

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; \$8,425,987,000, to remain available until September 30, 2024, of which not to exceed \$640,000,000 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 2022 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, 2022 (Division A of Public Law 117-43, as amended). The amounts included for 2022 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049-0100-0-1-999	2021 actual	2022 est.	2023 est.
Obligations by program activity:			
0001 Biological Sciences	819	795	970
0002 Computer and Information Science and Engineering	1,024	936	1,151
0003 Engineering	1,037	769	940
0005 Geosciences	1,005	1,002	1,239
0006 Mathematical and Physical Sciences	1,595	1,418	1,747
0007 Social, Behavioral and Economic Sciences	283	269	330
0008 Integrative Activities	603	424	546
0009 Office of International Science and Engineering	51	63	74
0010 Office of Polar Programs	484	424	547
0011 Technology, Innovation, and Partnerships	725	880	880
0013 Arctic Research Commission	2	2	2
0091 Direct program activities, subtotal	6,903	6,827	8,426
0401 American Rescue Plan Act (ARP)	196	271	.....
0799 Total direct obligations	7,099	7,098	8,426
0801 Research and Related Activities (Reimbursable)	83	120	120
0900 Total new obligations, unexpired accounts	7,182	7,218	8,546
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	16	308	120
1001 Discretionary unobligated balance brought fwd, Oct 1	16	.....	.....
1021 Recoveries of prior year unpaid obligations	25	.....	.....
1070 Unobligated balance (total)	41	308	120
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	6,910	6,910	8,426
1120 Appropriations transferred to other acct [049-0180]	-29	.....	.....
1160 Appropriation, discretionary (total)	6,881	6,910	8,426
Appropriations, mandatory:			
1200 Appropriation	467	.....	.....
Spending authority from offsetting collections, discretionary:			
1700 Collected	51	120	120
1701 Change in uncollected payments, Federal sources	53	.....	.....
1750 Spending auth from offsetting collections, disc (total)	104	120	120
1900 Budget authority (total)	7,452	7,030	8,546
1930 Total budgetary resources available	7,493	7,338	8,666
Memorandum (non-add) entries:			
1940 Unobligated balance expiring	-3	.....	.....
1941 Unexpired unobligated balance, end of year	308	120	120
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	12,441	13,577	14,179
3010 New obligations, unexpired accounts	7,182	7,218	8,546
3011 Obligations ("upward adjustments"), expired accounts	65	.....	.....
3020 Outlays (gross)	-6,020	-6,616	-7,118
3040 Recoveries of prior year unpaid obligations, unexpired	-25	.....	.....
3041 Recoveries of prior year unpaid obligations, expired	-66	.....	.....
3050 Unpaid obligations, end of year	13,577	14,179	15,607
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-82	-115	-115

3070 Change in uncollected pymts, Fed sources, unexpired	-53	.....	.....
3071 Change in uncollected pymts, Fed sources, expired	20	.....	.....
3090 Uncollected pymts, Fed sources, end of year	-115	-115	-115
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	12,359	13,462	14,064
3200 Obligated balance, end of year	13,462	14,064	15,492
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	6,985	7,030	8,546
Outlays, gross:			
4010 Outlays from new discretionary authority	629	1,502	1,805
4011 Outlays from discretionary balances	5,389	4,952	5,215
4020 Outlays, gross (total)	6,018	6,454	7,020
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-72	-120	-120
4033 Non-Federal sources	-62	.....	.....
4040 Offsets against gross budget authority and outlays (total)	-134	-120	-120
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	-53	.....	.....
4052 Offsetting collections credited to expired accounts	83	.....	.....
4060 Additional offsets against budget authority only (total)	30	.....	.....
4070 Budget authority, net (discretionary)	6,881	6,910	8,426
4080 Outlays, net (discretionary)	5,884	6,334	6,900
Mandatory:			
4090 Budget authority, gross	467	.....	.....
Outlays, gross:			
4100 Outlays from new mandatory authority	2	.....	.....
4101 Outlays from mandatory balances .....	.....	162	98
4110 Outlays, gross (total)	2	162	98
4180 Budget authority, net (total)	7,348	6,910	8,426
4190 Outlays, net (total)	5,886	6,496	6,998

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; 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 computing, communication and information science and engineering research and education, and advances the development and use of advanced 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, trustworthy, transparent, and affordable participation in a knowledge-based economy.

