

NATIONAL SCIENCE FOUNDATION

Federal Funds

RESEARCH AND RELATED ACTIVITIES

For necessary expenses in carrying out the National Science Foundation Act of 1950 (42 U.S.C. 1861 et seq.), and Public Law 86–209 (42 U.S.C. 1880 et seq.); services as authorized by section 3109 of title 5, United States Code; maintenance and operation of aircraft and purchase of flight services for research support; acquisition of aircraft; and authorized travel; \$5,361,650,000, to remain available until September 30, 2019, of which not to exceed \$500,000,000 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 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.

Note.—A full-year 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Further Continuing Appropriations Act, 2017 (P.L. 114–254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049–0100–0–1–999	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Biological Sciences	724	744	672
0002 Computer and Information Science and Engineering	935	936	839
0003 Engineering	915	916	834
0005 Geosciences	1,327	1,320	783
0006 Mathematical and Physical Sciences	1,349	1,362	1,220
0007 Social, Behavioral and Economic Sciences	272	272	244
0008 Integrative Activities	426	437	316
0009 Office of International Science and Engineering	49	49	44
0010 Office of Polar Programs .....			409
0013 Arctic Research Commission	1	1	1
0799 Total direct obligations	5,998	6,037	5,362
0801 Research and Related Activities (Reimbursable)	84	126	120
0900 Total new obligations, unexpired accounts	6,082	6,163	5,482
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	11	20
1021 Recoveries of prior year unpaid obligations	13
1050 Unobligated balance (total)	24	20
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	6,034	6,023	5,362
1120 Appropriations transferred to other acct [049–0551]	–20
1120 Appropriations transferred to other acct [049–0180]	–24
1160 Appropriation, discretionary (total)	5,990	6,023	5,362
Spending authority from offsetting collections, discretionary:			
1700 Collected	69	120	120
1701 Change in uncollected payments, Federal sources	21
1750 Spending auth from offsetting collections, disc (total)	90	120	120
1900 Budget authority (total)	6,080	6,143	5,482
1930 Total budgetary resources available	6,104	6,163	5,482
Memorandum (non-add) entries:			
1940 Unobligated balance expiring	–2
1941 Unexpired unobligated balance, end of year	20
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	9,672	10,099	10,601
3010 New obligations, unexpired accounts	6,082	6,163	5,482
3011 Obligations ("upward adjustments"), expired accounts	2
3020 Outlays (gross)	–5,586	–5,661	–5,527
3040 Recoveries of prior year unpaid obligations, unexpired	–13
3041 Recoveries of prior year unpaid obligations, expired	–58
3050 Unpaid obligations, end of year	10,099	10,601	10,556
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	–98	–88	–88
3070 Change in uncollected pymts, Fed sources, unexpired	–21
3071 Change in uncollected pymts, Fed sources, expired	31
3090 Uncollected pymts, Fed sources, end of year	–88	–88	–88
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	9,574	10,011	10,513

3200	Obligated balance, end of year	10,011	10,513	10,468
Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	6,080	6,143	5,482
Outlays, gross:				
4010	Outlays from new discretionary authority	684	1,325	1,192
4011	Outlays from discretionary balances	4,902	4,336	4,335
4020	Outlays, gross (total)	5,586	5,661	5,527
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources	–98	–120	–120
4033	Non-Federal sources	–1
4040	Offsets against gross budget authority and outlays (total)	–99	–120	–120
Additional offsets against gross budget authority only:				
4050	Change in uncollected pymts, Fed sources, unexpired	–21
4052	Offsetting collections credited to expired accounts	30
4060	Additional offsets against budget authority only (total)	9
4070	Budget authority, net (discretionary)	5,990	6,023	5,362
4080	Outlays, net (discretionary)	5,487	5,541	5,407
4180	Budget authority, net (total)	5,990	6,023	5,362
4190	Outlays, net (total)	5,487	5,541	5,407

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.

The major research program activities of NSF are:

Biological Sciences.—This activity supports understanding how complex living systems function and interact with each other and with non-living systems, which has direct impact on issues of national importance related to the economy, food, human welfare, and the environment. Research in this activity promotes scientific progress through support of research that crosses scales, from molecules to cells through organisms to ecosystems. This activity's investment portfolio includes projects on understanding the fundamental characteristics of biological energy systems, the changing dynamics of the biosphere, and infrastructure and research resources such as databases, research centers, and observatories, and efforts to broaden participation and develop the next generation of biological researchers.

