



**WRITTEN TESTIMONY OF  
KEVIN J. McGUIRE, PH.D.  
DIRECTOR, VIRGINIA WATER RESOURCES RESEARCH CENTER  
VIRGINIA TECH  
Blacksburg, Virginia  
On behalf of the  
NATIONAL INSTITUTES FOR WATER RESOURCES (NIWR)**

---

**BEFORE THE  
SUBCOMMITTEE ON WATER, WILDLIFE, AND FISHERIES  
COMMITTEE ON NATURAL RESOURCES  
U.S. HOUSE OF REPRESENTATIVES  
119th Congress, Second Session  
Legislative Hearing on  
H.R. 7889  
The “Advancing Water Research and Collaboration (AWRC) Act of 2026”**

---

March 26, 2026

Chair Hageman, Ranking Member Hoyle, and Members of the Subcommittee, thank you for the opportunity to testify today. My name is Kevin McGuire, and I serve as Director of the Virginia Water Resources Research Center (VWRRC) at Virginia Tech. I appear before you today on behalf of the **National Institutes for Water Resources (NIWR)** — the national network of 54 water resources research institutes and centers established by the Water Resources Research Act (WRRRA), originally in 1964, and funded in partnership with the U.S. Geological Survey since 1984. I strongly support H.R. 7889 and urge this Subcommittee to report it favorably.

**I. History and Purpose of the Water Resources Research Act**

The Water Resources Research Act or WRRRA was enacted to expand water research across the Nation and forge enduring federal-state partnerships at land-grant universities — guaranteeing a

reliable “supply of water sufficient in quantity and quality to meet the requirements of its expanding population.”

President Lyndon B. Johnson signed the Act into law on July 17, 1964. In his remarks, he articulated a vision that continues to motivate the program today:

*“The Water Resources Research Act of 1964, which I have approved today, fills a vital need. Abundant, good water is essential to continued economic growth and progress...This legislation...will create local centers of water research. It will enlist the intellectual power of universities and research institutes in a nationwide effort to conserve and utilize our water resources for the common benefit.”*

From its inception, the Act established three enduring objectives for the institutes:

1. to develop, through research, new technology and more efficient methods for resolving local, state, and national water resources challenges;
2. to train water scientists and engineers through on-the-job participation in research; and
3. to facilitate water research coordination and the application of research results through information dissemination and technology transfer.

The Act was recodified and strengthened in 1984 by Public Law 98-242 — the Water Resources Research Act of 1984 — and has since been reauthorized by Congress in the 101st, 104th, 106th, 109th, and 117th Congresses. Administration of the program was assigned to the U.S. Geological Survey in 1984, where it remains a cornerstone of the USGS Water Resources Mission Area.

## **II. The NIWR Network: A Federal-State Partnership That Works**

Today, the WRRRA program supports 54 water resources research institutes and centers — one in each state plus the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and Guam.

In our last reporting year, FY 2025, the WRRRA program provided **\$14.3 million** in federal funding. This federal funding was met with a 1:1 match from local public and private sector entities, effectively doubling the value of the federal investment. Of the total, **\$8.3 million** was awarded in annual base grants to the 54 institutes, and **\$6 million** was awarded through our National Competitive Grants program for research on water issues of a regional or interstate nature. Across the network, institutes supported more than **388 students** and more than **245 sponsored research projects**.

The matching structure of this program is one of its most important and most underappreciated features. In Virginia, for example, the annual base grant of approximately \$150,000 is met dollar for dollar with state funds. But over the past five years, additional research sponsored by private, and other sources has exceeded the matching requirement by several times, multiplying the program’s impact well beyond its federal investment. Virginia’s Center is a medium-sized NIWR institute; scaled across the full network of 54 institutes, this leveraging effect represents a substantial national investment in water resources research.

The WRRRA program does not duplicate existing federal research capacity — it multiplies it, by channeling federal investment through the academic institutions best positioned to address their

states' unique water conditions. This connectivity between research and practice — between university laboratories and the water managers, farmers, utilities, and communities who need answers — is what distinguishes the WRRRA program from other federal research investments.

