

MAINE EPSCoR



Building research capacity in Maine



NSF EPSCoR
ADVANCING GEOGRAPHIC DIVERSITY IN STEM



History of NSF EPSCoR Track-1 programming and long-term impacts



Track-1 project	Earth and Marine Science	Global Environmental Change	Wood Science and Marine Molecular Biology	Adv. Eng. Wood Composites and Aquaculture	Biosensors, Intel./ Spatial	Institute for Molecular Biophysics	Forest Bio-products	Sustainable Solutions Initiatives	Sustainable Ecological Aquaculture Network	eDNA as a Nexus of Coastal Ecosystem
Year	1980-1987	1990-1993	1993-1996	1996-2000	2000-2003	2003-2006	2006-2009	2009-2014	2014-2019	2019-2024
Established infrastructure	Ar-dating and Heat Flow Lab	Stable Isotope Lab	DNA-sequencing facility Timber Bridge/FRP Hybrids Project	Advanced Structures and Composites Center Aquaculture Research Institute	Intelligent Spatial Design Technology Institute (ISTI) housed at FIRST	Institute for Molecular Biophysics	Forest Bioproducts Research Institute	Sen George J. Mitchell Center for Sustainability Solutions	Aquaculture Research Institute	Maine Center for Genetics in the Environment
Faculty hired	5	1	8	8	6	4	3	4	4	3
Postdoctoral fellows supported	0	0	1	5	7	0	2	10	6	6
Graduates supported	4	12	48	10	4	26	53	144	52	38
Undergraduates supported	0	7	39	30	17	13	86	459	445	183

An original participant in the national EPSCoR program, Maine EPSCoR programming has driven research and economic development in Maine since 1978.

Maine leads new EPSCoR programs

Maine-FOREST

The \$8 million RII E-RISE Maine-FOREST award, or Forest-based Opportunities for Resilient Economy, Sustainability and Technology, will expand the state's research and educational capacity to connect human and ecosystem focused innovations and services. Led by the University of Maine, the project takes an integrated thematic approach to fuel the state's forest-based economy and the rural communities it supports. Learn more at www.umaine.edu/maine-forest.



MARIA

Bigelow Laboratory for Ocean Sciences secured a \$7 million E-RISE award for the Maine Algal Research Infrastructure and Accelerator (MARIA) project. MARIA will strengthen research infrastructure to serve as a nucleus of innovation potential for algae-based solutions in agriculture, aquaculture, energy, and pharmaceutical sectors. MARIA streamlines the process of exploring and harnessing algae's potential to help drive economic growth and workforce development in Maine's blue economy. Learn more at www.bigelow.org/services/maria.



Maine-SMART

The \$8 million RII E-CORE Maine-SMART, a four-year initiative led by the University of Maine, will bolster STEM research capacity and education and dismantle systemic barriers to innovation. Maine-SMART, or Strengthening Maine's Research Ecosystem and Pathways Through Strategic Capacity Building, will support more than 200 early career faculty and 2,500 undergraduate students at colleges across Maine, and an additional 120 educators and 9,000 K-12 students. Learn more at www.umaine.edu/maine-smart.



Maine is one of the first EPSCoR jurisdictions in the nation to earn two EPSCoR Research Incubators for STEM Excellence (E-RISE) and a Collaborations for Optimizing Research Ecosystems (E-CORE) award, all part of the EPSCoR Research Infrastructure Improvement (RII) Program. **This represents a \$23 million investment in Maine over four years with an additional \$17 million in awards if renewed.** These programs connect Maine's leading institutions in research, education and development from across the state and unite them in the pursuit of improving Maine's research capacity and national competitiveness.

As the RII Track-1 program winds down, Maine has embraced NSF EPSCoR's new programs in order to not just to improve Maine but serve as a leader in the EPSCoR community.

Maine's RII E-RISE and E-CORE programs collectively bring together 28 leading research, education and economic development institutions from across Maine as formal partners.

Maine-eDNA establishes state as national leader in environmental genetics



Established through the \$20 million RII Track-1 Maine-eDNA project, the Maine Center for Genetics in the Environment (MCGE) fosters broad-based environmental genetics collaborations, partnerships, and infrastructure that contribute to sustainability of current and future natural resource industries and agriculture, improve human health and wellbeing, and prepare a technologically skilled workforce.

Over the course of the five year project, Maine-eDNA made strategic investments in infrastructure and personnel to establish Maine as a center for genetics research.

- MCGE faculty brought in more than \$11.2 million from sponsors in the past year with \$2.2 million of indirects.
- Maine EPSCoR has invested \$125,000 in genetics equipment for the University of Maine environmental DNA (eDNA) lab in the 2024 fiscal year alone.
- Additionally, MCGE was able to invest \$31,700 in graduate support.
- The White House Office on Science and Technology Policy's "National Aquatic Environmental DNA Strategy", eDNA is an increasingly important tool for resource managers, researchers and other stakeholders.

Maine-eDNA has completed its work, there is so much more to do. The program established eDNA as a powerful tool for understanding Maine's aquatic ecosystems. These new insights are helping resource managers, communities and other stakeholders make informed decisions about the environments they work with.

To learn more about MCGE visit:
www.umaine.edu/mcge



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