Welcome!

Stakeholder Listening Session

WATER

Archived resources for AFRI Water RFA planning:
http://water.unl.edu/web/water/AFRIwater
USDA NIFA AFRI
Water Challenge Area
Request for Applications (RFA)

External Stakeholder
Listening Session
January 7, 2014

Deb Hamernik
Ag Research Division, IANR

UNIVERSITY OF NEBRASKA–LINCOLN
USDA
National Institute of Food & Ag (NIFA)

Agriculture and Food Research Initiative (AFRI)

• $266.089M in FY 2013

• Competitive grants for:
  1. Plant health and production and plant products;
  2. Animal health and production and animal products;
  3. Food safety, nutrition, and health;
  4. Renewable energy, natural resources, and environment;
  5. Agriculture systems and technology; and
  6. Agriculture economics and rural communities.

www.nifa.usda.gov/afri
USDA NIFA AFRI Update

AFRI Challenge Area Request for Applications (RFAs):

- Started in fiscal year 2010
- **Focus**: few priorities
- **Scale**: larger, but fewer grants
- **Impact**: solve grand societal challenges
  - Changes in behavior or conditions
  - Requires stakeholder engagement and participation

www.nifa.usda.gov/afri
Impacts:

- Develop enhanced/innovative management practices
- Describe how strategies will directly benefit and be adopted by ag producers and/or consumers
- New approaches to encourage adoption of new strategies by end users
- Analysis of behavioral or economic incentives
USDA NIFA AFRI Challenge Areas

Bioenergy
Childhood Obesity
Climate Variability & Change
Food Safety
Food Security

Water: Expected January 2014

www.nifa.usda.gov/afri
AFRI Challenge Area RFAs:

Coordinated Agricultural Project (CAP) grants

• Integrated: research, education, *and* extension
• Not more than 2/3 of budget on one function
• Multi-disciplinary, multi-institutional, multi-state
• BIG (?) grants:
  • $10M (total costs) for 5 years; maybe 10 years
  • $25M (total costs) for 5 years; maybe 10 years
    • UNL-led STEC CAP (Food Safety)
  • $45M (total costs) for 5 years; maybe 10 years

www.nifa.usda.gov/afri
AFRI Water Challenge Area RFA

Federal Register (July 8, 2013)

• Request for stakeholder input
• How can NIFA achieve the most impact within budget constraints in the early years of this new challenge area?
• Comments will be summarized and discussed in the Water RFA

AFRI Water RFA—Federal Register

- Focus on developing solutions for water management that link food, water, climate change, energy, and environmental issues.

- Develop and transfer management practices, technologies, and tools for farmers, ranchers, forest owners and managers, and citizens to improve water resource quantity and quality.

- Link social, economic, and behavioral sciences with traditional biophysical sciences and engineering to address watershed- or aquifer-scale problems.

Immediate, comprehensive, and coordinated efforts in research, education, and extension:

1) Ensuring agricultural water security, addressing surface water, groundwater and reclaimed water needed to produce a wide array of agricultural goods and services now and into the future.

2) Improving nutrient management in agricultural landscapes with focus on nitrogen and phosphorous

3) Reducing impacts of chemicals of emerging concern and the presence and movement of waterborne pathogens in the landscape

UNL Preparation for AFRI Water RFA

Begin planning prior to release of RFA!

- Faculty meeting (November 8, 2013)
- External Stakeholder listening session (January 7, 2014)
- Ag water quality faculty meeting (January 13, 2014)
- Ag water quantity faculty meeting (January 15, 2014)
- Three question survey of faculty:
  - Grand challenges/big issues
  - Specific ideas for AFRI applications
  - Expertise—research, education, extension
Long-term Agro-ecosystem Research Network (LTAR)

- Administered by USDA-ARS
- Recently approved, but no funding

Overall goal: make available historical long-term data, cross-site research data, and common geographically-scalable databases necessary to deliver knowledge and develop applications to address increasingly critical agricultural challenges associated with producing the food, feed, fiber, and feed stocks needed by society.

- Cropping systems
- Beef cattle and grasslands
- Water resources
- Regional modeling and interactions
Platte River – High Plains Aquifer LTAR

- LTAR Directors:
  - Brian Wienhold
    (USDA-ARS Agro-ecosystem Management Research Unit)
  - Tala Awada
    (IANR School of Natural Resources)

- 6 member faculty leadership team
- >20 faculty/scientist affiliates
- 10 research sites in Nebraska
- >30 active data monitoring programs
Draft Framework—AFRI application

Building Resilient Agro-ecosystems: Harvesting the Power of Big Data for Water and Food Security

- Platte River and/or High Plains Aquifer
- Adaptive management/ecosystem services
- Behavior, economics, governance
- Climate modeling and predictive models
- Cropping systems/crop productivity
- Irrigation systems
- Land use/land cover change
- Livestock systems
- Sensors, information technologies, visualization
- Watershed research/modeling
Listen to External Stakeholders

What are your research, education, and extension priorities for Nebraska watersheds and the High Plains Aquifer?

What role do you want to play?

1) Ensuring agricultural water security, addressing surface water, groundwater and reclaimed water needed to produce a wide array of agricultural goods and services now and into the future.

2) Improving nutrient management in agricultural landscapes with focus on nitrogen and phosphorous.

3) Reducing impacts of chemicals of emerging concern and the presence and movement of waterborne pathogens in the landscape.
Questions?

Deb Hamernik (dhamernik2@unl.edu)
Rick Koelsch (rkoelsch1@unl.edu)
Monica Norby (mnorby1@unl.edu)
Christopher Neale (cneale@nebraska.edu)
Rachael Herpel (rherpel@nebraska.edu)

 Archived resources for AFRI Water RFA planning:
http://water.unl.edu/web/water/AFRIwater

Office of Research and Economic Development