

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; **[\$6,737,200,000]** \$6,213,020,000, to remain available until September 30, **[2021]** 2022, of which not to exceed **[\$500,000,000]** \$544,000,000 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. (*Science Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 049-0100-0-1-999	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Biological Sciences	784	811	705
0002 Computer and Information Science and Engineering	985	1,016	1,062
0003 Engineering	991	1,030	910
0005 Geosciences	970	992	836
0006 Mathematical and Physical Sciences	1,491	1,541	1,448
0007 Social, Behavioral and Economic Sciences	271	281	247
0008 Integrative Activities	547	552	539
0009 Office of International Science and Engineering	49	51	44
0010 Office of Polar Programs	489	480	420
0013 Arctic Research Commission	1	2	2
0799 Total direct obligations	6,578	6,756	6,213
0801 Research and Related Activities (Reimbursable)	96	120	120
0900 Total new obligations, unexpired accounts	6,674	6,876	6,333
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	29	19	.....
1021 Recoveries of prior year unpaid obligations	67	.....	.....
1033 Recoveries of prior year paid obligations	2	.....	.....
1050 Unobligated balance (total)	98	19	.....
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	6,520	6,737	6,213
1120 Appropriations transferred to other acct [049-0106]	-12	.....	.....
1120 Appropriations transferred to other acct [049-0180]	-3	.....	.....
1160 Appropriation, discretionary (total)	6,505	6,737	6,213
Spending authority from offsetting collections, discretionary:			
1700 Collected	59	120	120
1701 Change in uncollected payments, Federal sources	34	.....	.....
1750 Spending auth from offsetting collections, disc (total)	93	120	120
1900 Budget authority (total)	6,598	6,857	6,333
1930 Total budgetary resources available	6,696	6,876	6,333
Memorandum (non-add) entries:			
1940 Unobligated balance expiring	-3	.....	.....
1941 Unexpired unobligated balance, end of year	19	.....	.....
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	10,859	11,534	12,429
3010 New obligations, unexpired accounts	6,674	6,876	6,333
3011 Obligations ("upward adjustments"), expired accounts	2	.....	.....
3020 Outlays (gross)	-5,880	-5,981	-6,290
3040 Recoveries of prior year unpaid obligations, unexpired	-67	.....	.....
3041 Recoveries of prior year unpaid obligations, expired	-54	.....	.....
3050 Unpaid obligations, end of year	11,534	12,429	12,472
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-72	-96	-96
3070 Change in uncollected pymts, Fed sources, unexpired	-34	.....	.....
3071 Change in uncollected pymts, Fed sources, expired	10	.....	.....
3090 Uncollected pymts, Fed sources, end of year	-96	-96	-96
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	10,787	11,438	12,333
3200 Obligated balance, end of year	11,438	12,333	12,376

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	6,598	6,857	6,333
Outlays, gross:			
4010 Outlays from new discretionary authority	732	1,467	1,362
4011 Outlays from discretionary balances	5,148	4,514	4,928
4020 Outlays, gross (total)	5,880	5,981	6,290
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-69	-120	-120
4033 Non-Federal sources	-2	.....	.....
4040 Offsets against gross budget authority and outlays (total)	-71	-120	-120
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	-34	.....	.....
4052 Offsetting collections credited to expired accounts	10	.....	.....
4053 Recoveries of prior year paid obligations, unexpired accounts	2	.....	.....
4060 Additional offsets against budget authority only (total)	-22	.....	.....
4070 Budget authority, net (discretionary)	6,505	6,737	6,213
4080 Outlays, net (discretionary)	5,809	5,861	6,170
4180 Budget authority, net (total)	6,505	6,737	6,213
4190 Outlays, net (total)	5,809	5,861	6,170

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 related to the economy, food, human welfare, and the environment. Research in this activity 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 computing and information technology in society; and contributes to universal, transparent, and affordable participation in a knowledge-based society.

