

Opportunity Title: ERDC-CHL: Process-based Flood Frequency Analysis

Fellowship

Opportunity Reference Code: ERDC-CHL-2026-0013

Organization U.S. Department of Defense (DOD)

Reference Code ERDC-CHL-2026-0013

How to Apply Click on *Apply* now to start your application.

Description The U.S. Army Engineer Research and Development Center's Coastal & Hydraulics Laboratory (CHL) performs research on ocean, estuarine, riverine, and watershed systems in support of the U.S. Army Corps of Engineers (USACE) and the Department of Defense (DOD) Task Force in support of the Ocean Commission. A multi-disciplinary team of scientists, engineers, and support personnel work in CHL's internationally known, unique facilities. This team has developed state-of-the-art experimental and computational models for solving water resource problems worldwide. CHL research and development addresses water resource and navigation challenges in a variety of hydrodynamic systems including aquifers, watersheds, rivers, reservoirs, lakes, estuaries, harbors, coastal inlets, and wetlands. Projects may include access to physical facilities of approximately 1.7 million square feet and high-performance computing facilities at the DOD Supercomputing Research Center.

What will I be doing?

Process-based flood frequency analysis (FFA) integrates recent advances in observations and Earth system simulations to better capture the complexities of the hydrologic cycle. This research initiative focuses on enhancing the physical representation of hydrological processes in rainfall-runoff models, such as HEC-HMS and the National Water Model, to support more reliable flood frequency analysis and improve flash flood predictions in small watersheds.

Under the guidance of a mentor, you will receive hands-on learning within the USACE hydrological research domain, with a focus on gaining experience on process-based flood frequency analysis and interagency collaboration between USACE and the National Water Center (NWC).

Why should I apply?

This fellowship provides the opportunity to independently utilize your skills and engage with experts in innovative ideas to move the proposed research forward.

Where will I be located? Location Varies

What is the anticipated start date? October 2026

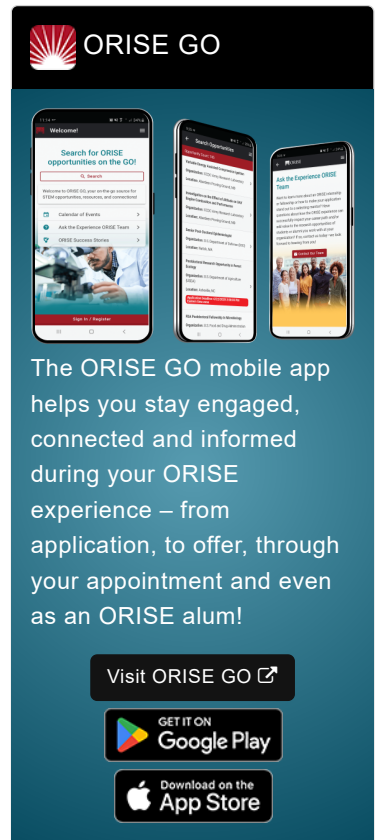
Exact start dates will be determined at the time of selection and in coordination with the selected candidate.

What is the appointment length?

This appointment is a part-time twelve-month research appointment. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.

What are the appointment provisions?

You will receive a stipend to be determined by ERDC-CHL. Stipends are typically based



Opportunity Title: ERDC-CHL: Process-based Flood Frequency Analysis

Fellowship

Opportunity Reference Code: ERDC-CHL-2026-0013

on a participant's academic standing, discipline, experience, and research facility location. Other provisions may include the following:

- Health Insurance Supplement (*Participants are eligible to purchase health insurance through ORISE*)
- Relocation Allowance
- Training and Travel Allowance

About ORISE

This program, administered by Oak Ridge Associated Universities (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 DoD. Participants do not enter into an employee/employer relationship with ORISE, ORAU, DoD or any other office or agency. Instead, you will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE. For more information, visit the [ORISE Research Participation Program at the U.S. Department of Defense](#).

Qualifications The ideal candidate will be a graduate student or received a master's or doctoral degree in Civil or Environmental Engineering, or Hydrologic Sciences.

Preferred skills include:

- Familiarity with rainfall–runoff modeling platforms (e.g., HEC-HMS, National Water Model, or NextGen)
- Understanding of flood frequency analysis (FFA), extreme precipitation, or stochastic hydrologic methods
- Proficiency in Python for geospatial data handling, model workflows, and scientific computing
- Strong communication skills and enthusiasm for interagency scientific research

Application Requirements

A complete application consists of:

- Zintellect Profile
- Educational and Employment History
- Essay Questions (goals, experiences, and skills relevant to the opportunity)
- Resume (PDF)
- Transcripts/Academic Records - Please upload a copy of a transcript for your current or most recent degree program that meets the disciplinary qualifications of the opportunity. [Click here for detailed information about acceptable transcripts](#).
- One recommendation. We encourage you to contact your recommender(s) as soon as you start your application to ensure they are able to complete the recommendation form and to let them know to expect a message from Zintellect. Recommenders will be asked to rate your scientific capabilities, personal characteristics, and describe how they know you. You can always log back in to your Zintellect account and check the status of your application.

Opportunity Title: ERDC-CHL: Process-based Flood Frequency Analysis

Fellowship

Opportunity Reference Code: ERDC-CHL-2026-0013

Submitted documents must have all social security numbers, student identification numbers, and/or dates of birth removed (blanked out, blackened out, made illegible, etc.) prior to uploading into the application system. All documents must be in English or include an official English translation. If you have questions, send an email to USACE@orise.orau.gov. Please list the reference code of this opportunity in the subject line of the email. Please understand that ORISE does not review applications or select applicants; selections are made by the sponsoring agency identified on this opportunity. All application materials should be submitted via the "Apply" button at the bottom of this opportunity listing. Please do not send application materials to the email address above.

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!

Point of Contact [Debbie](#)

Eligibility

Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or currently pursuing.
- **Minimum Overall GPA:** 3.00
- **Discipline(s):**
 - **Engineering** ([2](#) 👁)
 - **Environmental and Marine Sciences** ([1](#) 👁)
- **Age:** Must be 18 years of age