

Opportunity Title: Technology, Innovation and Policy For Clean and Safe Water
Opportunity Reference Code: EPA-Water-2019-0006



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 recommendations

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

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

Application Deadline 4/17/2019 3:00:00 PM Eastern Time Zone

Description A postgraduate research opportunity is available in the U.S. Environmental Protection Agency (EPA) Office of Water's (OW) Office of Science and Technology (EPA-OW-OST). The selected applicant will be in OST's Immediate (Front) Office with both the Resource Management and Information Staff and the Water Technology and Innovation team.

OST works with states, tribes, and stakeholders to develop and implement the foundational elements of the Clean Water Act and Safe Drinking Water Act. OST develops national aquatic life and human health criteria; drinking water health advisories; policy and guidance for water quality standards and human health protection programs; and industrial and municipal performance standards. OST publishes analytical methods for pollutants in water and wastewater. OST's Resource Management and Information Staff (RMIS) oversee multiple areas, including regulatory management and communications which direct water quality criteria, standards, effluent limit guidelines and analytical methods throughout the United States.

The Water Technology and Innovation (WTI) team conducts a range of technical, policy, and program activities on behalf of the Office of Water to assess how the National Water Program and water stakeholders can better foster sustainability and technological innovations into their activities, operations, and management, as described in the Water Technology Innovation Blueprint.

Under the guidance of the mentor, the participant may learn how to research, collect and analyze data, and present information on various topics pertinent to OST, RMIS, and WTI, including:

- The regulatory management process for the Office of Science and Technology's multiple programs; as well as intra-agency (e.g. other EPA offices) and inter-agency coordination (e.g. Office of Management and Budget).
- Traditional and emerging water monitoring technology (e.g. sensors, remote sensing); the role of data in implementing the Clean Water Act and Safe Drinking Water Act programs; big data and IoT as related to water resource

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management and the environment; and the various considerations when collecting and sharing near real-time data (e.g. data quality, data analysis, technology evaluation, telemetry, data visualization).

- Development and evaluation of metrics to assess progress for the EPA Strategic Plan, the National Water Program's Strategic Plan, and the National Water Program's draft strategic plan for advanced monitoring and intelligent water.
- Advancements in sensor and sensing technology, intelligent water systems, smart water, and the Internet of Water (open, interoperable, discoverable data) across surface water, drinking water, groundwater, and wastewater.
- The 10 market opportunities described in the Water Technology Innovation Blueprints (<https://www.epa.gov/innovation/water-technology-innovation-blueprints>)

Through this project, the participant will develop a sound understanding of: (1) water resources management, including the critical challenges facing the U.S. and world; (2) gain an understanding of technology and innovation initiatives that are currently being implemented and are on the horizon to solve water resource issues; (3) the regulatory process to publish new regulations; (4) develop expertise in advanced monitoring and smart water as described in the Water Technology Innovation Blueprints; (5) become familiar with water sector affairs/stakeholders; and (6) develop water-related research/practitioner skills. The participant will be exposed to regulatory, policy, technical, and research experiences related to science, technology, and policy. The participant will have the opportunity to attend meetings and conferences related to the project and their research.

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 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 at EPA in the Washington, DC area. Participants do not become employees of EPA, DOE or the program administrator, and there are no employment-related benefits.

This opportunity is open to U.S. citizens only.

The mentor for this project is Adriana Felix-Salgado (felix-salgado.adriana@epa.gov).

Qualifications

The qualified candidate must have received a master's degree in one of the relevant fields with a focus/interest in water, technology, innovation, and/or sustainability. Degree must have been received within five years of the appointment start date.

Preferred skills:










- Knowledge, familiarity and/or work experience with the Clean Water Act, Safe Drinking Water Act, or water resources science and management
- Possess the skills for analysis, critical thinking and problem solving
- Proficiency with Excel
- Good interpersonal relationship skills

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- Excellent written communication and oral presentation skills
- Ability to multi-task and handle multiple projects with short-turnaround time-frames and minimal guidance
- Strong networking and communication skills with a broad range of peers, awareness of strategic relationships, and adaptability to work with diverse groups of people of differing opinions
- Understanding of change management
- Ability to research a broad variety of water monitoring subjects and projects, while also researching in-depth in a few key subject areas
- Interest in sensor technology, near real-time data, and the Internet of Things
- Familiarity with R code, Python, Qlik, Tableau, GIS and SharePoint is valued

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree received within the last 60 month(s).
- **Discipline(s):**
 - **Chemistry and Materials Sciences** (1 )
 - **Communications and Graphics Design** (2 )
 - **Computer, Information, and Data Sciences** (1 )
 - **Earth and Geosciences** (1 )
 - **Engineering** (8 )
 - **Environmental and Marine Sciences** (4 )
 - **Life Health and Medical Sciences** (3 )
 - **Other Non-Science & Engineering** (2 )
 - **Social and Behavioral Sciences** (5 )