Computer and Information Science and Engineering.—This activity supports investigator initiated research in all areas of computer and information science and engineering, helps develop and maintain cutting-edge national computational and information infrastructure for research and education generally, and contributes to the education and training of the next generation of computer and computational engineers.

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

Geosciences.—This activity supports research and associated infrastructure to advance knowledge of the properties and dynamics of the planet on which we live. Research includes understanding the causes and implications of earth system dynamics, as well as disruptive processes such as earthquakes and storms.

Mathematical and Physical Sciences.—Research in this activity is directed at increasing understanding of natural laws and phenomena across the astronomical sciences, chemistry, materials sciences, mathematical sciences, and physics. Research support is available in multiple modalities ranging from multi-user facilities and mid-scale instrumentation to individual investigator awards, from sites for undergraduate research experiences to early career faculty development and collaborative and international efforts.

Social, Behavioral, and Economic Sciences.—This activity supports research, education, and infrastructure in the social, behavioral, cognitive, and economic sciences and funds the collection and dissemination of statistics on the science and engineering enterprise.

RESEARCH AND RELATED ACTIVITIES—Continued

Office of International Science and Engineering.—This activity serves as the focal point of international activities at NSF. In addition to strategic funding and co-funding that targets catalytic partnerships and workforce-building international research opportunities, OISE advances NSF's global science leadership through extensive interactions with U.S. and global counterpart agencies and organizations.

Office of Polar Programs.—This activity supports Arctic and Antarctic research and operational science support and other related activities for United States polar research programs, including the funding to reimburse Federal agencies for logistical and other related activities supported by 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. The Experimental Program to Stimulate Competitive Research broadens participation of States and regions in science and engineering by helping institutions expand their research capacity and competitiveness.

The *United States Arctic Research Commission (USARC)* is an independent agency, funded through NSF's appropriations. USARC promotes Arctic research and recommends national Arctic research policies to guide Federal agencies in developing and implementing their research programs in the Arctic region.

Object Classification (in millions of dollars)

Identification code 049–0100–0–1–999	2016 actual	2017 est.	2018 est.
Direct obligations:			
11.8 Personnel compensation: Special personal services payments	1	50	50
21.0 Travel and transportation of persons	15	15	15
25.1 Advisory and assistance services	123	125	125
25.2 Other services from non-Federal sources	6	6	6
25.3 Other goods and services from Federal sources	136	80	75
25.4 Operation and maintenance of facilities	214	275	270
25.5 Research and development contracts	5	5	5
31.0 Equipment	1		
41.0 Grants, subsidies, and contributions	5,497	5,481	4,816
99.0 Direct obligations	5,998	6,037	5,362
99.0 Reimbursable obligations	84	126	120
99.9 Total new obligations, unexpired accounts	6,082	6,163	5,482

Employment Summary

Identification code 049–0100–0–1–999	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	3	3	3

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 (42 U.S.C. 1861 et seq.), including authorized travel, \$182,800,000, to remain available until expended.

Note.—A full-year 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Further Continuing Appropriations Act, 2017 (P.L. 114–254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049–0551–0–1–251	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Major Research Equipment and Facilities Construction	241	237	183
0900 Total new obligations, unexpired accounts (object class 41.0)	241	237	183
Budgetary resources:			
1000 Unobligated balance:			
Unobligated balance brought forward, Oct 1	58	37	

1021 Recoveries of prior year unpaid obligations	2		
1050 Unobligated balance (total)	60	37	
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	200	200	183
1120 Appropriations transferred to other acct [049–0180]	–2		
1121 Appropriations transferred from other acct [049–0100]	20		
1160 Appropriation, discretionary (total)	218	200	183
1900 Budget authority (total)	218	200	183
1930 Total budgetary resources available	278	237	183
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	37		
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	174	240	322
3010 New obligations, unexpired accounts	241	237	183
3020 Outlays (gross)	–173	–155	–166
3040 Recoveries of prior year unpaid obligations, unexpired	–2		
3050 Unpaid obligations, end of year	240	322	339
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	174	240	322
3200 Obligated balance, end of year	240	322	339
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	218	200	183
Outlays, gross:			
4010 Outlays from new discretionary authority		12	11
4011 Outlays from discretionary balances	173	143	155
4020 Outlays, gross (total)	173	155	166
4180 Budget authority, net (total)	218	200	183
4190 Outlays, net (total)	173	155	166

The Major Research Equipment and Facilities Construction activity supports the acquisition, construction, and commissioning of unique national research platforms and major research facilities and equipment. Performance of each construction project is measured against an established baseline at regular intervals and at major milestones.

