

RESEARCH AND RELATED ACTIVITIES

\$4,333,490,000

The FY 2006 Budget Request for the Research and Related Activities (R&RA) Appropriation is \$4,333.49 million, an increase of \$112.94 million, or 2.7 percent, above the FY 2005 Current Plan of \$4,220.55 million. Support from the R&RA Appropriation enables U.S. leadership and accelerated progress across the expanding frontiers of scientific and engineering research and education. In turn, these activities support areas of inquiry critical to long-term U.S. economic strength, security, and quality of life.

Research activities spur the knowledge, ideas, tools and approaches that increase understanding, solve problems, and stimulate opportunities for economic growth. The productive exchange of knowledge, information and technology can accelerate innovation, often yielding new insights into the underlying research. Researchers from different disciplines increasingly transcend traditional boundaries to solve complex problems. Students work with senior scientists performing research, fostering the natural integration of research and education, and obtaining the skills needed for the next generation's workforce of scientists and engineers.

Research and Related Activities

(Dollars in Millions)

	FY 2005		FY 2006 Request	Change over FY 2005	
	FY 2004 Actual	Current Plan		Amount	Percent
Biological Sciences	\$587.05	\$576.61	\$581.79	\$5.18	0.9%
Computer and Information Science and Engineering	605.35	613.72	620.56	6.84	1.1%
Engineering	565.57	561.30	580.68	19.38	3.5%
Geosciences	713.41	694.16	709.10	14.94	2.2%
Mathematical and Physical Sciences	1,091.59	1,069.86	1,086.23	16.37	1.5%
Social, Behavioral and Economic Sciences	184.30	196.90	198.79	1.89	1.0%
Office of International Science and Engineering ¹	40.83	33.73	34.51	0.78	2.3%
U.S. Polar Research Programs	274.18	276.84	319.41	42.57	15.4%
U.S. Antarctic Logistical Support Activities	67.54	67.52	67.52	0.00	0.0%
Integrative Activities	163.52	129.91	134.90	4.99	3.8%
Total, Research and Related Activities	\$4,293.34	\$4,220.55	\$4,333.49	\$112.94	2.7%

Totals may not add due to rounding.

¹ OISE FY 2004 Actual includes \$10.99 million provided to NSF by the U.S. Department of State for an award to the U.S. Civilian Research and Development Foundation.

FY 2006 Appropriations Language

For necessary expenses in carrying out the National Science Foundation Act of 1950, as amended (42 U.S.C. 1861-1875), and the Act to establish a National Medal of Science (42 U.S.C. 1880-1881); services as authorized by 5 U.S.C. 3109; maintenance and operation of aircraft and purchase of flight services for research support; acquisition of aircraft; ~~\$4,254,593,000~~ *\$4,333,500,000 to remain available until September 30, 2007*, of which not to exceed ~~\$350,000,000~~ *\$425,000,000* shall remain available until expended for Polar research and operations support, and for reimbursement to other Federal agencies for operational and science support and logistical and other related activities for the United States Antarctic program; ~~the balance to remain available until September 30, 2006~~: *Provided, That from amounts specified for Polar research and operations support, the National Science Foundation shall reimburse the Coast Guard for such sums as mutually determined to be necessary for Coast Guard operations and maintenance of the U.S. polar icebreaking fleet: Provided further, That receipts for scientific support services and materials furnished by the National Research Centers and other National Science Foundation supported research facilities may be credited to this appropriation: Provided further, That to the extent that the amount appropriated is less than the total amount authorized to be appropriated for included program activities, all amounts, including floors and ceilings, specified in the authorizing Act for those program activities or their subactivities shall be reduced proportionally: Provided further, That \$95,000,000 of the funds available under this heading shall be made available for a comprehensive research initiative on plant genomes for economically significant crops: Provided further, That not to exceed \$25,954,000 of these funds shall be for all costs, direct and indirect, associated with personnel assignments under the Intergovernmental Personnel Act. (Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 2005.)*

Explanation of proposed changes to appropriation language:

- Adds language to clarify NSF's increased responsibility for funding polar icebreaking activities.
- Deletes language related to allocating funds proportionately across programs, Plant Genome research, and ceilings on funding for Intergovernmental Personnel Act appointments. Each of these issues is more appropriately addressed through administrative measures.

