gov and include the reference code for this opportunity.






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 October 2020. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Experience with watershed science and spatial analyses of landscapes and watersheds.
- Solid background in landscape ecology approaches and methods.
- Experience with ArcGIS, R statistical software, and working with large datasets.
- Experience working with watershed and water quality data.
- Excellent written verbal and written communication skills.
- Demonstrated skills working in a group setting.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 6/30/2021 11:59:00 PM.
- **Discipline(s):**
 - **Earth and Geosciences** (21 )
 - **Engineering** (4 )
 - **Environmental and Marine Sciences** (8 )
 - **Life Health and Medical Sciences** (10 )
 - **Mathematics and Statistics** (1 )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).