Engineering.—Research supported by this activity aims to increase and strengthen U.S. engineering capability and focus that capability 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 (OISE).—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, as well as major research instrumentation and Mid-scale research infrastructure. 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	2019 actual	2020 est.	2021 est.
Direct obligations:			
11.8 Personnel compensation: Special personal services payments	37	38	38
21.0 Travel and transportation of persons	13	14	14
23.2 Rental payments to others	1		
25.1 Advisory and assistance services	131	135	132
25.2 Other services from non-Federal sources	10	10	10
25.3 Other goods and services from Federal sources	194	197	197
25.4 Operation and maintenance of facilities	172	172	172
25.5 Research and development contracts	6	6	6
41.0 Grants, subsidies, and contributions	6,014	6,184	5,644
99.0 Direct obligations	6,578	6,756	6,213
99.0 Reimbursable obligations	96	120	120
99.9 Total new obligations, unexpired accounts	6,674	6,876	6,333

Employment Summary

Identification code 049-0100-0-1-999	2019 actual	2020 est.	2021 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 up-grading 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, **[\$243,230,000]** \$229,750,000, to remain available until expended. (*Science Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 049-0551-0-1-251	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Major Research Equipment and Facilities Construction	285	282	230
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	28	39	
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	296	243	230
1900 Budget authority (total)	296	243	230
1930 Total budgetary resources available	324	282	230

Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	39		
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	302	448	530
3010 New obligations, unexpired accounts	285	282	230
3020 Outlays (gross)	-139	-200	-297
3050 Unpaid obligations, end of year	448	530	463
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	302	448	530
3200 Obligated balance, end of year	448	530	463
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	296	243	230
Outlays, gross:			
4010 Outlays from new discretionary authority		15	14
4011 Outlays from discretionary balances	139	185	283
4020 Outlays, gross (total)	139	200	297
4180 Budget authority, net (total)	296	243	230
4190 Outlays, net (total)	139	200	297

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.

Object Classification (in millions of dollars)

Identification code 049-0551-0-1-251	2019 actual	2020 est.	2021 est.
Direct obligations:			
32.0 Land and structures	103	98	90
41.0 Grants, subsidies, and contributions	182	184	140
99.9 Total new obligations, unexpired accounts	285	282	230

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; **[\$336,900,000]** \$345,640,000: *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 **[2020]** 2021 for maintenance and operation of facilities and for other services to be provided during the next fiscal year. (*Science Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 049-0180-0-1-251	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Agency Operations and Award Management	333	338	346
0801 Agency Operations and Award Management (Reimbursable)	6	10	10
0900 Total new obligations, unexpired accounts	339	348	356
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1		1	
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	330	337	346
1121 Appropriations transferred from other acct [049-0100]	3		
1160 Appropriation, discretionary (total)	333	337	346
Spending authority from offsetting collections, discretionary:			
1700 Collected	6	10	10
1701 Change in uncollected payments, Federal sources	1		
1750 Spending auth from offsetting collections, disc (total)	7	10	10
1900 Budget authority (total)	340	347	356
1930 Total budgetary resources available	340	348	356

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	72	73 66
3010	New obligations, unexpired accounts	339	348 356
3020	Outlays (gross)	-335	-355 -351
3041	Recoveries of prior year unpaid obligations, expired	-3	.....
3050	Unpaid obligations, end of year	73	66 71
Uncollected payments:			
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-1	-1 -1
3070	Change in uncollected pymts, Fed sources, unexpired	-1	.....
3071	Change in uncollected pymts, Fed sources, expired	1	.....
3090	Uncollected pymts, Fed sources, end of year	-1	-1 -1
Memorandum (non-add) entries:			
3100	Obligated balance, start of year	71	72 65
3200	Obligated balance, end of year	72	65 70

Budget authority and outlays, net:			
Discretionary:			
4000	Budget authority, gross	340	347 356
Outlays, gross:			
4010	Outlays from new discretionary authority	273	286 294
4011	Outlays from discretionary balances	62	69 57
4020	Outlays, gross (total)	335	355 351
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030	Federal sources	-6	-10 -10
4040	Offsets against gross budget authority and outlays (total)	-6	-10 -10
Additional offsets against gross budget authority only:			
4050	Change in uncollected pymts, Fed sources, unexpired	-1	.....
4060	Additional offsets against budget authority only (total)	-1	.....
4070	Budget authority, net (discretionary)	333	337 346
4080	Outlays, net (discretionary)	329	345 341
4180	Budget authority, net (total)	333	337 346
4190	Outlays, net (total)	329	345 341

