



CONGRESSIONAL BRIEFING: THE ROLE OF ECOSYSTEM RESEARCH CENTERS IN THE BIOECONOMY

Date: Thursday, September 17, 2026
Time: 10:00 – 11:00 AM Eastern Time
Location: 2325 Rayburn House Office Building

Registration:
io.aibs.org/aerc

Presented by: Association of Ecosystem Research Centers
Supported by: American Institute of Biological Sciences
Moderator: Dr. Joel Trexler, AERC President

Speakers:



Dr. Bernard Engel

Glenn W. Sample Dean of Agriculture, Professor of Agricultural & Biological Engineering, Purdue University

A Healthy Bioeconomy Requires a Healthy Ecosystem



Dewey R. Houck II

Retired senior executive & applied scientist, Chief Technology Officer, Cypress Point Oyster Company

What Restorative Aquaculture Means to a Healthy Ecosystem



Dr. Jennifer Tank

Galla Professor of Biological Sciences, Director of the Notre Dame Environmental Change Initiative, University of Notre Dame

Conservation Practices and the Bioeconomy: Ecosystem Research That Protects Farming and Freshwater

A sustainable economy relies heavily on the steady supply of biological resources and critical ecosystem services, including agricultural crops, forestry products, and aquaculture; effectively, our bioeconomy supports our broader economy. Healthy well-managed ecosystems are resilient to extreme climatic conditions such as drought and severe storms, buffering the built environment from their impacts. Ecosystem science provides the tools to understand, quantify, and manage these natural assets by enabling an understanding of ecological processes, such as nutrient cycling, water retention, and pollination, that directly underpin resilient agricultural, recreational, and urban landscapes. Ecosystem research centers provide a vital nexus for knowledge acquisition, education, and problem-solving to optimize these services for the bioeconomy. This briefing will feature speakers highlighting the role of ecosystem research in leveraging and protecting ecosystem services to promote a thriving bioeconomy across agriculture, watershed management, and aquaculture.

CONGRESSIONAL BRIEFING: THE ROLE OF ECOSYSTEM RESEARCH CENTERS IN THE BIOECONOMY



Dr. Bernard Engel

Glenn W. Sample Dean of Agriculture, Professor of Agricultural & Biological Engineering, Purdue University

A Healthy Bioeconomy Requires a Healthy Ecosystem

Bernie Engel is the Glenn W. Sample Dean of Agriculture and Professor of Agricultural and Biological Engineering at Purdue University with more than 38 years of teaching and research experience. He is a leading global expert in the development and application of hydrologic/water quality models and environmental decision support systems. The models address agricultural, rural, urban and mixed land-use watersheds and a range of constituents including nutrients, pesticides and soil erosion. He has published more than 380 peer reviewed journal articles on his research. His hydrologic/water quality modeling efforts range in scales from small plots to fields, watersheds and river basins. His modeling and decision support tools are widely used within state and federal agencies as well as internationally. Dr. Engel's excellence in research has been recognized by the American Society of Agricultural and Biological Engineers (ASABE) with their Outstanding Young Researcher Award and by the Purdue University College of Agriculture Outstanding Researcher Award. In addition, he has been designated a University Faculty Fellow by Purdue University. He is a Fellow of the American Society of Agricultural and Biological Engineers (ASABE) and recipient of the ASABE Hancor Soil and Water Conservation Engineering Award. He has served in various leadership roles including Head of Agricultural and Biological Engineering and Associate Dean of Research and Graduate Education in the College of Agriculture at Purdue University.



Dewey R. Houck II

Retired senior executive and applied scientist, Chief Technology Officer, Cypress Point Oyster Company

What Restorative Aquaculture Means to a Healthy Ecosystem

Dewey R. Houck II is a retired senior executive and applied scientist whose career spans national-security technology leadership and, today, sustainable coastal aquaculture. As Senior Vice President and Chief Data Analytics Officer for Boeing Defense, Space & Security, he built and led the enterprise function that treats data as a strategic business asset—positioning Boeing's defense platforms and services for a distinct information advantage in the global marketplace. He now owns and operates a premium oyster aquaculture business in Wakulla County, Florida, supplying half-shell oysters to leading Southern oyster houses, including James Beard-recognized chefs and Michelin-recognized restaurants.

