EPSCoR, Established Program to Stimulate Competitive Research

Advancing Geographic Diversity in Science and Engineering Research and Education Across America

The U.S. National Science Foundation recognizes the inherent value of a national science and engineering (S&E) research enterprise that engages and trains students and researchers throughout the country. EPSCoR was created in 1979 to invest in S&E research and capacity-building in U.S. states and territories that receive a disproportionate percentage of federal dollars for research and development. Ever since, EPSCoR, has continuously and competitively invested in targeted jurisdictions (states, territories, and commonwealths), totaling more than **$2.55 billion**.

Investment Strategies

EPSCoR investments are made through three major investment strategies that infuse support for cutting-edge research and education programs. Each funding mechanism is designed to support a unique facet of research and training to foster an environment for discovery, innovation and workforce development in science, technology, engineering and mathematics at universities and colleges in a jurisdiction.

I. The Research Infrastructure Improvement program provides funding across three Tracks.

   a. Track-1 awards invest up to $20 million over five years in research, infrastructure and talent development for an area critical to the jurisdiction's science and technology plan.

   b. Track-2 awards stimulate collaborations between EPSCoR jurisdictions in scientific focus areas, consistent with NSF and national priorities.

   c. Track-4 awards, also called EPSCoR Research Fellowships, directly support researchers for key collaborations with industry, government or academic research centers that enhance the research capacity of the researcher, institution and jurisdiction.

II. EPSCoR encourages co-funding or support for competitive proposals across the agency from individual investigators, groups and centers in EPSCoR jurisdictions.

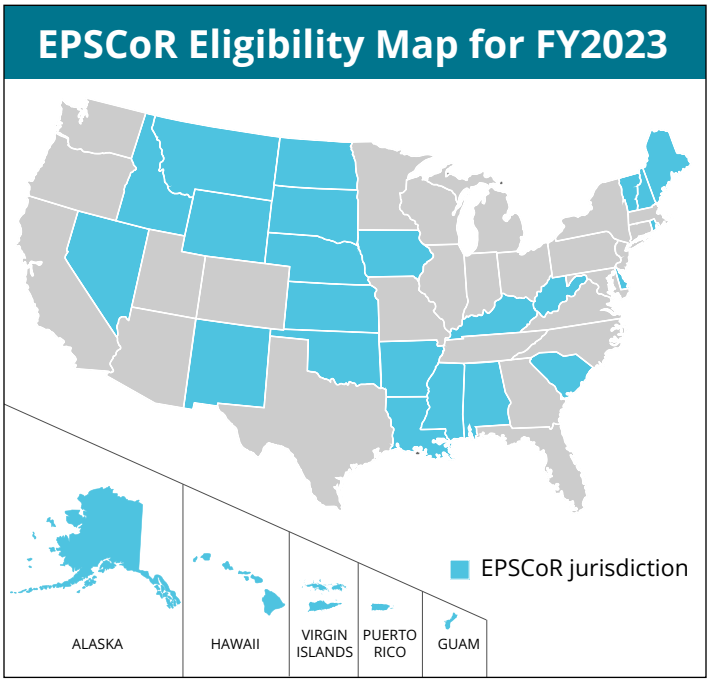
III. Workshops, conferences and other community-based activities are eligible for EPSCoR funding.

EPSCoR Eligibility

Eligibility to participate in EPSCoR activities is based on two primary considerations:

- A jurisdiction's demonstrated commitment to develop its research capacity and to improve the quality of STEM research conducted at its universities and colleges.
- A jurisdiction's most recent five-year level of total NSF funding is equal to or less than 0.75% of the total NSF budget (excluding EPSCoR funding and NSF funding to other federal agencies).

EPSCoR Eligibility Map for FY2023



Transitioning Beyond EPSCoR

Eligibility criteria allows for continued investments in EPSCoR jurisdictions on the cusp of eligibility. This effort will mitigate year-to-year eligibility fluctuation and provide a buffer for those jurisdictions on an upward funding trajectory. EPSCoR eligibility is based on a five-year average with an expanded definition of NSF investments with an updated announcement each year on Oct. 1. These rules were designed as the best practice for building sustainable STEM research and education capacities. Link to eligibility table.

EPSCoR Highlights

Kentucky

At Morehead State University, Kouroush Jenab and Jorge Ortega-Moody use virtual reality to test and train Kentucky's manufacturing workforce by strengthening the connection between human and machine. By working in virtual reality, the team develops a better understanding of the safety concerns and maintenance needs of advanced manufacturing robotics.

Mississippi

Colleen Scott seeks to simplify how technicians prepare for medical imaging. Working with students from Mississippi State University, the University of Mississippi, and the University of Illinois Urbana-Champaign, she has developed a streamlined method for producing stable dyes that can be used by medical professionals to look through the top layers of tissue while maintaining high-resolution images.

Montana

At the University of Montana, Riley Logan's research used drone-based imaging systems to identify algae blooms in the state's river systems. Algae blooms can impact water quality and the health of local fish. By developing this airborne observation system, large sections of the river system can be investigated without the need for disturbing the river itself.

Find out more information about specific EPSCoR jurisdictions.

EPSCoR Outcomes

- **Impact research, education and economic development.** Researchers in EPSCoR jurisdictions have received 64 new patents and leveraged over $1.4 billion in new awards in the past five years.
- **Catalyze research capability development and new knowledge creation.** EPSCoR has co-funded 210 CAREER awards in the past five years, helping to spark the research careers of junior faculty.
- **Establish sustainable STEM education, training and professional development pathways.** EPSCoR projects supported more than 7,000 faculty researchers and 16,800 students over the past five years.
- **Broaden the direct participation of diverse individuals, institutions and organizations.** From 2017 to 2022, 486 graduate and undergraduate students from groups underrepresented in STEM who were involved in EPSCoR projects attained their degrees.
- **Effect engagement at the academic, government and private-sector levels.** Since 2017, EPSCoR-supported outreach engaged nearly 10,000 faculty at academic institutions, more than 18,000 K-12 teachers and at least 309,000 K-12 students.