Engineering.—Research supported by this activity aims to increase and strengthen U.S. engineering capability and create a better tomorrow by driving discovery, inspiring innovation, enriching education and accelerating access.

Geosciences.—This activity is focused on elucidating the many processes that affect the global environment and earth system through research in earth, ocean, atmospheric, and geospace sciences. This activity supports basic research, facilities, and associated infrastructure that enable an understanding of the causes and implications of climate change, 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

RESEARCH AND RELATED ACTIVITIES—Continued

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.

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 funding to support Federal agencies' logistical needs in the Arctic and Antarctica, research collaborations, and related activities supported by the United States Antarctic Program.

Integrative Activities.—This activity supports innovative, transdisciplinary team science, advanced research infrastructure, use-inspired research, and emerging national research priorities. Integrative Activities supports jurisdictional and institutional capacity-building programs helping colleges and universities expand their research capacity and improve competitiveness in science and engineering research. Additionally, Integrative Activities funding supports activities that expand NSF's capacity to use evidence for decision making. This activity provides support for a federally funded Research and Development Center, the Science and Technology Policy Institute.

Technology, Innovation, and Partnerships (TIP).—This activity advances critical and emerging technologies addressing societal and economic challenges and opportunities; accelerates the translation of research results from the lab to market and society; and cultivates new education pathways leading to a diverse skilled technical workforce comprising researchers, practitioners, technicians, and entrepreneurs. TIP will accomplish these objectives by catalyzing strategic partnerships that link academia, industry, government, nonprofits, civil society, and communities of practice to cultivate innovation ecosystems throughout the U.S., growing regional economies, creating the jobs of the future, and enhancing the Nation's long-term 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	2021 actual	2022 est.	2023 est.
Direct obligations:			
11.8 Personnel compensation: Special personal services payments	42	42	43
21.0 Travel and transportation of persons	2	2	2
25.1 Advisory and assistance services	144	144	145
25.2 Other services from non-Federal sources	11	11	11
25.3 Other goods and services from Federal sources	145	145	145
25.4 Operation and maintenance of facilities	233	233	283
25.5 Research and development contracts	11	11	11
31.0 Equipment	4	4	4
41.0 Grants, subsidies, and contributions	6,507	6,506	7,782
99.0 Direct obligations	7,099	7,098	8,426
99.0 Reimbursable obligations	83	120	120
99.9 Total new obligations, unexpired accounts	7,182	7,218	8,546

Employment Summary

Identification code 049-0100-0-1-999	2021 actual	2022 est.	2023 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, \$187,230,000, to remain available until expended.

Note.—A full-year 2022 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, 2022 (Division A of Public Law 117-43, as amended). The amounts included for 2022 reflect the annualized level provided by the continuing resolution.

MAJOR RESEARCH EQUIPMENT AND FACILITIES CONSTRUCTION

For an additional amount for "Major Research Equipment and Facilities Construction" for necessary expenses related to the National Science Foundation Regional Class Research Vessel construction impacted by Hurricane Ida, \$25,000,000, to remain available until expended. (Disaster Relief Supplemental Appropriations Act, 2022.)

