

FY2008 PROGRAM PLAN

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SOUTH DAKOTA SPACE GRANT CONSORTIUM

www.sd.spacegrant.org

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Vision, Mission and Guiding Principles

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, and space science. As the link between NASA and the citizens of South Dakota, SDSGC's mission is to instill the spirit of exploration and discovery in students and educators and in the general public, with a special focus on the fields of science, technology, engineering, and mathematics (STEM) that are essential for the development of the nation's workforce.

The SDSGC is committed to excellence in student and faculty research and to promoting STEM education and expanding outreach projects across the state of South Dakota. We specifically seek to include women, Native Americans, and other underrepresented groups in all of the programs and activities supported by the South Dakota Space Grant Consortium.

SDSGC's Management Team has developed this FY 2008 proposed Program Plan in alignment with NASA and state priorities focused around SMART (Specific, Measurable, Acceptable, Realistic, Time frame) goals and objectives. At the heart of these goals and objectives are SDSGC's Guiding Principles for Improvement and Sustained Quality:

- **Inclusiveness** — The need to deliver a broad and equitable Fellowship/Scholarship program; to engage all affiliates in Consortium programs; to provide broad input into decision-making; and to recruit more Native American students.
- **Focus** — The need to set realistic goals consistent with available resources; to maintain a Strategic Plan with specific short- and long-term objectives; to prioritize activities based on budget level; and to formalize the benefits and expectations of management and affiliates.
- **Alignment** — The need to align the Consortium programs and Strategic Plan with NASA, state, and affiliate priorities; to recognize potential future transformations in NASA direction and make appropriate changes in state programs; and to seek guidance from state and industry representatives.
- **Impact** — The need to maintain accurate and consistent measurements regarding programs and participants; to formalize methods for external and self evaluation; to carry on regular assessment of the Strategic Plan, activities, and outcomes; and to recognize and implement needed adjustments to achieve results.

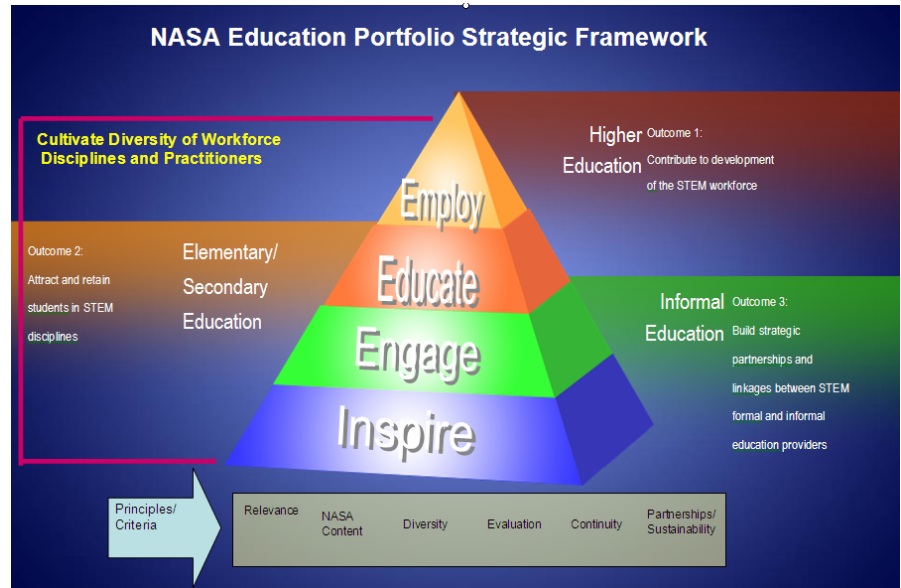
Budget and Associated Documentation

- The enclosed budget clearly identifies our requested FY2008 funding for the work described herein. Specific Statements of Work and Budgets for the following subawardees are included: SD State University (SDSU), Augustana College, the SD Discovery Center, and St. Francis Indian School (SFIS). *[Budget note regarding SFIS: Although the attached workplan and budget for SFIS refer to three programs (i.e., Summer of Action Research, Career Education Program, and Other Activities/Needs) which provide \$26,108 in matching funds, only \$15,480 of this match is included in the overall Consortium budget.]*
- The subcontract budget line item for Project Initiation Grants will be awarded among Consortium affiliates based on competitive proposals for Higher Education, Research Infrastructure, and Precollege programs.

