

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; \$4,230,510,000, to remain available until September 30, 2020, 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 2018 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Act, 2018 (Division D of P.L. 115–56, as amended). The amounts included for 2018 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049–0100–0–1–999	2017 actual	2018 est.	2019 est.
Obligations by program activity:			
0001 Biological Sciences	742	742	526
0002 Computer and Information Science and Engineering	936	936	663
0003 Engineering	931	931	660
0005 Geosciences	826	826	585
0006 Mathematical and Physical Sciences	1,362	1,362	965
0007 Social, Behavioral and Economic Sciences	271	271	192
0008 Integrative Activities	420	440	262
0009 Office of International Science and Engineering	49	49	35
0010 Office of Polar Programs	468	468	342
0013 Arctic Research Commission	1	1	1
0799 Total direct obligations	6,006	6,026	4,231
0801 Research and Related Activities (Reimbursable)	66	120	120
0900 Total new obligations, unexpired accounts	6,072	6,146	4,351
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	18	33	.....
1021 Recoveries of prior year unpaid obligations	25	.....	.....
1050 Unobligated balance (total)	43	33	.....
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	6,034	5,993	4,231
1120 Appropriations transferred to other acct [049–0180]	–22	.....	.....
1120 Appropriations transferred to other acct [049–0551]	–6	.....	.....
1160 Appropriation, discretionary (total)	6,006	5,993	4,231
Spending authority from offsetting collections, discretionary:			
1700 Collected	73	120	120
1701 Change in uncollected payments, Federal sources	–14	.....	.....
1750 Spending auth from offsetting collections, disc (total)	59	120	120
1900 Budget authority (total)	6,065	6,113	4,351
1930 Total budgetary resources available	6,108	6,146	4,351
Memorandum (non-add) entries:			
1940 Unobligated balance expiring	–3	.....	.....
1941 Unexpired unobligated balance, end of year	33	.....	.....
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	10,101	10,235	10,758
3010 New obligations, unexpired accounts	6,072	6,146	4,351
3011 Obligations ("upward adjustments"), expired accounts	13	.....	.....
3020 Outlays (gross)	–5,867	–5,623	–5,417
3040 Recoveries of prior year unpaid obligations, unexpired	–25	.....	.....
3041 Recoveries of prior year unpaid obligations, expired	–59	.....	.....
3050 Unpaid obligations, end of year	10,235	10,758	9,692
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	–88	–63	–63
3070 Change in uncollected pymts, Fed sources, unexpired	14	.....	.....
3071 Change in uncollected pymts, Fed sources, expired	11	.....	.....
3090 Uncollected pymts, Fed sources, end of year	–63	–63	–63
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	10,013	10,172	10,695

3200	Obligated balance, end of year	10,172	10,695	9,629
Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	6,065	6,113	4,351
Outlays, gross:				
4010	Outlays from new discretionary authority	711	1,319	966
4011	Outlays from discretionary balances	5,156	4,304	4,451
4020	Outlays, gross (total)	5,867	5,623	5,417
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources	–84	–120	–120
4040	Offsets against gross budget authority and outlays (total)	–84	–120	–120
Additional offsets against gross budget authority only:				
4050	Change in uncollected pymts, Fed sources, unexpired	14	.....	.....
4052	Offsetting collections credited to expired accounts	11	.....	.....
4060	Additional offsets against budget authority only (total)	25	.....	.....
4070	Budget authority, net (discretionary)	6,006	5,993	4,231
4080	Outlays, net (discretionary)	5,783	5,503	5,297
4180	Budget authority, net (total)	6,006	5,993	4,231
4190	Outlays, net (total)	5,783	5,503	5,297

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 impacts 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 promotes the progress of computer and information science and engineering research and education, and advances the development and use of cyberinfrastructure across the science and engineering research enterprise; promotes understanding of the principles and uses of society; and contributes to universal, transparent, and affordable participation in a knowledge-based society.

