



## Graduate Assistantships in Wastewater System Resilience Modeling

The Liu Group at the [Department of Civil, Construction and Environmental Engineering](#) (CCEE), Iowa State University (ISU) is providing **1** Graduate Assistantship in the area of Wastewater System Resilience modeling, starting in **Spring 2025**.

Many U.S. cities experience combined sewer overflows (CSOs) during wet weather, resulting in significant environmental and health consequences. Marginalized communities, often located in historically flood-prone areas, face heightened susceptibility to the impacts of CSOs. In this position, the Graduate Research Assistant (GRA) will develop an integrated modeling framework to:

- Advance data analytics and modeling methodologies for urban wastewater systems.
- Assess the system-level resilience of test-bed systems to wet weather conditions under the influence of climate change.
- Identify the vulnerability of marginalized communities to future likely CSO incidents.

The GRA will primarily work under the supervision of Dr. Lu Liu. Additionally, this position offers unique opportunities to work collaboratively across universities and directly with industry collaborators.

We are seeking highly motivated students with a strong interest in sustainable environmental-human systems, particularly focusing on water resources. Ideal candidates will have a background in water resources engineering, civil engineering, environmental engineering, agricultural and biological engineering, geographic science, environmental science, or related fields. Prerequisites include proficiency in data processing languages/environments such as R, Python, and MATLAB. Preferred qualifications include experience with programming, hydrologic modeling, systems analysis, geospatial data analysis, and socioeconomic methods. **Candidates with a master's degree are especially encouraged to apply.**

Potential applicants are encouraged to send inquiries/questions to Dr. Lu Liu ([luliu@iastate.edu](mailto:luliu@iastate.edu)) prior to apply. To apply, using "*Graduate Assistantship in wastewater – the Liu Group*" as the subject line. Please include (1) a cover letter briefly describing your research interests (no more than 1 page), (2) a CV and (3) unofficial transcripts. In addition, potential applicants need to fulfill the Departmental admission requirements. Below please find links about ISU's CCEE department and programs:

- [CCEE Graduate Admission Requirements](#)

You can use the [ISU Admissions Preapplication](#) for an initial check of your academic credentials at no cost.

*ISU is a public land-grant research university in Ames, Iowa. It is the largest university in the state of Iowa and the third largest university in the Big 12 athletic conference. ISU's CCEE Department ranked no. 16 nationally, or no. 12 among public universities in the US News & World Report in 2017.*