- A fair and balanced distribution of funds to individuals at member universities and educational affiliates will be ensured through SDSGC’s centralized, consortium-wide fellowship/scholarship program. Total undergraduate and graduate student stipends during FY 2008 will be \$135,000 of NASA Space Grant funds.

Alignment with NASA Education Framework and Measurable Outcomes

SDSGC’s FY2008 program goals and objectives described below and in the Consortium’s attached **Strategic Plan (Appendix A, which also includes the respective outcome measures)** are closely aligned with NASA’s Education Framework. Consortium goals and objectives reflective of each of NASA’s three main education outcomes are summarized in the table below and described in greater detail in the narrative that follows. *(Note: The*



Consortium’s Management Team is currently mapping SDSGC’s attached Strategic Plan to NASA’s three education outcomes. This updated Strategic Plan will be available for the 20th Year Review.)

Summary of SDSGC FY2008 Goals by NASA Education Outcome

<u>Outcome 1</u>	Consortium Program Areas 2, 3, and 4 (Fellowship/Scholarship, Research Infrastructure, and Higher Education Programs)
1.1	Faculty and Research Support <ul style="list-style-type: none"> ■ Continue to coordinate with SD NASA EPSCoR to support research seed grants and travel grants (e.g., \$80,000 awarded by SD NASA EPSCoR in FY2007) ■ Support the new NASA Space Grant Telescope Network Project
1.2	Student Support <ul style="list-style-type: none"> ■ Continue to place graduate and undergraduate students in internships with NASA, industry, and USGS/EROS ■ Provide fellowship/scholarship support to students in STEM degree programs
1.3	Student Involvement Higher Education <ul style="list-style-type: none"> ■ Continue to support engineering design teams and robotics teams
1.4	Course Development <ul style="list-style-type: none"> ■ Continue to make funds available to faculty for innovative curriculum development (e.g., \$19,925 awarded in FY2007 to Augustana College for university-level robotics/computer science program)
1.5	Targeted Institution and Academic Infrastructure <ul style="list-style-type: none"> ■ Continue to target SDSGC’s three Tribal College affiliates for improvements in research

competitiveness and STEM education opportunities	
Outcome 2	Consortium Program Area 5 (Precollege Program)
2.1 Educator Professional Development—Short Duration	
<ul style="list-style-type: none"> ■ Continue to facilitate teacher workshops, especially the NASA Teacher Academies in cooperation with the NASA Aerospace Education Services Program focusing on robotics; also E-missions, GEMS, and others 	
2.2 Educator Professional Development—Long Duration	
<ul style="list-style-type: none"> ■ Continue support programs for three NASA Explorer Schools in South Dakota ■ Continue competitive grant program for K-12 math/science teachers (Kelly Lane Earth & Space Science Teacher Grant) ■ Continue targeted STEM improvement program (3-5 year duration) with selected schools or districts (e.g., collaboration with St. Francis Indian School, now in its third year, and ongoing collaboration with Flandreau Indian School) 	
2.3 Curricular Support Resources	
<ul style="list-style-type: none"> ■ Continue to support NASA Educator Resource Centers at affiliate institutions ■ Continue to support NASA AESP, Robotics, GEMS, and E-missions teacher training 	
2.4 Student Involvement K-12	
<ul style="list-style-type: none"> ■ Continue support of STEM summer programs such as Gear-Up, ACE Camp, RoboCamp, and Space Camp, and high school-college bridge programs (emphasis on Native American students) ■ Continue (and expand) support for precollege robotics programs ■ Continue to support student/family participation in Opportunities for Enhancing Diversity in the Geosciences (four He Sapa Bloketu Wocun summer camps in 2008) 	
Outcome 3	Consortium Program Area 6 (Public Service Program)
3.1 Resources	
<ul style="list-style-type: none"> ■ Continue to support activities such as “Space Days” in cooperation with Informal Education Providers (Space Days 2008 to be hosted by Lake Area Technical Institute in Watertown, SD, in October, coinciding with NASA’s 50th Anniversary. Space Days 2007 at Kirby Science Discovery Center attended by 1,200 teachers and students) 	
3.2 Professional Development for Informal Education Providers	
<ul style="list-style-type: none"> ■ Facilitate six NASA Teacher Academies during summer 2008 and related programs at SDSGC’s three Informal Education affiliates 	
3.3 Informal Education Provider Involvement Opportunities	
<ul style="list-style-type: none"> ■ Continue to engage state’s Informal Education Providers by representation on Consortium Management Team 	

