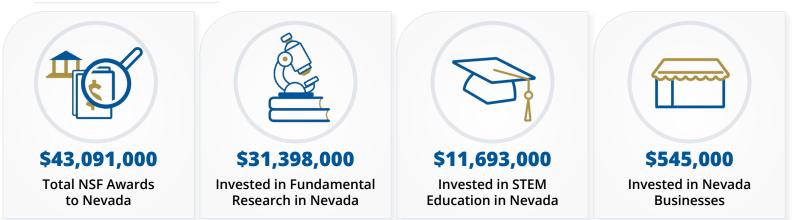


### • FY 2023 Fast Facts



### • Top NSF-funded Academic Institutions for FY 2023

University of Nevada, Reno \$22,403,000 University of Nevada, Las Vegas \$10,244,000

Desert Research Institute \$2,715,000

#### • NSF By The Numbers

The U. S. National Science Foundation (NSF) is an <u>\$9.06 billion</u> 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.





2415 Eisenhower Avenue | Alexandria, VA 22314



## **Expanding the Frontiers of Science**

Through funding from the NSF Quantum Sensing Challenges for Transformational Advances in Quantum Systems program, researcher at the **University of Nevada**, **Reno** are combining two exotic materials—superfluid helium and nanoporous two-dimensional polymers—to develop a sensor device that takes advantage of the strange macroscopic quantum behavior of liquid helium at temperatures near absolute zero. A nanoporous membrane will provide a weak link between two reservoirs of superfluid helium and enable a quantum coupling known as a Josephson junction. Quantum sensors based on this architecture will allow measurement of phenomena undetectable to conventional sensors, from minute fluctuations in the Earth's rotation to the fingerprints of dark matter. The technical applications of this quantum sensor include uses in geodesy (the branch of mathematics dealing with the shape and area of the earth), gravitation and general relativity, metrology (the science of measurement) and quantum information science.

# **STEM Education and Broadening Participation**

The Southern Nevada Northern Arizona–Louis Stokes Alliance for Minority Participation (SNNA-LSAMP), funded through the NSF LSAMP program, is an alliance of higher education institutions that includes research universities (the **University of Nevada**, **Las Vegas** and Northern Arizona University) and community colleges (the **College of Southern Nevada** and Coconino Community College) in the Lower Colorado River Basin. SNNA-LSAMP's goal is to substantially increase the number of underrepresented minority students who earn science, technology, engineering and mathematics bachelor's degrees at alliance institutions within five years. To reach this goal, SNNA-LSAMP is providing students with intensive, near-peer mentoring; out-of-class STEM activities that enhance socialization between STEM disciplines; undergraduate research opportunities; internships; registration for STEM courses; and access to all academic support services provided on alliance campuses. The project will be a vital component of efforts to diversify and significantly expand the pool of highly qualified STEM workers in southern Nevada and northern Arizona, accelerating the region's ongoing transformation into a hub for STEM startups and an attractive destination for established STEM-based businesses seeking to relocate.



# **Regional Innovation Engines**

NSF Regional Innovation Engines (NSF Engines) represent one of the single largest broad investments in placebased research and development in the nation's history, uniquely placing science and technology leadership as the central driver for regional economic competitiveness. Serving the entirety of Nevada, the **NSF Engine: Southwest Sustainability Innovation Engine**, led by Arizona State University, aims to equitably transform water security, renewable energy and net-carbon emissions in the region by incentivizing new technology and governance, expanding infrastructure and capacity for research translation and preparing a diverse and highly skilled workforce. Additionally, an NSF Engines Development Award led by the **Nevada System for Higher Education** seeks to produce a use-inspired research and development agenda exploring innovative research methodologies for lithium extraction and the development, use, rejuvenating, recycling and repurposing of lithium batteries.

#### EPSCoR

**COMPETITIVE RESEARCH** | Nevada is one of 28 U.S. states or territories under the <u>NSF Established Program to Stimulate</u> <u>Competitive Research (EPSCoR</u>). **\$7,818,018** in awards have been made to Nevada academic institutions through EPSCoR in FY 2023. For more information, visit Nevada's EPSCoR state web page.

### NCSES

According to the <u>NSF National Center for Science and</u> <u>Engineering Statistics (NCSES)</u>, which is housed in NSF, 24% of science, engineering and health doctorates conferred in Nevada are made in engineering. <u>Visit Nevada's science and</u> <u>engineering state profile to learn more!</u>

- **32.29%** of **Nevada's** higher education degrees are concentrated in S&E fields.
  - **2.75%** of Nevada's <u>workforce is employed in S&E</u> <u>occupations.</u>
  - **3.79**<sup>6</sup> of Nevada's <u>total employment is attributable</u> <u>to knowledge - and technology - intensive</u> <u>industries.</u>

### 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 <u>congressionalteam@nsf.gov</u>.