Research and Related Activities

FY 2006 Summary Statement

(Dollars in Millions)

	Enacted/ Request	Rescission	Carryover/ Recoveries	Transfers ¹	Total Resources	Obligations Incurred/ Est.
FY 2004 Appropriation	4,276.60	-25.23	37.78	10.75	4,299.90	4,293.34
FY 2005 Current Plan	4,254.59	-34.04	6.56	-	4,227.11	4,227.11
FY 2006 Request	4,333.49	-	-	-	4,333.49	4,333.49
Change from FY 2005	78.90				106.38	

Totals may not add due to rounding.

¹The U.S. Department of State transferred \$10.99 million for an award to the U.S. Civilian Research and Development Foundation (\$10.75 million in FY 2004 funds is shown under transfers, and the \$240,000 balance of FY 2003 funds is included as carryover into FY 2004).

Explanation of Carryover:

Within the Research and Related Activities (R&RA) appropriation \$6.56 million was carried forward into FY 2005. The Office of Polar Programs (OPP) portion totals \$5.60 million and includes \$2.74 million for Antarctic Logistics Support, \$270,000 for the Operations Support Program and \$2.20 million in unobligated recoveries. The Office of Integrative Activities (OIA) carried forward \$425,955 for the Science and Technology Centers (STC) site visits. The Office of International Science and Engineering (OISE) carried forward \$287,000 for the start-up costs for the NSF/China Office. The remaining amounts are from several awards in various programs that were not ready for obligation in FY 2004.

**RESEARCH AND RELATED ACTIVITIES
FY 2006 Performance Highlights**

The table below shows the strategic planning and evaluation framework for activities funded through the Research and Related Activities (R&RA) appropriation. This framework was established in the NSF Strategic Plan for FY 2003-2008. NSF's strategic outcome goals are assessed annually by the Advisory Committee for GPRA Performance Assessment. The investment categories are assessed using the Program Assessment Rating Tool (PART). Additional information on these activities is available in the Performance Information section of this document.

**Research and Related Activities
by Strategic Outcome Goal and Investment Category**
(Dollars in Millions)

	FY 2004 Actual	FY 2005 Current Plan	FY 2006 Request
Individuals	324.68	309.55	312.92
Institutions	41.05	40.17	40.98
Collaborations	34.83	29.41	56.53
PEOPLE, total	\$400.56	\$379.13	\$410.43
Fundamental Science & Engineering	2,147.36	2,102.13	2,116.27
Centers Programs	362.85	350.83	357.89
Capability Enhancement	144.71	137.94	141.97
IDEAS, total	\$2,654.92	\$2,590.90	\$2,616.13
Facilities	431.22	469.58	464.08
Infrastructure & Instrumentation	317.84	301.58	319.79
Polar Tools, Facilities & Logistics	256.04	257.46	300.63
Federally-Funded R&D Centers	195.61	182.56	182.53
TOOLS, total	\$1,200.71	\$1,211.18	\$1,267.03
ORGANIZATIONAL EXCELLENCE	\$37.14	\$39.33	\$39.89
Total, R&RA	\$4,293.34	\$4,220.55	\$4,333.49

In developing the FY 2006 Budget Request, NSF completed the PART for three investment categories and one priority area that receive R&RA funding. All were rated "effective," the highest rating.

- **Institutions.** Major activities in R&RA include ADVANCE; Course, Curriculum and Laboratory Improvement; and Engineering Education Reform. Overall, the PART found Institutions to be an "effective" program and that additional attention should continue to be focused on achieving performance and efficiency targets.
- **Collaborations.** Major activities in R&RA include Partnerships for Innovation, Model Institutions of Excellence, and undergraduate research centers and related activities in the mathematical and physical sciences and the geosciences. Overall, the PART found

Collaborations to be an “effective” program and that additional attention should continue to be focused on achieving performance and efficiency targets.

- Polar Tools, Facilities and Logistics. Major activities in R&RA include Antarctic Facilities and Operations, Antarctic Logistics, and Arctic Logistics. Overall, the PART assessments found Polar Tools, Logistics and Facilities to be an “effective” program with recommendations to perform a targeted review through a Committee of Visitors (completed), continue to improve performance targets and monitoring, and further promote the use of Earned Value Management in facilities construction. NSF has developed goals for this investment category using the Facilities Construction goal, incorporating Earned Value Management, and Facilities Operations. Therefore, since FY 2004, Polar Tools, Logistics and Facilities construction and operations have been tracked separately from these other facilities.
- Biocomplexity in the Environment (BE). R&RA funding for the BE priority area is roughly \$84 million in the FY 2006 Request and is provided by all research directorates and Offices. Overall, the PART assessments found this program to be “effective” and that additional attention should continue to be focused on achieving performance and efficiency targets.

