

**CHANGES BETWEEN
FY 2004 REQUEST
AND FY 2004 ESTIMATE**

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The FY 2004 Estimate for the National Science Foundation is \$5,577.83 million, or 1.8 percent more than requested. This represents an increase of \$208.49 million, over the FY 2003 Actual of \$5,369.34 million.

Changes Between FY 2004 Request and FY 2004 Estimate (Dollars in Millions)

	FY 2003 Actual	FY 2004 Request	FY 2004 Estimate	Change between FY 2004 Estimate & FY 2004 Request	
				Amount	Percent
Research & Related Activities	4,054.43	4,106.36	4,251.36	145.00	3.5%
Education & Human Resources	934.88	938.04	938.98	0.94	0.1%
Major Research Equipment	179.03	202.33	154.97	-47.36	-23.4%
Salaries & Expenses	189.42	225.70	218.70	-7.00	-3.1%
National Science Board	2.88	0.00	3.88	3.88	N/A
Office of Inspector General	8.70	8.77	9.94	1.17	13.3%
Total, NSF	\$5,369.34	\$5,481.20	\$5,577.83	\$96.63	1.8%

Totals may not add due to rounding.

The FY 2004 Estimate for the **Research and Related Activities** (R&RA) Appropriation is \$4,251.36 million, an increase of 3.5 percent over the FY 2004 Request. Funding levels for the FY 2004 Estimate include the 0.59 percent rescission.

Per Congressional direction, the FY 2004 Estimate includes \$342.15 million within the R&RA account for Polar Research and Operations, an increase of \$12.22 million over the FY 2004 Request.

The FY 2004 Estimate also includes \$89.47 million within the Biological Sciences Activity for plant genome research.

Of the appropriated increases within the Computer and Information Science and Engineering Activity (CISE), \$247.19 million is provided for Information Technology Research and \$22.24 million for Domain-specific cyberinfrastructure.

Per Congressional direction, the FY 2004 Estimate within the Mathematical and Physical Sciences Activity will provide \$54.98 million for the National Radio Astronomy Observatory (NRAO) program, which will include targeted funds for the Expanded Very Large Array and the Green Bank Observatory. The FY 2004 Estimate will also provide \$6.0 million for continued advanced planning of the Rare Symmetry Violating Process (RSVP) project.

Of appropriated funding for Social, Behavioral and Economic Sciences, \$6.0 million will target the Children's Research Initiative.

Of funds provided for Integrative Activities at the FY 2004 level, \$109.35 million will be provided for Major Research Instrumentation.

The FY 2004 Estimate includes \$253.51 million for nanotechnology programs across the directorates, an increase of \$4.52 million over the FY 2004 Request.

The **Education and Human Resources** (EHR) Account will be funded at \$938.98 million, an increase of 0.1 percent over the FY 2004 Request. Per Congressional direction, the Experimental Program to Stimulate Competitive Research (EPSCoR) will receive \$94.44 million, an additional \$19.44 million over the FY 2004 Request level. Of the amount appropriated for Elementary, Secondary and Informal Education, \$62.13 million has been provided for the Informal Science Education program. Within the level of funding for Undergraduate Education, \$45.23 million will be provided for the Advanced Technological Education program, \$24.85 million for the STEM Talent Expansion Program, and \$7.95 million for the Noyce Scholarship Program.

Sufficient funding will be provided at the FY 2004 level to reach a graduate stipend level of \$30,000.

Within the funding level for Human Resource Development \$34.30 million will be provided for the Louis Stokes Alliances for Minority Participation, \$23.86 million for the Historically Black Colleges and Universities Undergraduate program (HBCU-UP), \$14.91 million for the Alliance for Graduate Education and Professoriate, and \$14.91 million for the Centers of Research Excellence in Science and Technology (CREST) program.

