

NATIONAL SCIENCE FOUNDATION

NATIONAL SCIENCE FOUNDATION

Federal Funds

General and special funds:

RESEARCH AND RELATED ACTIVITIES

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; \$4,106,360,000, of which not to exceed \$375,000,000 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, 2005: Provided, 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 and used for authorized purposes of this account.

Note.—A regular 2003 appropriation for this account had not been enacted at the time the budget was prepared; therefore, this account is operating under a continuing resolution (P.L. 107–229, as amended). The amounts included for 2003 in this budget reflect the Administration's 2003 policy proposals.

Program and Financing (in millions of dollars)

Identification code 49–0100–0–1–999	2002 actual	2003 est.	2004 est.
Obligations by program activity:			
Direct program:			
00.01 Biological sciences	510	526	562
00.02 Computer and information science and engineering	515	527	584
00.03 Engineering	471	490	537
00.05 Geosciences	610	691	688
00.06 Mathematical and physical sciences	920	942	1,061
00.07 Social, behavioral and economic sciences	184	196	212
00.09 U.S. Polar research programs	231	236	262
00.10 U.S. Antarctic logistical support activities	70	68	68
00.11 Integrative activities	106	111	132
09.01 Reimbursable programs	80	100	100
10.00 Total new obligations	3,696	3,886	4,206
Budgetary resources available for obligation:			
21.40 Unobligated balance carried forward, start of year	2	3	.....
22.00 New budget authority (gross)	3,693	3,883	4,206
22.10 Resources available from recoveries of prior year obligations	7	.....	.....
23.90 Total budgetary resources available for obligation	3,702	3,886	4,206
23.95 Total new obligations	–3,696	–3,886	–4,206
23.98 Unobligated balance expiring or withdrawn	–3	.....	.....
24.40 Unobligated balance carried forward, end of year	3	.....	.....
New budget authority (gross), detail:			
Discretionary:			
40.00 Appropriation	3,599	3,783	4,106
42.00 Transferred from other accounts	14	.....	.....
43.00 Appropriation (total discretionary)	3,613	3,783	4,106
Spending authority from offsetting collections:			
68.00 Offsetting collections (cash)	85	100	100
68.10 Change in uncollected customer payments from Federal sources (unexpired)	–5	.....	.....
68.90 Spending authority from offsetting collections (total discretionary)	80	100	100
70.00 Total new budget authority (gross)	3,693	3,883	4,206
Change in obligated balances:			
72.40 Obligated balance, start of year	3,979	4,441	4,717
73.10 Total new obligations	3,696	3,886	4,206
73.20 Total outlays (gross)	–3,216	–3,610	–3,832

73.40 Adjustments in expired accounts (net)	–21	.....	.....
73.45 Recoveries of prior year obligations	–7	.....	.....
74.00 Change in uncollected customer payments from Federal sources (unexpired)	5	.....	.....
74.10 Change in uncollected customer payments from Federal sources (expired)	5	.....	.....
74.40 Obligated balance, end of year	4,441	4,717	5,091
Outlays (gross), detail:			
86.90 Outlays from new discretionary authority	757	1,109	1,196
86.93 Outlays from discretionary balances	2,459	2,501	2,636
87.00 Total outlays (gross)	3,216	3,610	3,832
Offsets:			
Against gross budget authority and outlays:			
88.00 Offsetting collections (cash) from: Federal sources	–90	–100	–100
Against gross budget authority only:			
88.95 Change in uncollected customer payments from Federal sources (unexpired)	5	.....	.....
88.96 Portion of offsetting collections (cash) credited to expired accounts	5	.....	.....
Net budget authority and outlays:			
89.00 Budget authority	3,613	3,783	4,106
90.00 Outlays	3,126	3,510	3,732

The research and related activities appropriation enables the United States to provide leadership and promote progress across the expanding frontiers of scientific and engineering research and education. This appropriation provides resources for NSF to achieve the following goals for strategic outcomes: enabling discovery across the frontier of science and engineering, connected to learning, innovation and service of society; development of a diverse, internationally competitive and globally-engaged workforce of scientists, engineers and well-prepared citizens; and providing broadly accessible, state-of-the-art research and education tools. Research activities will contribute to the achievement of these goals through development of intellectual capital, integration of research and education, and promotion of partnerships. This appropriation supports NSF's active development of performance indicators.

