What is North Carolina’s Water Resources Research Institute?

WRRI supports water research, trains the next generation of water scientists, and solves the pressing water issues of our time. For more than five decades, we have been a go-to resource for unbiased, research-based information for scientists, local officials, government agencies, businesses and students working to address the state’s water priorities. We take pride in the success of students whose careers began with WRRI-funded research, or professional presentations at our events.

Why invest in WRRI?

More than 10.4 million North Carolinians depend on fresh, clean water to live and thrive. From the mountains to the coast, rainwater to groundwater, WRRI facilitates significant funding for research, training and outreach programs each year, including our participation in the innovative Community Collaborative Research Program. We also help ensure that North Carolina’s professionals, educators and policymakers have information they need to respond to our state’s most pressing water challenges and to protect our communities, economy and natural resources. Our popular WRRI Annual Conference had to quickly adapt in 2020, due to COVID restrictions, but the shift to online sessions provided important research results on pressing topics. Our role as a trusted source of information will continue with online sessions in 2021.

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How do we do it?

WRRI is a multi-campus program of the University of North Carolina System — and also serves other public and private universities in the state, including historically black colleges and universities, minority-serving institutions, and community colleges. We are one of 54 water institutes (niwr.info) supported through a partnership with the U.S. Geological Survey.
Partnerships Guide our Growing State

North Carolina is among the fastest-growing states in the nation. As our urban areas expand, cities feel increasing pressure on their drinking water, wastewater and stormwater utilities. WRRI unites 12 of North Carolina’s largest cities through the N.C. Urban Water Consortium and the N.C. Stormwater Consortium. In the past three decades, with WRRI’s guidance, these groups have effectively invested research funds to address priority issues, such as increasing demand and emerging water treatment challenges. Those results are directly applied by local professionals to ensure high-quality service and abundant clean, safe water.

Fellows Focus on Vulnerable Communities

NC WRRI continues its focus on communities, students and faculty who have been underserved and underrepresented in water-related research. For example, WRRI partners with NC Sea Grant to fund fellowships for students in minority-serving institutions and/or research that reaches the people and protects the water in underserved communities. Recent fellows have included Olivia Vilá, who is engaging Hispanic/Latino organizations in Wilmington to better understand recovery and resilience needs in light of historic flooding.

Watershed Network Serves Entire State

WRRI understands the collective power of individuals striving towards a shared goal. Thus, we provide leadership for the N.C. Watershed Stewardship Network (NCWSN), as a platform for citizens and watershed professionals to collaborate and build skills for starting and supporting successful watershed projects. The network’s ultimate goals are healthy watersheds that support economic, environmental and community health. As COVID shifted classrooms online in 2020, NCWSN and partners at UNC-TV Science adapted the popular Watershed Wisdom lesson plans for at-home learning. NCWSN also hosted an online session for stewards to share successful strategies for 2020. From Madison County in the mountains to Hyde County at the coast, the network empowers citizens across the state to improve waterways in their communities.

WRRI researchers Astrid Schnetzer (NC State University) and Nathan Hall (UNC-Chapel Hill) teach water utility operators and students how to deploy resin bags that can be used to indicate the presence of toxins from algae blooms in drinking water supplies.

Yener Ulus is looking at mercury’s impacts on freshwater coastal wetlands, including in Tyrrell County.

In 2020, Watershed Wisdom lessons online served 9,000 teachers and students.