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			
	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1	Full-time permanent	162	168 174
11.3	Other than full-time permanent	13	15 15
11.5	Other personnel compensation	3	3 3
11.9	Total personnel compensation	178	186 192
12.1	Civilian personnel benefits	54	57 59
21.0	Travel and transportation of persons	6	..... 4
23.1	Rental payments	23	25 26
23.3	Communications, utilities, and miscellaneous charges	2	..... 2
25.1	Advisory and assistance services	42	41 39
25.2	Other services from non-Federal sources	9	11 11
25.3	Other goods and services from Federal sources	13	12 10
26.0	Supplies and materials	1	1 1
31.0	Equipment	5	5 2
99.0	Direct obligations	333	338 346
99.0	Reimbursable obligations	6	10 10
99.9	Total new obligations, unexpired accounts	339	348 356

Employment Summary

Identification code 049-0180-0-1-251			
	2019 actual	2020 est.	2021 est.
1001	Direct civilian full-time equivalent employment	1,324	1,357 1,357

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.), **[\$4,500,000] \$4,210,000: Provided,** That not to exceed \$2,500 shall be available for official reception and representation expenses. (Science Appropriations Act, 2020.)

Program and Financing (in millions of dollars)

Identification code 049-0350-0-1-251			
	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001	Office of the National Science Board	4	5 4
Budgetary resources:			
Budget authority:			
Appropriations, discretionary:			
1100	Appropriation	4	5 4
1930	Total budgetary resources available	4	5 4
Change in obligated balance:			
Unpaid obligations:			
3000	Unpaid obligations, brought forward, Oct 1	1	.....
3010	New obligations, unexpired accounts	4	5 4
3020	Outlays (gross)	-5	-5 -4
Memorandum (non-add) entries:			
3100	Obligated balance, start of year	1	.....
Budget authority and outlays, net:			
Discretionary:			
4000	Budget authority, gross	4	5 4
Outlays, gross:			
4010	Outlays from new discretionary authority	4	4 3
4011	Outlays from discretionary balances	1	1 1
4020	Outlays, gross (total)	5	5 4
4180	Budget authority, net (total)	4	5 4
4190	Outlays, net (total)	5	5 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			
	2019 actual	2020 est.	2021 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	2 1
99.9	Total new obligations, unexpired accounts	4	5 4

Employment Summary

Identification code 049-0350-0-1-251			
	2019 actual	2020 est.	2021 est.
1001	Direct civilian full-time equivalent employment	17	18 17

OFFICE OF INSPECTOR GENERAL

For necessary expenses of the Office of Inspector General as authorized by the Inspector General Act of 1978, **[\$16,500,000] \$17,850,000,** of which \$400,000 shall remain available until September 30, **[2021] 2022.** (Science Appropriations Act, 2020.)

Program and Financing (in millions of dollars)

Identification code 049-0300-0-1-251			
	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001	Office of Inspector General	16	17 18

OFFICE OF INSPECTOR GENERAL—Continued
Program and Financing—Continued

Identification code 049-0300-0-1-251	2019 actual	2020 est.	2021 est.
Budgetary resources:			
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	15	17	18
Spending authority from offsetting collections, discretionary:			
1700 Collected	1		
1900 Budget authority (total)	16	17	18
1930 Total budgetary resources available	16	17	18
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	2	1	2
3010 New obligations, unexpired accounts	16	17	18
3020 Outlays (gross)	-17	-16	-18
3050 Unpaid obligations, end of year	1	2	2
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	2	1	2
3200 Obligated balance, end of year	1	2	2
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	16	17	18
Outlays, gross:			
4010 Outlays from new discretionary authority	15	14	15
4011 Outlays from discretionary balances	2	2	3
4020 Outlays, gross (total)	17	16	18
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-1		
4180 Budget authority, net (total)	15	17	18
4190 Outlays, net (total)	16	16	18

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	2019 actual	2020 est.	2021 est.
Direct obligations:			
11.1 Personnel compensation: Full-time permanent	10	10	10
12.1 Civilian personnel benefits	3	4	5
25.2 Other services from non-Federal sources	3	3	3
99.9 Total new obligations, unexpired accounts	16	17	18

Employment Summary

Identification code 049-0300-0-1-251	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	71	71	71

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, **[\$940,000,000] \$930,930,000**, to remain available until September 30, **[2021] 2022**. (*Science Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 049-0106-0-1-251	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Education and Human Resources	935	945	931
0100 Total Disc obligations	935	945	931