AGENCY OPERATIONS AND AWARD MANAGEMENT

For agency operations and award management necessary in carrying out the National Science Foundation Act of 1950 (42 U.S.C. 1861 et seq.); services authorized by section 3109 of title 5, United States Code; hire of passenger motor vehicles; uniforms or allowances therefor, as authorized by sections 5901 and 5902 of title 5, United States Code; rental of conference rooms in the District of Columbia; and reimbursement of the Department of Homeland Security for security guard services; \$328,510,000: Provided, That not to exceed \$8,280 is for official reception and representation expenses: Provided further, That contracts may be entered into under this heading in fiscal year 2018 for maintenance and operation of facilities and for other services to be provided during the next fiscal year: Provided further, That of the amount provided for costs associated with the acquisition, occupancy, and related costs of new headquarters space, not more than \$5,000,000 shall remain available until expended.

Note.—A full-year 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Further Continuing Appropriations Act, 2017 (P.L. 114–254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049–0180–0–1–251	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Agency Operations and Award Management	351	354	329
0801 Agency Operations and Award Management (Reimbursable)	5	10	10
0900 Total new obligations, unexpired accounts	356	364	339
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	18	25	
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	330	329	329
1121 Appropriations transferred from other acct [049–0100]	24		

1121	Appropriations transferred from other acct [049–0551]	2	.....	.....
1121	Appropriations transferred from other acct [049–0106]	1	.....	.....
1160	Appropriation, discretionary (total)	357	329	329
	Spending authority from offsetting collections, discretionary:			
1700	Collected	6	10	10
1900	Budget authority (total)	363	339	339
1930	Total budgetary resources available	381	364	339
	Memorandum (non-add) entries:			
1941	Unexpired unobligated balance, end of year	25	.....	.....

Change in obligated balance:

	Unpaid obligations:			
3000	Unpaid obligations, brought forward, Oct 1	89	116	113
3010	New obligations, unexpired accounts	356	364	339
3011	Obligations ("upward adjustments"), expired accounts	1	.....	.....
3020	Outlays (gross)	–324	–367	–359
3041	Recoveries of prior year unpaid obligations, expired	–6	.....	.....
3050	Unpaid obligations, end of year	116	113	93
	Uncollected payments:			
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	–1	.....	.....
3071	Change in uncollected pymts, Fed sources, expired	1	.....	.....
	Memorandum (non-add) entries:			
3100	Obligated balance, start of year	88	116	113
3200	Obligated balance, end of year	116	113	93

Budget authority and outlays, net:

	Discretionary:			
4000	Budget authority, gross	363	339	339
	Outlays, gross:			
4010	Outlays from new discretionary authority	263	280	280
4011	Outlays from discretionary balances	61	87	79
4020	Outlays, gross (total)	324	367	359
	Offsets against gross budget authority and outlays:			
	Offsetting collections (collected) from:			
4030	Federal sources	–6	–10	–10
4033	Non-Federal sources	–1	.....	.....
4040	Offsets against gross budget authority and outlays (total)	–7	–10	–10
	Additional offsets against gross budget authority only:			
4052	Offsetting collections credited to expired accounts	1	.....	.....
4060	Additional offsets against budget authority only (total)	1	.....	.....
4070	Budget authority, net (discretionary)	357	329	329
4080	Outlays, net (discretionary)	317	357	349
4180	Budget authority, net (total)	357	329	329
4190	Outlays, net (total)	317	357	349

This account funds NSF's scientific, professional, and administrative workforce, the physical and technological infrastructure necessary for a productive, safe and secure work environment, and the essential business operations critical to NSF's administrative processes.

