ESTABLISHED PROGRAM TO STIMULATE COMPETITIVE RESEARCH (EPSCoR)

Building Research Infrastructure to Advance Science and Engineering Research and Education Across America since 1979

The National Science Foundation recognizes the inherent value of a truly national science and engineering (S&E) research enterprise that trains students and engages researchers throughout the country. The Established Program to Stimulate Competitive Research (EPSCoR) was created to provide deliberate investments in S&E research and capacity-building in U.S. states and territories receiving a disproportionate share of NSF funds. This program has continuously invested in EPSCoR jurisdictions across the country totaling over $2.55 billion invested since 1979.

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 holistically stimulate an environment for discovery, innovation, and STEM workforce training in a jurisdiction.

I. Research Infrastructure Improvement (RII) Program
   a) Track-1 awards are up to $20 million over 5 years that is invested in research infrastructure in 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 Fellows, directly support non-tenured researchers for key collaborations with industry, government, or academic research centers that enhance the research capacity of the researcher, institution, and jurisdiction.

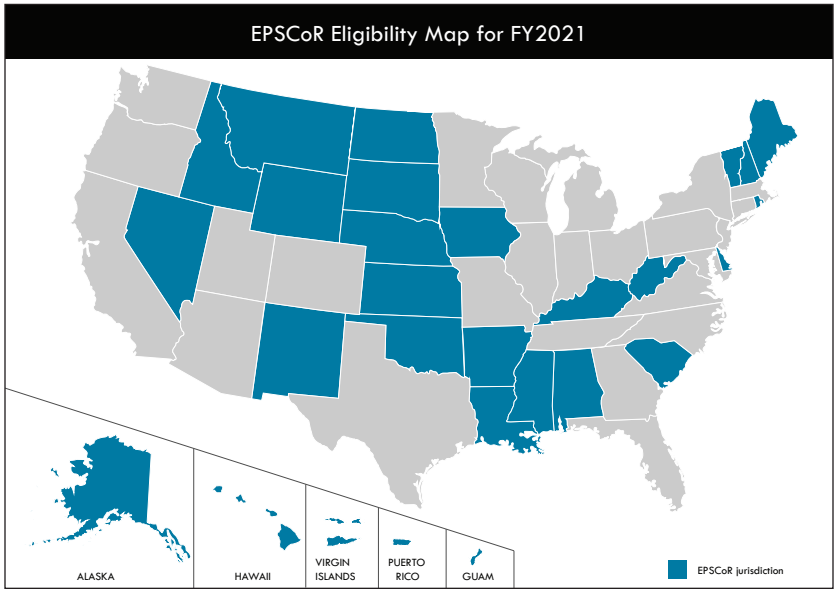
II. EPSCoR funds are also used to provide co-funding support for competitive proposals from individual investigators, groups, and centers in EPSCoR jurisdictions.

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

EPSCOR ELIGIBILITY

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

- A jurisdiction's demonstrated commitment to develop its research capacity and to improve the quality of science, technology, engineering, and mathematics (STEM) research conducted at its universities and colleges, and
- A jurisdiction's most recent five-year history of research funds awarded by NSF relative to the Foundation's total research budget for that same period.



Updating eligibility for sustained investments

Effective starting in FY2021, the eligibility criteria have been updated to allow for continued investments in EPSCoR jurisdictions on the cusp of eligibility. This effort will help to eliminate year-to-yeareligibility fluctuation and provide a buffer for those jurisdictions on an upward funding trajectory. The new rules determine EPSCoR competition based on a five-year average with an expanded definition of NSF investments with an updated announcement each year on October 1. These rules were designed as best practice for building sustainable STEM research and education capacities. Link to FY2021 Eligibility Table.

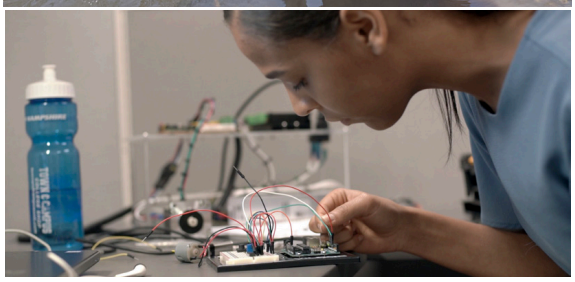
EPSCOR HIGHLIGHTS

Alabama

A team of researchers led by Gary Zank at the University of Alabama in Huntsville have invented a novel process to grow nanostructured diamond films. This finding opens the possibility to make electrically conducting diamond film surfaces that could someday lead to breakthroughs in machining or extend the lifetime of existing equipment.

Kansas

Kristin Bowman-James and her team at the University of Kansas are working to understand the multitudes of microbes that naturally inhabit Kansas' soil and water. Understanding the interconnections of this microbiome can aid ecosystem management to increase plant, root, and soil productivity while maintaining water quality of streams and lakes.



New Hampshire

3D-printed skin grafts sound straight out of a science fiction novel but a team of researchers at the University of New Hampshire led by Brad Kinsey is working to bring it into reality. This team has developed biocompatible materials of varying size that can be 3D printed to create a scaffold that stimulates tissue regrowth.

Find information about specific EPSCoR jurisdictions here.

EPSCOR OUTCOMES

Catalyze the development of research capabilities and the creation of new knowledge

- EPSCoR projects supported over **6,500** faculty researchers and **13,200** students over the past five years.

Broaden direct participation of diverse individuals, institutions and organizations

- In the past five years, **486** underrepresented minority graduate and undergraduate students involved in EPSCoR projects attained their degrees.

Establish sustainable STEM education, training, and professional development pathways

- EPSCoR has co-funded **152** Faculty Early Career Development (CAREER) awards in the past five years, helping to spark the research careers of junior faculty.

Effect engagement at the academic, government and private-sector levels

- In the past five years, EPSCoR-supported outreach engaged over **16,000** faculty in academic institutions, more than **27,000** K-12 teachers, and over **475,000** K-12 students.

Impact research, education and economic development

- EPSCoR jurisdictions have received **69** new patents and leveraged over **$1.5 billion** in new awards in the past five years.

Image Credits: Trinka Kensill, National Science Foundation; Walter Dodds; Zachary Sar, Loading Dock NH