

NIWR MISSION and VISION STATEMENT

February 2016

Prepared by NIWR Officers and Board of Directors

NIWR, WRRRA, and Funding History

WATER RESOURCES RESEARCH INSTITUTE PROGRAM FUNDING HISTORY, FY 1991-2015
U.S. Geological Survey – Water Resources Investigations

Fiscal Year	Budget Request	House Bill	Senate Bill	Enacted
FY 1991	5,229,000	10,782,000 ¹	10,782,000 ¹	10,776,000 ¹
FY 1992	5,234,000	8,109,000 ¹	8,109,000 ¹	8,017,000
FY 1993	3,229,000	6,258,000	8,258,000 ¹	6,205,000
FY 1994	5,770,000	5,770,000	5,770,000	5,770,000
FY 1995	0	3,000,000	5,770,000	4,553,000
FY 1996	0	4,553,000	4,553,000	4,553,000
FY 1997	0	4,553,000	4,553,000	4,553,000
FY 1998	1,750,000	4,553,000	4,553,000	4,553,000
FY 1999	5,557,000	5,057,000	4,553,000	5,057,000
FY 2000	5,062,000	5,062,000	5,062,000	5,062,000
FY 2001	5,067,000	5,462,000	5,067,000	5,462,000
FY 2002	0	6,000,000	5,460,000	6,000,000
FY 2003	0	6,400,000	5,502,000	5,963,000
FY 2004	0	6,500,000	6,000,000	6,500,000
FY 2005	0	6,500,000	6,500,000	6,500,000
FY 2006	0	6,500,000	6,500,000	6,500,000
FY 2007	0	6,404,000	6,404,000	5,404,000
FY 2008	0	6,404,000	6,404,000	6,404,000
FY 2009	0	6,500,000	6,404,000	6,500,000
FY 2010	6,500,000	6,500,000	6,500,000	6,500,000
FY 2011	6,499,000	(No report filed)	(No report filed)	6,486,000
FY 2012	0	6,500,000	6,500,000	6,500,000
FY 2013	0	6,490,000	6,490,000	6,490,000 ²
FY 2014	1,000,000	Supportive Language	6,500,000	6,500,000
FY 2015	3,500,000	6,500,000	6,500,000	\$6,500,000

Goals to Strengthen NIWR.

- Connect to nation's water problems
- Demonstrate success
- Define unique mission
- Become essential to the nation