Program and Financing (in millions of dollars)

Identification code 049-0551-0-1-251	2021 actual	2022 est.	2023 est.
Obligations by program activity:			
0001 Major Research Equipment and Facilities Construction	161	475	187
0401 American Rescue Plan Act (ARP)	9	51	.....
0900 Total new obligations, unexpired accounts	170	526	187
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	129	260	.....
1001 Discretionary unobligated balance brought fwd, Oct 1	129	.....	.....
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	241	266	187
Appropriations, mandatory:			
1200 Appropriation	60	.....	.....
1900 Budget authority (total)	301	266	187
1930 Total budgetary resources available	430	526	187
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	260	.....	.....
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	423	440	603
3010 New obligations, unexpired accounts	170	526	187
3020 Outlays (gross)	-153	-363	-276
3050 Unpaid obligations, end of year	440	603	514
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	423	440	603
3200 Obligated balance, end of year	440	603	514
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	241	266	187
Outlays, gross:			
4010 Outlays from new discretionary authority .....	.....	16	11
4011 Outlays from discretionary balances	145	318	238
4020 Outlays, gross (total)	145	334	249
Mandatory:			
4090 Budget authority, gross	60	.....	.....
Outlays, gross:			
4100 Outlays from new mandatory authority	8	.....	.....
4101 Outlays from mandatory balances .....	.....	29	27
4110 Outlays, gross (total)	8	29	27
4180 Budget authority, net (total)	301	266	187
4190 Outlays, net (total)	153	363	276

This appropriation supports the acquisition, construction, and commissioning of unique national research platforms and major research facilities and equipment.

Object Classification (in millions of dollars)

Identification code 049-0551-0-1-251	2021 actual	2022 est.	2023 est.
Direct obligations:			
25.7 Operation and maintenance of equipment	4	4	4
41.0 Grants, subsidies, and contributions	166	522	183
99.9 Total new obligations, unexpired accounts	170	526	187

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; \$473,200,000: 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 2023 for maintenance and operation of facilities and for other services to be provided during the next fiscal year.

Note.—A full-year 2022 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, 2022 (Division A of Public Law 117-43, as amended). The amounts included for 2022 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049-0180-0-1-251	2021 actual	2022 est.	2023 est.
Obligations by program activity:			
0001 Agency Operations and Award Management	385	346	473
0401 American Rescue Plan Act (ARP)	12		
0799 Total direct obligations	397	346	473
0801 Agency Operations and Award Management (Reimbursable)	6	10	10
0900 Total new obligations, unexpired accounts	403	356	483

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	9		
1021 Recoveries of prior year unpaid obligations	1		
1070 Unobligated balance (total)	10		
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	346	346	473
1121 Appropriations transferred from other acct [049-0100]	29		
1160 Appropriation, discretionary (total)	375	346	473
Appropriations, mandatory:			
1200 Appropriation	12		
Spending authority from offsetting collections, discretionary:			
1700 Collected	5	10	10
1701 Change in uncollected payments, Federal sources	1		
1750 Spending auth from offsetting collections, disc (total)	6	10	10
1900 Budget authority (total)	393	356	483
1930 Total budgetary resources available	403	356	483

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	67	96	66
3010 New obligations, unexpired accounts	403	356	483
3011 Obligations ("upward adjustments"), expired accounts	1		
3020 Outlays (gross)	-371	-386	-461
3040 Recoveries of prior year unpaid obligations, unexpired	-1		
3041 Recoveries of prior year unpaid obligations, expired	-3		
3050 Unpaid obligations, end of year	96	66	88
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	66	95	65
3200 Obligated balance, end of year	95	65	87

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	381	356	483
Outlays, gross:			
4010 Outlays from new discretionary authority	302	294	398
4011 Outlays from discretionary balances	60	89	63
4020 Outlays, gross (total)	362	383	461
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:			
4050 Change in uncollected pymts, Fed sources, unexpired	-1		
4052 Offsetting collections credited to expired accounts	2		
4060 Additional offsets against budget authority only (total)	1		
4070 Budget authority, net (discretionary)	375	346	473
4080 Outlays, net (discretionary)	355	373	451
Mandatory:			
4090 Budget authority, gross	12		
Outlays, gross:			
4100 Outlays from new mandatory authority	9		
4101 Outlays from mandatory balances		3	
4110 Outlays, gross (total)	9	3	
4180 Budget authority, net (total)	387	346	473
4190 Outlays, net (total)	364	376	451