### **III. National Research Priorities: Addressing 21st-Century Water Challenges**

The NIWR network is organized around seven national research priority areas identified by the USGS: water scarcity and availability; water-related hazards and climate variability; water quality; water policy, planning, and socioeconomics; ecosystem and drainage basin functions; water technology and innovation; and workforce development and water literacy. These are not abstract academic categories. They are the real water challenges facing communities, industries, and governments in every state.

Three areas deserve particular attention in the context of this hearing:

#### **Water Quality and PFAS.**

Per- and polyfluoroalkyl substances (PFAS), known as “forever chemicals” for their environmental persistence, are among the most urgent drinking water challenges the nation faces. Water research institutes in states such as Arkansas, Indiana, Kansas, Oregon, and Virginia, among others, are leading collaborative, multi-year research to understand PFAS transport, fate, and health effects, and to develop cost-effective solutions for detection and remediation. The multiyear, regional, statewide approach described in the WRRRA and demonstrated across states and river basins ensures that research is translated into practical solutions that protect public health. This is precisely the kind of applied, state-focused research that federal funding agencies are not positioned to conduct alone.

#### **The Water-Energy Nexus and Artificial Intelligence.**

As the nation faces new water challenges driven by the rapid growth of high-technology industries, NIWR is positioned to lead the critical research needed to secure the country's water-energy future. The proliferation of artificial intelligence data centers is creating substantial new demands on water supplies for cooling and energy generation. NIWR has established a Water and AI Committee to investigate AI water research needs for industries, communities, and beyond. This work is timely and urgent. H.R. 7889's language addition referencing AI and the growing technology industry in the purpose section of the statute codifies what the institutes are already doing and signals to industry partners and federal collaborators that this is a recognized national research priority.

#### **Workforce Development.**

A foundational component of the WRRRA Program is the training of the next generation of water professionals. The NIWR network prepares a highly skilled workforce to solve America's water challenges by bridging the gap between academia and practical application. The more than 388 students supported in FY 2025, together with students supported in other years, will be future water scientists, engineers, and managers who will spend their careers addressing the water challenges of the states and regions they call home. This workforce pipeline cannot be replicated by federal agencies alone. It requires the sustained investment in university-based institutes that the WRRRA program provides.

#### **IV. Support for H.R. 7889: The Advancing Water Research and Collaboration Act**

I commend Congressman Wittman for his leadership in introducing H.R. 7889, and Congresswoman Brownley for her bipartisan co-sponsorship. The bill makes three well-conceived changes to the Water Resources Research Act of 1984.

##### **A. Reauthorization through FY 2029**

H.R. 7889 would reauthorize the WRRRA Program from FY 2026 through FY 2029. The program's authorization lapsed at the end of FY 2025. Operating under expired authorization creates institutional uncertainty for every institute in the network, affecting staff hiring, graduate student support commitments, and the ability to plan multi-year research programs. A four-year reauthorization window is well-suited to this program.

##### **B. Updating the Authorization of Appropriations to \$16 Million**

H.R. 7889 would increase the authorization of appropriations ceiling from \$15 million to \$16 million per year. This is not a request for new spending. Recent appropriations for the WRRRA program have already reached \$15.5 million in FY 2024 and \$16 million in FY 2026. This provision simply updates the authorization level to align with what Congress has already appropriated, resolving inconsistency between the statute and actual funding levels. Given the 1:1 matching requirement, a \$16 million federal authorization translates to *at least* \$32 million directed annually toward state and regional water research—one of the most efficient returns on federal investment in the Nation's water science portfolio.

##### **C. Adding AI Research Language**

The addition of language in the purpose section of the 1984 Act referencing “the growing artificial intelligence industry” is modest in text but significant in policy signal. As described above, NIWR institutes are already engaged in AI water research, and the demand for this work is growing rapidly. This statutory update legitimizes collaboration between the institute network and technology industry partners, clarifies that this research falls within the program's mandate, and helps direct future competitive grant investments toward one of the most consequential water-energy challenges of the coming decade.

#### **V. Conclusion**

I urge this Subcommittee to report H.R. 7889 favorably. The water challenges of the next decade will not wait.

Thank you, Chair Hageman and Members of the Subcommittee, for convening this hearing and for your longstanding support for federal water resources research. I am pleased to answer any questions you may have.