The major research program activities of the Foundation are:

Biological sciences.—This activity promotes scientific progress in biology through support of research ranging from the study of molecules, through cells and organisms, to studies of ecosystems. This activity also supports a comprehensive research initiative on plant genomes, including research on economically significant crops.

Computer and information sciences and engineering.—Research is directed at “information technology” in the broadest sense of the term, ranging from fundamental theory to systems engineering.

Engineering.—Research supported by this activity aims to increase U.S. engineering capability and strength, and focus that capability and strength on areas which are relevant to national problems and long-term needs. This activity also includes small business innovation research.

Geosciences.—This research advances knowledge of the properties and dynamics of the planet Earth.

Mathematical and physical sciences.—Research in this activity is directed at increasing understanding of natural laws and phenomena. It includes research in mathematical sciences, astronomy, physics, chemistry, and materials science.

Social, behavioral and economic sciences.—This activity supports research in social, behavioral and economic sciences,

General and special funds—Continued

RESEARCH AND RELATED ACTIVITIES—Continued

facilitates international scientific cooperation, and funds science resources studies.

U.S. polar research programs.—This activity supports Arctic and Antarctic research and operational science support and other related activities for the United States polar research programs. This activity includes funding for the expenses of the Arctic Research Commission.

U.S. Antarctic logistical support activities.—This activity provides funding for reimbursing Federal agencies for logistical and other related activities for the United States Antarctic program.

Integrative activities.—This activity supports emerging cross-disciplinary research efforts and major research instrumentation. This activity also provides support for the Science and Technology Policy Institute.

Object Classification (in millions of dollars)

Identification code 49-0100-0-1-999	2002 actual	2003 est.	2004 est.
Direct obligations:			
21.0 Travel and transportation of persons	6	7	7
25.1 Advisory and assistance services	26	26	26
25.2 Other services	20	20	20
25.3 Other purchases of goods and services from Government accounts	7	7	7
25.4 Operation and maintenance of facilities	202	202	202
25.5 Research and development contracts	9	9	9
31.0 Equipment	4	4	4
41.0 Grants, subsidies, and contributions	3,342	3,511	3,831
99.0 Direct obligations	3,616	3,786	4,106
99.0 Reimbursable obligations	80	100	100
99.9 Total new obligations	3,696	3,886	4,206

Personnel Summary

Identification code 49-0100-0-1-999	2002 actual	2003 est.	2004 est.
1001 Total compensable workyears: Civilian full-time equivalent employment	4	4	4

ACADEMIC RESEARCH INFRASTRUCTURE

Program and Financing (in millions of dollars)

Identification code 49-0150-0-1-251	2002 actual	2003 est.	2004 est.
Change in obligated balances:			
72.40 Obligated balance, start of year	5		
73.20 Total outlays (gross)	-5		
Outlays (gross), detail:			
86.93 Outlays from discretionary balances	5		
Net budget authority and outlays:			
89.00 Budget authority			
90.00 Outlays	5		

The academic research infrastructure facilities activity has been terminated. A program to support the acquisition of major research instrumentation has been funded through the research and related activities appropriation since 1997. This account shows spending from balances prior to the account restructuring.

MAJOR RESEARCH EQUIPMENT AND FACILITIES CONSTRUCTION

For necessary expenses for the acquisition, construction, commissioning, and upgrading of major research equipment, facilities, and other such capital assets pursuant to the National Science Foundation Act of 1950, as amended, \$202,330,000, to remain available until expended.

Note.—A regular 2003 appropriation for this account had not been enacted at the time the budget was prepared; therefore, this account is operating under a continuing resolution (P.L. 107-229, as amended). The amounts included for 2003 in this budget reflect the Administration's 2003 policy proposals.