1. *NASA Education Outcome 1 (Educate and Employ): “Contribute to the development of the STEM workforce in disciplines needed to achieve NASA’s strategic goals”*

-- SDSGC Strategic Plan sections 2, 3, 4, 7 (Fellowships, Research Infrastructure, Higher Education, Workforce Development)

❖ **Fellowship/Scholarship**

Goal: To administer a fellowship/scholarship program that offers educational and research opportunities to students from diverse backgrounds who are pursuing degrees in fields of science, technology, engineering, and mathematics (STEM) that align with NASA’s mission and those of SDSGC members and affiliates.

- **Objective 2.1:** (Competitiveness) Ensure the fair distribution of funds to member universities and educational affiliates.
 - **Objective 2.2:** (NASA and EROS ties) Offer hands-on, tangible research experiences to student research fellowship awardees at NASA Centers and EROS.
 - **Objective 2.3:** (Industry ties) Offer hands-on, tangible research experiences to student research fellowship awardees at aerospace and related science and technology industries.
 - **Objective 2.4:** (Mentoring and professional development) Provide mentoring and professional development experiences to student researchers, which will develop skills that contribute to the future workforce.
 - **Objective 2.5:** (Diversity) Ensure funding for fellowships and scholarships to women, underrepresented minorities, and persons with disabilities.
 - **Objective 2.6:** (Longitudinal tracking) All students who have received significant fellowship or scholarship assistance from SDSGC will be longitudinally tracked through first employment or beginning of advanced degrees.
 - **Objective 2.7:** (Evaluation) The Consortium will develop methods to document, measure, and assess the impact of the fellowship and scholarship programs in conjunction with its implementation of an overall evaluation strategy (see 1.9).
- Workforce Development in NASA Outcome 1**
- NASA interns
 - Industry interns
 - USGS/EROS interns
 - Engineering design teams
 - University-NASA contacts
 - Travel to NASA Centers
 - Research seed grants
 - Engineering design teams
- Diversity in NASA Outcome 1**
- Support for Native American students including those at Tribal Colleges
 - Support remote sensing research with Tribal Colleges
 - Seed grants and travel grants offered at three Tribal College affiliates
 - STEM support programs for Native American students
 - At least one Tribal College representative on Management Team
 - NSF Opportunities for Enhancing Diversity project
 - Higher Education opportunities offered to all three Tribal College affiliates
- Related objectives from Workforce Development section of Strategic Plan:**
- **Objective 7.3:** (Fellowships) Offer student support through fellowships and scholarships that encourage women and members of underrepresented groups to enter the NASA pipeline.
 - **Objective 7.4:** (Mentoring and professional development) Provide mentoring and professional development experiences to Workforce Development student fellows, which will develop skills that contribute to the future workforce. (See also 2.4.)
 - **Objective 7.5:** (NASA placement) Offer hands-on, tangible research experiences at NASA Centers to SDSGC Workforce Development student fellows.

- **Objective 7.6:** (Industry placement) Increase industry participation in SDSGC's Workforce Development efforts and increase internships and job placement.
- **Objective 7.7:** (Longitudinal tracking) All students who have received significant fellowship or scholarship assistance through the SDSGC Workforce Development efforts will be longitudinally tracked through first employment or beginning of advanced degrees. (See also 2.6.)
- **Objective 7.8:** (Evaluation) The Consortium will develop methods to document, measure, and assess the impact of its workforce development efforts in conjunction with its implementation of an overall evaluation strategy (see 1.9).

Longitudinal Tracking: In order to track the next step that students take after Space Grant funding in terms of workforce or advanced education, SDSGC will continue to secure the services of the National Space Grant Foundation throughout FY2008 and beyond to provide longitudinal tracking of all students who receive significant support from Space Grant. In South Dakota, students receiving \$1,000 or more in a single award will be included in our longitudinal tracking surveys and respective database.