0302 Low income scholarship program	115	176	125
0303 ITEST grants for Mathematics, Science, or Engineering enrichment courses	34	59	41
0391 Total Mandatory Obligations (H-1B)	149	235	166
0799 Total direct obligations	1,084	1,180	1,097
0801 Education and Human Resources (Reimbursable)	5	10	10
0900 Total new obligations, unexpired accounts	1,089	1,190	1,107
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	79	82	
1001 Discretionary unobligated balance brought fwd, Oct 1	14	5	
1021 Recoveries of prior year unpaid obligations	9		
1050 Unobligated balance (total)	88	82	
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	910	940	931
1121 Appropriations transferred from other acct [049-0100]	12		
1160 Appropriation, discretionary (total)	922	940	931
Appropriations, mandatory:			
1201 Appropriation (special or trust fund)	157	157	157
1203 Appropriation (previously unavailable)(special or trust)	10	10	9
1232 Appropriations and/or unobligated balance of appropriations temporarily reduced	-10	-9	
1260 Appropriations, mandatory (total)	157	158	166
Spending authority from offsetting collections, discretionary:			
1700 Collected	4	10	10
1701 Change in uncollected payments, Federal sources	1		
1750 Spending auth from offsetting collections, disc (total)	5	10	10
1900 Budget authority (total)	1,084	1,108	1,107
1930 Total budgetary resources available	1,172	1,190	1,107
Memorandum (non-add) entries:			
1940 Unobligated balance expiring	-1		
1941 Unexpired unobligated balance, end of year	82		
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	2,500	2,586	2,692
3010 New obligations, unexpired accounts	1,089	1,190	1,107
3020 Outlays (gross)	-980	-1,084	-1,166
3040 Recoveries of prior year unpaid obligations, unexpired	-9		
3041 Recoveries of prior year unpaid obligations, expired	-14		
3050 Unpaid obligations, end of year	2,586	2,692	2,633
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-11	-7	-7
3070 Change in uncollected pymts, Fed sources, unexpired	-1		
3071 Change in uncollected pymts, Fed sources, expired	5		
3090 Uncollected pymts, Fed sources, end of year	-7	-7	-7
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	2,489	2,579	2,685
3200 Obligated balance, end of year	2,579	2,685	2,626
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	927	950	941
Outlays, gross:			
4010 Outlays from new discretionary authority	34	142	140
4011 Outlays from discretionary balances	813	789	851
4020 Outlays, gross (total)	847	931	991
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-9	-10	-10
4040 Offsets against gross budget authority and outlays (total)	-9	-10	-10
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	-1		
4052 Offsetting collections credited to expired accounts	5		
4060 Additional offsets against budget authority only (total)	4		
4070 Budget authority, net (discretionary)	922	940	931
4080 Outlays, net (discretionary)	838	921	981
Mandatory:			
4090 Budget authority, gross	157	158	166
Outlays, gross:			
4100 Outlays from new mandatory authority		17	18
4101 Outlays from mandatory balances	133	136	157
4110 Outlays, gross (total)	133	153	175
4180 Budget authority, net (total)	1,079	1,098	1,097

4190 Outlays, net (total)	971	1,074	1,156
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Summary of Budget Authority and Outlays (in millions of dollars)

	2019 actual	2020 est.	2021 est.
Enacted/requested:			
Budget Authority	1,079	1,098	1,097
Outlays	971	1,074	1,156
Legislative proposal, subject to PAYGO:			
Budget Authority			39
Outlays			18
Total:			
Budget Authority	1,079	1,098	1,136
Outlays	971	1,074	1,174

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	2019 actual	2020 est.	2021 est.
Direct obligations:			
11.8 Personnel compensation: Special personal services payments	6	6	6
21.0 Travel and transportation of persons	1	1	1
25.1 Advisory and assistance services	24	25	24
25.3 Other goods and services from Federal sources	6		
25.5 Research and development contracts	1		
31.0 Equipment	1		
41.0 Grants, subsidies, and contributions	1,045	1,148	1,066
99.0 Direct obligations	1,084	1,180	1,097
99.0 Reimbursable obligations	5	10	10
99.9 Total new obligations, unexpired accounts	1,089	1,190	1,107

EDUCATION AND HUMAN RESOURCES
(Legislative proposal, subject to PAYGO)

Program and Financing (in millions of dollars)

