

PARTNERSHIP WITH USGS

- The National Institutes for Water Resources (NIWR) partners with the U.S. Geological Survey (USGS) through the provisions of the Water Resources Research Act (WRRRA) to address water-related concerns by providing a national platform for research, training and collaboration.
- USGS provides each institute with a grant to target local priorities, recruit researchers and leverage federal funds with state money and private funding.
- 54 NIWR member institutes are housed in the country's land-grant universities in all 50 states, three U.S. territories and the District of Columbia.
- NIWR is the only federally mandated research program that focuses on applied water resource research, education, training and outreach.



Housed in the nation's leading research universities, NIWR institutes leverage world-class science and policy solutions to address emerging water issues. Member institutes help USGS efficiently address the entire spectrum of water issues, including those that fall between government agency missions as well as policy-driven or regulatory missions.

MAXIMIZING FEDERAL IMPACT

NIWR's ability to attract and match non-federal funds to USGS grant-sponsored research multiplies the federal investment in local water projects. The NIWR-USGS partnership also strengthens USGS's own funding model, as NIWR institutes often allow funds to pass through the institutes to USGS State Water Science Centers. The NIWR institutes open doors for the USGS at the state-level to other funding sources that may require non-federal matching funds. In recent years, the USGS State Water Science Centers have benefitted from funds that have flowed through NIWR institutes from external sources for technical assistance and scientific expertise on large-scale, multi-partner projects that address emerging water research needs.

WANTED: INTERNS

The USGS is encouraging NIWR institutes to take advantage of its nationwide internship program, details of which follow:

- The interns are hired by the NIWR institute but work with USGS Water Science Center researchers.
- The USGS funds paid internships for undergraduates and graduate students.
- Interns can be from any of the 54 NIWR institutes.
- Students receive valuable experience working on water-related research.

IMPACT & COLLABORATION

- NIWR member institutes assist public and private sector groups in their mission to protect human health, environmental resources and economic sustainability.
- Last year, NIWR member institutes sponsored more than 1,200 groundbreaking research projects.
- Grants from USGS and other sponsors are awarded through a competitive, peer-reviewed process.
- NIWR member institutes collaborated on projects with over 200 universities, 150 state agencies, 180 federal agencies, departments and divisions, and more than 165 local and municipal offices.



The federal government's investment through USGS in NIWR makes for a powerful combination of innovative water research and solutions for the most pressing challenges facing our nation's water resources.

Example Projects: Universities Solving Water Dilemmas Furthering the USGS Missions

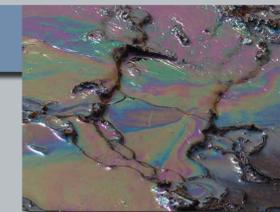
Preserving Wetland Health

The health of wetland ecosystems depends on many factors, including fluctuations in the amount of available groundwater and water that's lost to evapotranspiration. Those are two unknowns in any water budget and are often ignored in regional groundwater flow models. They're also the focus of a study by NIWR's Montana Water Center, which is using the Gartside Reservoir prairie fen to model groundwater availability and evapotranspiration, and develop methods for defining the aquifer conditions affecting evapotranspiration.



Treating Coal Mine Drainage with Bacteria

One of the most serious water-quality problems in the Appalachian coal mining regions is acid mine drainage (AMD), where high levels of acid and iron can create long stretches of "dead" streams. NIWR's Ohio Water Resources Center discovered that adding certain bacteria to AMD speeds oxidation and removes the iron, a discovery that could lead to an inexpensive, efficient and sustainable solution to treating AMD.



Entering Uncharted Waters with Carbon Runoff



In addition to the obvious damage from hurricanes, researchers at NIWR's Delaware Water Resources Center are finding that hurricanes can have dramatic consequences on the environment as well. The research team studied carbon levels in stream runoff over a 16-month period that included hurricanes Nicole, Irene and Sandy. They found that particulate carbon levels were six to eight times higher than dissolved organic carbon levels. Such shifts in the proportion of carbon forms entering streams, lakes and rivers can have serious effects on ecosystems and human health.



The Network of Water Resources Research Institutes

