

**Opportunity Title:** Mapping, monitoring, and geospatial analysis of PFAS across the USA: geospatial research

**Opportunity Reference Code:** EPA-ORD-NERL-EMMD-2018-09

**Organization** U.S. Environmental Protection Agency (EPA)

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**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](mailto:EPARpp@orau.org). Please include the reference code for this opportunity in your email.

**Description** Poly- and perfluoroalkyl substances (PFASs) make up a large group of persistent anthropogenic chemicals used in industrial processes and commercial products over the past 60 years. Widespread use and extreme resistance to degradation have resulted in the ubiquitous presence of these compounds in the environment. Human PFAS exposure has been linked to cancer, elevated cholesterol, obesity, immune suppression, and endocrine disruption.

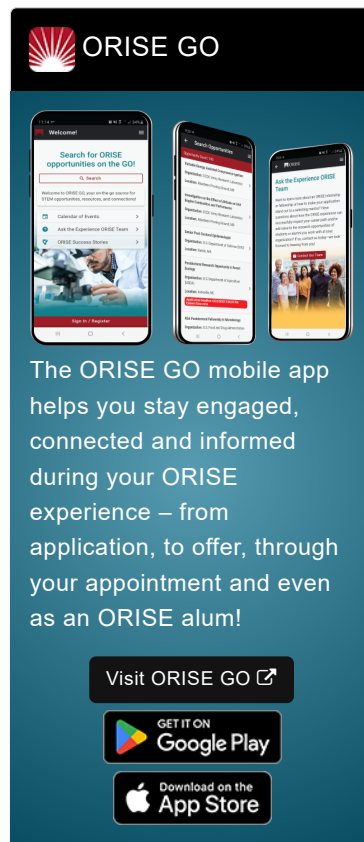
There are many PFAS compounds in use and emerging in industry. We do not yet have a comprehensive understanding of where PFAS is used in manufacturing, and where it is likely to have entered the environment. The goal of this research project is to map existing known sources of PFAS, and investigate potential new sources of PFAS. Analysis of PFAS occurrence data combined with environmental and socioeconomic data will be used to create qualitative maps of potential PFAS occurrence.

Research activities may include:

- Searching and acquiring existing PFAS geospatial data
- Organizing and maintaining acquired data in a collaborative PFAS GIS workspace on the EPA GeoPlatform (ArcGIS Online)
- Conducting research on PFAS data using ArcGIS Online, ArcPro, ArcGIS, or other software
- Interacting with the EnviroAtlas team for incorporation of PFAS data and tools into EnviroAtlas ([www.epa.gov/enviroatlas](http://www.epa.gov/enviroatlas))
- Performing quality assurance, maintain an electronic research notebook, and creating metadata


Learning objectives for the research participant may include:


- Performing integrated transdisciplinary research (ITR) to protect human health.
- Advancing the state of knowledge of PFAS occurrence in the




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environment.





- Enhancing geospatial skills.
- Opportunity to apply skills to analytical chemistry.
- Gaining knowledge of leading edge geospatial tools and infrastructure on a multidisciplinary science team in a Federal government laboratory.

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 Research Triangle Park, North Carolina area. Participants do not become employees of EPA, DOE or the program administrator, and there are no employment-related benefits.

The mentors for this project are Drew Piant ([piant.drew@epa.gov](mailto:piant.drew@epa.gov)) and Andrew Lindstrom ([lindstrom.andrew@epa.gov](mailto:lindstrom.andrew@epa.gov)). The anticipated start date for the appointment is October 1, 2018.

**Qualifications** The successful candidate will have a strong background in GIS and geospatial analysis. Degrees in Geography, Earth Science, Environmental Science, Geochemistry, Geospatial Science and related fields are appropriate.

The successful candidate will be skilled at geospatial processing, GIS and mapping. Proficiency with GIS software ArcGIS Online, ArcPro and ArcMAP is preferred. Knowledge and experience with geochemistry, aqueous chemistry, and water quality analysis are helpful but not required. Skill with Python and R is helpful but not required. The successful candidate will have strong written and oral communication skills.

- Eligibility Requirements**
- **Degree:** Doctoral Degree received within the last 60 month(s).
  - **Discipline(s):**
    - **Chemistry and Materials Sciences** (1 )
    - **Earth and Geosciences** (3 )
    - **Environmental and Marine Sciences** (3 )
    - **Social and Behavioral Sciences** (1 )