

## ***Holistic Wet Weather Management through Adaptive Volume and Pollutant Source Control at a Community Scale: Finding the Sweet Spot***

Funded by Water Research Foundation, RFP# 5131

Project Lead/PI: Miriam Hacker, Howard Neukrug



### **Job title**

Graduate Research Assistant - Climate change adaptation

### **Contract type**

Start date: August 30th, 2022  
Contract type: Stipend  
Length of contract: 9 months, with potential to extend  
Hourly rate: Up to 20 hrs/wk at \$21/hr

### **Project description**

Utilities, municipalities, and counties are at a crossroads; not only must they face external stressors due to climate change (e.g. extreme events with increasing frequency and intensity), but they must also address aging infrastructure, population shifts (densification and shrinking cities), and additional pressure on networks already over-capacity. Adaptive management strategies for improving water management policies and practice based on past experiences is needed to appropriately account for such uncertainty. ***This project focuses on finding the balance (or the “sweet spot”) for how utilities select adaptive volume and pollutant source control best management practices (BMPs) for wet weather events using a holistic, or triple-bottom line approach.*** Strategies will be geospatially analyzed across three EPA regions (Regions 3, 5, and another TBD) to provide a decision-support framework for utilities and impacted communities to explore options for wet weather management based on their local context and desired goals.

### **Project outcomes**

- Guidance document with a decision support framework
- Interactive ESRI StoryMap
- Public outreach factsheets
- Academic peer-review journal article

## Job description

To support this work, the Water Center is hiring a graduate research assistant to support data collection with utilities and work with spatial analysis using ArcGIS / ESRI Storymap software. This position will work with Water Center staff to develop a decision-support framework for how US cities select wet weather BMPs for volume and pollutant source control using a triple-bottom-line approach.

The ideal candidate will...

- Be a current University of Pennsylvania student
- Hold a B.S. in environmental studies, geography, engineering, or related major (other disciplines welcomed with technical experience)
- Experience with ArcGIS and/or ESRI Storymap
- Experience with administrative support (emails, coordinating meetings, etc.)
- Strong communication skills
- Understanding of water utilities or water/wastewater infrastructure is highly desired

In addition to compensation, this project will be producing academic and conference publications, as well as science communication materials. Inclusion in authorship is available and extent of involvement is to be determined based on student preference.

## List of responsibilities

- Literature/desk review.
- Supporting workshop coordination with key stakeholders.
- Using ArcGIS to spatially analyze qualitative data.
- Developing research findings into a Storymap tool.
- Helping schedule meetings, draft reports, present findings.

## To apply

Submit a cover letter and resume to Dr. Miriam Hacker, Senior Research Implementation Lead at [hackerm@sas.upenn.edu](mailto:hackerm@sas.upenn.edu). Review of applications will start on August 15th; applications will be accepted until the position is filled. Questions can also be sent to the email address above.