



United States  
Department of  
Agriculture

National Institute  
of Food  
and Agriculture

www.nifa.usda.gov  
@USDA\_NIFA



## FACT SHEET

# Division of Environmental Systems

NIFA's Division of Environmental Systems (DoES) is one of three divisions within NIFA's Institute of Bioenergy, Climate, and Environment (IBCE). DoES advances knowledge in natural sustainable resources, the environment, and conservation. The division supports research, education, and outreach that involves air, water, soil, and wildland resources to advance the sustainability of agricultural, forest, and range production systems. DoES-supported projects help America meet its needs in the face of increasing competition for water, accelerated soil erosion, reduced biological diversity, loss of habitat, and other issues that may significantly affect agricultural sustainability and production.

DoES' priorities include improving air and water quality; developing sustainable ecosystem services; maintaining soil health and productivity; improve the understanding of agricultural microbiomes; and improving the management and sustainable use of forests, wildlife, and rangelands. DoES uses the following portfolios and funding mechanisms to support their priority projects.

---

## ENVIRONMENTAL SYSTEMS COMPETITIVE PROGRAMS

### Agriculture and Food Research Initiative

- The Water for Food Production Systems program addresses critical water resources issues, such as drought, excess soil moisture, flooding, and quality in an agricultural context.
- The Foundational Bioenergy, Natural Resources, and Environment program area supports research to promote, improve, and maintain healthy agro-ecosystems and the underlying natural resources essential to long-term agricultural production.

### ENVIRONMENTAL SYSTEMS NON-COMPETITIVE PROGRAMS Renewable Resources Extension Act (RREA)

The sustainability of the nation's forests and rangelands is largely dependent upon the millions of family forest owners, farmers, ranchers, and land managers. RREA funds extension programs for forest and rangeland resources. In FY 2017 RREA-funded programs supported over 5,000 educational programs and events at 73 universities that reached 321,000 landowners who manage over 36 million acres of forest and rangelands.

### McIntire-Stennis

The McIntire-Stennis Cooperative Forestry Research Program supports forestry research at 79 eligible institutions. The program has produced 13,500 masters and doctoral degrees. The program delivers scientific results and management

technologies to forest landowners, managers, and policymakers and prepares future researchers in forestry and related natural resource sciences for the 21st century. This program requires a one-to-one funding match from states.

### Hatch

Hatch Act funds support State Agricultural Experiment Stations to conduct research that addresses problems of local, state, regional, or national concern. NIFA distributes these funds according to a statutory formula. Hatch-funded projects include research on environmental systems and the ecosystems services they provide, including: soil and water health, conservation, and use; forestry and rangeland science and management; sustainable agriculture (biophysical, social, and economic aspects); and wildlife science and management.

### National Atmospheric Deposition Program

The National Atmospheric Deposition Program (NADP) monitors and studies the environmental impacts of particles of pollution, chemicals, etc., that travel on the wind before settling to the ground. The program is a cooperative effort between federal, state, tribal, and local governmental agencies, educational institutions, private companies, and non-governmental agencies. NAPD operates five monitoring networks: National Trends, Mercury Deposition, Atmospheric Mercury, Atmospheric Integrated Research Monitoring, and Ammonia Monitoring.



United States  
Department of  
Agriculture

National Institute  
of Food  
and Agriculture

[www.nifa.usda.gov](http://www.nifa.usda.gov)  
[@USDA\\_NIFA](https://twitter.com/USDA_NIFA)



## MAJOR INITIATIVES AND HIGHLIGHTS

### Protecting water on native lands

The Native Waters on Arid Lands (NWAL) project joins researchers and extension experts with tribal communities in the Great Basin and American Southwest to understand the impacts of climate change and to evaluate options for sustaining water resources and agriculture on reservations. The NWAL (<http://nativewaters-aridlands.com>) provides information on project activities.

### Training trainers to show the way

In 2016, NIFA funded Pennsylvania State University's Guiding Forest Landowners through Complex Resource Development Issues project. The project trains extension educators throughout the Northeast to identify and respond to emerging resource development issues, such as unconventional oil and gas development issues. The Penn State program helps extension educators improve and increase their outreach throughout the Northeast.

### Supporting forestry research and education

Using McIntire-Stennis funds, West Virginia State University joined with USDA's Natural Resources Conservation Service to develop a web-based soil-rating tool for storm water management practices. In another McIntire-Stennis project, Mississippi State University scientists developed an upgraded biofuel that can be blended with gasoline and diesel fuels.

### Tool is a win-win for farmers and the environment

Cornell University developed a management decision tool, Adapt-N, that helps reduce nutrient pollution from agricultural fields into the nation's water resources. The internet-based tool has saved farmers about \$30 per acre in reduced nitrogen use, a situation that provides "win-win" opportunities for enhancing farm profits while minimizing negative environmental impacts.

---

## CONTACT INFORMATION

### OFFICIAL MAIL

1400 Independence Ave., SW Mail Stop 2210  
Washington, DC 20250

### PHYSICAL LOCATION

800 9th St., SW, Room 3700  
Washington, DC 20024

### DIVISION DIRECTOR

Dr. Ali Mohamed  
[amohamed@nifa.usda.gov](mailto:amohamed@nifa.usda.gov)

### NATIONAL PROGRAM LEADERS

Dr. Karelyn Cruz  
Soils, air quality and nutrient management  
[karelyn.cruz@nifa.usda.gov](mailto:karelyn.cruz@nifa.usda.gov)

Dr. James Dobrowolski  
Water, Rangeland and Grasslands  
[jdobrowolski@nifa.usda.gov](mailto:jdobrowolski@nifa.usda.gov)

Dr. Eric Norland  
Forest Resource Management  
[enorland@nifa.usda.gov](mailto:enorland@nifa.usda.gov)

Dr. Daniel Cassidy  
Forestry-Research  
[dcassidy@nifa.usda.gov](mailto:dcassidy@nifa.usda.gov)

### PROGRAM SPECIALISTS

Latasha Lyte [latasha.lyte@nifa.usda.gov](mailto:latasha.lyte@nifa.usda.gov)  
Olivia Moreno [olivia.moreno@nifa.usda.gov](mailto:olivia.moreno@nifa.usda.gov)  
Dr. Rodney Vance [rvance@nifa.usda.gov](mailto:rvance@nifa.usda.gov)  
Greg Sixt [gsixt@nifa.usda.gov](mailto:gsixt@nifa.usda.gov)