Object Classification (in millions of dollars)

Identification code 049–0180–0–1–251	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	145	146	156
11.3 Other than full-time permanent	13	14	15
11.5 Other personnel compensation	2	2	3
11.9 Total personnel compensation	160	162	174
12.1 Civilian personnel benefits	49	50	52
21.0 Travel and transportation of persons	6	6	5
22.0 Transportation of things	1	1	1
23.1 Rental payments	33	33	27
23.2 Rental payments to others .....	.....	.....	1
23.3 Communications, utilities, and miscellaneous charges	2	2	3
25.1 Advisory and assistance services	78	77	44
25.2 Other services from non-Federal sources	7	7	8
25.3 Other goods and services from Federal sources	8	9	7
26.0 Supplies and materials	1	1	1
31.0 Equipment	6	6	6
99.0 Direct obligations	351	354	329
99.0 Reimbursable obligations	5	10	10
99.9 Total new obligations, unexpired accounts	356	364	339

Employment Summary

Identification code 049–0180–0–1–251	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	1,276	1,310	1,310

OFFICE OF THE NATIONAL SCIENCE BOARD

For necessary expenses (including payment of salaries, authorized travel, hire of passenger motor vehicles, the rental of conference rooms in the District of Columbia, and the employment of experts and consultants under section 3109 of title 5, United States Code) involved in carrying out section 4 of the National Science Foundation Act of 1950 (42 U.S.C. 1863) and Public Law 86–209 (42 U.S.C. 1880 et seq.), \$4,370,000: Provided, That not to exceed \$2,500 shall be available for official reception and representation expenses.

Note.—A full-year 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Further Continuing Appropriations Act, 2017 (P.L. 114–254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049–0350–0–1–251	2016 actual	2017 est.	2018 est.
--------------------------------------	-------------	-----------	-----------

Obligations by program activity:

0001 Office of the National Science Board (Direct)	4	4	4
--	---	---	---

Budgetary resources:

	Budget authority:			
	Appropriations, discretionary:			
1100	Appropriation	4	4	4
1930	Total budgetary resources available	4	4	4

Change in obligated balance:

	Unpaid obligations:			
3000	Unpaid obligations, brought forward, Oct 1	1	1	1
3010	New obligations, unexpired accounts	4	4	4
3020	Outlays (gross)	–4	–4	–4
3050	Unpaid obligations, end of year	1	1	1
	Memorandum (non-add) entries:			
3100	Obligated balance, start of year	1	1	1
3200	Obligated balance, end of year	1	1	1

Budget authority and outlays, net:

	Discretionary:			
4000	Budget authority, gross	4	4	4
	Outlays, gross:			
4010	Outlays from new discretionary authority	3	3	3
4011	Outlays from discretionary balances	1	1	1
4020	Outlays, gross (total)	4	4	4
4180	Budget authority, net (total)	4	4	4
4190	Outlays, net (total)	4	4	4

This appropriation provides policy-making and related responsibilities for NSF and provides guidance on significant national policy issues in science and engineering research and education, as required by law.

Object Classification (in millions of dollars)

Identification code 049–0350–0–1–251	2016 actual	2017 est.	2018 est.
Direct obligations:			
11.1 Personnel compensation: Full-time permanent	2	2	2
12.1 Civilian personnel benefits	1	1	1
25.1 Advisory and assistance services	1	1	1
99.9 Total new obligations, unexpired accounts	4	4	4

Employment Summary

Identification code 049–0350–0–1–251	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	18	18	19

OFFICE OF INSPECTOR GENERAL

For necessary expenses of the Office of Inspector General as authorized by the Inspector General Act of 1978, \$15,008,000, of which \$400,000 shall remain available until September 30, 2019.

Note.—A full-year 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Further Continuing Appropriations Act, 2017 (P.L. 114–254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049–0300–0–1–251	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Office of Inspector General (Direct)	15	15	15
Budgetary resources:			
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	15	15	15
1930 Total budgetary resources available	15	15	15
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	2	4	4
3010 New obligations, unexpired accounts	15	15	15
3011 Obligations ("upward adjustments"), expired accounts	1		
3020 Outlays (gross)	–14	–15	–15
3050 Unpaid obligations, end of year	4	4	4
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	2	4	4
3200 Obligated balance, end of year	4	4	4
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	15	15	15
Outlays, gross:			
4010 Outlays from new discretionary authority	13	12	12
4011 Outlays from discretionary balances	1	3	3
4020 Outlays, gross (total)	14	15	15
4180 Budget authority, net (total)	15	15	15
4190 Outlays, net (total)	14	15	15