❖ **Higher Education**

Goal: To build interdisciplinary programs related to NASA's mission and goals at the state's institutions of higher education and to support related programs that serve to strengthen STEM education in South Dakota.

- **Objective 4.1:** (Curriculum and NASA content) Contribute aerospace and earth science materials to the higher education community in South Dakota.
- **Objective 4.2:** (NASA and EROS ties) Enhance faculty and undergraduate/graduate student development through planning visits, internships, and fellowships at NASA Centers and EROS.
- **Objective 4.3:** (State government) Establish and maintain linkages between SDSGC and higher education and state government.
- **Objective 4.4:** (Industry involvement) Establish and maintain linkages between SDSGC and higher education and industry in South Dakota.
- **Objective 4.5:** (Diversity) Increase the participation of women and underrepresented groups in all aspects of SDSGC's higher education program and facilitate their subsequent entry into STEM careers.
- **Objective 4.6:** (Evaluation) The Consortium will develop methods to document, measure, and assess the impact of the higher education programs in conjunction with its implementation of an overall evaluation strategy (see 1.9).

Related objective from Workforce Development section of Strategic Plan:

- **Objective 7.1:** (Diversity) Model diversity in SDSGC's workforce development efforts, with an emphasis on Native Americans, which make up the state's largest minority.

❖ **Research Infrastructure**

Goal: To promote the improvement of research programs and capabilities of institutional and affiliate members with an emphasis on the fields of aerospace, earth science, and supporting STEM disciplines.

- **Objective 3.1:** (Research proposals) Increase the number of research proposals submitted by SDSGC institutions in fields aligned with NASA’s mission.
- **Objective 3.2:** (Research support) Support new and developing research, especially multidisciplinary and collaborative projects, in fields aligned with NASA’s mission.
- **Objective 3.3:** (Collaborations) Build research collaborations both within and outside the state.
- **Objective 3.4:** (Facilities) Promote acquisition of new facilities and shared use of existing resources.
- **Objective 3.5:** (Integrate research and education) Foster research groups and engineering design teams that integrate education, research, and development.
- **Objective 3.6:** (Diversity) Increase the participation of women and underrepresented groups in statewide research programs and facilitate their subsequent entry into STEM careers.
- **Objective 3.7:** (Evaluation) The Consortium will develop methods to document, measure, and assess the impact of the research infrastructure programs in conjunction with its implementation of an overall evaluation strategy (see 1.9).

2. **NASA Education Outcome 2 (Educate and Engage): “Attract and retain students in STEM disciplines through a progression of educational opportunities for students, teachers, and faculty”**

-- SDSGC Strategic Plan section 5 (Precollege)

❖ **Precollege**

Goal: To increase student awareness and access to education and career opportunities in aerospace, earth science, and supporting STEM disciplines.

- **Objective 5.1:** (NASA dissemination) Disseminate information on NASA and SDSGC precollege activities and opportunities to teachers and students statewide.
- **Objective 5.2:** (Partnerships) Facilitate partnerships for grant applications that aim to strengthen precollege STEM education.
- **Objective 5.3:** (In-service teacher training) Increase teacher capacity to effectively incorporate aerospace and earth science into the curriculum.
- **Objective 5.4:** (Science and education events) Support programs that expose K-12 students to hands-on experiences and to educational and career opportunities in the fields of aerospace, earth science and technology.

Workforce Development in NASA Outcome 2

- NASA teacher training with NASA AESP staff
- Precollege Robotics
- Aerospace Career and Education Camp
- Space Camp
- Engineers’ Week

- **Objective 5.5:** (State standards) SDSGC will promote and support programs that align with state and national education standards.
- **Objective 5.6:** (Diversity) Inspire and motivate women, underrepresented minorities, and persons with disabilities to pursue STEM careers.
- **Objective 5.7:** (Evaluation) The Consortium will develop methods to document, measure, and assess the impact of the precollege education programs in conjunction with its implementation of an overall evaluation strategy (see 1.9).