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 Established 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	2017 actual	2018 est.	2019 est.
Direct obligations:			
11.8 Personnel compensation: Special personal services			
payments	31	32	30
21.0 Travel and transportation of persons	14	15	12
25.1 Advisory and assistance services	123	120	90
25.2 Other services from non-Federal sources	9	9	8
25.3 Other goods and services from Federal sources	134	135	110
25.4 Operation and maintenance of facilities	224	225	200
25.5 Research and development contracts	9	10	9
31.0 Equipment	1		
41.0 Grants, subsidies, and contributions	5,461	5,480	3,772
99.0 Direct obligations	6,006	6,026	4,231
99.0 Reimbursable obligations	66	120	120
99.9 Total new obligations, unexpired accounts	6,072	6,146	4,351

Employment Summary

Identification code 049–0100–0–1–999	2017 actual	2018 est.	2019 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, \$65,950,000, to remain available until expended.

Note.—A full-year 2018 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Act, 2018 (Division D of P.L. 115–56, as amended). The amounts included for 2018 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049–0551–0–1–251	2017 actual	2018 est.	2019 est.
Obligations by program activity:			
0001 Major Research Equipment and Facilities Construction	223	239	66
0900 Total new obligations, unexpired accounts (object class 41.0)	223	239	66
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	37	31	

1021 Recoveries of prior year unpaid obligations	2		
1050 Unobligated balance (total)	39	31	
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	209	208	66
1121 Appropriations transferred from other acct [049–0100]	6		
1160 Appropriation, discretionary (total)	215	208	66
1900 Budget authority (total)	215	208	66
1930 Total budgetary resources available	254	239	66
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	31		
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	240	287	340
3010 New obligations, unexpired accounts	223	239	66
3020 Outlays (gross)	–174	–186	–189
3040 Recoveries of prior year unpaid obligations, unexpired	–2		
3050 Unpaid obligations, end of year	287	340	217
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	240	287	340
3200 Obligated balance, end of year	287	340	217
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	215	208	66
Outlays, gross:			
4010 Outlays from new discretionary authority		12	4
4011 Outlays from discretionary balances	174	174	185
4020 Outlays, gross (total)	174	186	189
4180 Budget authority, net (total)	215	208	66
4190 Outlays, net (total)	174	186	189

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; \$333,630,000: 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 2019 for maintenance and operation of facilities and for other services to be provided during the next fiscal year.

Note.—A full-year 2018 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Act, 2018 (Division D of P.L. 115–56, as amended). The amounts included for 2018 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049–0180–0–1–251	2017 actual	2018 est.	2019 est.
Obligations by program activity:			
0001 Agency Operations and Award Management	382	329	334
0801 Agency Operations and Award Management (Reimbursable)	4	10	10
0900 Total new obligations, unexpired accounts	386	339	344
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	24	1	
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	330	328	334
1121 Appropriations transferred from other acct [049–0100]	22		
1121 Appropriations transferred from other acct [049–0106]	7		
1160 Appropriation, discretionary (total)	359	328	334
Spending authority from offsetting collections, discretionary:			
1700 Collected	4	10	10

1900	Budget authority (total)	363	338	344
1930	Total budgetary resources available	387	339	344
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	1		

Change in obligated balance:

Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	117	111	61
3010	New obligations, unexpired accounts	386	339	344
3011	Obligations ("upward adjustments"), expired accounts	1		
3020	Outlays (gross)	-387	-389	-340
3041	Recoveries of prior year unpaid obligations, expired	-6		
3050	Unpaid obligations, end of year	111	61	65
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	117	111	61
3200	Obligated balance, end of year	111	61	65

Budget authority and outlays, net:

Discretionary:				
4000	Budget authority, gross	363	338	344
Outlays, gross:				
4010	Outlays from new discretionary authority	269	279	284
4011	Outlays from discretionary balances	118	110	56
4020	Outlays, gross (total)	387	389	340
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources	-4	-10	-10
4040	Offsets against gross budget authority and outlays (total)	-4	-10	-10
4180	Budget authority, net (total)	359	328	334
4190	Outlays, net (total)	383	379	330

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		2017 actual	2018 est.	2019 est.
Direct obligations:				
Personnel compensation:				
11.1	Full-time permanent	155	158	160
11.3	Other than full-time permanent	12	14	15
11.5	Other personnel compensation	2	2	2
11.9	Total personnel compensation	169	174	177
12.1	Civilian personnel benefits	51	52	53
21.0	Travel and transportation of persons	6	6	6
23.1	Rental payments	32	28	31
23.2	Rental payments to others	2	1	.....
23.3	Communications, utilities, and miscellaneous charges	1	2	2
24.0	Printing and reproduction	1	.....	1
25.1	Advisory and assistance services	79	44	42
25.2	Other services from non-Federal sources	11	8	9
25.3	Other goods and services from Federal sources	24	7	9
26.0	Supplies and materials	2	1	1
31.0	Equipment	4	6	3
99.0	Direct obligations	382	329	334
99.0	Reimbursable obligations	4	10	10
99.9	Total new obligations, unexpired accounts	386	339	344

Employment Summary

Identification code 049-0180-0-1-251	2017 actual	2018 est.	2019 est.
1001 Direct civilian full-time equivalent employment	1,309	1,352	1,352

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.), \$4,320,000: Provided, That not to exceed \$2,500 shall be available for official reception and representation expenses.