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 049–0300–0–1–251	2016 actual	2017 est.	2018 est.
Direct obligations:			
11.1 Personnel compensation: Full-time permanent	9	9	9
12.1 Civilian personnel benefits	3	3	3
25.2 Other services from non-Federal sources	3	3	3
99.9 Total new obligations, unexpired accounts	15	15	15

Employment Summary

Identification code 049–0300–0–1–251	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	68	68	69

EDUCATION AND HUMAN RESOURCES

For necessary expenses in carrying out science, mathematics and engineering education and human resources programs and activities pursuant to the National Science Foundation Act of 1950 (42 U.S.C. 1861 et seq.), including services as authorized by section 3109 of title 5, United States Code, authorized travel, and rental of conference rooms in the District of Columbia, \$760,550,000, to remain available until September 30, 2019.

Note.—A full-year 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Further Continu-

ing Appropriations Act, 2017 (P.L. 114–254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049–0106–0–1–251	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Education and Human Resources	884	882	761
0100 Total Disc obligations	884	882	761
0302 Low income scholarship program	139	129	75
0303 ITTEST grants for Mathematics, Science, or Engineering enrichment courses	46	47	25
0391 Total Mandatory Obligations (H-1B)	185	176	100
0799 Total direct obligations	1,069	1,058	861
0801 Education and Human Resources (Reimbursable)	5	15	15
0900 Total new obligations, unexpired accounts	1,074	1,073	876
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	121	80	
1001 Discretionary unobligated balance brought fwd, Oct 1	5	5	
1021 Recoveries of prior year unpaid obligations	12		
1050 Unobligated balance (total)	133	80	
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	880	878	761
1120 Appropriations transferred to other acct [049–0180]	–1		
1160 Appropriation, discretionary (total)	879	878	761
Appropriations, mandatory:			
1201 Appropriation (special or trust fund)	139	100	100
1203 Appropriation (previously unavailable)	7	7	7
1232 Appropriations and/or unobligated balance of appropriations temporarily reduced	–7	–7	
1260 Appropriations, mandatory (total)	139	100	107
Spending authority from offsetting collections, discretionary:			
1700 Collected	2	15	15
1701 Change in uncollected payments, Federal sources	3		
1750 Spending auth from offsetting collections, disc (total)	5	15	15
1900 Budget authority (total)	1,023	993	883
1930 Total budgetary resources available	1,156	1,073	883
Memorandum (non-add) entries:			
1940 Unobligated balance expiring	–2		
1941 Unexpired unobligated balance, end of year	80		7
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	2,104	2,242	2,340
3010 New obligations, unexpired accounts	1,074	1,073	876
3011 Obligations ("upward adjustments"), expired accounts	1		
3020 Outlays (gross)	–911	–975	–1,001
3040 Recoveries of prior year unpaid obligations, unexpired	–12		
3041 Recoveries of prior year unpaid obligations, expired	–14		
3050 Unpaid obligations, end of year	2,242	2,340	2,215
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	–5	–7	–7
3070 Change in uncollected pymts, Fed sources, unexpired	–3		
3071 Change in uncollected pymts, Fed sources, expired	1		
3090 Uncollected pymts, Fed sources, end of year	–7	–7	–7
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	2,099	2,235	2,333
3200 Obligated balance, end of year	2,235	2,333	2,208
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	884	893	776
Outlays, gross:			
4010 Outlays from new discretionary authority	110	138	122
4011 Outlays from discretionary balances	706	695	698
4020 Outlays, gross (total)	816	833	820
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	–2	–15	–15
4033 Non-Federal sources	–1		
4040 Offsets against gross budget authority and outlays (total)	–3	–15	–15
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	–3		

4052	Offsetting collections credited to expired accounts	1		
4060	Additional offsets against budget authority only (total)	-2		
4070	Budget authority, net (discretionary)	879	878	761
4080	Outlays, net (discretionary)	813	818	805
	Mandatory:			
4090	Budget authority, gross	139	100	107
	Outlays, gross:			
4100	Outlays from new mandatory authority		11	12
4101	Outlays from mandatory balances	95	131	169
4110	Outlays, gross (total)	95	142	181
4180	Budget authority, net (total)	1,018	978	868
4190	Outlays, net (total)	908	960	986