CONGRESSIONAL BRIEFING: THE ROLE OF ECOSYSTEM RESEARCH CENTERS IN THE BIOECONOMY



Dr. Jennifer Tank

Galla Professor of Biological Sciences, Director of the Notre Dame Environmental Change Initiative, University of Notre Dame

Conservation Practices and the Bioeconomy: Ecosystem Research That Protects Farming and Freshwater

Dr. Jennifer Tank is the Galla Professor of Biological Sciences at the University of Notre Dame and Director of the Notre Dame Environmental Change Initiative (ND-ECI). She is an aquatic ecosystem ecologist and biogeochemist who studies how nutrients, carbon, and particles move and cycle through streams and rivers, working across scales from small experimental channels to entire river basins, with a focus on the conservation and restoration of flowing waters. Much of her research is done in direct partnership with farmers, watershed groups, and agencies to improve water quality in agricultural landscapes while sustaining productive farms. She has published more than 220 peer-reviewed journal articles, has been cited over 25,000 times, and is currently co-editing the 4th edition of *Methods in Stream Ecology*. Dr. Tank served as 2018-19 President of the Society for Freshwater Science (SFS), became a Society Fellow in 2020, and received the SFS Award of Excellence in 2026 for her career contributions to the field. She was also named a 2020 Fellow of the American Association for the Advancement of Science (AAAS) and currently serves the NASEM on the Water Science and Technology Board (WSTB). Current and former students and postdocs in her research group all share her commitment to translational ecology to solve real world challenges facing our freshwaters.

CONGRESSIONAL BRIEFING: THE ROLE OF ECOSYSTEM RESEARCH CENTERS IN THE BIOECONOMY

The Association of Ecosystem Research Centers (AERC) aims to support and encourage cooperation in research and training among ecosystem centers; strengthen ecosystem research and its applications; and advance understanding of ecosystem science at local, regional, national and international levels.

AERC brings together a network of U.S. research programs in universities and private, state and federal laboratories that conduct research, provide training and analyze policy at the ecosystem level of environmental science and natural resources management. These centers are located throughout the U.S. mainland, as well as Alaska and Puerto Rico. These organizations conduct a major share of the ecosystem research in the United States and represent hundreds of scientists. Together these scientists conduct a major share of the ecosystem research in the United States.

The major environmental and natural-resources problems facing the earth - global climatic change, declining biodiversity, spreading surface and groundwater pollution, acid precipitation, desertification, declining fisheries - are so extensive that they can only be addressed on a regional, continental, or global scale, and with a broadly coordinated interdisciplinary focus. Such scales and focus imply the need for extensive communication; and for exchange of views and collaboration on research, training, and policy needs.



CONGRESSIONAL BRIEFING: THE ROLE OF ECOSYSTEM RESEARCH CENTERS IN THE BIOECONOMY

- Cary Institute of Ecosystem Studies
- Center for Freshwater Studies, University of Alabama
- Natural Resources Research Institute, University of Minnesota
- Earth and Ecosystem Sciences Division, Desert Research Institute
- Earth, Ecosystem and Ecological Sciences, Dartmouth College
- Ecology Center, Utah State University
- Ecology Research Center, Miami University
- Environmental Sciences Department, University of Virginia
- Flathead Lake Biological Station, The University of Montana
- Global Institute of Sustainability, Arizona State University
- Hancock Biological Station and Watershed Studies Institute, Murray State University
- Harvard Forest & Quabbin Watershed, National Ecological Observatory Network (NEON)
- Institute for the Study of Earth, Oceans, and Space, University of New Hampshire
- Institute for Tropical Ecosystem Studies, University of Puerto Rico
- Institute of Environment, Florida International University
- Oak Ridge, NEON
- Odum School of Ecology, University of Georgia
- Onaqui, NEON
- Jasper Ridge Biological Preserve, Stanford University
- Joseph W. Jones Ecological Research Center at Ichauway
- Joseph W. Jones Ecological Research Center at Ichauway, NEON
- Konza Prairie Biological Station, Kansas State University
- Konza Prairie Biological Station, NEON
- Natural Resource Ecology Laboratory, Colorado State University
- National Ecological Observatory Network
- Savannah River Ecology Laboratory, University of Georgia
- Sevilleta Field Research Station, University of New Mexico
- Smithsonian Conservation Biology Institute
- Smithsonian Conservation Biology Institute, NEON
- Smithsonian Environmental Research Center
- Talladega National Forest, NEON
- Toolik Field Station, NEON
- University of Kansas Field Station
- University of Michigan Biological Station
- University of Notre Dame Environmental Research Center
- University of Notre Dame Environmental Research Center, NEON
- USDA-ARS Jornada Experimental Range, New Mexico State University
- Yellowstone Ecological Research Center