The **Major Research Equipment and Facilities Construction** (MREFC) Account is funded at \$154.97 million, a decrease of 23.4 percent from the FY 2004 Request. Within MREFC, \$50.70 million will be provided for construction of the Atacama Large Millimeter Array (ALMA) radio telescope, \$43.24 million for EarthScope, \$41.75 million for the IceCube Neutrino Detection project, and \$8.05 million for the Network for Earthquake Engineering Simulation. Terascale Computing Systems are being provided \$9.94 million. \$1.29 million will be provided for construction costs associated with the South Pole Station. Additionally, NSF will consider the recommendations in the National Academy of Sciences report and continue to refine the National Ecological Observatory Network (NEON) plan from funds provided under Research and Related Activities.

The **Salaries and Expenses** (S&E) appropriation totals \$218.70 million. These funds provide for the operation, management, and direction of all Foundation programs and activities, and include necessary funds to develop and coordinate NSF programs.

The **National Science Board** (NSB) will be funded at \$3.88 million.

The **Office of Inspector General** (OIG) will be funded at \$9.94 million.

LEVEL OF FUNDING BY PROGRAM

(Dollars in Thousands)					
PROGRAM	FY 2003 ACTUAL	FY 2004 REQUEST	FY 2004 ESTIMATE	CHANGE FY 2004 Req/FY 2004 Estimate	
				AMOUNT	PERCENT
<u>BIOLOGICAL SCIENCES</u>					
<i>MOLECULAR AND CELLULAR BIOSCIENCES</i>					
Molecular & Cellular Biosciences Research	\$121,891	\$116,860	\$121,770	\$4,910	4.2%
Total	121,891	116,860	121,770	4,910	4.2%
<i>INTEGRATIVE BIOLOGY AND NEUROSCIENCE</i>					
Integrative Biology & Neuroscience Research	107,470	103,380	107,410	4,030	3.9%
Total	107,470	103,380	107,410	4,030	3.9%
<i>ENVIRONMENTAL BIOLOGY</i>					
Environmental Biology Research	108,276	104,770	108,260	3,490	3.3%
Total	108,276	104,770	108,260	3,490	3.3%
<i>BIOLOGICAL INFRASTRUCTURE</i>					
Research Resources	42,410	54,990	48,630	-6,360	-11.6%
Human Resources	32,620	24,970	31,590	6,620	26.5%
Total	75,030	79,960	80,220	260	0.3%
<i>EMERGING FRONTIERS</i>					
Emerging Frontiers	73,373	82,250	79,760	-2,490	-3.0%
Total	73,373	82,250	79,760	-2,490	-3.0%
<i>PLANT GENOME RESEARCH</i>					
Plant Genome Research	84,450	75,000	89,470	14,470	19.3%
Total	84,450	75,000	89,470	14,470	19.3%
Total, BIO	\$570,490	\$562,220	\$586,890	\$24,670	4.4%

LEVEL OF FUNDING BY PROGRAM

(Dollars in Thousands)					
PROGRAM	FY 2003 ACTUAL	FY 2004 REQUEST	FY 2004 ESTIMATE	CHANGE	
				FY 2004 Req/FY 2004 Estimate AMOUNT	PERCENT
<u>COMPUTER AND INFORMATION SCIENCE AND ENGINEERING</u>					
<i>COMPUTER & NETWORK SYSTEMS</i>					
Computer & Network Systems	\$117,150	\$118,720	\$114,934	-\$3,786	-3.2%
Total	117,150	118,720	114,934	-3,786	-3.2%
<i>COMPUTING & COMMUNICATION FOUNDATIONS</i>					
Computing & Communication Foundations	81,150	81,910	78,925	-2,985	-3.6%
Total	81,150	81,910	78,925	-2,985	-3.6%
<i>INFORMATION & INTELLIGENT SYSTEMS</i>					
Information & Intelligent Systems	82,150	82,980	80,052	-2,928	-3.5%
Total	82,150	82,980	80,052	-2,928	-3.5%
<i>SHARED CYBERINFRASTRUCTURE</i>					
Shared Cyberinfrastructure	95,071	101,220	112,629	11,409	11.3%
Total	95,071	101,220	112,629	11,409	11.3%
<i>INFORMATION TECHNOLOGY RESEARCH (ITR)</i>					
Information Technology Research (ITR)	213,770	199,430	218,110	18,680	9.4%
Total	213,770	199,430	218,110	18,680	9.4%
Total, CISE	\$589,291	\$584,260	\$604,650	\$20,390	10.3%

