

**Opportunity Title:** Forestry Analytical Modeling **Opportunity Reference Code:** EPA-SSP-0014-13

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-SSP-0014-13

## How to Apply Ready to send share your interest with EPA scientists?

- Submit application and supporting documents by clicking on Apply Now button.
- For more information, contact EPAjobs@orau.org. Do not contact EPA directly.
- Check out our website at: <u>http://orau.org/epa/</u>

Description THIS OPPORTUNITY HAS BEEN RE-POSTED. PLEASE CHECK EPA-SSP-0014-13-02-18-20, FORESTRY STATISTICIAN AND APPLY

> The EPA National Student Services Contract has an immediate opening for a full time Forestry Analytical Modeling with the Office of Research and Development at the EPA facility in Corvallis, OR.

> The Office of Research and Development at the EPA supports high-quality research to improve the scientific basis for decisions on national environmental issues and help EPA achieve its environmental goals. Research is conducted in a broad range of environmental areas by scientists in EPA laboratories and at universities across the country.

## What the EPA project is about

The Western Ecology Division (WED) is one of four ecological effects divisions of EPA's National Health and Environmental Effects Research Laboratory. WED's mission is 1) to provide EPA with national scientific leadership for terrestrial and regional-scale ecology, and 2) to develop the scientific basis for assessing the condition of aquatic resources and their response to natural and anthropogenic stresses. WED's research approach comprises two aspects: 1) developing an understanding of the structure and function of ecological systems, and 2) conducting analyses of ecological phenomena at the ecosystem, landscape, and regional scales.

In support of EPA's Office of Air and Office of Air Quality Planning and Standards Programs, researchers are examining the potential impacts of tropospheric ozone concentrations on tree growth for purposes of setting a secondary National Ambient Air Quality Standard (NAAQS) for ozone. Tropospheric ozone is one of six criteria pollutants that are regulated by the EPA as mandated by the Clean Air Act. This research involves a reanalysis of existing seedling ozone exposure studies to develop an ozone exposure metric that is biologically relevant and can be used for regulatory purposes. This research assesses the risk of tropospheric ozone to the environment by determining the threshold concentration for ozone below which tree growth is not affected. Several ozone metrics have been proposed for setting the secondary NAAQS for ozone but have not yet been fully evaluated based on statistical fit using existing seedling exposure studies. EPA scientists are conducting research to: (1) review the current scientific





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literature to quantify the relationship between tree growth and tropospheric ozone using regression-based ozone exposure studies on seedlings; and (2) better understand the role of tropospheric ozone on physiological processes, tree growth and mortality nationally. EPA wishes to incorporate knowledge gained from these research efforts to develop a secondary NAAQS for ozone that is protective.

## What skills will you gain?

EPA is seeking a skilled team member to aid in the statistical analysis of tree response data from existing ozone exposure studies. The work consists of the following two components: 1) assist in the development of a database of existing seedling ozone exposure studies to be made available to the public; and (2) assist in the statistical analysis of tree response data from these existing seedling ozone exposure studies. Both efforts will require strong analytical skills to assist the EPA mentor in the processing and clean-up of the experimental tree response data. These efforts require statistical expertise so we are looking for a team member with a Master's level expertise in applied and environmental statistics and a strong interest in plant sciences or forest ecology.

As a team member, you will interact with a multidisciplinary team of forest ecologists, biologists, and a statistician to prepare the raw field data for publication in peer-reviewed journals and presentation at international conferences. You will work with groups and subject matter experts to transform knowledge of atmospheric pollutant effects into strategies for promulgating a national ozone standard. Also, you will implement an approach for evaluating and reporting on the data and information quality upon which specific risks and strategies are based.

## Required Knowledge, Skills, Work Experience, and Education

- Strong analytical and communication skills;
- Experience in Microsoft Excel and R; and
- Experience working as part of a collaborative team.

Location: This job will be located at EPA's facility in Corvallis, OR.

Hours: Full time.

Salary: Hourly wage for hours worked at a rate of \$28.14 per hour.

**Employer**: Selected applicant will become a temporary employee of ORAU working as a contractor at EPA.

Travel: Occasional overnight travel may be required.

**Working Conditions:** The selected candidate will be supervised by a mentor who will provide day-to-day direction, as well as coach, advise and counsel the candidate, and review the candidate's work. This position will involve work in an administrative setting and is not expected to involve exposure to hazardous elements.

Expected Start Date: The position is full-time and expected to begin in



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March 2020. The initial project is through May 14, 2020 with potential optional periods.

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- Qualifications Be at least 18 years of age and
  - Have earned at least a Master's degree in Forest Ecology, Biology, Statistics, Computer Science, or other scientific discipline related field of study from an accredited university or college within the last 24 months, and
  - Be a citizen of the United States of America or a Legal Permanent Resident.

Eligibility • Citizenship: LPR or U.S. Citizen

- Requirements
- **Degree:** Master's Degree or Doctoral Degree received within the last 24 months or anticipated to be received by 2/29/2020 11:59:00 PM.
- Overall GPA: 2.00
- Discipline(s):
  - Computer, Information, and Data Sciences (<u>16</u>)
  - Earth and Geosciences (21 (\*)
  - Environmental and Marine Sciences (14 (1)
  - Life Health and Medical Sciences (45.)
  - Mathematics and Statistics (<u>10</u>)
- Affirmation I certify that I am at least 18 years of age; have earned at least a Master's degree in Forest Ecology, Biology, Statistics, Computer Science, or other scientific discipline related field of study from an accredited university or college within the last 24 months; a citizen or a Legal Permanent Resident of the United States of America; and not a current employee of EPA ORD or the spouse or child of an EPA ORD employee.

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