

# USDA'S NATIONAL INSTITUTE OF FOOD AND AGRICULTURE (NIFA): ENGAGING KNOWLEDGE AND TECHNOLOGY, INCENTIVES AND POLICIES TO PROMOTE APPROPRIATE DECISION MAKING IN THE MANAGEMENT OF WATER AND WATERSHEDS

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Agriculture, across the value chain, is the greatest consumptive user of water resources in the United States and around the world. Perhaps the greatest challenge facing agricultural producers will be increased agricultural production to meet rising demand in the face of limited water resources. This will require producers to adapt water management strategies to an increasingly variable climate, extreme weather conditions, and frequent occurrence of droughts. The development of new science and technologies focused on widening the array of choices for the efficient use of water, sustaining water quality and managing watersheds at multiple scales and for multiple purposes is needed. USDA National Institute of Food and Agriculture's (NIFA) water and watersheds science, education and extension/outreach (REE) portfolio engages knowledge and technology, incentives, and policies to promote appropriate decision making. Water and watersheds address critical water resources issues such as drought, excess soil moisture, flooding, availability (quality + quantity) in an agricultural context. Ongoing drought conditions in the western and southwestern U.S. as well as drought and excess moisture conditions in the southern and eastern U.S. make continued activity and support for water and watersheds REE a critical focus of NIFA's funding portfolio. Significant variations from the historical rate of water supply, demand and quality are projected to have major impacts on rural, urbanizing and peri-urban agricultural, horticultural, forest, and rangeland production systems. NIFA's water and watersheds program focuses on developing solutions for water management that form a nexus across food, water, climate, energy, human health and the environment. Funding will continue to be used to develop technologies and tools for a broad group of stakeholders to sustain and improve water availability. We propose to present NIFA's systems approach to public funding that links social, economic and behavioral sciences with biophysical sciences and engineering to address water and watershed issues.

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