Diversity in NASA Outcome 2

- Targeted STEM programs at St. Francis Indian School and Flandreau Indian School
- Three NASA Explorer Schools with very high Native American enrollment
- Gear-Up program for precollege Native American students
- Women in Science and Engineering

NASA Explorer Schools (NES): Three NES schools are located in South Dakota, two Tribal Schools on the Rosebud Indian Reservation which have near 100% Native American student population and one school with over 50% Native American population. SDSGC will continue supporting these NES schools during FY2008 by augmenting NES program resources with Space Grant support staff, teacher-training coordination through AESP, and other NASA informal education resources.

3. NASA Education Outcome 3 (Engage and Inspire): “Build strategic partnerships and linkages between STEM formal and informal education providers that promote STEM literacy and awareness of NASA’s mission”

-- SDSGC Strategic Plan section 6 (Public Service)

❖ Public Service

Goal: To enhance public scientific literacy in aerospace and earth science; to complement community efforts in STEM education; and to inspire citizens of diverse backgrounds through the excitement of scientific exploration and discovery.

- **Objective 6.1:** (NASA dissemination) The SDSGC will increase public awareness of the Space Grant program and its activities and engage the public in the excitement of NASA missions.
- **Objective 6.2:** (Science and education events) The SDSGC will support activities of scientific discovery across the state (e.g., SD Space Days in Watertown, SD Oct. 16-17, 2008)
- **Objective 6.3:** (Diversity) SDSGC will seek to inspire and motivate women, underrepresented minorities, and persons with disabilities through the excitement of NASA missions.
- **Objective 6.4:** (Evaluation) The Consortium will develop methods to document, measure, and assess the impact of the public service program in conjunction with its implementation of an overall evaluation strategy (see 1.9)

Workforce Development in Public Service Program

- SD Space Days 2008
- NASA content at three Informal Education affiliates

Diversity in Public Service Program

- Engage members of underrepresented groups in activities such as Space Day

Consortium Management (Administration)

Goal: To ensure quality and fairness in all Consortium programs and alignment with the needs of NASA, the member and affiliate organizations, and the state of South Dakota.

- **Objective 1.1:** (Reporting) The Management Team will provide timely reporting and responses to NASA Headquarters regarding Consortium operations and finances.
- **Objective 1.2:** (National network) The Management Team will work to strengthen relationships with NASA Centers and the USGS Center for Earth Resource Observation and Science (EROS), the national Space Grant network, and the state's NASA EPSCoR Program.
- **Objective 1.3:** (Consortium network) The Management Team will faithfully represent the diverse interests and resources of the Consortium member institutions and affiliates.
- **Objective 1.4:** (State government) The Management Team will ensure that Consortium programs are aligned with state priorities.
- **Objective 1.5:** (State industry) The Management Team will foster interaction between the Consortium and state industries involved in aerospace and related technologies.
- **Objective 1.6:** (Link to public) The Management Team will seek to maintain and improve the effectiveness of the Consortium as the link between the public and NASA in the state.
- **Objective 1.7:** (Increase resources) The Management Team will pursue opportunities to increase the resources available to the Consortium, to broaden participation within the state, to collaborate with other state Consortia in areas of mutual interest and capability, and to assure long-term sustainability.
- **Objective 1.8:** (Diversity) The Management Team will ensure diversity in all Consortium programs and activities by seeking to include women, underrepresented minorities, and persons with disabilities.
- **Objective 1.9:** (Evaluation) The Management Team will continually monitor and seek to improve the quality and effectiveness of the state program.

Management Team Structure

During FY2008, the Consortium's Management Team will continue to consist of the following permanent representatives from the SD School of Mines & Technology (SDSM&T), SD State University (SDSU), Augustana College, the USGS Center for Earth Resource Observation and Science (EROS), the SD Discovery Center and Aquarium, and two additional rotating positions filled by affiliate members for a period of two years. During FY 2007 there were actually be three people in rotating positions held by representatives from the Kirby Science Discovery Center, Sinte Gleska University, and the Journey Museum.

