



# MEMORANDUM OF UNDERSTANDING between THE NATIONAL INSTITUTES FOR WATER RESOURCES and THE U.S. ARMY CORPS OF ENGINEERS, INSTITUTE FOR WATER RESOURCES

The National Institutes for Water Resources ("NIWR") and the United States Army Corps of Engineers (USACE), Institute for Water Resources ("IWR") hereinafter jointly referred to as "the Parties":

*HAVING* a common interest in the advancement of water resources education and research, and in the sustainable development, management and protection of water resources;

*HAVING* independent missions to promote and enhance the scientific understanding and infusion of state-of-the-art methods and models into the contemporary practice of integrated water resources management;

*RECOGNIZING* NIWR represents fifty-four state and territorial Water Research Institutes and Centers in collective activities to implement the provisions of the Water Resources Research Act of 1984, (Public Law 98-242), as amended;

*RECOGNIZING* IWR seeks to provide forward-looking analysis and research in developing planning and hydrologic engineering methodologies to advance the nation's domestic and international water resources efforts and the USACE Civil Works program;

HEREBY SIMULTANEOUSLY DECLARE the following framework for partnership:

## Article I - The Parties

1. The National Institutes for Water Resources, Inc. (NIWR) is a 501(c)4 organization that represents the fifty-four state and territorial Water Research Institutes and Centers in their collective activities to (1) advance competent research that addresses water problems or expands the understanding of water and water-related phenomena; (2) aids the entry of new research scientists into the water resources fields; (3) helps train future water scientists and engineers; (4) infuses the results of sponsored research to water managers and the public; and (5) focuses on applied research, including practical applications to improve water supply reliability and helps resolve water issues, working under the general guidance of the Secretary of the Interior, through the U.S. Geological Survey (USGS). NIWR networks these various institutes into a coordinated unit, and facilitates, as appropriate, the response of the Water Research Institutes and its membership to other mutual concerns and interests in water.

2. The Institute for Water Resources (IWR) supports the USACE Civil Works mission through applied research, policy analysis, the development and application of new planning, socio-economic, environmental evaluation and hydrologic engineering and risk management methods and software models, and the management of national water resources and transportation data and statistical systems. IWR's mission niche is advancing "best management practices" for IWRM, working in collaboration with federal, state, and local agencies; international aid agencies and organizations; academia; NGO's; and a wide variety of scientific institutions and professional organizations.

# Article II - Areas of Collaboration and Cooperation

The NIWR and IWR will use their best efforts to establish a long-term cooperation and partnership in the development and practice of integrated water resources management through scientific research and joint activities or programs that support National, regional, and local water resource needs.

The Parties are especially interested in pursuing cooperative opportunities in the following areas of common interest:

- 1. Integrated water resources management and environmentally sustainable development
- 2. Public works infrastructure, adaptive management, and adaptation to climate change
- 3. Flood risk management, hydrologic analysis, risk analysis, and watershed systems modeling
- 4. Environmental restoration, ecological design, eco-hydrologic analysis and water quality
- 5. Decision-support systems, trade-off analysis, and water supply reliability
- 6. Consensus building, public participation and citizen involvement, conflict management, alternate dispute resolution, and shared vision planning
- 7. Water policy, governance, and institutional aspects of water and watershed management
- 8. Capacity building, training; educational practices, methods, systems and curriculum development
- 9. Water security, asset management, deterioration science and renewals engineering
- 10. Effects of climate change on water resources and related ecosystems

The mechanisms for pursuing these cooperative opportunities include the following:

- 1. IWR's various Visiting Scholar programs
- 2. IWR participation the National Academy of Science's Research Associateship Program
- 3. Applied research programs developed on topics of mutual interest
- 4. Collaboration on advanced degree programs in IWRM, as appropriate with individual institutions
- 5. Information exchanges at NIWR National/Regional meetings and IWR workshops as appropriate
- 6. Mutual leveraging of each party's communication instruments to promote opportunities and share information, such as training announcements, guest columns in newsletters, website articles, etc.;
- 7. Joint development of distance learning modules, as well as other educational tools; and,
- 8. Potential collaborative efforts addressing water resources problems, within the U.S. and abroad.

#### Article III – Designated Points-of-Contact

Each party shall designate a Principle Representative to serve as the primary point of contact between the parties on all matters arising under this Partnership Document.

#### **Article IV - Limitations**

Any cooperative activity undertaken between the parties shall only be done under the authority of the laws, guidelines, regulations, and policies governing each party individually. Further, nothing in this document shall be construed as either authorizing or obligating either party to commit funds or resources.

### **Article V - Duration**

This Partnership Document shall become effective when signed by both the National Institutes for Water Resources and the U.S. Army Corps of Engineers, Institute for Water Resources.

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ANDERS W. ANDREN President, National Institutes for Water Resources

ROBERT A. PIETROWSKY Date Director, Institute for Water Resources