LEVEL OF FUNDING BY PROGRAM

(Dollars in Thousands)					
PROGRAM	FY 2003 ACTUAL	FY 2004 REQUEST	FY 2004 ESTIMATE	CHANGE	
				FY 2004 Req/FY 2004 Estimate AMOUNT	PERCENT
<u>ENGINEERING</u>					
<i>BIOENGINEERING AND ENVIRONMENTAL SYSTEMS</i>					
Bioengineering and Environmental Systems	\$49,452	\$47,910	\$51,020	\$3,110	6.5%
Total	49,452	47,910	51,020	3,110	6.5%
<i>CHEMICAL AND TRANSPORT SYSTEMS</i>					
Chemical and Transport Systems	68,331	66,200	68,920	2,720	4.1%
Total	68,331	66,200	68,920	2,720	4.1%
<i>CIVIL AND MECHANICAL SYSTEMS</i>					
Civil and Mechanical Systems	63,229	64,360	67,170	2,810	4.4%
Total	63,229	64,360	67,170	2,810	4.4%
<i>DESIGN, MANUFACTURE, AND INDUSTRIAL INNOVATION</i>					
Design, Manufacture, and Industrial Innovation	64,000	61,910	65,810	3,900	6.3%
Small Business-Industrial Innovation	90,923	101,150	103,590	2,440	2.4%
Total	154,923	163,060	169,400	6,340	3.9%
<i>ELECTRICAL AND COMMUNICATIONS SYSTEMS</i>					
Electrical and Communications Systems	73,046	70,760	74,580	3,820	5.4%
Total	73,046	70,760	74,580	3,820	5.4%
<i>ENGINEERING EDUCATION AND CENTERS</i>					
Engineering Education and Centers	132,722	124,280	134,040	9,760	7.9%
Total	132,722	124,280	134,040	9,760	7.9%
Total, ENG	\$541,702	\$536,570	\$565,130	\$28,560	5.3%

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(Dollars in Thousands)					
PROGRAM	FY 2003 ACTUAL	FY 2004 REQUEST	FY 2004 ESTIMATE	CHANGE	
				FY 2004 Req/FY 2004 Estimate AMOUNT	PERCENT
<u>GEOSCIENCES</u>					
<i>ATMOSPHERIC SCIENCES</i>					
Atmospheric Sciences Research Support	\$147,943	\$151,100	\$156,780	\$5,680	3.8%
National Center for Atmospheric Research	83,348	78,820	82,000	3,180	4.0%
Total	231,291	229,920	238,780	8,860	3.9%
<i>EARTH SCIENCES</i>					
Earth Sciences Project Support	115,378	109,160	119,580	10,420	9.5%
Instrumentation and Facilities	31,937	35,100	32,000	-3,100	-2.1%
Total	147,315	144,260	151,580	7,320	5.1%
<i>OCEAN SCIENCES</i>					
Ocean Section	117,980	115,760	120,450	4,690	4.1%
Integrative Programs Section	110,260	104,080	118,080	14,000	13.5%
Marine Geosciences Section	84,980	93,900	84,210	-9,690	-3.1%
Total	313,230	313,740	322,740	9,000	2.9%
Total, GEO	\$691,836	\$687,920	\$713,100	\$25,180	3.7%