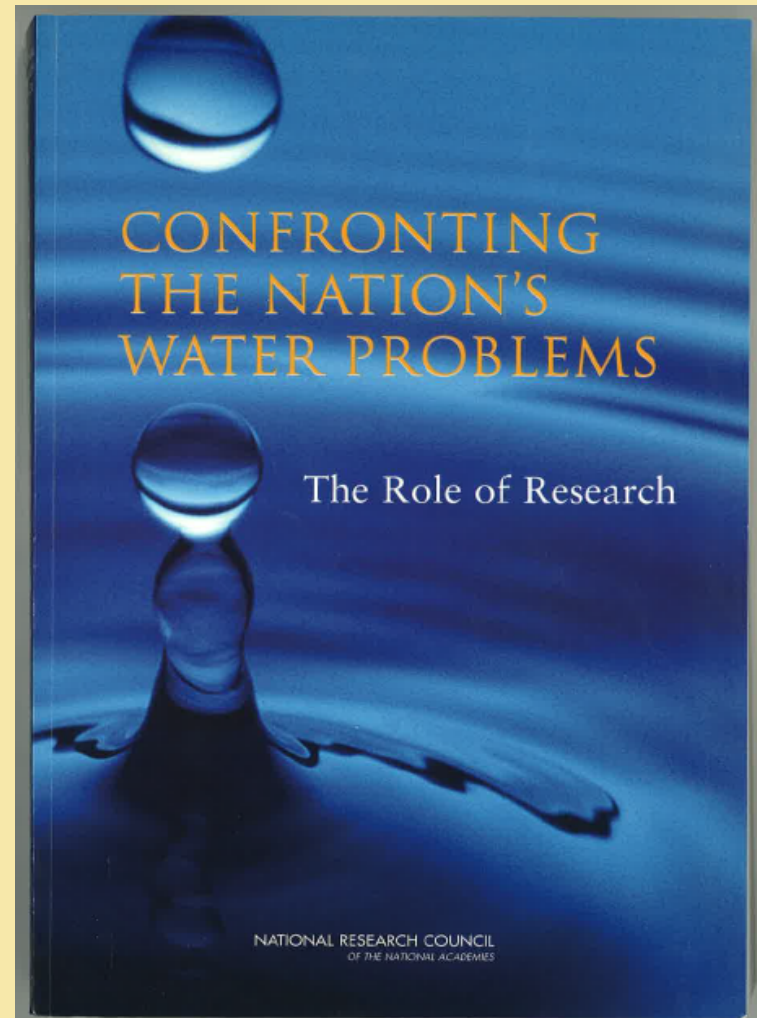
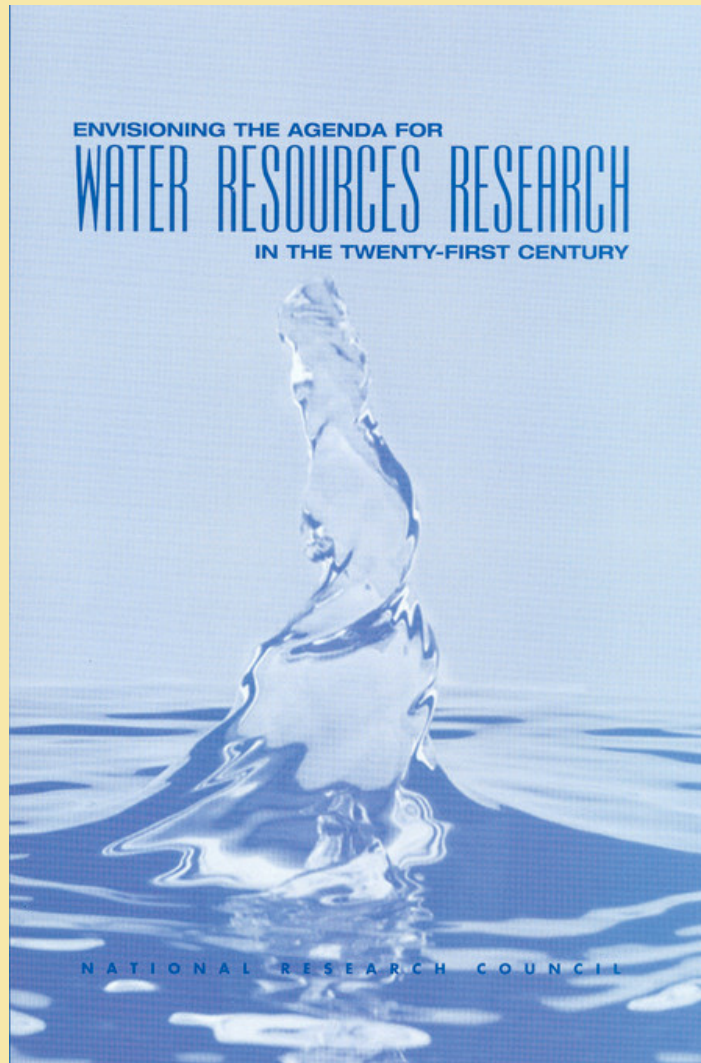
Setting the stage.

NIWR By-Laws

NIWR's functions shall include, but not be limited to, the following activities:

- A. Provide a mechanism for the exchange of information and a forum for the discussion of topics of mutual concern among the membership.
- B. Express the opinions of the membership on water-related issues of national or regional concern.
- C. Facilitate consultation and collaboration between NIWR's membership and federal, state and local water-related agencies; water user associations; industrial water users; and others involved in planning, programming, financing, implementing, coordinating or conducting water resources activities.
- D. Advise and assist the U.S. Geological Survey in the U.S. Department of the Interior in planning, programming, financing, implementing, coordinating or conducting water-related research; in identifying needed state, regional and national water-related research; and in disseminating information and transferring water-related technology.

Setting the stage.



Strategic Plan and Revisions.

1st NIWR strategic plan was prepared and adopted, Spring 2005.

Revision of the plan, approved and revised. February 2009.