Current Management Team members include:

- Dr. Edward Duke, Director
- Mr. Thomas Durkin, Deputy Director
- Dr. Daniel Swets, Associate Director at Augustana College
- Ms. Kristie Maher, Exec. Dir., SD Discover Center & Aquarium
- Mr. Kevin Dalsted, Associate Director at SD State University
- Mr. Gregg Johnson, Senior Scientist at EROS

- ♦ Mr. James Rattling Leaf, *Sinte Gleska University (through 5/14/08)
- ♦ Ms. Diane Melvin, The Journey Museum (through 5/14/09)
- ♦ Mr. Chris Rossing, Kirby Science Discovery Center (through 5/14/09)
 - * - *Minority Serving Institution*
 - ♦ - *Rotating position*

Diversity and Engaging Minority Serving Institutions and Minorities

Based on latest data from the National Center of Education Statistics Digest, South Dakota's minority enrollment in degree-granting institutions is *10.1% (8.9% as adjusted for Asian students) of which *6.6% are Native American. In FY2007, SDSGC exceeded its targeted goal of 10% of awards to minorities in that 18% of student awardees were minorities (all Native American) and 14% of the total amount of the award funds was provided to minorities. Forty-three percent (43%) of the seven minority students funded in FY2007 attend a minority-serving institution (Tribal College).

* http://nces.ed.gov/programs/digest/d06/tables/dt06_212.asp

Connie Giroux, a Native American graduate student conducted a summer 2007 internship at NASA JPL where she worked on assessing identified risks for the Mars Science Laboratory Project and the Aquarius Project (see page 11 of attached FY2007 Progress Report). Similar promising NASA internships will be promoted among the Consortium's minority students during FY2008.

Through concerted outreach and focused classroom activities, SDSM&T in partnership with Consortium affiliate Oglala Lakota College (OLC) has successfully implemented various NASA and NSF funded programs geared toward recruiting and retaining Native American high school and undergraduate students in STEM. In 2007, OLC and SDSM&T formalized a partnership agreement and established OLC's intent to be a feeder program to supply quality pre-engineering students to SDSM&T. Between 1998 and 2007, OLC graduated 19 minority students from their Science Engineering and Mathematics (SEM) program. Eleven of the students (58%) matriculated into SDSM&T. Of the OLC students matriculating into SDSM&T, seven students (64%) have graduated or are expected to graduate from SDSM&T during the 2007-2008 school year. Other colleges and universities have formally and informally operated as feeder programs for increasing minority participation at SDSM&T. In the current 2007-2008 school year, 29 Native American students are pursuing BS degrees in engineering and computer science at SDSM&T. During FY2008, Space Grant will recruit students into NASA-aligned STEM research programs from the initial class of undergraduate students who have either transitioned to SDSM&T or are currently at OLC. In addition to recruiting graduating students from OLC and SDSM&T, we will make efforts to recruit students from other Tribal Colleges serving students in South Dakota, specifically from affiliate Sinte Gleska University, a minority-serving institution on the Rosebud Indian Reservation.

James Rattling Leaf of Sinte Gleska University completed his third year on the SDSGC Management Team in FY2007. We are considering a representative from one of the Consortium's other two affiliate Tribal Colleges to take his place during FY2008.

These are meaningful engagements of minorities and minority-serving institutions by the Consortium which will continue to be pursued during FY2008.

Outcome Completion

The specific program areas, strategies and measurable outcome indicators used to guide the Consortium and track accomplishments are described in the Consortium's Strategic Plan (Appendix A). The enclosed FY2007 Progress Report includes "Quantitative Outcome Measures Matrix Tables" for each program area. Those tables clearly indicate whether the outcome indicators for the various program areas were completed, partially completed, or not completed during FY2007. The outcomes completed in FY2007 will be continued in FY2008 and are not repeated here. In the cases where an outcome indicator was partially or not completed last year, we indicate below for each of the six program areas 1) how and when the outcome will be achieved during FY2008, or 2) whether there has been a change to the desired outcome.

To avoid duplication, the specific projects and programs described in detail under each of the six Program Areas in the FY2007 Progress Report are not repeated here. However, the vast majority of those individual projects are planned to be continued in FY2008.

1) **Management Outcomes Partially Completed in FY'07 to be Revised in FY'08**

Nineteen (95%) of the 20 Management outcomes identified in SDSGC's Strategic Plan were completed in FY2007 (see Management "Quantitative Outcome Measures Matrix Table" in FY2007 Progress Report). Those outcomes will continue to be met in FY2008. The following outcome was partially completed in FY2007 will continue to be pursued during FY2008.

