U.S. National Science Foundation

MONTANA

FY 2023 Fast Facts

$42,573,000
Total NSF Awards to Montana

$34,477,000
Invested in Fundamental Research in Montana

$8,096,000
Invested in STEM Education in Montana

Top NSF-funded Academic Institutions for FY 2023

Montana State University	University of Montana	Aaniiih Nakoda College
$29,140,000	**$8,684,000**	**$2,284,000**

NSF By The Numbers

The U. S. National Science Foundation (NSF) is an $9.06 billion independent federal agency created by Congress in 1950 to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense. NSF's vital role is to support basic research and researchers who create knowledge that transforms the future.

DID YOU KNOW? NSF has funded the work of **261** Nobel Prize winners over 75 years.

$9.06B
FY 2024 Total Enacted

93%
Funds research, education and related activities

11K
Awards

1.9K
Institutions

353K
People

**Data represents FY 2023 Actuals unless otherwise indicated*

Expanding the Frontiers of Science

Prescribed fire is increasingly employed across the Western U.S. to mitigate and manage wildfire risk. The Integrating Montana's Environmental Research with Smart Sensors (IMERSS) project—funded through an NSF Established Program to Stimulate Competitive Research: Research Infrastructure Improvement program award and administered by **Montana State University**, in collaboration with five other Montana institutions—is focused on improving researchers' understanding of prescribed fire dynamics. IMERSS is developing a new generation of smart optical sensors that couple emerging engineering technologies with advances in artificial intelligence and machine learning. The project will then deploy the new instruments to measure prescribed fire behavior in real time, acquiring spatially accurate, real-time data about fuels, smoke aerosol type, smoke plume height, smoke trajectory and social acceptance of prescribed fire and smoke. With this data, managers of prescribed fires will be able to make better-informed decisions about where, when and for how long to burn. The novel smart optical sensor systems contribute to the region's economic infrastructure through partnerships with Montana's expanding optics-based industry.

STEM Education and Broadening Participation

A goal of The NSF Tribal Colleges and Universities Program (TCUP) is to increase the science, technology, engineering and mathematics instructional and research capacities of institutions of higher education that serve the nation's Indigenous students. A TCUP award to **Aaniiih Nakoda College (ANC)** is being used to upgrade specific STEM IT resources at the institution to improve the resiliency and security of STEM operations, data management, teaching and research enterprises. Improvements to ANC's network and cybersecurity advance the college's ability to implement advances in STEM instruction and research. Students benefit from increased access to online resources as well as virtual courses, and STEM research activities in environmental science and natural resources are aided and enabled by advances in cyberinfrastructure at the institution. Due to upgrades to the library, the community served by the college also benefits from the upgrades.

Regional Innovation Engines

NSF Regional Innovation Engines (NSF Engines) Development Awards help organizations create connections and develop their local innovation ecosystem within two years to prepare a strong proposal for becoming a future NSF Engine. **Montana State University** leads an award focused on quantum information science and engineering, an area of critical importance to the nation's security and future economy. The region of service for this award includes the states of Idaho, Wyoming and Montana, home of the NSF-funded MonArk Quantum Foundry. Private sector input into performance requirements and vested interest in the outcomes improves the translation of the project's collaborative research.

EPSCoR

COMPETITIVE RESEARCH | Montana is one of 28 U.S. states or territories under the NSF Established Program to Stimulate Competitive Research (EPSCoR). **$7,857,767** in awards have been made to Montana academic institutions through EPSCoR in FY 2023. For more information, visit Montana's EPSCoR state web page.

NCSES

According to the NSF National Center for Science and Engineering Statistics (NCSES), which is housed in NSF, 48% of science, engineering and health doctorates conferred in Montana are made in life sciences. Visit Montana's science and engineering state profile to learn more!

41.32% of **Montana's** higher education degrees are concentrated in S&E fields.

3.95% of **Montana's** workforce is employed in S&E occupations.

2.81% of **Montana's** total employment is attributable to knowledge - and technology - intensive industries.

Learn More

CHIPS & SCIENCE – The CHIPS and Science Act's investments in the U.S. National Science Foundation will help the United States remain a global leader in innovation. Implementation of this legislation will be key to ensuring that ideas, talent and prosperity are unleashed across all corners of the nation. For more information, please visit the NSF CHIPS and Science website.

RESEARCH SECURITY – NSF is committed to safeguarding the integrity and security of science and engineering while also keeping fundamental research open and collaborative. NSF seeks to address an age of new threats and challenges through close work with our partners in academia, law enforcement, intelligence and other federal agencies. By fostering transparency, disclosure and other practices that reflect the values of research integrity, NSF is helping to lead the way in ensuring taxpayer-funded research remains secure. To learn more, please visit the NSF Research Security website.

CONNECT WITH NSF – For more information on NSF's impact in your state, please contact the NSF Office of Legislative and Public Affairs at congressionalteam@nsf.gov.