

# NASA South Dakota Space Grant Consortium



SD Space Grant Consortium  
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## Inspiring and Preparing the Next Generation of Explorers and Innovators

### SPACE GRANT BACKGROUND AND VISION

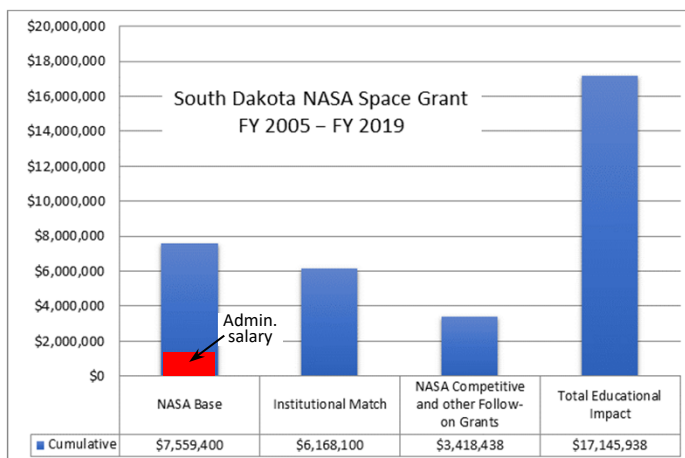
- ❑ The South Dakota Space Grant is one of 52 state-based consortia authorized by Congress and supported by NASA's Office of Education with the goal of maintaining the nation's leadership in aeronautics and space exploration.
- ❑ Established in 1991, the vision of the South Dakota Space Grant Consortium (SDSGC) is "to expand opportunities for all South Dakotans through education, research, and public service in the fields of aerospace, earth science, and supporting disciplines in science, technology, engineering, and mathematics (STEM)."

### MAJOR SPACE GRANT PROGRAMS

- ❑ Fellowships for college students in STEM degrees
- ❑ Internships at NASA centers and aerospace industry
- ❑ College robotics and interdisciplinary engineering design teams
- ❑ Seed grants for innovative research and education projects (Project Innovation Grants)
- ❑ K-12 teacher grants and student/classroom opportunities including precollege robotics
- ❑ Diversity targets in all educational programs consist of at least 15% minority participants and 40% female

### FUNDING AND RETURN ON INVESTMENT

- ❑ Federal Space Grant funds are matched and leveraged for additional funds for a significant return on investment (approximately 1.8 dollars for every NASA dollar (2005-2019))
- ❑ Only 12.6% of 2019 base funding went to program administrative salaries and benefits



### FELLOWSHIPS/SCHOLARSHIPS (2005 – 2019)

- ❑ 770 undergraduate and graduate students at 10 public, private and tribal colleges in South Dakota directly received over \$2.31 million in Space Grant funds
- ❑ 18.1% of funded students are minority, mostly Native American, and 38.6% female
- ❑ 98 student internships: 66 at NASA Centers, 31 at aerospace industries (some of which paid by industry), and 1 Navy
- ❑ Funding allows students to participate in NASA center and aerospace industry internships, participate in multi-disciplinary student led design team competitions, perform NASA STEM-related research on campus, present findings at professional conferences, and earn their degrees
- ❑ Longitudinal tracking shows that 96% of students supported by Space Grant from 2006-19 who have taken their next step are working in STEM careers or pursuing advanced STEM degrees

### PRECOLLEGE

#### (2019 program year only)

- ❑ ~1,300 teachers reached through teacher training, NASA STEM experiences, and NASA educational material
- ❑ ~25,500 precollege students participated in Space Grant instructional/enrichment activities
- ❑ 673 middle school students (79 teams across South Dakota) competed in SD FIRST LEGO League and BEST Robotics sponsored by Space Grant in 2019
- ❑ 2,797 middle and high school girls, 29% of which are minority, attended one of seven Space Grant-supported Women in Science conferences in 2019

### SEED GRANTS FOR RESEARCH & EDUCATION (2005 – 2019)

- ❑ 52 Project Innovation Grants totaling \$833,528 awarded to nine SDSGC affiliates for research and education projects that align with NASA and SGSGC goals
- ❑ 67 robotics and NASA-STEM precollege teacher grants (\$216,366)

### IMPACT AND ACCOUNTABILITY

- ❑ Measurable outcomes with national and state-level evaluation and tracking of performance
- ❑ Low administrative costs—approximately 1.0 FTE
- ❑ On a per-capita basis, South Dakota's NASA base funding is six times the national average

**Higher Education:** SD School of Mines & Technology (Lead Institution), SD State University, University of South Dakota, Black Hills State University, Dakota State University, Northern State University, Augustana College, Oglala Lakota College, Sinte Gleska University, Lake Area Technical Institute  
**Informal Ed.:** Journey Museum, SD Discovery Center, Kirby Science Discovery Center, Badlands Observatory, Black Hills Astronomical Soc., SD Air & Space Museum  
**State and Federal:** Sanford Underground Research Facility, USGS Center for Earth Resources Observation & Science (EROS), SD Board of Regents, SD State Library  
**Industry:** Raven Industries/Aerostar International, RESPEC, Missouri Breaks Industries Research, Inc. (MBIRI)  
 (Updated 2/17/20)