RESEARCH AND RELATED ACTIVITIES $4,665,950,000

The FY 2007 Budget Request for the Research and Related Activities (R&RA) Appropriation is $4,665.95 million, an increase of $334.47 million, or 7.7 percent, above the FY 2006 Current Plan of $4,331.48 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.

The R&RA portfolio for FY 2007 emphasizes priorities that will strengthen the science and engineering enterprise through investments in frontier research and cutting-edge research tools. The fruits of research in science, engineering, and technology have steadily lifted America's standard of living. In every sector, every community, and every region, discovery, learning, and innovation are the dynamos driving wealth-producing growth and job creation. America has always measured her progress not through comparisons with traditional standards, but by pursuing unmet challenges and venturing into unexplored territory. Today, however, this is becoming increasingly difficult. Intense competition for ideas and talent, for comparative advantage and market opportunities, are felt worldwide. Robust investments are now more fundamentally critical than ever before.

Research and Related Activities
(Dollars in Millions)

	FY 2005 Actual	FY 2006 Current Plan	FY 2007 Request	Change over FY 2006 Amount	Change over FY 2006 Percent
Biological Sciences	$576.78	$576.69	$607.85	$31.16	5.4%
Computer and Information Science and Engineering	490.20	496.41	526.69	30.28	6.1%
Engineering	557.09	580.92	628.55	47.63	8.2%
Geosciences	697.17	702.83	744.85	42.02	6.0%
Mathematical and Physical Sciences	1,069.36	1,085.45	1,150.30	64.85	6.0%
Social, Behavioral and Economic Sciences	196.80	199.91	213.76	13.85	6.9%
Office of Cyberinfrastructure	123.40	127.12	182.42	55.30	43.5%
Office of International Science and Engineering[1]	43.38	34.52	40.61	6.09	17.6%
U.S. Polar Research Programs	278.27	322.68	370.58	47.90	14.8%
U.S. Antarctic Logistical Support Activities	70.26	66.66	67.52	0.86	1.3%
Integrative Activities	130.92	137.12	131.37	-5.75	-4.2%
Arctic Research Commission	1.19	1.17	1.45	0.28	23.9%
Total, Research and Related Activities	$4,234.82	$4,331.48	$4,665.95	$334.47	7.7%

Totals may not add due to rounding.

[1] OISE FY 2005 Actual includes $9.42 million provided to NSF by the U.S. Department of State for an award to the U.S. Civilian Research and Development Foundation.

FY 2007 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; and authorized travel; ~~$4,387,520,000~~*$4,665,950,000*, to remain available until September 30, ~~2007~~*2008*, of which not to exceed ~~$425,000,000~~*$485,000,000* 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: Provided, ~~That from funds specified in the fiscal year 2006 budget request for icebreaking services, such sums shall be available for the procurement of polar icebreaking services: Provided further, That the National Science Foundation shall reimburse the Coast Guard according to the existing memorandum of agreement: 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 funds under this heading may be available for innovation inducement prizes~~]. *(Science Appropriations Act, 2006.)*

Research and Related Activities
FY 2007 Summary Statement
(Dollars in Millions)

	Enacted/ Request	Rescission	Carryover/ Recoveries	Lapsed	Transfers[1]	Total Budgetary Resources	Obligations Incurred/ Estimated
FY 2005 Actual	4,254.59	-34.04	12.69	(0.78)	9.42	4,241.88	4,234.82
FY 2006 Current Plan	4,387.52	-56.04	7.06	-	-	4,338.54	4,338.54
FY 2007 Request	4,665.95	-	-		-	4,665.95	4,665.95
Change from FY 2006	$278.43					$327.41	

Totals may not add due to rounding.

[1]The U.S. Department of State transferred $9.42 million for an award to the U.S. Civilian Research and Development Foundation.

