

Opportunity Title: EPA Graduate Research Opportunity in Puerto Rico Drinking Water Assessment

Opportunity Reference Code: EPA-REG2-2022-02

Organization U.S. Environmental Protection Agency (EPA)

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A complete application consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. All transcripts must be in English or include an official English translation. 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. Click [here](#) for detailed information about recommendations.

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

Application Deadline 3/3/2022 3:00:00 PM Eastern Time Zone

Description ***Applications may be reviewed on a rolling-basis and this posting could close before the deadline.** Click [here](#) for information about the selection process.

EPA Office/Lab and Location: Multiple research opportunities are available at the U.S. Environmental Protection Agency's (EPA) Region 2, Caribbean Environmental Protection Division (CEPD). This research opportunity is with the Public Water System Supervision Program within the Municipal Waters Program Branch at CEPD, located in Guaynabo, Puerto Rico.

Research Project: Community drinking water systems in Puerto Rico are commonly known as Non-Puerto Rico Aqueduct and Sewer Authority (Non-PRASA), as they are not owned or managed by the main water utility in the island. The Non-PRASA systems are primarily located in small, disadvantaged, environmental justice communities in rural areas, and they are typically owned and operated by community leaders. Non-PRASA communities have a historical high percentage of health-based violations (they have the highest impact in EPA Region 2's "Long Standing Health-Based Violators Performance Measures"), representing a chronic risk to the public health of the population in these communities. There is a constant concern about the quality of the drinking water served by community drinking water systems serving about 100,000 people in overburdened and vulnerable communities in Puerto Rico.

Puerto Rico's economic constraints and the recent impacts of



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several natural disasters (hurricanes, earthquakes, drought), as well as the COVID-19 pandemic, have placed an additional burden on Non-PRASA systems, negatively affecting compliance rates with drinking water standards. The poverty rate in Puerto Rico is significant; with a 43.5% poverty rate documented by the US Census for 2021, compared to Mississippi, the mainland's poorest state, with a 18.7% poverty rate. Hence, the whole island of Puerto Rico is considered to have communities with environmental justice concerns.

The objective of this project is to conduct capacity assessments at approximately 240 Non-Puerto Rico Aqueduct and Sewer Authority (Non-PRASA) community drinking water systems, to support possible and ongoing infrastructure investments and capacity development efforts led by federal and local agencies and local partners. The assessments will provide baseline information about the technical, managerial, and financial capacities and needs of these systems, as well as environmental justice considerations, to support decision making about resource allocation for planning and infrastructure projects. The project is divided into 3 phases: 1) Data Mining/Consolidation - Review and consolidate data from available information systems, 2) Capacity Assessments - Conduct field visits to systems for data collection and analysis, 3) Dashboard development and outreach: Elaborate a dashboard and educational materials to facilitate information sharing and coordination among all interested stakeholders.

Learning Objectives: Through this project, the participants will gain an understanding of EPA and the Puerto Rico Department of Health's (PRDOH) Drinking Water Programs. By means of qualitative and quantitative research methodologies, the participant will collect data and collaborate on assessing the technical, managerial and financial capacities of Non-PRASA systems in PR. Also, the participants will conduct a comparative analysis between capacity assessment results and enforcement data considering scoring systems. In addition, the participant will learn first-hand about interactions between Non-PRASA communities and government agencies (federal, state and local), academic institutions, non-for-profit organizations and the private industry. This project will provide excellent exposure to a broad range of scientific, technical and policy issues pertaining to drinking water quality, emergency response and remediation, community resiliency and sustainability, and environmental justice issues.

Mentor(s): The mentor for this opportunity is Cristina Maldonado (Maldonado.cristina@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: Spring 2022. All start dates are flexible and vary depending on numerous factors. Click

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[here](#) for detailed information about start dates.

Appointment Length: The appointment will initially be for one year and may be renewed three to four additional years upon EPA recommendation and subject to availability of funding.

Level of Participation: The appointment is full-time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. Click [here](#) for detailed information about full-time stipends.

EPA Security Clearance: Completion of a successful background investigation by the Office of Personnel Management (OPM) is required for an applicant to be on-boarded at EPA.

ORISE Information: 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. Participants do not become employees of EPA, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

ORISE offers all ORISE EPA graduate students and Postdocs a free 5 year membership to the National Postdoctoral Association (NPA).

The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility, including but not limited to, COVID-19 requirements (e.g. facial covering, physical distancing, testing, vaccination).

Questions: Please see the [FAQ section](#) of our website. After reading, if you have additional questions about the application process please email ORISE.EPA.REG@orau.org and include the reference code for this opportunity.

Qualifications

The qualified candidate should be currently pursuing or have received a master's or doctoral degree in one of the relevant fields. Degree must have been received within five years of the appointment start date.

Preferred skills/experience:

- Proficiency/fluency in Spanish
- Skills, knowledge or experience in conducting field work, drinking water systems, database entry and analysis, professional writing, and social/interpersonal relations









Eligibility

- **Citizenship:** LPR or U.S. Citizen

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Requirements

- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
 - **Communications and Graphics Design** (3 )
 - **Computer, Information, and Data Sciences** (6 )
 - **Earth and Geosciences** (2 )
 - **Engineering** (7 )
 - **Environmental and Marine Sciences** (4 )
 - **Life Health and Medical Sciences** (5 )
 - **Mathematics and Statistics** (3 )
 - **Social and Behavioral Sciences** (6 )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).