

USDA-NIFA AFRI Listening Session – Water Challenge Area

Script for Nathan Nelson, ASA Environmental Quality Section Chair

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Good afternoon, my name is Nathan Nelson, I am an Associate Professor in the Kansas State University Department of Agronomy and Chair of the Environmental Quality Section of the American Society of Agronomy. Today I am delivering comments on behalf of the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America also known as the Tri-Societies. The Tri-Societies have substantial interest in sustaining and improving the water resources of the United States. Managing the quantity and quality of water is essential to producing food, feed, fiber, and fuel; protecting human health, and delivering ecosystem services provided by both natural and agricultural environments. We commend NIFA leaders for proposing the AFRI water challenge area and appreciate this opportunity to comment on the proposal.

The Tri-Societies represent over 11,000 scientists and graduate and undergrad students who are highly qualified to address the research and educational issues related to water resources, as well as more than 14,000 practicing professionals who work directly with land owners and producers. In 2012, over 540 articles related to water quality, water quantity, and irrigation were published in the Tri-Societies' journals. It is with this base and background that we recommend including the following components in the new National Water Program. We feel these components are necessary to adequately address the diverse and complex issues facing water resource management.

1. We recommend a **Regional Focus** – The new program should encourage the development of diverse projects focused on regionally relevant priorities. Climate, soil resources, hydrology, and agricultural practices vary considerably between the diverse physiographic regions of the United States. Therefore, water resource issues and solutions to water resource challenges are specific to each region. Because of the diverse nature of water resource issues, the program would be best served by maximizing the number of projects funded, thereby allowing investigators to develop multiple regional projects targeted at locally identified water resource issues.
2. We recommend the establishment of **Comprehensive Priority Areas** – As identified in the Federal Register (Volume 78, Issue 130, Monday July 8, 2013), critical topics involving water resources include agricultural water security, improved nutrient management, and reducing the impact of emerging chemical and biological contaminants. Because these issues are complex and the factors influencing them are

diverse, we recommend maintaining a broad comprehensive set of priorities rather than a directed focus on one or two regions or topics.

3. We recommend providing **Long-term Funding Opportunities** – The new program should include opportunities for long-term funding of watershed- and aquifer-scale projects. There is a need for field data evaluating the effects of management on water resource issues. Water resource data collection is complicated by variable weather patterns and delayed response times inherent in these large-scale natural systems. Therefore, accurate documentation of resource response to changes in management requires long-term data collection. We recommend that funding mechanisms be put in place to enable continuation of funding for periods of up to 10 years for projects designed to collect field data related to water resource concerns. These could be administered through a competitive project renewal process on a 3-year cycle (for example, projects seeking renewal would need to submit applications that compete with new projects in order to maintain their funding). We recognize that not all projects in the new water challenge area will need to be long-term; however, a portion of the funds should be available for this purpose.
4. We recommend a **Substantial and Sustained Funding Commitment** - As previously stated, water resource issues are a top priority for maintaining a productive, environmentally sustainable agricultural system. We encourage NIFA to allocate substantial financial resources toward this new water challenge area. A multi-institutional regional project that is collecting field data on water quality or quantity can easily require \$1,000,000 per year in funding. Therefore, we recommend allocating \$50 million to the new water challenge area, which is comparable to the initial funding of other AFRI challenge areas. This level of funding commitment is required to meet the aforementioned recommendations of funding multiple regional projects that comprehensively address diverse water resource areas and allow the opportunity for long-term funding.