Program and Financing (in millions of dollars)

Identification code 49-0551-0-1-251	2002 actual	2003 est.	2004 est.
Obligations by program activity:			
00.01 Direct program activity	115	223	202
10.00 Total new obligations	115	223	202
Budgetary resources available for obligation:			
21.40 Unobligated balance carried forward, start of year	73	97	
22.00 New budget authority (gross)	139	126	202
23.90 Total budgetary resources available for obligation	212	223	202
23.95 Total new obligations	-115	-223	-202
24.40 Unobligated balance carried forward, end of year	97		
New budget authority (gross), detail:			
Discretionary:			
40.00 Appropriation	139	126	202
Change in obligated balances:			
72.40 Obligated balance, start of year	159	137	175
73.10 Total new obligations	115	223	202
73.20 Total outlays (gross)	-137	-185	-162
74.40 Obligated balance, end of year	137	175	215
Outlays (gross), detail:			
86.90 Outlays from new discretionary authority	48	19	30
86.93 Outlays from discretionary balances	89	166	132
87.00 Total outlays (gross)	137	185	162
Net budget authority and outlays:			
89.00 Budget authority	139	126	202
90.00 Outlays	137	185	162

The major research equipment and facilities construction activity supports the construction and procurement of unique national research platforms and major research equipment. Performance is measured against established construction schedules, costs and milestones.

Object Classification (in millions of dollars)

Identification code 49-0551-0-1-251	2002 actual	2003 est.	2004 est.
25.5 Research and development contracts	17	6	1
41.0 Grants, subsidies, and contributions	98	217	201
99.9 Total new obligations	115	223	202

SALARIES AND EXPENSES

For salaries and expenses necessary in carrying out the National Science Foundation Act of 1950, as amended (42 U.S.C. 1861-1875); services authorized by 5 U.S.C. 3109; hire of passenger motor vehicles; not to exceed \$9,000 for official reception and representation expenses; uniforms or allowances therefor, as authorized by 5 U.S.C. 5901-5902; rental of conference rooms in the District of Columbia; reimbursement of the General Services Administration for security guard services; \$225,700,000: Provided, That contracts may be entered into under "Salaries and expenses" in fiscal year 2004 for maintenance and operation of facilities, and for other services, to be provided during the next fiscal year.

Note.—A regular 2003 appropriation for this account had not been enacted at the time the budget was prepared; therefore, this account is operating under a continuing resolution (P.L. 107-229, as amended). The amounts included for 2003 in this budget reflect the Administration's 2003 policy proposals.

Program and Financing (in millions of dollars)

Identification code 49-0180-0-1-251	2002 actual	2003 est.	2004 est.
Obligations by program activity:			
00.01 Administration and management	170	203	226

09.01	Reimbursable programs	4	6	6
10.00	Total new obligations	174	209	232
Budgetary resources available for obligation:				
22.00	New budget authority (gross)	174	209	232
23.95	Total new obligations	-174	-209	-232
New budget authority (gross), detail:				
Discretionary:				
40.00	Appropriation	170	203	226
68.00	Spending authority from offsetting collections: Offsetting collections (cash)	4	6	6
70.00	Total new budget authority (gross)	174	209	232
Change in obligated balances:				
72.40	Obligated balance, start of year	23	24	
73.10	Total new obligations	174	209	232
73.20	Total outlays (gross)	-172	-210	-230
73.40	Adjustments in expired accounts (net)	-1	-23	
74.40	Obligated balance, end of year	24		2
Outlays (gross), detail:				
86.90	Outlays from new discretionary authority	155	186	207
86.93	Outlays from discretionary balances	17	24	23
87.00	Total outlays (gross)	172	210	230
Offsets:				
Against gross budget authority and outlays:				
88.00	Offsetting collections (cash) from: Federal sources	-4	-6	-6
Net budget authority and outlays:				
89.00	Budget authority	170	203	226
90.00	Outlays	168	204	224
Additional net budget authority and outlays to cover cost of fully accruing retirement:				
99.00	Budget authority	6	7	8
99.01	Outlays	6	7	8

This account provides funds to administer and manage NSF programs. NSF continually devises and refines performance measures for development and monitoring of programs.