Identification code 049-0106-4-1-251	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0302 Low income scholarship program			29
0303 ITTEST grants for Mathematics, Science, or Engineering enrichment courses			10
0900 Total new obligations, unexpired accounts (object class 41.0)			39

Budgetary resources:			
Budget authority:			
Appropriations, mandatory:			
1201 Appropriation (special or trust fund)			39
1930 Total budgetary resources available			39

Change in obligated balance:			
Unpaid obligations:			
3010 New obligations, unexpired accounts			39
3020 Outlays (gross)			-18
3050 Unpaid obligations, end of year			21
Memorandum (non-add) entries:			
3200 Obligated balance, end of year			21

Budget authority and outlays, net:			
Mandatory:			
4090 Budget authority, gross			39
Outlays, gross:			
4100 Outlays from new mandatory authority			18
4180 Budget authority, net (total)			39
4190 Outlays, net (total)			18

The Budget proposes authorizing legislation to double the American Competitiveness and Workforce Improvement Act (ACWIA) fee for the H-1B visa program in order to help train American workers and close the skills gap. The proposal would increase the ACWIA fee to \$3,000 per worker for large employers and \$1,500 per worker for small employers. The increased revenue would provide additional funding for Department of Labor (DOL) job training grants to support apprenticeship. Under the proposal, the allocations for DOL job training grants (50 percent); DOL foreign labor certifications (5 percent); National Science Foundation (NSF) Innovative Technology Experiences for Students and Teachers program (10 percent); and DHS processing costs (5 percent) would remain the same. The NSF allocation for STEM scholarships would decrease from 30 percent to 15 percent, which would maintain absolute funding levels under current estimates. The proposal would initiate a new 15 percent allocation for the Department of Education's Career and Technical Education formula grant.

Trust Funds
DONATIONS

Special and Trust Fund Receipts (in millions of dollars)

Identification code 049-8960-0-7-251	2019 actual	2020 est.	2021 est.
0100 Balance, start of year			
Receipts:			
Current law:			
1130 Donations, National Science Foundation	32	40	40
2000 Total: Balances and receipts	32	40	40
Appropriations:			
Current law:			
2101 Donations	-32	-40	-40
5099 Balance, end of year			

Program and Financing (in millions of dollars)

Identification code 049-8960-0-7-251	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Atacama Large Millimeter Array		11	4
0002 Gemini Telescope	9	31	17
0003 International Ocean Drilling	19	20	18
0004 Boeing	11		
0005 General Trust Fund		3	1
0900 Total new obligations, unexpired accounts (object class 41.0)	39	65	40

Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	32	25	
Budget authority:			
Appropriations, mandatory:			
1201 Appropriation (special or trust fund)	32	40	40
1930 Total budgetary resources available	64	65	40

DONATIONS—Continued
Program and Financing—Continued

Identification code 049-8960-0-7-251	2019 actual	2020 est.	2021 est.
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	29	42	58
3010 New obligations, unexpired accounts	39	65	40
3020 Outlays (gross)	-26	-49	-45
3050 Unpaid obligations, end of year	42	58	53
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	29	42	58
3200 Obligated balance, end of year	42	58	53
Budget authority and outlays, net:			
Mandatory:			
4090 Budget authority, gross	32	40	40
Outlays, gross:			
4100 Outlays from new mandatory authority		24	24
4101 Outlays from mandatory balances	26	25	21
4110 Outlays, gross (total)	26	49	45
4180 Budget authority, net (total)	32	40	40
4190 Outlays, net (total)	26	49	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 develop-

ment visits, international conferences, and support for certain special functions of NSF and the National Science Board. These funds are not otherwise available.

ADMINISTRATIVE PROVISIONS

(INCLUDING TRANSFER OF FUNDS)

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 paragraph shall be treated as a reprogramming of funds under section 505 of this Act and shall not be available for obligation except in compliance with the procedures set forth in that section.

The Director of the National Science Foundation (NSF) shall notify the Committees on Appropriations of the House of Representatives and the Senate at least 30 days in advance of any planned divestment through transfer, decommissioning, termination, or deconstruction of any NSF-owned facilities or any NSF capital assets (including land, structures, and equipment) valued greater than \$2,500,000. (*Science Appropriations Act, 2020.*)

GENERAL FUND RECEIPT ACCOUNTS

(in millions of dollars)

	2019 actual	2020 est.	2021 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	5	5	5
General Fund Offsetting receipts from the public	6	6	6