

**Opportunity Title:** EPA Fellowship on Streamflow Duration Research

**Opportunity Reference Code:** EPA-OW-OWOW-2022-08



## Organization

U.S. Environmental Protection Agency (EPA)

## Reference Code

EPA-OW-OWOW-2022-08

## How to Apply

**Connect with ORISE...on the GO!** Download the new ORISE GO mobile app in the [Apple App Store](#) or [Google Play Store](#) to help you stay engaged, connected, and informed during your ORISE experience and beyond!

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

8/9/2022 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:** A postgraduate research opportunity is currently available at the U.S. Environmental Protection Agency's (EPA) Office of Water (OW), Office of Wetlands, Oceans, and Watersheds (OWOW), Oceans, Wetlands, and Communities Division (OWCD), Freshwater and Marine Regulatory Branch (FMRB), located in Washington, D.C.

**Research Project:** This research project is investigating the development of Streamflow Duration Assessment Methods (SDAMs).

The development of SDAMs is a collaborative effort of the headquarters and field offices of the EPA, the U.S. Army Corps of Engineers and two teams of contractors. For more information about the development of SDAMs, including recent publications, see <https://www.epa.gov/streamflow-duration-assessment>.

The selected participant will contribute research to a project designed to help develop rapid site assessment methods for the identification of perennial, intermittent or ephemeral reaches. The research will support the development of final methods across the country and additional analysis of the data used to develop the methods such as evaluation of:

- Benthic macroinvertebrate and hydrophyte data to identify high performing indicators for distinguishing between ephemeral reaches versus intermittent or perennial reaches,
- The optimum regional boundaries for method accuracy and simplicity of implementation,
- Snow persistence on method selection,
- Optimal GIS indicators for inclusion in final SDAMs, and
- Continuous hydrologic and temperature data collected over multiple years across SDAM regions.

**Learning Objectives:** Under the guidance of a mentor, the participant will:

- Learn about streamflow duration assessment method development and use nationally including applied research methods, analysis and publication of field manuals, traditional journal articles and training materials,
- Learn about the CWA regulatory and non-regulatory programs with particular emphasis on the Section 404 regulatory program,
- Interact with Office of Research and Development, regional and other agency staff and learn about the role of the headquarters

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and regional offices across agencies,

- Learn about tracking and analysis tools used to support program requirements and goals, including the 404 Resource Library website and DARTER (Data on Aquatic Resources Tracking for Effective Regulation), which houses permit action data,
- Play a role in data management for the multiple concurrent regional methods at different stages of development.

**Mentor(s):** The mentor(s) for questions about this opportunity is Brian Topping ([topping.brian@epa.gov](mailto:topping.brian@epa.gov)). If you have questions about the nature of the research please contact the mentor(s) directly.

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

**Appointment Length:** The appointment initially may be for one year and may be renewed 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. **At this time, the annual stipend for master's degrees is ~\$61,947 per year and doctoral degrees ~\$74,950. Travel funding will also be provided to support the research project including for field training on the data being collected and analyzed.** 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.

ORISE offers all ORISE EPA graduate students and Postdocs a free 5 year membership to the National Postdoctoral Association (NPA).

The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility, including but not limited to, COVID-19 requirements (e.g. facial covering, physical distancing, testing, vaccination).

**Questions:** Please see the [FAQ section](#) of our website. After reading, if you have additional questions about the application process please email [ORISE.EPA.OW@orau.org](mailto:ORISE.EPA.OW@orau.org) and include the reference code for this opportunity.


### Qualifications

The qualified candidate should have received a master's or doctoral degree in one of the relevant fields, or be currently pursuing one of the degrees with completion by August 31, 2022. Degree must have been received within the past five years.

Preferred Skills:

- A solid foundation in data management and analysis techniques and tools including the analysis of field generated data, aquatic macroinvertebrate data and large-scale spatial analysis
- Familiarity with R and random forest analysis
- Experience with the assessment of wadeable streams, including non-perennial streams






### Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or anticipated to be received by 8/31/2022 11:59:00 PM.
- **Discipline(s):**
  - **Earth and Geosciences** (21 )

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- **Engineering** (27 )
- **Environmental and Marine Sciences** (14 )
- **Life Health and Medical Sciences** (48 )
- **Mathematics and Statistics** (11 )
- **Social and Behavioral Sciences** (1 )