

# NSGA

## National Space Grant Alliance



### FY 2010 REQUESTED FUNDING AND JUSTIFICATION

NSGA requests that \$44.8 million plus the following report language be provided in FY 2010: "The Committee has provided \$44,800,000 for the National Space Grant College and Fellowship program to fund 42 states or jurisdictions at \$900,000 each and 10 states or jurisdictions at \$700,000."

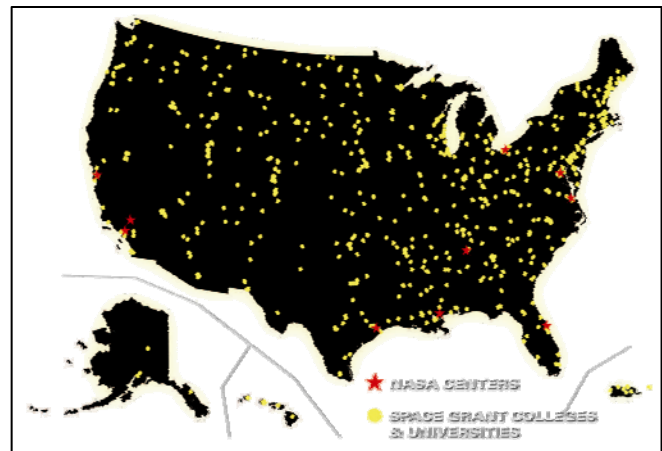
Space Grant is currently funded on a two tier level with "designated" and "non-designated" states or jurisdictions. The intent of the NSGA is to bridge this gap between consortia in the coming years. Increased funding to the Space Grant program would permit already successful programs to further expand within established networks, increase the number of students currently engaged in these programs, promote increased diversity to match the contemporary workforce, and continue the pursuit of parity in funding among "designated" and "non designated" states and jurisdictions.

**History** - Space Grant was first established under Title II of the National Aeronautics and Space Administration Authorization Act of 1988 (P.L. 100-147). A unique national program – inspired by the mission and work of NASA – Space Grant enhances the United States' capabilities to carry out education, research, and public outreach activities in science, technology, engineering, and mathematics (STEM) and additional fields related to space, aeronautics, life science, physical science, and earth system science. Over its 20-year history, the program has evolved into a powerful network for enabling state-based initiatives to provide the needed workforce for NASA's missions as well as the nation's critical STEM disciplines. Currently, there are 52 Space Grant Consortia, one in each state, Puerto Rico and the District of Columbia.

**Vision** - The vision of Space Grant is to harness and focus the creativity and ingenuity of today's students who will comprise NASA's future workforce to make the discoveries that will sustain the U.S. competitive lead in space science and exploration.

**Unique National Network** - The Space Grant program is improving STEM education, workforce development and research. Comprised of 844 colleges and universities, state, industry, non-profit and federal partners, the national network

works at three distinct levels (state, regional, national) to: (1) establish and maintain a national network of colleges and universities with interests and capabilities in aeronautics, space and related fields; (2) encourage cooperative programs among colleges and universities, aerospace industry, and Federal, state and local governments; (3) provide interdisciplinary training, research and public service programs related to aerospace industry; (4) recruit and train U.S. citizens, especially women, underrepresented minorities, and persons with disabilities, for careers in aerospace science and technology; and (5) promote a strong science, mathematics, and technology education base from elementary through secondary levels. This unique network and approach engages some of the nation's brightest and most creative, engineers, scientists and educators in program activities aimed at providing NASA and many of its supporting industries, research labs and national centers with a much needed technical workforce. Space Grant programs are active and effective catalysts in each state, leveraging NASA funding through partnerships and with close to a 2:1 dollar match.



**Program Opportunities** - Space Grant is much more than a Fellowship and Scholarship program. An array of hands-on research, training and education programs are provided that are contributing to a competitive STEM workforce. Programs include:

- ◆ College-level fellowships and scholarships, many of which have a research component
- ◆ Interdisciplinary hands-on mission programs and design projects for students
- ◆ Internships with industry and at NASA Centers
- ◆ Faculty and curriculum development initiatives
- ◆ University-based NASA-related research initiatives
- ◆ In-service and pre-service teacher-training programs for pre-college teachers
- ◆ K-12 student programs and public outreach programs that inspire and inform



**Diverse Workforce** - The Space Grant program is an inclusive program and specifically reaches out to women, underrepresented minorities and people with disabilities. Of the 572 institutions of higher education, 162 are designated as either an Historically Black College and University (HBCUs), Hispanic Serving Institution (HSIs), Minority Serving Institution (MSI), or Tribal College. A substantial percentage of Space Grant students and teachers are minorities and/or women. Frequently touted as a “the pump in the pipeline” for STEM education and workforce development, Space Grant is increasing the “supply and quality of ‘knowledge workers’ whose specialized skills enable them to work productively within the STEM industries and occupations.”



**Partnerships** - Space Grant maintains inter-state, regional, and national partnerships among the Space Grant consortia as well as with NASA, industry, and other government agencies. A key example includes national faculty and student training workshops teaching participants how to build and launch experiments with high altitude balloons in their states and on sounding rockets from NASA Wallops Flight Facility, as well as the Langley Aerospace Research Summer Scholars program for which consortia sponsor students from their states.



**Leveraging** - Space Grant leverages NASA funding in two ways: (1) by raising additional dollars and expanding the national network. For every NASA dollar, Space Grant raises about two additional dollars and (2) by sustaining a cohesive national network—the 52 consortia are university-based and include 844 colleges, universities, industries, government and non-profit affiliates. Of these, 572 affiliates are institutions of higher education with 354 being research universities, 122 four-year colleges, and 96 community colleges. The remaining 272 affiliates are comprised of industry, government and science-related entities.



### SPACE GRANT IN NUMBERS

- ◆ Awarded more than 1,000 internships, fellowships and research opportunities for undergraduates, graduate students and faculty in STEM disciplines.
- ◆ Awarded 270 competitive scholarships, internships, fellowships, and research opportunities for underrepresented and underserved students, teachers, and faculty in STEM disciplines.
- ◆ Provided 95 grants to enhance the capability of 50 underrepresented and underserved colleges and universities to compete for and conduct basic or applied NASA-related research.
- ◆ Assisted high-potential young faculty to become NASA Principal Investigators and effective partners with NASA centers and contractors.
- ◆ Trained 17,220 teachers in 2007 through its various programs.
- ◆ Impacted 196,813 citizens through some 288 “general public” programs.
- ◆ Actively involved more than 5,700 undergraduate and graduate students.
- ◆ Engaged 44 consortia in student-led flight projects (28 of which involve NASA centers) with more than 200 student-led flight projects involving 180+ institutions of Higher Education and nearly 90 industry partners which engaged close to 2,200 college students, 275 faculty, and 115+ precollege educators.
- ◆ In 2007, longitudinal tracking showed that 40% of the Space Grant student awardees were now in STEM careers (NASA, industry and academia) and 42% pursuing advanced STEM degrees.