- Strategy/Outcome 1.7.1, a Development Plan that identifies opportunities to increase funding, staffing, and matching for the Consortium's program, was not completed during FY2007. However, the Consortium's Management Team continually investigates and secures sources of outside funding and match, which often arise as time- and site-specific opportunities. Because a formal Development Plan document has not been deemed critical, development efforts will continue during FY2008 and beyond. Strategy/Outcome 1.7.1 will be revised to maintain development efforts, but not require a formal written plan.

2) **Fellowship Outcome Partially Completed in FY'07 to be Pursued in FY'08**

Twelve (92%) of the 13 Fellowship outcomes identified in SDSGC's Strategic Plan were completed in FY2007 (see Fellowship "Quantitative Outcome Measures Matrix Table" in FY2007 Progress Report). Those outcomes will continue to be met in FY2008. The following outcome was partially completed in FY2007 will continue to be pursued in FY2008.

- Per Strategy/Outcome 2.4.1, the majority of the student researchers funded through SD Space Grant in FY2007 presented their results to campus peers, professional organizations, precollege students, or civic groups in order to highlight their research and educate the community about specific STEM content areas that pertain to their research projects. Research presentations will remain a priority for all student fellows receiving FY2008 Space Grant funding.

- 3) **Research Outcome Not Completed in FY'07 to be Completed in FY'08**
 Fifteen (94%) of the 16 Research Infrastructure outcomes identified in SDSGC's Strategic Plan were completed in FY 2007 (see Research "Quantitative Outcome Measures Matrix Table" in FY2007 Progress Report). Those outcomes will continue to be met in FY2008. Although outcomes 3.2.2 and 3.3.2 were shown to only have been partially met in the FY2007 Progress Report, it turns out that they were fully met in that 6 researchers were funded with travel grants to NASA Centers during FY2007. The following outcome not completed in FY2007 will be completed in FY2008.
- Per Strategy/Outcome 3.3.3, an initial research needs and capabilities assessment of SDSGC academic institutions was to be completed in 2006 to promote research collaboration among the state's academic institutions with an emphasis on programs that link faculty at institutions with limited research infrastructure (including Tribal Colleges) and faculty at research-intensive institutions. This assessment is planned to be addressed during the Tribal College Research and Education Summit planned for Spring 2008.
- 4) **Higher Education Outcomes Completed in FY'07 to be Continued in FY'08**
 All six (100%) of the Higher Education outcomes identified in SDSGC's Strategic Plan were completed in FY 2007 (see Higher Education "Quantitative Outcome Measures Matrix Table" in FY2007 Progress Report). Those outcomes will continue to be met in FY2008.
- 5) **Precollege Outcome Partially Completed in FY'07 to be Completed in FY'08**
 Eleven (100%) of the 11 Precollege outcomes identified in SDSGC's Strategic Plan were completed in FY 2007 (see Precollege "Quantitative Outcome Measures Matrix Table" in FY2007 Progress Report). Those outcomes will continue to be met in FY2008. Although outcome 5.3.1 (completion and results publication of a K-12 geospatial education needs assessment survey by SDView) was shown to only have been partially met in the FY2007 Progress Report, it turns out that the outcome was met. The survey was conducted in late 2006 and results are available through the SDSGC.
- 6) **Public Service Outcomes Partially Completed in FY'07 to be Revised in FY'08**
 Five (83%) of the six Public Service outcomes identified in SDSGC's Strategic Plan were completed in FY2007 (see Public Service "Quantitative Outcome Measures Matrix Table" in FY2007 Progress Report). Those outcomes will continue to be met in FY2008. The following outcome was partially completed in FY2007 and will be met in FY2007.
- Per Strategy/Outcome 6.2.3, although more than 2,500 middle and high school students were engaged with hands-on science activities, SDSGC did not award prizes at the three science fairs in Rapid City, Sioux Falls, and Brookings due to time and staff limitations. SDSGC help judge these science fairs, but because this was the second year in a row that staff and time limitations have prevented us from awarding prizes, the Management Team has decided that a prize isn't a critical-enough outcome and the outcome will be revised to continue supporting the science fairs, but not necessarily award prizes at all three annual events.