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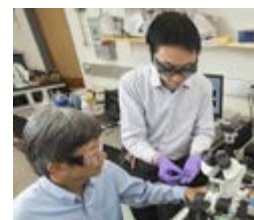
NSF INVESTS IN SCIENCE AND ENGINEERING INFRASTRUCTURE IN KEY AREAS ACROSS THE NATION

Delaware, Idaho, Nevada, New Mexico and Oklahoma will each receive \$20 million for strategically aligned, innovative research



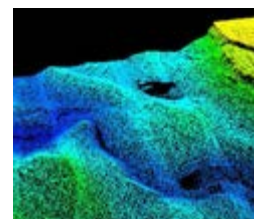
In Delaware, research aims to protect industrial brownfields in coastal, flood-prone areas.

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Delaware EPSCoR researcher Juejun Hu holds a sensor chip, while Chaoying Ni looks on.

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A 3-D point cloud from airborne LiDAR (light detection and ranging) dataset of Idaho's Salmon Falls.

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May 23, 2013

Five research projects aimed at deploying a world-class combination of research resources for the academic community have received awards from the National Science Foundation's (NSF) Experimental Program to Stimulate Competitive Research (EPSCoR).

Each award recipient, representing a statewide collaboration of academic, private-sector, and state institutions, will receive \$20 million during a five-year period to bolster its science and engineering academic research infrastructure.

"These projects address the national imperative to engage in cutting edge research, provide educational opportunities for future generations of scientists, stimulate the economy and create jobs," said Denise Barnes, head of NSF's EPSCoR program. "These projects are impressive in their complexity, state-wide scope and integration of individual researchers, institutions and organizations, as well as in their role in developing the diverse, well-prepared, STEM-enabled workforce necessary to sustain research competitiveness and economic growth."

The Research Infrastructure Improvement awards will go to five states: Delaware,

Idaho, New Mexico, Nevada, and Oklahoma. Each project will address fundamental research, science and engineering education, and workforce development in areas relevant to the state's economic and other vital interests. The institutions and principal investigators leading the research are listed below.

DELAWARE - UNIVERSITY OF DELAWARE (Donald Sparks)

This project addresses water quality and renewable energy use in vulnerable coastal areas subject to pressures from land use and climate change. The research employs natural, physical and social science approaches to examine the effects of rising sea level on the cycling of soil-bound contaminants and coupled land use and climate change impacts on water and natural systems ranging from tidal wetlands to agricultural land to densely populated and polluted urban areas. Novel sensors will be developed for environmental monitoring. The project will also address renewable energy including offshore wind.

The University of Delaware, Delaware State University, Wesley College, and Delaware Technical Community College will collaboratively address these themes using innovative research approaches and educational programs. The project includes public outreach activities and partnerships with private industry and government.

IDAHO - UNIVERSITY OF IDAHO (Peter Goodwin)

This project will advance the understanding of feedbacks between social and ecological systems and ecosystem services in mid-sized cities in the face of climate change and urban growth. The program builds Idaho's capacity to study complex social-ecological processes, especially those associated with water demand and valuation of ecosystem services. This research characterizes patterns and identifies social drivers of urban growth and ecological change, including valuable ecosystem services. Outcomes will include an integrated modeling framework and visualization and virtualization tools.

The major participating institutions in this project are: the University of Idaho, Boise State University and Idaho State University. Faculty and students from the College of Southern Idaho, Northern Idaho College, Lewis-Clark State College, College of Western Idaho and Eastern Idaho Technical College will also be engaged.

NEVADA - NEVADA SYSTEM OF HIGHER EDUCATION (Gayle Dana)

This project addresses critical, practical problems of relevance to large-scale solar installations in arid desert lands. Research on solar thermal energy generation will be aimed at limiting the effects on desert ecosystems and water resources. A major goal is to advance the economic and eco-friendly viability of solar electricity generation. The combination of research approaches distinguishes this project from other existing solar energy projects, making it a unique model relevant to Nevada, the United States and around the world.

The major participating institutions in this project are: the University of Nevada, Reno; the University of Nevada, Las Vegas and the University of Nevada Desert Research Institute. Faculty and students from the College of Southern Nevada, Truckee Meadows Community College and Nevada State College will also be engaged in this project.

NEW MEXICO - UNIVERSITY OF NEW MEXICO (William Michener)

This project aims to transform energy research and development in New Mexico while promoting sustainable energy development. The project will build and strengthen a scientific enterprise that enables New Mexico to harness its abundant renewable energy resources, including solar and biofuels, and sustainably capitalize on other resources such as geothermal and uranium reserves, without adversely affecting the environment and water resources. The project will improve education and research training in science, technology, engineering and mathematics and enhance the state's research and development capacity, thus creating new businesses and industry.

The major participants in this proposal are the University of New Mexico, New Mexico Institute of Mining & Technology, and New Mexico State University. Other partners include: Eastern New Mexico University Main Campus, Santa Fe Community College, Santa Fe Institute, Explora!, the Global Center for Creative & Cultural Entrepreneurship, the National Museum of Nuclear Science and History, and the New Mexico Museum of Natural History Foundation.

OKLAHOMA - OKLAHOMA STATE UNIVERSITY (James Wicksted)

This project advances understanding of how socio-ecological systems can adapt sustainably to increased climate change and variability. This knowledge will be used to empower managers to effectively adapt social and ecological systems to climate variability and educate Oklahomans about the expected consequences of regional environmental change. Three interlinked research focus areas will examine complex

human, climate and natural resource systems. An observatory network, a forecasting system and a decision support system will each address social and ecological systems. The project is innovative in addressing each of these subject areas in tandem as well as their interactions.

The major participants in this proposal are: Oklahoma State University, the University of Oklahoma, the Samuel Roberts Noble Foundation, and the University of Tulsa.

About EPSCoR

EPSCoR is a program designed to fulfill the National Science Foundation's mandate to promote scientific progress nationwide. Twenty-eight states, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, and Guam are currently eligible to participate. Through this program, NSF establishes regional partnerships with government, higher education, and industry that effect lasting improvements in a state's or territory's research infrastructure and research and development capacity, and hence, its academic competitiveness.

-NSF-

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Related Websites

Energize New Mexico: http://www.nsf.gov/awardsearch/showAward?AWD_ID=1301346&HistoricalAwards=false
Experimental Program to Stimulate Competitive Research: <http://www.nsf.gov/od/oia/programs/epscor/about.jsp>
The Solar Energy-Water-Environment Nexus in Nevada: http://www.nsf.gov/awardsearch/showAward?AWD_ID=1301726&HistoricalAwards=false
Managing Idaho's Landscapes for Ecosystem Services: http://www.nsf.gov/awardsearch/showAward?AWD_ID=1301792&HistoricalAwards=false
State receives \$20 million grant for solar research: Harry Reid calls grant 'another important step toward a more sustainable energy future': <http://www.lasvegassun.com/news/2013/may/13/state-receives-20-million-grant-solar-research/#axzz2TYschHMmj>

The National Science Foundation (NSF) is an independent federal agency that supports fundamental research and education across all fields of science and engineering. In fiscal year (FY) 2014, its budget is \$7.2 billion. NSF funds reach all 50 states through grants to nearly 2,000 colleges, universities and other institutions. Each year, NSF receives about 50,000 competitive requests for funding, and makes about 11,500 new funding awards. NSF also awards about \$593 million in professional and service contracts yearly.

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