Note.—A full-year 2018 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Act, 2018 (Division D of P.L. 115-56, as amended). The amounts included for 2018 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049-0350-0-1-251		2017 actual	2018 est.	2019 est.
Obligations by program activity:				
0001	Office of the National Science Board	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		2017 actual	2018 est.	2019 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	2017 actual	2018 est.	2019 est.
1001 Direct civilian full-time equivalent employment	18	18	18

OFFICE OF INSPECTOR GENERAL

For necessary expenses of the Office of Inspector General as authorized by the Inspector General Act of 1978, \$14,820,000, of which \$400,000 shall remain available until September 30, 2020.

Note.—A full-year 2018 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Act, 2018 (Division D of P.L. 115-56, as amended). The amounts included for 2018 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049-0300-0-1-251	2017 actual	2018 est.	2019 est.
Obligations by program activity:			
0001 Office of Inspector General (Direct)	15	15	15

OFFICE OF INSPECTOR GENERAL—Continued
Program and Financing—Continued

Identification code 049–0300–0–1–251	2017 actual	2018 est.	2019 est.
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	3	3	3
3010 New obligations, unexpired accounts	15	15	15
3020 Outlays (gross)	–15	–15	–15
3050 Unpaid obligations, end of year	3	3	3
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	3	3	3
3200 Obligated balance, end of year	3	3	3
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	2	3	3
4020 Outlays, gross (total)	15	15	15
4180 Budget authority, net (total)	15	15	15
4190 Outlays, net (total)	15	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	2017 actual	2018 est.	2019 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	2017 actual	2018 est.	2019 est.
1001 Direct civilian full-time equivalent employment	72	72	72

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, \$618,770,000, to remain available until September 30, 2020.

Note.—A full-year 2018 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Act, 2018 (Division D of P.L. 115–56, as amended). The amounts included for 2018 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049–0106–0–1–251	2017 actual	2018 est.	2019 est.
Obligations by program activity:			
0001 Education and Human Resources	874	882	619
0100 Total Disc obligations	874	882	619
0302 Low income scholarship program	84	182	75

0303 ITES grants for Mathematics, Science, or Engineering enrichment courses	35	59	25
0391 Total Mandatory Obligations (H-1B)	119	241	100
0799 Total direct obligations	993	1,123	719
0801 Education and Human Resources (Reimbursable)	4	15	15
0900 Total new obligations, unexpired accounts	997	1,138	734

Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	80	105	.....
1001 Discretionary unobligated balance brought fwd, Oct 1	5	8	.....
1021 Recoveries of prior year unpaid obligations	7	.....	.....
1050 Unobligated balance (total)	87	105	.....
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	880	874	619
1120 Appropriations transferred to other acct [049–0180]	–7	.....	.....
1160 Appropriation, discretionary (total)	873	874	619
Appropriations, mandatory:			
1201 Appropriation (special or trust fund)	141	142	100
1203 Appropriation (previously unavailable)	7	10	8
1232 Appropriations and/or unobligated balance of appropriations temporarily reduced	–10	–8	.....
1260 Appropriations, mandatory (total)	138	144	108
Spending authority from offsetting collections, discretionary:			
1700 Collected	1	15	15
1701 Change in uncollected payments, Federal sources	4	.....	.....
1750 Spending auth from offsetting collections, disc (total)	5	15	15
1900 Budget authority (total)	1,016	1,033	742
1930 Total budgetary resources available	1,103	1,138	742
Memorandum (non-add) entries:			
1940 Unobligated balance expiring	–1	.....	.....
1941 Unexpired unobligated balance, end of year	105	.....	8

Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	2,241	2,340	2,269
3010 New obligations, unexpired accounts	997	1,138	734
3011 Obligations ("upward adjustments"), expired accounts	1	.....	.....
3020 Outlays (gross)	–876	–1,209	–1,116
3040 Recoveries of prior year unpaid obligations, unexpired	–7	.....	.....
3041 Recoveries of prior year unpaid obligations, expired	–16	.....	.....
3050 Unpaid obligations, end of year	2,340	2,269	1,887
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	–7	–11	–11
3070 Change in uncollected pymts, Fed sources, unexpired	–4	.....	.....
3090 Uncollected pymts, Fed sources, end of year	–11	–11	–11
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	2,234	2,329	2,258
3200 Obligated balance, end of year	2,329	2,258	1,876

Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	878	889	634
Outlays, gross:			
4010 Outlays from new discretionary authority	43	137	102
4011 Outlays from discretionary balances	715	945	835
4020 Outlays, gross (total)	758	1,082	937
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	–1	–16	–15
4040 Offsets against gross budget authority and outlays (total)	–1	–16	–15
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	–4	.....	.....
4052 Offsetting collections credited to expired accounts .....	.....	1	.....
4060 Additional offsets against budget authority only (total)	–4	1	.....
4070 Budget authority, net (discretionary)	873	874	619
4080 Outlays, net (discretionary)	757	1,066	922
Mandatory:			
4090 Budget authority, gross	138	144	108
Outlays, gross:			
4100 Outlays from new mandatory authority .....	.....	16	12
4101 Outlays from mandatory balances	118	111	167
4110 Outlays, gross (total)	118	127	179
4180 Budget authority, net (total)	1,011	1,018	727
4190 Outlays, net (total)	875	1,193	1,101

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 and 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	2017 actual	2018 est.	2019 est.
Direct obligations:			
11.8 Personnel compensation: Special personal services payments	4	4	4
21.0 Travel and transportation of persons	1	1	1
25.1 Advisory and assistance services	26	25	20
25.2 Other services from non-Federal sources	2	2	2
41.0 Grants, subsidies, and contributions	960	1,091	692
99.0 Direct obligations	993	1,123	719
99.0 Reimbursable obligations	4	15	15
99.9 Total new obligations, unexpired accounts	997	1,138	734

Trust Funds

DONATIONS

Special and Trust Fund Receipts (in millions of dollars)

Identification code 049-8960-0-7-251	2017 actual	2018 est.	2019 est.
0100 Balance, start of year			
Receipts:			
Current law:			
1130 Donations, National Science Foundation	41	35	35
2000 Total: Balances and receipts	41	35	35
Appropriations:			
Current law:			
2101 Donations	-41	-35	-35
5099 Balance, end of year			

Program and Financing (in millions of dollars)

Identification code 049-8960-0-7-251	2017 actual	2018 est.	2019 est.
Obligations by program activity:			
0002 Gemini Telescope	19	26	11

0003 B&M Gates Foundation	1	2	1
0004 International Ocean Drilling	22	39	22
0900 Total new obligations, unexpired accounts (object class 41.0)	42	67	34

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	24	32	
1021 Recoveries of prior year unpaid obligations	9		
1050 Unobligated balance (total)	33	32	
Budget authority:			
Appropriations, mandatory:			
1201 Appropriation (special or trust fund)	41	35	35
1930 Total budgetary resources available	74	67	35
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	32		1

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	37	43	77
3010 New obligations, unexpired accounts	42	67	34
3020 Outlays (gross)	-27	-33	-45
3040 Recoveries of prior year unpaid obligations, unexpired	-9		
3050 Unpaid obligations, end of year	43	77	66
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	37	43	77
3200 Obligated balance, end of year	43	77	66

Budget authority and outlays, net:

Mandatory:			
4090 Budget authority, gross	41	35	35
Outlays, gross:			
4100 Outlays from new mandatory authority		21	21
4101 Outlays from mandatory balances	27	12	24
4110 Outlays, gross (total)	27	33	45
4180 Budget authority, net (total)	41	35	35
4190 Outlays, net (total)	27	33	45

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)

	2017 actual	2018 est.	2019 est.
Offsetting receipts from the public:			
049-320000 Collections of Receivables from Canceled Accounts		1	1
049-322000 All Other General Fund Proprietary Receipts Including Budget Clearing Accounts	5	5	5
General Fund Offsetting receipts from the public	5	6	6