-Plan's purpose was to define the role of the Water Resources Research Institutes stated in the Water Resources Research Act Amendments of 2006 (WRRRAA) and consistent with the recommendations of the two NRC studies, the USGS strategic plan, and the SWAQ report.

Three premises:

(1) substantial Federal funding is essential to generate needed water resource knowledge;

(2) universities play a central role in this research; and

(3) the network of the 54 water research institutes is the best vehicle to coordinate and disseminate university-based, applied research that meets the research needs of water resource managers.

The First NIWR Strategic Plan.

2005 NIWR-

Will Focht, OK

Deb Swackhammer,
MN

Mike Barber, WA

Upton Hatch, AL

Survey of State and Territory Water Resources Research Institute Directors on Water Resources Research Needs and Priorities

The National Research Council recently published a report entitled, *Confronting the Nation's Water Problems: The Role of Research*, which outlined 43 water resource research needs grouped into three broad areas: water availability, water use, and water institutions. The NRC report concludes that federal funding has remained static (in constant dollars) for more than 30 years, despite significant increases on research funding in other areas. Moreover, the water research funding that has been provided has been devoted to operational and near-term problems that fit within the mission agendas of the funding agencies. In addition, the NRC points out that research funding in water use and water institutions has been seriously underfunded. In response, they argue for a more integrated, coordinated, strategically mixed basic and applied research portfolio.

Rationale for NIWR Involvement in Defining a National Water Research Agenda

NIWR Institutes should participate in setting the national water resources research agenda for several reasons.

- Though the NRC list of 43 research priorities is the most comprehensive of those lists identified above, it focuses on research from a top-down perspective. The 54 water resources research institutes are in the best position to identify the research needs within their states and territories and thus build a list from the bottom-up.
- NIWR and its member institutes are in a position to revise its list of water research priorities each year, providing the first and most comprehensive annual compilation of research priorities ever assembled.
- NIWR and its member institutes have well-established relations with Congress and executive branch agencies.
- NIWR can further solidify its standing and reputation by preparing and publishing such a list.
- NIWR enjoys an excellent reputation in the water research community and the larger water profession (e.g., CUAHSI, UCOWR, AWRA, NWRA, NASULGC, NGWA, AGU, GSA, WEF, Water 2025, etc.)
- This year is the 40th anniversary of the water resources research institutes, which presents a propitious opportunity for presenting the first NIWR survey of water research priorities.

Research, Education, and Outreach Metrics.

TABLE 1. MAPPING REO ACTIVITIES AND ACCOMPLISHMENTS ONTO WATER SUPPLY IMPROVEMENT OUTCOMES

[illegible]

Research, Education, and Outreach Metrics.

**TABLE 2. EXAMPLES OF REO TOPICS RELATED TO
WATER SUPPLY IMPROVEMENT OUTCOMES**

WATER RESOURCE MANAGEMENT OBJECTIVES	WATER RESOURCE MANAGEMENT TARGETS		
	WATER QUANTITY	WATER QUALITY	WATER RELIABILITY
Water Availability Improvement	climate change, hydrologic cycle, ground and surface water interactions, water banking, artificial recharge	contaminant fate and transport, risk assessment, pollutant tracking, riparian areas	water supply resilience and redundancy, inter-basin transfers and sales
Water Use Improvement	water conservation, demand forecasting, water use efficiency, minimum streamflows, water rationing	conjunctive use, water reuse, wetland protection, ecological uses, water allocation	sustainability, adaptive management
Water Technology and Infrastructure Improvement	streamflow measurement, aquifer storage measurement, remote sensing, water distribution, reservoir management	water quality monitoring, water treatment, wastewater collection and treatment, ecological restoration	water system integrity, structural durability, leak detection, anti-terrorism detection
Water Institution Improvement	water rights, water markets, water allocation, water planning	water quality regulations and agencies, discharge permitting, water planning	inter-governmental compacts, water planning

Redirection to Mission and Vision Statement.

Simplify

**NIWR STATEMENT OF
MISSION AND PURPOSE:**
Imperatives in Water Resources
for the 21st Century

**January 2016
Revision 3**

- **Section 1. NIWR Vision Statement.**
- **Section 2. NIWR Mission Statement.**
- **Section 3. Support of U.S. Geological Survey's Water Mission.**
- **Section 4. Benefits to the Nation of a Strong Water Resources Research Institute Program.**

- Section 1. NIWR Vision Statement

The National Institutes for Water Resources, its member water resources research institutes, and their university partners, serve as the primary resource to assist the Nation in the development and implementation of programs aimed at achieving sustainable quantities of quality water.



