

Opportunity Title: ERDC Coastal Hydraulics Laboratory: Post-Wildfire Impacts to Reservoirs - Postdoctoral
Opportunity Reference Code: ERDC-CHL-2024-0013

Organization U.S. Department of Defense (DOD)

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

Description The Coastal and Hydraulics Laboratory (CHL, est. 1996) multi-disciplinary team of scientists, engineers and support personnel is internationally recognized for its world-class research. This laboratory includes more than 150 engineers and scientists and a number of contractors, including more than 60 doctorate and master's degrees. Along with access to unique, cutting-edge facilities, these team members have the experimental and computational expertise needed to solve water resource problems worldwide. CHL addresses an entire spectrum of water resource challenges in groundwater, watersheds, rivers, reservoirs, estuaries, harbors, coastal inlets and wetlands.

What will I be doing?

Under the guidance of mentors, you will explore the implications of hydrologic and land-cover disturbances, such as wildfires, on the hydraulics and water quality of inland reservoirs. You will utilize water quality and discharge (sourced from monitored and modeled data) to force an inland water quality model for pre- and post-disturbance periods. You will examine water quality outcomes resulting from cascading alterations in runoff dynamics, lake stratification dynamics, and nutrient and sediment loading.

You will learn two water quality models (ResSim and CE-Qual-W2) as well as utilize monitored data and hydrologic models (HEC-HMS) to develop hydrologic and loading boundary conditions. You will draw on water resources engineering concepts such as system mass balances, scaling from bench scale to field scale, data uncertainty, and model sensitivity as well as ecological concepts such as limnological dynamics, nutrient cycling, and ecologic pulse dynamics. You will engage in project team discussions to collaborate with other researchers on findings, give and receive feedback, and place your research in the greater context. You will practice research documentation at all stages to record and communicate the model development and application process.

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.

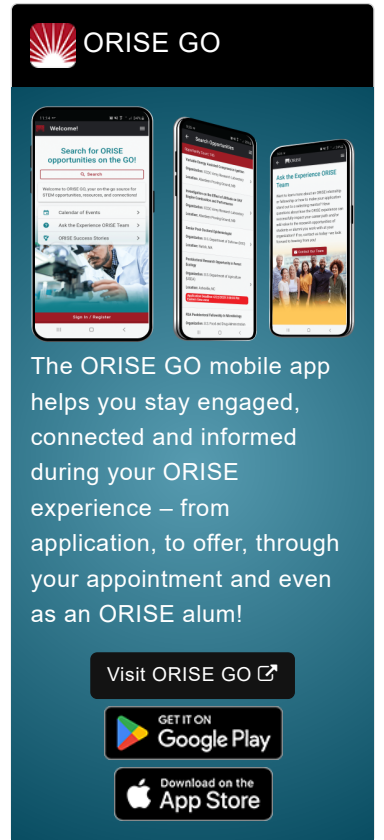
Where will I be located? Location Varies

What is the anticipated start date?

ERDC-CHL is ready to make an appointment immediately. Exact start date will be determined at the time of selection and in coordination with the selected candidate.


What is the length of the appointment?


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




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What are the appointment provisions?

You will receive a stipend to be determined by ERDC-CHL. Stipends are typically based on the participant's academic standing, discipline, experience, and research facility location. Other provision 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 have water quality modeling knowledge and a demonstrated record of documenting and publishing research results. A Ph.D. in a relevant field, such as Oceanography, Limnology, or Environmental Engineering, is required.

A complete application consists of:

- Zintellect profile
- Essay Questions - The application includes questions specific to the opportunity.
- Academic Records - An official transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted.
- One (1) 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. The status will go from Started to Submitted and then to Completed once the required recommendations have been received.

Submitted documents must have all social security numbers, student identification numbers, and/or dates of birth removed (blacked out, blackened out, made illegible, etc.) prior to uploading into the application system. 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. All documents must be in English or include an official English translation. 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.

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Point of Contact [Debbie at ORISE](#)

- Eligibility**
- Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Doctoral Degree received within the last 60 month(s).
 - **Minimum Overall GPA:** 3.00
 - **Discipline(s):**
 - **Earth and Geosciences** ([21](#) 👁)
 - **Engineering** ([27](#) 👁)
 - **Environmental and Marine Sciences** ([14](#) 👁)
 - **Age:** Must be 18 years of age