



NSF & WEST VIRGINIA

FAST FACTS

\$15,125,000

Total NSF awards to West Virginia in FY19

\$12,090,000

Amount invested in fundamental research in West Virginia in FY19

\$3,035,000

Amount invested in STEM education in West Virginia in FY19

\$6,350,000

Amount dedicated to stimulating competitive research in West Virginia through NSF EPSCoR

In Fiscal Year (FY) 2019, the **National Science Foundation made \$15,125,000 in awards** to West Virginia in support of fundamental research, advanced technical education, entrepreneurial training, STEM teacher training, long-term ecological monitoring, small business development, major research instrumentation and more.

DID YOU KNOW?

IMPACT | EPSCoR Research Infrastructure is a four-year (2019-2023) collaboration award involving five partner institutions in West Virginia and Arkansas. The goal is to accelerate decision making for smart health applications through the development of artificial intelligence tools that leverage large scale health and medical datasets in an unbiased way. The project aims to spur economic activity and grow workforce capacity in data science, AI, and smart health.



The Robert C. Byrd Green Bank Telescope in Green Bank, West Virginia, US is the world's largest fully steerable radio telescope.

Image Credit: NRAO/AUI/NSF

STEM WORKFORCE DEVELOPMENT | In FY 2018, **Fairmont State College** was awarded a five-year cooperative agreement for an NSF INCLUDES Alliance totaling \$2,486,937, of which \$960,622 has been awarded to date. NSF INCLUDES is a comprehensive initiative to enhance U.S. leadership in science and engineering discovery and innovation by proactively seeking and effectively developing STEM talent from all sectors and groups in society. Developing and maintaining a diverse, innovative workforce in STEM fields is critical to American competitiveness in the world, but national surveys report a current and future shortage of highly qualified STEM professionals in the U.S. This project assembles undergraduate students, K-12 educators, college faculty and policymakers in West Virginia to form the First2 STEM Success Alliance. The Alliance aims to improve the college enrollment rate and success of undergraduate STEM students, with emphasis on rural first generation students through their first two years of college.

SUPPORTING STUDENTS | NSF's **Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM)** program addresses the need for a high-quality STEM workforce in STEM disciplines supported by the program and for the increased success of low-income, academically talented students with a demonstrated financial need who are pursuing associate, baccalaureate or graduate degrees in STEM. With **\$648,409** in funding from the NSF S-STEM program in FY 2019, the project will support high-achieving, low-income students with a demonstrated financial need at **University of Charleston**. Specifically, the project will provide four year scholarships to 12 students who are pursuing baccalaureate degrees in data science, computer science, biological sciences, chemistry, and dual biology-chemistry B.S. programs. The program is funded by H-1B visa fees, so is not subject to the availability of appropriated funds.

SCIENCE & ENGINEERING (S&E) INDICATORS | **3.13 percent of the West Virginia workforce is employed in S&E occupations**, and 6.80 percent of West Virginia's business establishments are industries with high employment in science, engineering and technology occupations.⁺

FACILITY | Green Bank Observatory (GBO), Green Bank, West Virginia. Radio telescopes including the Robert C. Byrd Green Bank Telescope (GBT) provide key ground-based, radio-wavelength research facilities. GBT is the world's largest, fully steerable radio telescope, and GBO's flagship research instrument. It provides information from fundamental physics and radio astronomy to the discovery and characterization of interstellar organic molecules that provide insight into the organic chemistry of life on Earth to the search for life beyond. GBO is in a 13,000-square-mile radio quiet zone. Associated Universities Inc. is the managing organization for GBO under a five-year cooperative agreement through September 2024.

⁺ National Science Board, National Science Foundation. 2020. Science and Engineering Indicators 2020: The State of U.S. Science and Engineering. NSB-2020-1. Alexandria, VA. Available at <https://nces.nsf.gov/pubs/nsb20201/>.

TOP NSF-FUNDED ACADEMIC INSTITUTION FOR FY19

\$9,389,000

West Virginia University Research Corporation

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