LEVEL OF FUNDING BY PROGRAM

(Dollars in Thousands)					
PROGRAM	FY 2003 ACTUAL	FY 2004 REQUEST	FY 2004 ESTIMATE	CHANGE	
				FY 2004 Req/FY 2004 Estimate AMOUNT	PERCENT
<u>MATHEMATICAL AND PHYSICAL SCIENCES</u>					
<i>ASTRONOMICAL SCIENCES</i>					
Astronomical Research	\$187,074	\$183,070	\$196,550	\$13,480	7.4%
Total	187,074	183,070	196,550	13,480	7.4%
<i>CHEMISTRY</i>					
Chemistry Research	181,609	181,710	185,220	3,510	1.9%
Total	181,609	181,710	185,220	3,510	1.9%
<i>MATERIALS RESEARCH</i>					
Materials Research	241,386	246,120	250,890	4,770	1.9%
Total	241,386	246,120	250,890	4,770	1.9%
<i>MATHEMATICAL SCIENCES</i>					
Mathematical Sciences	178,785	201,870	200,410	-1,460	-0.7%
Total	178,785	201,870	200,410	-1,460	-0.7%
<i>PHYSICS</i>					
Physics Research	224,502	217,500	227,670	10,170	4.7%
Total	224,502	217,500	227,670	10,170	4.7%
<i>MULTIDISCIPLINARY ACTIVITIES</i>					
Research Project Support	27,341	31,000	30,770	-230	-0.7%
Total	27,341	31,000	30,770	-230	-0.7%
Total, MPS	\$1,040,697	\$1,061,270	\$1,091,510	\$30,240	2.8%

LEVEL OF FUNDING BY PROGRAM

(Dollars in Thousands)					
PROGRAM	FY 2003 ACTUAL	FY 2004 REQUEST	FY 2004 ESTIMATE	CHANGE	
				FY 2004 Req/FY 2004 Estimate AMOUNT	PERCENT
<u>SOCIAL, BEHAVIORAL AND ECONOMIC SCIENCES</u>					
<i>SOCIAL AND ECONOMIC SCIENCES</i>					
Social and Economic Sciences	\$71,007	\$83,920	\$81,020	-\$2,900	-3.5%
Total	71,007	83,920	81,020	-2,900	-3.5%
<i>BEHAVIORAL AND COGNITIVE SCIENCES</i>					
Behavioral and Cognitive Sciences	62,315	71,120	68,500	-2,620	-3.7%
Total	62,315	71,120	68,500	-2,620	-3.7%
<i>SCIENCE RESOURCES STATISTICS</i>					
Science Resource Statistics	25,305	26,700	26,150	-550	-2.1%
Total	25,305	26,700	26,150	-550	-2.1%
<i>OFFICE OF INTERNATIONAL SCIENCE AND ENGINEERING</i>					
Office of International Science and Engineering	39,973	30,000	28,120	-1,880	-6.3%
Total	39,973	30,000	28,120	-1,880	-6.3%
Total, SBE	\$198,599	\$211,740	\$203,790	-\$7,950	-3.8%
<u>UNITED STATES POLAR RESEARCH PROGRAMS</u>					
	\$255,407	\$261,860	\$274,080	\$12,220	4.7%
<u>UNITED STATES ANTARCTIC LOGISTICAL SUPPORT ACTIVITIES</u>					
	\$68,552	\$68,070	\$68,070	\$0	0.0%
<u>INTEGRATIVE ACTIVITIES</u>					
	\$97,859	\$132,450	\$144,140	\$11,690	8.8%
Total, RESEARCH AND RELATED ACTIVITIES	\$4,054,433	\$4,106,360	\$4,251,360	\$145,000	3.5%