Object Classification (in millions of dollars)

Identification code 49-0180-0-1-251		2002 actual	2003 est.	2004 est.
Direct obligations:				
Personnel compensation:				
11.1	Full-time permanent	88	97	97
11.3	Other than full-time permanent	7	7	7
11.5	Other personnel compensation	4	5	6
11.8	Special personal services payments	1	1	1
11.9	Total personnel compensation	100	110	111
12.1	Civilian personnel benefits	21	23	23
21.0	Travel and transportation of persons	5	6	6
23.1	Rental payments to GSA	16	17	19
23.3	Communications, utilities, and miscellaneous charges	2	3	3
25.1	Advisory and assistance services	3	6	10
25.2	Other services	4	7	8
25.3	Other purchases of goods and services from Government accounts	1	1	2
25.7	Operation and maintenance of equipment	6	13	14
26.0	Supplies and materials	2	3	3
31.0	Equipment	10	14	27
99.0	Direct obligations	170	203	226
99.0	Reimbursable obligations	4	6	6
99.9	Total new obligations	174	209	232

Personnel Summary

Identification code 49-0180-0-1-251		2002 actual	2003 est.	2004 est.
1001	Total compensable workyears: Civilian full-time equivalent employment	1,188	1,217	1,200

OFFICE OF INSPECTOR GENERAL

For necessary expenses of the Office of Inspector General as authorized by the Inspector General Act of 1978, as amended, \$8,770,000, to remain available until September 30, 2005.

Note.—A regular 2003 appropriation for this account had not been enacted at the time the budget was prepared; therefore, this account is operating under a continuing resolution (P.L. 107-229, as amended). The amounts included for 2003 in this budget reflect the Administration's 2003 policy proposals.

Program and Financing (in millions of dollars)

Identification code 49-0300-0-1-251		2002 actual	2003 est.	2004 est.
Obligations by program activity:				
00.01	Direct program activity	7	8	9
10.00	Total new obligations	7	8	9
Budgetary resources available for obligation:				
22.00	New budget authority (gross)	7	8	9
23.95	Total new obligations	-7	-8	-9
New budget authority (gross), detail:				
Discretionary:				
40.00	Appropriation	7	8	9
Change in obligated balances:				
72.40	Obligated balance, start of year	2	2	1
73.10	Total new obligations	7	8	9
73.20	Total outlays (gross)	-7	-9	-9
74.40	Obligated balance, end of year	2	1	1
Outlays (gross), detail:				
86.90	Outlays from new discretionary authority	6	7	8
86.93	Outlays from discretionary balances	1	2	1
87.00	Total outlays (gross)	7	9	9
Net budget authority and outlays:				
89.00	Budget authority	7	8	9
90.00	Outlays	7	9	9

This appropriation provides agency-wide audit and investigative functions to identify and correct management and administrative deficiencies which create conditions for existing or potential instances of fraud, waste, and mismanagement consistent with the Inspector General Act of 1978, as amended (5 U.S.C. App. 3).

Object Classification (in millions of dollars)

Identification code 49-0300-0-1-251		2002 actual	2003 est.	2004 est.
Direct obligations:				
11.1	Personnel compensation: Full-time permanent	4	5	6
12.1	Civilian personnel benefits	1	1	1
25.1	Advisory and assistance services	1	1	2
99.0	Direct obligations	6	7	9
99.5	Below reporting threshold	1	1	
99.9	Total new obligations	7	8	9

Personnel Summary

Identification code 49-0300-0-1-251		2002 actual	2003 est.	2004 est.
1001	Total compensable workyears: Civilian full-time equivalent employment	51	53	60

EDUCATION AND HUMAN RESOURCES

For necessary expenses in carrying out science and engineering education and human resources programs and activities pursuant to the National Science Foundation Act of 1950, as amended (42 U.S.C. 1861-1875), including services as authorized by 5 U.S.C. 3109, and rental of conference rooms in the District of Columbia, \$938,040,000, to remain available until September 30, 2005.