The Education and Human Resources (EHR) appropriation funds and manages a comprehensive set of programs that further NSF's goals of ensuring a diverse, globally competitive U.S. science, technology, engineering, and mathematics (STEM) workforce, as well as a scientifically literate population. To advance those goals, EHR collaborates with other NSF research units, federal agencies, and promotes public-private partnerships. EHR supports research on STEM teaching and learning to provide the evidence base for improvements in education at all levels in the STEM disciplines. Supporting development and effective implementation of new learning technologies is also a priority. EHR's pre-K-12 education-research programs, for example, develop and test new instruction materials for students and teachers, which incorporate the latest advances in teaching, learning, and education technologies. STEM teacher-education opportunities occur throughout the full continuum, from pre-service and in-service, through life-long learning. Research programs at the undergraduate level improve curricula, strengthen laboratory courses, enhance faculty effectiveness and lead education reforms in STEM disciplines. Advanced technological education programs strengthen student preparation for the high-technology workforce. Support of graduate-level STEM education primarily includes fellowships and traineeships to sustain U.S. leadership in global science and technology. All EHR programs aim to broaden participation of groups underrepresented in STEM fields by, for example, improving infrastructure and academic programs at minority-serving institutions. EHR activities also include programs supported by H-1B non-immigrant visa fees, which provide undergraduate and graduate scholarships in STEM disciplines, improve educational opportunities for students, and provide research opportunities for STEM teachers and students.

Object Classification (in millions of dollars)

Identification code 049-0106-0-1-251	2016 actual	2017 est.	2018 est.
Direct obligations:			
21.0 Travel and transportation of persons	2	3	3
25.1 Advisory and assistance services	22	24	24
25.2 Other services from non-Federal sources	4	4	4
41.0 Grants, subsidies, and contributions	1,041	1,027	830
99.0 Direct obligations	1,069	1,058	861
99.0 Reimbursable obligations	5	15	15
99.9 Total new obligations, unexpired accounts	1,074	1,073	876

Trust Funds

DONATIONS

Special and Trust Fund Receipts (in millions of dollars)

Identification code 049-8960-0-7-251	2016 actual	2017 est.	2018 est.
0100 Balance, start of year			
Receipts:			
Current law:			
1130 Donations, National Science Foundation	24	35	35
2000 Total: Balances and receipts	24	35	35
Appropriations:			
Current law:			
2101 Donations	-24	-35	-35

5099	Balance, end of year			
------	----------------------------	--	--	--

Program and Financing (in millions of dollars)

Identification code 049-8960-0-7-251	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Atacama Large Millimeter Array	3	3	1
0002 Gemini Telescope	9	21	11
0003 B&M Gates Foundation	1	4	1
0004 International Ocean Drilling	17	30	22
0900 Total new obligations, unexpired accounts (object class 41.0)	30	58	35
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	29	23	
Budget authority:			
Appropriations, mandatory:			
1201 Appropriation (special or trust fund)	24	35	35
1930 Total budgetary resources available	53	58	35
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	23		
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	36	38	65
3010 New obligations, unexpired accounts	30	58	35
3020 Outlays (gross)	-28	-31	-33
3050 Unpaid obligations, end of year	38	65	67
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	36	38	65
3200 Obligated balance, end of year	38	65	67
Budget authority and outlays, net:			
Mandatory:			
4090 Budget authority, gross	24	35	35
Outlays, gross:			
4100 Outlays from new mandatory authority		21	21
4101 Outlays from mandatory balances	28	10	12
4110 Outlays, gross (total)	28	31	33
4180 Budget authority, net (total)	24	35	35
4190 Outlays, net (total)	28	31	33

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 telescopes, and the NSF ocean discovery 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.

ADMINISTRATIVE PROVISION

Not to exceed 5 percent of any appropriation made available for the current fiscal year for the National Science Foundation in this Act may be transferred between such appropriations, but no such appropriation shall be increased by more than 10 percent by any such transfers. Any transfer pursuant to this section shall be treated as a reprogramming of funds under section 504 of this Act and shall not be available for obligation except in compliance with the procedures set forth in that section.

GENERAL FUND RECEIPT ACCOUNTS

(in millions of dollars)

	2016 actual	2017 est.	2018 est.
Offsetting receipts from the public:			
049-320000 Collections of Receivables from Canceled Accounts	1	1	1
049-322000 All Other General Fund Proprietary Receipts Including Budget Clearing Accounts	4	2	2
General Fund Offsetting receipts from the public	5	3	3