Explanation of Carryover:

Within the **Research and Related Activities** (R&RA) appropriation $7.06 million was carried forward into FY 2006. This includes $3.98 million carried forward by the Engineering Directorate as part of a competition to award a Nanoscale Science and Engineering Center (NSEC). The Foundation is in the process of negotiating a complex potential cooperative agreement as a result of this competition. The remaining R&RA carryover includes $2.36 million carried forward for efforts relating to Hurricane Katrina and $720,804 carried forward for the Office of Polar Programs (OPP).

RESEARCH AND RELATED ACTIVITIES
FY 2007 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 2005 Actual	FY 2006 Current Plan	FY 2007 Request
Fundamental Science and Engineering	$2,223.47	$2,222.82	$2,372.53
Centers Programs	236.67	253.25	259.78
Capability Enhancement	110.30	107.91	116.93
IDEAS	2,570.44	2,583.98	2,749.24
Facilities	326.85	323.44	348.98
Infrastructure and Instrumentation	446.27	464.38	549.78
Polar Tools, Facilities and Logistics	261.30	306.95	336.43
Federally-Funded R&D Centers	182.10	187.45	194.08
TOOLS	1,216.52	1,282.22	1,429.27
Individuals	347.15	325.44	339.87
Institutions	34.34	39.49	41.25
Collaborations	31.28	59.38	64.38
PEOPLE	412.77	424.31	445.50
ORGANIZATIONAL EXCELLENCE	35.08	40.97	41.94
Total, R&RA	$4,234.82	$4,331.48	$4,665.95

Totals may not add due to rounding.

NSF's 2007 Budget Request includes special initiatives within the R&RA Account.

- **Cyberinfrastructure**. Funding is requested for acquisition of a leadership-class, high performance computing (HPC) system. In acquiring such a system, NSF will work closely with other federal agencies similarly committed to the effective coordination of investments in HPC system acquisition and operation, including Department of Energy, NASA, DARPA, and other parts of the Department of Defense. This interagency partnership allows participating agencies to leverage expertise and promising practices, minimizes duplication of effort, and ultimately promises to increase the architectural diversity of leadership class systems available to researchers and educators around the country.

- **International Polar Year (IPY)**. NSF is requesting support for activities related to IPY. Research and education activities include Arctic environmental change, polar ice sheet dynamics and stability, and research on life in the cold and dark. Investments for infrastructure and logistics address a number of concerns, such as enabling winter research, equipping NOAA's Barrow Global Change Climate Research Facility, and increasing South Pole communications in support of physics and astronomy experiments.

- **Sensor Research**. Funds are requested to support leading edge research across NSF on sensors and in other areas that are potentially relevant to the detection of explosives and related threats. The Directorate for Engineering will lead this new NSF-wide effort which seeks to advance fundamental knowledge in new technologies for sensors and sensor networks, and in the use of sensor data in control and decision-making across a broad range of applications, particularly those that bear on the prediction and detection of explosive materials and related threats. NSF investments will coordinate with and leverage on research currently underway in other areas of the federal government such as the Department of Energy, U.S. Navy, and other parts of the Department of Defense.

In addition, as part of the 2007 budget process NSF completed Program Assessment Rating Tool (PART) reviews of two of its investment categories noted below. Both were rated effective.

- **Fundamental Science and Engineering (FSE)**. This is the Foundation's largest investment category. It comprises the core set of research activities that ensure the vitality of a broad array of scientific and engineering fields needed for the U.S. to maintain science and engineering leadership.

- **Federally Funded Research and Development Centers (FFRDCs)**. These support investments in research, development, and R&D policy that create unique, important, and long-term capabilities for the federal government in response to law, mandate, or widely recognized need. NSF's FFRDCs are uniquely positioned to provide capabilities and state-of-the-art instrumentation. The five designated FFRDCs are the National Astronomy and Ionosphere Center, National Center for Atmospheric Research, National Optical Astronomy Observatory/National Solar Observatory, National Radio Astronomy Observatory, and Science and Technology Policy Institute.