Note.—A regular 2003 appropriation for this account had not been enacted at the time the budget was prepared; therefore, this account is operating under a continuing resolution

General and special funds—Continued

EDUCATION AND HUMAN RESOURCES—Continued

(P.L. 107-229, as amended). The amounts included for 2003 in this budget reflect the Administration's 2003 policy proposals.

Program and Financing (in millions of dollars)

Identification code 49-0106-0-1-251	2002 actual	2003 est.	2004 est.	
Obligations by program activity:				
Obligations by program activity:				
Direct program:				
Appropriated activities:				
00.01	Educational system reform	45	40	.....
00.02	EPSCoR	91	75	75
00.03	Elementary, secondary and informal education	166	171	195
00.04	Undergraduate education	143	155	142
00.05	Graduate education	106	128	157
00.06	Human resource development	97	90	103
00.07	Research, evaluation and communication	69	67	66
00.08	Math and science partnership	150	210	200
00.91	Subtotal appropriated activities	867	936	938
H-1B non-immigrant petitioner fee activities:				
01.01	Computer science, engineering, and mathematics scholarships (CSEMS)	34	59	.....
01.02	Grants for mathematics, engineering, or science enrichment courses	6	.....	.....
01.03	Systemic reform activities	4	.....	.....
01.04	Private-public partnerships in K-12	13	72	.....
01.91	Subtotal H-1B non-immigrant petitioner fee activities	57	131	.....
02.00	Total direct obligations	924	1,067	938
09.01	Reimbursable programs	1	10	10
10.00	Total new obligations	925	1,077	948
Budgetary resources available for obligation:				
21.40	Unobligated balance carried forward, start of year	60	93	.....
22.00	New budget authority (gross)	956	984	948
22.10	Resources available from recoveries of prior year obligations	2	.....	.....
23.90	Total budgetary resources available for obligation	1,018	1,077	948
23.95	Total new obligations	-925	-1,077	-948
24.40	Unobligated balance carried forward, end of year	93	.....	.....
New budget authority (gross), detail:				
Discretionary:				
40.00	Appropriation	894	908	938
Mandatory:				
60.20	Appropriation (special fund)	61	66	.....
Discretionary:				
68.00	Spending authority from offsetting collections: Offsetting collections (cash)	1	10	10
70.00	Total new budget authority (gross)	956	984	948
Change in obligated balances:				
72.40	Obligated balance, start of year	1,301	1,499	1,662
73.10	Total new obligations	925	1,077	948
73.20	Total outlays (gross)	-715	-914	-948
73.40	Adjustments in expired accounts (net)	-10	.....	.....
73.45	Recoveries of prior year obligations	-2	.....	.....
74.40	Obligated balance, end of year	1,499	1,662	1,662
Outlays (gross), detail:				
86.90	Outlays from new discretionary authority	97	110	113
86.93	Outlays from discretionary balances	592	703	757
86.97	Outlays from new mandatory authority	4	7	.....
86.98	Outlays from mandatory balances	22	94	78
87.00	Total outlays (gross)	715	914	948
Offsets:				
Against gross budget authority and outlays:				
88.00	Offsetting collections (cash) from: Federal sources	-1	-10	-10
Net budget authority and outlays:				
89.00	Budget authority	955	974	938
90.00	Outlays	714	904	938

