Opportunity Title: Software Development of a Wildfire Water Quality App
Opportunity Reference Code: EPA-ORD-NHEERL-WED-2018-14

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Organization	U.S. Environmental Protection Agency (EPA)
Reference Code	EPA-ORD-NHEERL-WED-2018-14
How to Apply	A complete application consists of:

- An application

- Transcripts – [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 references

All documents must be in English or include an official English translation.

If you have questions, send an email to EPArpp@orau.org. Please include the reference code for this opportunity in your email.

Description As a part of EPA's Air and Energy National Research Program, researchers are examining the effect of wildfire on water quality, including (1) a review of the current scientific literature to identify factors increasing the vulnerability of drinking water to wildfire, (2) empirical analyses demonstrating the relationship between wildfire and water quality in drinking water and streams, (3) watershed-scale modeling to determine the factors influencing water quality impacts, and (4) evaluating tools for assessing vulnerability and identifying strategies for reducing risk. EPA wishes to incorporate knowledge gained from these research efforts and other sources into a wildfire water quality app that can be used by drinking water and aquatic managers to understand risks to their systems from wildfire and to provide strategies for reducing these risks. This would likely involve development and/or use of a server database and web services. This effort could make use of a variety of programming languages and platforms, so we are looking for a candidate with a broad range of skills and a willingness and desire to learn new ones, though knowledge of Python, Java, Javascript, and PHP is desirable.

This opportunity is for a research participant with experience in software development that will contribute to the app development. The participant will gain further experience in developing code by collaborating with other researchers to write a variety of applications which may include database applications and interactive web applications. Experience developing user interface designs and graphical user interfaces will be gained during this research experience. The participant will also develop skills in communicating to a variety of technical and non-technical audiences by contributing to technical and end-user documentation, preparing reports and summaries of findings, presenting results at meetings, and contributing to publications. The research participant will further develop collaborative skills by interacting with a team of researchers having diverse interests, including a knowledge engineer, senior-level computer scientist, aquatic and landscape ecologists, geographers, and other environmental scientists.
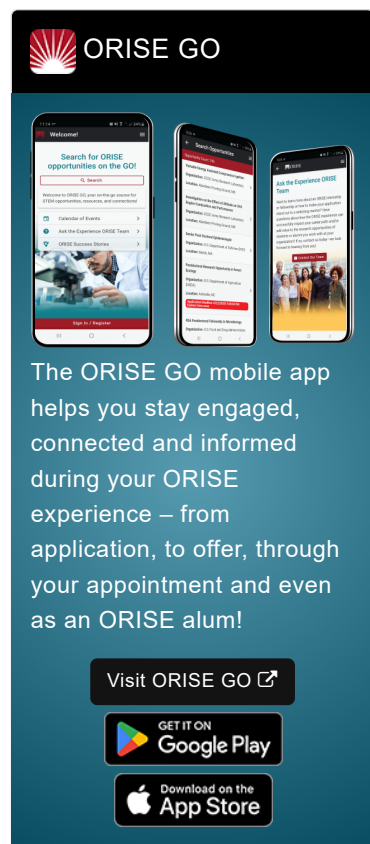
This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and EPA. The initial appointment is for one year, but may be renewed upon recommendation of EPA and is contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time in the Corvallis, Oregon area. Participants do not become employees of EPA, DOE or the program administrator, and there are no employment-related benefits.

The mentor for this project is Scott Leibowitz (leibowitz.scott@epa.gov). The anticipated start date for the appointment is October 1, 2018.

Qualifications   The applicant should have a Bachelor's or Master's degree in computer science, engineering, mathematics, or a closely-related field, and a strong background in software development. The degree must be received within five years of the appointment start date. Ideal candidates will have some experience in a number of different computer languages, including at least one object oriented language. Experience with databases and web development is preferred. Experience with GIS and training in one of the sciences is desirable. Since this is a team effort, preferred candidates will have demonstrated skills working as a part of a group and strong communication skills.

Eligibility Requirements
- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Bachelor's Degree or Master's Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (7 👁)
  - **Engineering** (2 👁)