• **Section 2. NIWR Mission Statement**

The 1984 Water Resources Research Act lead to the formation of state Water Resources Research Institutes (WRRI), all of which are members of NIWR. Our mission is to assist the Nation and the States in water resources science and technology to:

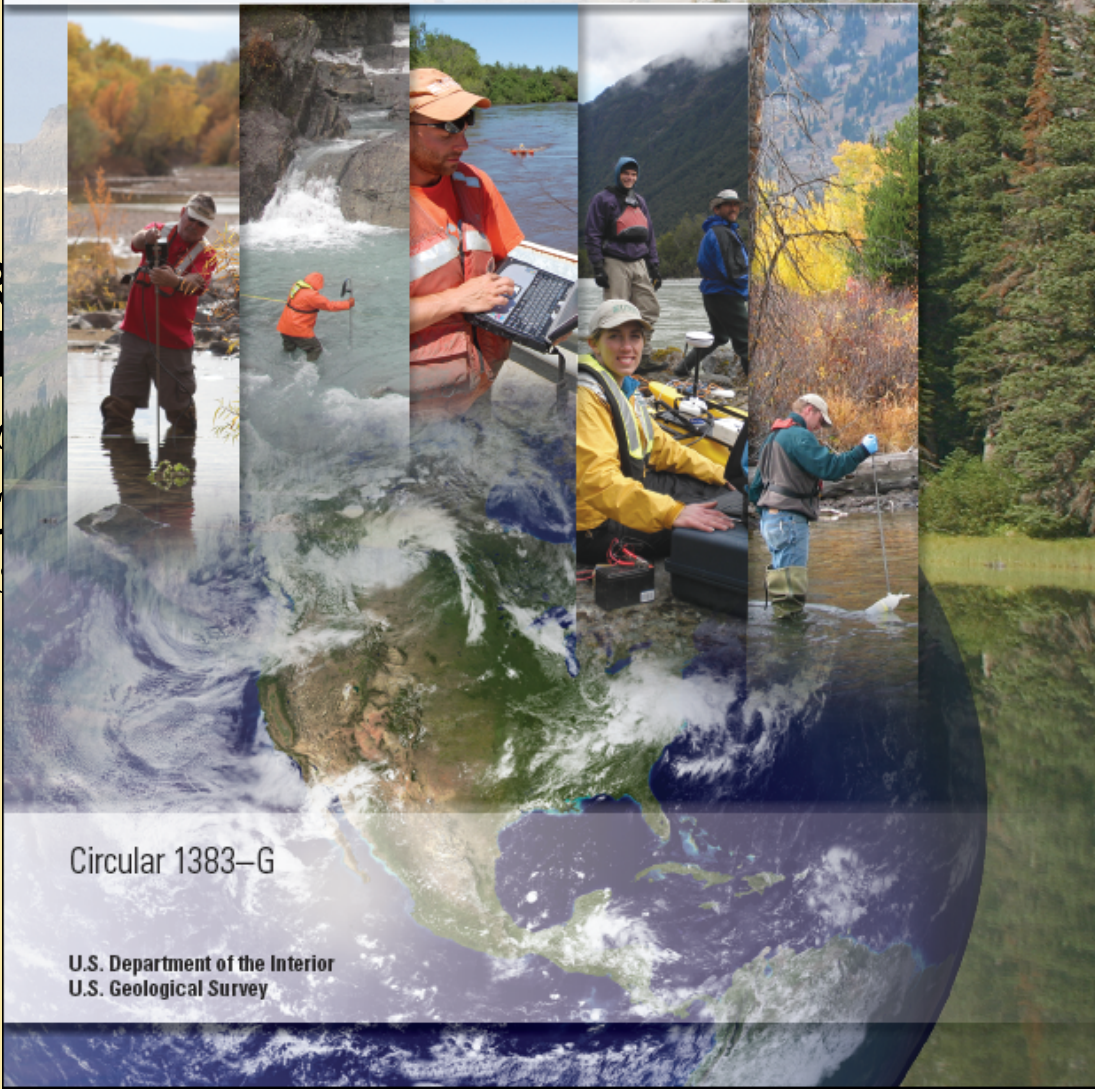
Section 2, continued...