Education and human resources (EHR) activities provide a comprehensive set of programs that further NSF's goal of ensuring a diverse, internationally competitive and globally-engaged workforce of scientists, engineers and well-prepared citizens. At the pre-kindergarten through grade 12 (pre K-12) level, EHR catalyzes reform of science, technology, engineering and mathematics (STEM) education through the development of public-private partnerships. Its pre K-12 programs provide new instructional materials and pedagogical techniques that incorporate the latest advances in teaching, learning, and educational technologies. It also supports training activities for pre-service and in-service STEM teachers. Undergraduate programs improve curricula, strengthen laboratory course offerings, enhance faculty, and lead reform efforts in STEM disciplines. Programs for advanced technological education strengthen education for students preparing to enter the high-technology workforce. Graduate level support is directed primarily to fellowships and traineeships to sustain the U.S. world leadership in science and technology. All EHR programming focuses on broadening participation of groups underrepresented in STEM fields including activities focused on the improvement of infrastructure and academic programs at minority-serving institutions. The Experimental Program to Stimulate Competitive Research (EPSCoR) broadens participation of States and regions in science and engineering by helping institutions expand their research capacity and competitiveness. EHR supports research that advances STEM education, as well as development and effective implementation of learning technologies. Evaluation and communications activities ensure accountability by developing indicators that measure program impact and inform the education community of best practices and relevant information. Also included within EHR are funds resulting from the collection and use of H-1B non-immigrant fees, for undergraduate and graduate scholarships in computer science, mathematics, and engineering and private-public partnerships in K-12 for STEM education. This appropriation also supports NSF's active development of performance indicators.

Object Classification (in millions of dollars)

Identification code 49-0106-0-1-251	2002 actual	2003 est.	2004 est.	
Direct obligations:				
21.0	Travel and transportation of persons	4	4	4
25.1	Advisory and assistance services	17	19	20
41.0	Grants, subsidies, and contributions	903	1,044	914
99.0	Direct obligations	924	1,067	938
99.0	Reimbursable obligations	1	10	10
99.9	Total new obligations	925	1,077	948

Trust Funds

DONATIONS

Unavailable Collections (in millions of dollars)

Identification code 49-8960-0-7-251	2002 actual	2003 est.	2004 est.	
01.99	Balance, start of year .....	.....	.....	.....
Receipts:				
02.00	Donations to the National Science Foundation	33	41	27
Appropriations:				
05.00	Donations	-33	-41	-27
07.99	Balance, end of year .....	.....	.....	.....

Program and Financing (in millions of dollars)

Identification code 49-8960-0-7-251	2002 actual	2003 est.	2004 est.	
Obligations by program activity:				
00.01	Ocean drilling programs	15	17	8
00.02	Gemini telescope	10	14	14

00.03	Taiwan rocket (NCAR)	3	8	3
00.04	NATO—fellowships	1	1	1
00.05	Other	1	1	1
10.00	Total new obligations	30	41	27
Budgetary resources available for obligation:				
21.40	Unobligated balance carried forward, start of year	18	21	21
22.00	New budget authority (gross)	33	41	27
23.90	Total budgetary resources available for obligation	51	62	48
23.95	Total new obligations	-30	-41	-27
24.40	Unobligated balance carried forward, end of year	21	21	21
New budget authority (gross), detail:				
Mandatory:				
60.26	Appropriation (trust fund)	33	41	27
Change in obligated balances:				
72.40	Obligated balance, start of year	12	11	11
73.10	Total new obligations	30	41	27
73.20	Total outlays (gross)	-31	-41	-27
74.40	Obligated balance, end of year	11	11	11
Outlays (gross), detail:				
86.97	Outlays from new mandatory authority	31	41	27

Net budget authority and outlays:				
89.00	Budget authority	33	41	27
90.00	Outlays	31	41	27

This account consists of contributions from foreign governments, organizations and individuals to fund various cooperative efforts in science, research and education. These efforts include major international projects, such as operation of the GEMINI telescope, and the NSF Ocean drilling program. Other smaller activities supported include cooperative research, joint seminars, exchange of senior scientists, short-term research development visits, international conferences, and support for certain special functions of NSF and the National Science Board. These funds are not otherwise available.

Object Classification (in millions of dollars)				
Identification code 49-8960-0-7-251	2002 actual	2003 est.	2004 est.	
25.4	Operation and maintenance of facilities	15	17	8
41.0	Grants, subsidies, and contributions	15	24	19
99.9	Total new obligations	30	41	27