LEVEL OF FUNDING BY PROGRAM

(Dollars in Thousands)					
PROGRAM	FY 2003 ACTUAL	FY 2004 REQUEST	FY 2004 ESTIMATE	CHANGE	
				FY 2004 Req/FY 2004 Estimate AMOUNT	PERCENT
EDUCATION AND HUMAN RESOURCES					
<i>MATH & SCIENCE PARTNERSHIP</i>					
Math & Science Partnership	\$144,070	\$200,000	\$139,170	-\$60,830	-30.4%
Total	144,070	200,000	139,170	-60,830	-30.4%
<i>EXPERIMENTAL PROGRAM TO STIMULATE COMPETITIVE RESEARCH (EPSCoR)</i>					
Experimental Program to Stimulate Competitive Research (EPSCoR)	89,210	75,000	94,440	19,440	25.9%
Total	89,210	75,000	94,440	19,440	25.9%
<i>ELEMENTARY, SECONDARY AND INFORMAL SCIENCE EDUCATION¹</i>					
Instructional and Assessment Materials Development	28,780	28,990	28,820	-170	-0.6%
Teacher & Student Development	134,080	115,460	121,310	5,850	5.1%
Informal Science Education	60,440	50,000	62,130	12,130	24.3%
Total	223,300	194,450	212,260	17,810	9.2%
<i>UNDERGRADUATE EDUCATION</i>					
Curriculum, Laboratory and Instructional Development	99,700	71,740	93,200	21,460	29.9%
Workforce Development	72,850	70,360	62,300	-8,060	-11.5%
Total	172,550	142,100	155,500	13,400	9.4%
<i>GRADUATE EDUCATION</i>					
Graduate Student Support	139,500	156,880	155,950	-930	-0.6%
Total	139,500	156,880	155,950	-930	-0.6%
<i>HUMAN RESOURCE DEVELOPMENT</i>					
Undergraduate/ Graduate Student Support	60,760	62,970	68,370	5,400	8.6%
Research & Education Infrastructure	22,740	25,200	32,330	7,130	28.3%
Opportunities for Women and Persons with Disabilities	15,980	15,240	15,150	-90	-0.6%
Total	99,480	103,410	115,850	12,440	12.0%
<i>RESEARCH, EVALUATION AND COMMUNICATION</i>					
Research	54,270	54,560	54,240	-320	-0.6%
Evaluation	12,500	11,640	11,570	-70	-0.6%
Total	66,770	66,200	65,810	-390	-0.6%
Total, EHR	\$934,879	\$938,040	\$938,980	\$940	0.1%

¹FY 2003 Actual and FY 2004 Estimate have been restated for the purposes of the FY 2005 Budget Request to reflect all funds for the Teacher Professional Continuum (TPC) in the ESIE Subactivity, including those previously shown in DUE (FY 2003, \$6.71 million; FY 2004 Estimate, \$6.48 million).

LEVEL OF FUNDING BY PROGRAM

(Dollars in Thousands)					
PROGRAM	FY 2003 ACTUAL	FY 2004 REQUEST	FY 2004 ESTIMATE	CHANGE FY 2004 Req/FY 2004 Estimate	
				AMOUNT	PERCENT
MAJOR RESEARCH EQUIPMENT AND FACILITIES CONSTRUCTION	\$179,029	\$202,330	\$154,970	-\$47,360	-23.4%
Total, MREFC	\$179,029	\$202,330	\$154,970	-\$47,360	-23.4%
SALARIES AND EXPENSES	\$189,423	\$225,700	\$218,700	-\$7,000	-3.1%
Total, S&E ¹	\$189,423	\$225,700	\$218,700	-\$7,000	-3.1%
NATIONAL SCIENCE BOARD	\$2,876	\$0	\$3,880	\$3,880	#DIV/0!
Total, NSB	\$2,876	\$0	\$3,880	\$3,880	#DIV/0!
OFFICE OF INSPECTOR GENERAL	\$8,697	\$8,770	\$9,940	\$1,170	13.3%
Total, OIG	\$8,697	\$8,770	\$9,940	\$1,170	13.3%
TOTAL, NATIONAL SCIENCE FOUNDATION	\$5,369,338	\$5,481,200	\$5,577,830	\$96,630	1.8%

Totals may not add due to rounding.

¹ FY 2003 includes an Appropriations Transfer from the Department of State in the amount of \$13.14 million for an award to the U.S. Civilian Research and Development Foundation. (\$12.83 million in SBE and \$315,436 in S&E)