- assure sufficient quantity and quality of water to meet the Nation's needs for the production of food, materials, and energy;
- discover practical solutions to the Nation's water resources-related problems;
- provide tools so that water resources management and utilization protects and enhances environmental and societal values;
- promote the interest of governments and the private sector in research and development of water technologies that will reclaim wastewater and convert saline and other impaired waters to suitable condition for municipal, industrial, agricultural, recreational, and other beneficial uses;
- promote more effective coordination of the Nation's water resources research programs;
- help to train a cadre of research scientists, engineers, and technicians to address current and future water resources problems; and
- encourage long-term planning and research to meet future water management, quality, and supply challenges.

**U.S. Geological Survey Water Science Strategy—
Observing, Understanding, Predicting, and
Delivering Water Science to the Nation**

• **Section
Water M**

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- **Section 4. Benefits to the Nation of a Strong Water Resources Research Institute Program**

NIWR, through member water resources research institutes, provides benefits to the Nation through sustained support from Congress, various federal and state agencies, and other partners.

Section 4, continued...

- The national WRRRI Program has a *Congressional mandate* to address water resource issues using university-based expertise.
- The WRRRI Program allows members to be *objective brokers* of water resources information among a wide range of constituencies.
- University-based institutes can examine *long-term consequences* of water resources policies and recognize long-term problems through access to expertise in *all water-related disciplines*.
- The WRRRI Program is *flexible* in addressing emerging water resources problems and adaptable to local cultures, institutions of governance, and regional socio-economic and physical conditions.
- Institutes and academic researchers are motivated to consider *institutional, in addition to technical*, solutions to water resources challenges.
- The national WRRRI Program is, collectively, an extensive *well-established network* with diverse capabilities that facilitate *regional* as well as state and local cooperation.

Section 4, continued...

- The WRRIs provide experiential *educational opportunities* to develop the highly trained workforce necessary to build national capacity for sustainable water resource management.
- *Technology transfer* programs at each Institute provide scientifically credible communication of research needs and results *upward* from states and localities to federal agencies and *downward* from these agencies to users of research results.
- Institutes are *experienced in assessing priorities* for research, with strong stakeholders involvement.
- The WRRI Program provides information to increase *efficiency* of federal water resources research investments by identifying research gaps and avoiding redundancies.
- The WRRI Program provides funding to fill research gaps that improves *effectiveness* of water resources management.
- The WRRI Program includes a *quality review process* with mandated reviews every three years. Institutes are held accountable for expenditures as well as for the quality and relevance of scientific results, the vigor of outreach programs, and the effectiveness of training initiatives.

- **Section 5. Program Objectives**

The unique capacities and strengths of NIWR institutions, allow state WRRRI programs to be timely and agile in meeting program objectives.



Section 5, continued...

Water Resource Management Objectives

To provide relevant and timely information that can assist the Nation's water resource users in their development and implementation of programs aimed at providing sustainable water quality and supply; the following three objectives will be pursued by NIWR, its members and partners.

- Provision of a sufficient quantity of water to meet demands.
- Provision of an adequate quality of water to satisfy intended uses
- Assurance of a reliable supply of water wherever and whenever needed.

Section 5, continued...

Water Resource Management Targets

To achieve sustainable water quality, quantity and adequate supply, NIWR and its member institutes and partners directly assist the Nation's water resources needs in five improvement areas.

- Improvement of water availability through better Supply Management.
- Improvement of water quality through better Source Management.
- Improvement of water use through better Demand Management.
- Improvement of water infrastructure & technology through better Systems Management.
- Improvement of water institutions and policies through better Strategic Management.

Section 5, continued...

Performance Goals

NIWR adopts the following performance goals, toward which institute performance metrics are designed to measure progress.

The Nation's Water Resources Research Institutes shall conduct research, education, and outreach activities aimed at managing water resources so that adequate quantities of water of sufficient quality are available to satisfy water needs, wherever and whenever these needs arise.

