

**Opportunity Title:** Citizen Science Outreach: Assess and Address Children's Environmental Health and Air Pollution-EPA

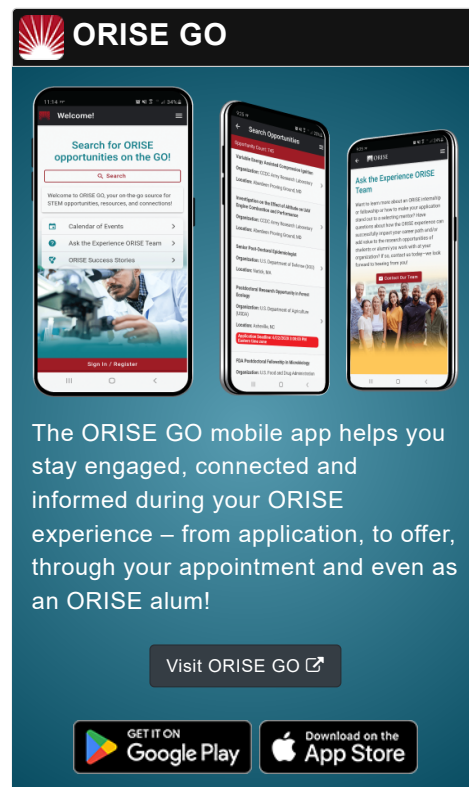
**Opportunity Reference Code:** ORD-NERL-HEASD-2015-11

<b>Organization</b>	U.S. Environmental Protection Agency (EPA)
<b>Reference Code</b>	ORD-NERL-HEASD-2015-11
<b>How to Apply</b>	<p>A complete application consists of:</p> <ul style="list-style-type: none"> <li>• An application</li> <li>• Transcripts – Click here for detailed information about acceptable transcripts</li> <li>• A current resume/CV, including academic history, employment history, relevant experiences, and publication list</li> <li>• Two educational or professional references</li> </ul> <p>All documents must be in English or include an official English translation.</p> <p>If you have questions, send an email to <a href="mailto:EPArpp@orau.org">EPArpp@orau.org</a>. Please include the reference code for this opportunity in your email.</p>

**Description** An undergraduate or postgraduate research project training opportunity is currently available at the U.S. Environmental Protection Agency (EPA). This project is collaboration between the EPA's Office of Research and Development (ORD) National Exposure Research Laboratory (NERL) Human Exposure and Atmospheric Modeling Division (HEASD) and Region 10's Office of Ecosystem Tribal and Public Affairs (OETPA). This project will be located in Region 10, Seattle, WA/Portland, OR.

This Sustainable and Healthy Communities funded research project focuses on "Making a Visible Difference (MVD) in N/NE Portland: Engaging Communities, Using Citizen Science to Assess and Address Children's Environmental Health from Transit and Air Pollution." This research is part of a program between EPA Region 10 and several partners in Portland, Oregon, including, but not limited to Concordia University, METRO, Neighbors for Clean Air, Groundwork Portland, Oregon Health Authority, and other community partners who seek to better understand environmental health stressors impacting school age children. A key focus of this research will be health concerns where children are exposed to environmental contaminants on their school bus routes.

The research participant will join a team that seeks to address problems of significant human health importance at the community level, provide tools to communities to understand and reduce environmental burden, and evaluate the estimates of exposure, risk, using next gen sensors, ground-truth scenarios

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and web based modeling. S/he will engage community members and partners in using state of the art EPA citizen science tools (including those under development i.e. C-FERST, C-LINE) EJ SCREEN, and EnviroAtlas.

The research participant will gain experience by:

- Developing their skills through community partnerships and collaboration with diverse communities and vulnerable populations, academia, community based organizations, and government representatives
- Participating in applications of EPA science tools to estimate emissions and model the dispersion of air pollutants in neighborhoods surrounding bus stops and along the routes that students commute to school in order to mitigate exposure
- Applying and translating scientific findings to support practical community driven solutions that improve human health and the environment

The participant will develop professionally in one or more disciplines supporting this project (e.g., environmental and human health, geographic information systems, sustainability and citizen science).

This program, administered by ORAU through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education, was established through an interagency agreement between DOE and EPA.

The mentor for this project is Sheryl Stohs (stohs.sheryl@epa.gov). The desired start date is December 14, 2015.

## **Qualifications**

The successful participant can have an interdisciplinary focus with background in the following areas: Environment and Sustainability, Urban and Social Sciences, Geographic Information Systems, Environmental Sciences, Education and Humanities, Transportation, Cultural Community, and Interdisciplinary Studies. Applicants must have received a an undergraduate or graduate degree within 5 years of the desired starting date, or be currently in a degree granting program at an accredited U.S. college or university. Students will be required to provide proof of enrollment each semester.

Preferred skills for the successful participant are:

- Experience engaging culturally diverse community members
- Knowledge of or experience in maintaining and sustaining

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historical connections to communities

- Experience with Geographic Information Systems, citizen science and web-based tools (i.e. EJ SCREEN, C-FERST, EnviroAtlas, or other environmental analysis tools, etc.)
- Hands on experience with next generation sensors or monitors and modeling.

The appointment is part time, 20 hours per week (50% of full time), for 9 months and may be renewed upon recommendation of EPA and contingent on the availability of funds. The participant will receive a monthly stipend based on level of education. Funding may be made available to reimburse the participant's travel expenses to present the results of his/her research at scientific conferences. No funding will be made available to cover travel costs for pre-appointment visits, relocation costs, tuition and fees, or participant's health insurance. The participant must show proof of health and medical insurance. The participant does not become an EPA employee.

#### Eligibility Requirements

- **Degree:** Bachelor's Degree or Master's Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Communications and Graphics Design** (1 )
  - **Computer, Information, and Data Sciences** (1 )
  - **Earth and Geosciences** (2 )
  - **Environmental and Marine Sciences** (2 )
  - **Life Health and Medical Sciences** (3 )
  - **Other Non-Science & Engineering** (3 )
  - **Social and Behavioral Sciences** (5 )