

North Carolina has 17 river basins. Source: NC DEQ

What is North Carolina's Water Resources Research Institute?

WRRI funds critical water research, trains the next generation of water scientists, and disseminates sound science, educational programs, and training opportunities that support the sustainable use and conservation of water resources.

WRRI is a multi-campus program of the University of North Carolina System, serving public and private universities across the state, including minority-serving institutions. WRRI is supported through a partnership with the U.S. Geological Survey and is one of 54 institutes of the National Institutes for Water Resources.

OVER THE PAST DECADE:



PhD candidate Adeola Sorinolu (UNC Charlotte) presents her WRRI-funded water quality research at the 2022 WRRI Annual Conference.

8:1 WRRI leverages \$8 for every \$1 in federal funding received

RESEARCH

WRRI provides grants for water research to students, faculty, and practitioners across the state. We encourage researchers to consult and collaborate with end-users of their research to maximize relevance and application of results.

ENGAGEMENT

Addressing complex challenges and meeting varied community needs requires a **diversity of voices and experiences**. We fund outreach and engage communities in research through our innovative **Community Collaborative Research Grant** (CCRG) Program.

EDUCATION

We support lifelong learning from kindergarten through career. Each year, the **NC WRRI Annual Conference** brings together researchers, students, policymakers, nonprofits, government agencies, and community members.

COLLABORATION

We serve as a bridge between research and practice. Through the **NC Urban Water Consortium** and **NC Stormwater Consortium**, WRRI puts new research into the hands of utilities professionals from 12 of North Carolina's largest cities.

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Spotlight on PFAS: Researchers Seeking Solutions

Exposure to PFAS (Per- and polyfluoroalkyl substances, a class of "forever chemicals") has been linked to cancer, immune disorders, and other adverse health effects. North Carolina has among the highest PFAS prevalence in drinking water in the United States.

WRRI and the NC Urban Water Consortium fund research projects to create new water treatment technologies that more efficiently, safely, and effectively remove PFAS from drinking water.

Training and Inspiring the Next Generation of Water Stewards

Through her CCRG-funded project, Olya Keen (UNC Charlotte) is leading five high school students through their own water-related research projects. With the support of community partner Eboné Lockett (Harvesting Humanity), students selected project topics related to particular environmental concerns in their communities, ranging from nutrient pollution of runoff, to impact of land development on stream water quality, to quantifying the amount of lead in school tap water. With guidance from their graduate student mentors, these scholars are gaining hands-on experience in water monitoring, data collection, and analysis. They will present their research findings at the 2023 WRRI conference.

Graduate student researcher Holly Haflich (UNC Chapel Hill) is evaluating techniques for more selective removal of PFAS during water treatment. Here she poses with undergraduate mentee Josh Singleton as they apply a membrane-based electro-driven water treatment process.

Mei Sun (UNC Charlotte) is utilizing an Ultraviolet-Sulfite treatment to degrade PFAS while lowering the risk of contaminating the surrounding environment. Pictured here is Postdoc Yingying You preparing the instrument for analyzing PFAS in waste samples.

What water re and ho keep it

What makes water renewable,

and how can we keep it that way?

Our growing partnership with PBS NC has resulted in a free, standards-aligned curriculum on renewable water, helping middle school teachers statewide incorporate the latest data and information into their instruction.

Partnering with Communities to Address Environmental Injustices

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WRRI received \$205,440 to work with the Walnut Creek Wetlands Community Partnership to install green infrastructure and use wetland restoration practices to treat stormwater runoff. The project addresses environmental harms that Raleigh's Rochester Heights neighborhood has suffered for decades.

> A Walnut Creek community stewardship crew member collects a sample to test for bacteria in a Walnut Creek tributary.

