

Opportunity Title: EPA Climate Change Impact on Watersheds Modeling

Fellowship

Opportunity Reference Code: EPA-ORD-CPHEA-PESD-2022-03

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 5/31/2023 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.

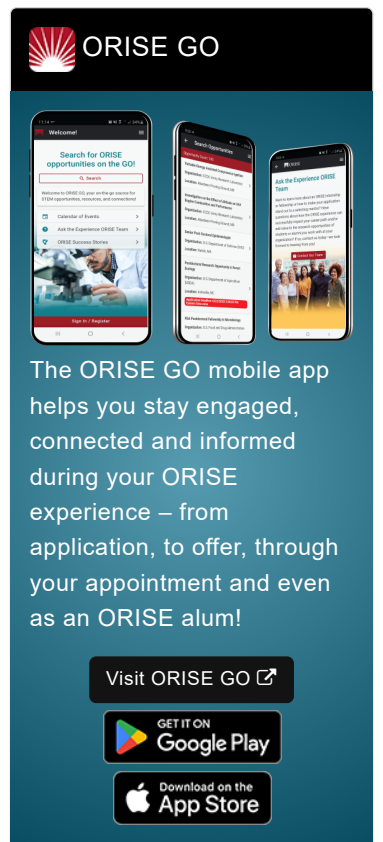
EPA Office/Lab and Location: A research training opportunity is available at the Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Public Health and Environmental Assessment (CPHEA), Pacific Ecological Systems Division (PESD) located in Corvallis, Oregon.

Research Project: The research participant will have the opportunity to collaborate with a team of EPA scientists focused on applications of EPA's VELMA ecohydrology model (<https://www.epa.gov/water-research/visualizing-ecosystem-land-management-assessments-velma-model>) to inform salmon recovery planning by tribal, community, and state and federal partners in the Puget Sound basin of Washington State, USA.

Learning Objectives: Under the guidance of a mentor, the research participant will have the opportunity to participate in research activities which may include modeling to forecast and evaluate impacts of climate change, land-use change, and other drivers affecting the production, delivery, and benefits of clean water, salmon habitat, healthy forests and other ecosystem services vital to the health and well-being of Puget Sound tribes and communities directly dependent on these natural resources. Additional opportunities may include application of modeled ecosystem services results to an existing human-natural systems model to estimate environmental, social, and economic trade-offs for alternative future watershed management practices.





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Mentor(s): The mentor for this opportunity is Bob McKane (mckane.bob@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: Winter/Spring 2023. 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 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.

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.ORD@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 (e.g. Watershed Modeling, Hydrology, Ecohydrology, Water Resources, Biogeochemical Cycles), or be currently pursuing one of the degrees with completion by May 31, 2023. Most recent degree must have been received within five years of the appointment start date.

Preferred skills:

- Strong background in spatial analysis (GIS)
- Skills/experiences with:

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- Spatially-explicit (grid-based) simulation models that link hydrological and biogeochemical processes within watersheds
- Strong background in the use of ArcGIS or similar spatial analysis tools for watershed modeling
- Demonstrated experience with conducting research of said models and tools for assessing impacts of climate and land use on water quality/quantity and plant and soil dynamics
- Communication of modeling results in the peer-reviewed scientific literature and at conferences

Eligibility • **Citizenship:** U.S. Citizen Only

Requirements • **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or anticipated to be received by 5/31/2023 11:59:00 PM.

• **Discipline(s):**

- **Business** ([1](#))
- **Chemistry and Materials Sciences** ([4](#))
- **Communications and Graphics Design** ([2](#))
- **Computer, Information, and Data Sciences** ([17](#))
- **Earth and Geosciences** ([21](#))
- **Engineering** ([4](#))
- **Environmental and Marine Sciences** ([14](#))
- **Life Health and Medical Sciences** ([7](#))
- **Mathematics and Statistics** ([11](#))
- **Other Non-Science & Engineering** ([1](#))
- **Social and Behavioral Sciences** ([1](#))