OKLAHOMA

EPSCoR researchers are performing cutting-edge science and making a difference in Oklahoma and the world. Our environmental research is providing important answers about the changing planet and how we live in it. We're also training a diverse and skilled STEM workforce to ensure that Oklahoma's emerging tech-based businesses and research labs have a high-quality applicant pool to draw from for years to come. More than 144,000 Oklahomans have been served in the past ten years; 31% were underrepresented minorities and 58% women.

OKLAHOMA EPSCoR OKLAHOMA NSF EPSCoR

NETWORK COLLABORATORS

- **Cameron University**
- **College of the Muscogee Nation**
- **East Central University**
- **i2E**
- **Langston University**
- **Noble Research Institute**
- **OCAST**
- **OK Career Tech/Pontotoc Tech Center**
- **OK 4-H**
- **OK Museum Network**
- **OK State Regents for Higher Education**
- **Oklahoma State University**
- **Peoria Tribe**
- **Science Museum OK**
- **Southwestern OSU**
- **University of Oklahoma**
- **University of Tulsa**

EPSCoR STATE DIRECTOR
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PROGRAM OVERVIEW
NSF EPSCoR TRACK-1

- Award #OIA-1946093 (2020-2025)
- Socially Sustainable Solutions for Water, Carbon & Infrastructure Resilience in Oklahoma (S³OK)
- PI: Kevin Wagner, OSU; Co-PIs: Carol L. Silva & Hank Jenkins-Smith, OU

Oklahoma NSF EPSCoR researchers are innovating a new, interdisciplinary, inter-institutional approach to develop and test science-based solutions for complex problems at the intersection of land use, water availability, and infrastructure. Researchers are investigating:

- How Oklahoma's seasonal and subseasonal weather patterns are likely to shift over time and what those implications might be;

- terrestrial water and carbon dynamics as they relate to climate change and land management;

- water reuse and sustainability; and

- infrastructure implications for these topics.

- The social dynamics framework team is integrating the science team's perspectives with those of opinion leaders and citizens across the state to find solutions in the overlapping areas being investigated.

Predicting & Preparing for Cold Air Outbreaks

Oklahoma NSF EPSCoR researchers are investigating the development of cold air outbreaks (CAOs) in the Great Plains region. The team's goal is to provide emergency managers and the public with important lead-time to prepare for these large-scale, extreme cold events. Researchers are examining how CAOs form and evolve, while also studying the potential for their predictability. Through the team's work, harmful socioeconomic, environmental, and infrastructural impacts, such as widespread power outages, may be mitigated.

Researchers are looking at additional atmospheric variables that could yield signals to enhance predictability potential, and also developing a suite of numerical weather models to further assess prediction capabilities.

Impact of Program

Research
- $470 Million in New Research Funding Generated
- $167 Million Active Grant Awards

Workforce Development
- 120 New Technologies
- 38 Companies & 9 Marketed Products
- 34 Patents & 9 Copyrights
- 5 Tribal College Faculty Positions

Outreach & Education
- 144,000 Oklahomans Served since 2013 (Including 44,500 Underrepresented Minorities & 84,000 Women)
- 50 Institutions Served via OneOklahoma Cyber, Facilitating over $400 Million in External Funding
- 29 New University Faculty Hired

NEW RESEARCH FUNDING GENERATED FOR OKLAHOMA		
OKLAHOMA NSF EPSCOR RII TRACK-1 AWARDS		**NEW FUNDS GENERATED***
2001-2008	$16 Million	$ 50 Million
2008-2013	$15 Million	$ 70 Million
2013-2020	$21 Million	$332 Million
2020-2025	$20 Million	$ 18 Million
	$72 Million	**$470 Million**

*Does not include: NSF RII Award or State Funds

ACTIVE OKLAHOMA EPSCoR/IDEA AWARDS			
PROGRAM	**AWARD**	**TYPE OF AWARD**	**AMOUNT**
NSF	EPSCoR	Research Infrastructure Track-1	$ 20 Million
NSF	EPSCoR	Research Infrastructure Track-2 (2 Awards)	$ 9.5 Million
NSF	EPSCoR	Research Infrastructure Track-4 (8 Awards)	$ 1.7 Million
NASA	EPSCoR	Research Infrastructure (3 Awards)	$ 1.9 Million
DOE	EPSCoR	Research Infrastructure	$ 0.8 Million
NIH	IDeA	COBRE (9 Awards)	$ 94 Million
NIH	IDeA	OSCTR	$ 20 Million
NIH	IDeA	INBRE	$ 19 Million
		Total Funds	**$167 Million**