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	2021 actual	2022 est.	2023 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	180	180	225
11.3 Other than full-time permanent	14	14	15
11.5 Other personnel compensation	7	7	7
11.9 Total personnel compensation	201	201	247
12.1 Civilian personnel benefits	65	65	85
22.0 Transportation of things	1	1	1
23.1 Rental payments	40	20	26
23.2 Rental payments to others	1	1	1
23.3 Communications, utilities, and miscellaneous charges			1
25.1 Advisory and assistance services	46	46	57
25.2 Other services from non-Federal sources	28	6	38
25.3 Other goods and services from Federal sources	12	6	14
26.0 Supplies and materials	1		1
31.0 Equipment	2		2
99.0 Direct obligations	397	346	473
99.0 Reimbursable obligations	6	10	10
99.9 Total new obligations, unexpired accounts	403	356	483

Employment Summary

Identification code 049-0180-0-1-251	2021 actual	2022 est.	2023 est.
1001 Direct civilian full-time equivalent employment	1,368	1,368	1,497

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.), \$5,090,000: Provided, That not to exceed \$2,500 shall be available for official reception and representation expenses.

Note.—A full-year 2022 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, 2022 (Division A of Public Law 117-43, as amended). The amounts included for 2022 reflect the annualized level provided by the continuing resolution.

OFFICE OF THE NATIONAL SCIENCE BOARD—Continued
Program and Financing (in millions of dollars)

Identification code 049-0350-0-1-251	2021 actual	2022 est.	2023 est.
Obligations by program activity:			
0001 Office of the National Science Board	4	5	5
Budgetary resources:			
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	5	5	5
1930 Total budgetary resources available	5	5	5
Memorandum (non-add) entries:			
1940 Unobligated balance expiring	-1		
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	1	1	1
3010 New obligations, unexpired accounts	4	5	5
3020 Outlays (gross)	-4	-5	-5
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	5	5	5
Outlays, gross:			
4010 Outlays from new discretionary authority	3	4	4
4011 Outlays from discretionary balances	1	1	1
4020 Outlays, gross (total)	4	5	5
4180 Budget authority, net (total)	5	5	5
4190 Outlays, net (total)	4	5	5

This appropriation supports the National Science Board, which 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	2021 actual	2022 est.	2023 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	2
99.9 Total new obligations, unexpired accounts	4	5	5

Employment Summary

Identification code 049-0350-0-1-251	2021 actual	2022 est.	2023 est.
1001 Direct civilian full-time equivalent employment	17	17	18

OFFICE OF INSPECTOR GENERAL

For necessary expenses of the Office of Inspector General as authorized by the Inspector General Act of 1978, \$23,393,000, of which \$400,000 shall remain available until September 30, 2024.

Note.—A full-year 2022 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, 2022 (Division A of Public Law 117-43, as amended). The amounts included for 2022 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049-0300-0-1-251	2021 actual	2022 est.	2023 est.
Obligations by program activity:			
0001 Office of Inspector General	18	18	23

Budgetary resources:

Identification code	2021 actual	2022 est.	2023 est.
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	18	18	23
1900 Budget authority (total)	18	18	23
1930 Total budgetary resources available	18	18	23

Change in obligated balance:

Identification code	2021 actual	2022 est.	2023 est.
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	2	3	3
3010 New obligations, unexpired accounts	18	18	23
3020 Outlays (gross)	-16	-18	-22
3041 Recoveries of prior year unpaid obligations, expired	-1		
3050 Unpaid obligations, end of year	3	3	4
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	2	3	3
3200 Obligated balance, end of year	3	3	4

Budget authority and outlays, net:

Identification code	2021 actual	2022 est.	2023 est.
Discretionary:			
4000 Budget authority, gross	18	18	23
Outlays, gross:			
4010 Outlays from new discretionary authority	15	15	19
4011 Outlays from discretionary balances	1	3	3
4020 Outlays, gross (total)	16	18	22
4180 Budget authority, net (total)	18	18	23
4190 Outlays, net (total)	16	18	22

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

Object Classification (in millions of dollars)

Identification code 049-0300-0-1-251	2021 actual	2022 est.	2023 est.
Direct obligations:			
11.1 Personnel compensation: Full-time permanent	10	10	14
12.1 Civilian personnel benefits	5	5	6
25.2 Other services from non-Federal sources	1	1	1
25.3 Other goods and services from Federal sources	2	2	2
99.9 Total new obligations, unexpired accounts	18	18	23

Employment Summary

Identification code 049-0300-0-1-251	2021 actual	2022 est.	2023 est.
1001 Direct civilian full-time equivalent employment	68	79	93

STEM EDUCATION

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, \$1,377,180,000, to remain available until September 30, 2024.

Note.—A full-year 2022 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, 2022 (Division A of Public Law 117-43, as amended). The amounts included for 2022 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 049-0106-0-1-251	2021 actual	2022 est.	2023 est.
Obligations by program activity:			
0001 STEM Education (formerly Education and Human Resources)	969	976	1,377
0100 Total Disc obligations	969	976	1,377
0302 S-STEM Scholarships for STEM	95	161	119
0303 ITEST grants for Mathematics, Science, or Engineering enrichment courses	52	75	40
0391 Total Mandatory Obligations (H-1B)	147	236	159

0401	American Rescue Plan Act (ARP)	24	37	.....
0799	Total direct obligations	1,140	1,249	1,536
0801	Education and Human Resources (Reimbursable)	4	10	10
0900	Total new obligations, unexpired accounts	1,144	1,259	1,546
Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	129	179	.....
1001	Discretionary unobligated balance brought fwd, Oct 1	4	.....	.....
1021	Recoveries of prior year unpaid obligations	8	.....	.....
1070	Unobligated balance (total)	137	179	.....
Budget authority:				
Appropriations, discretionary:				
1100	Appropriation	968	968	1,377
1130	Appropriations permanently reduced .....	.....	-60	.....
1160	Appropriation, discretionary (total)	968	908	1,377
Appropriations, mandatory:				
1200	Appropriation - American Rescue Plan Act	61	.....	.....
1201	Appropriation (special or trust fund)	213	162	159
1203	Appropriation (previously unavailable)(special or trust)	9	9	9
1230	Appropriations and/or unobligated balance of appropriations permanently reduced	-60	.....	.....
1232	Appropriations and/or unobligated balance of appropriations temporarily reduced	-9	-9	-9
1260	Appropriations, mandatory (total)	214	162	159
Spending authority from offsetting collections, discretionary:				
1700	Collected	3	10	10
1701	Change in uncollected payments, Federal sources	2	.....	.....
1750	Spending auth from offsetting collections, disc (total)	5	10	10
1900	Budget authority (total)	1,187	1,080	1,546
1930	Total budgetary resources available	1,324	1,259	1,546
Memorandum (non-add) entries:				
1940	Unobligated balance expiring	-1	.....	.....
1941	Unexpired unobligated balance, end of year	179	.....	.....

Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	2,684	2,870	2,816
3010	New obligations, unexpired accounts	1,144	1,259	1,546
3011	Obligations ("upward adjustments"), expired accounts	7	.....	.....
3020	Outlays (gross)	-934	-1,313	-1,446
3040	Recoveries of prior year unpaid obligations, unexpired	-8	.....	.....
3041	Recoveries of prior year unpaid obligations, expired	-23	.....	.....
3050	Unpaid obligations, end of year	2,870	2,816	2,916
Uncollected payments:				
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-9	-9	-9
3070	Change in uncollected pymts, Fed sources, unexpired	-2	.....	.....
3071	Change in uncollected pymts, Fed sources, expired	2	.....	.....
3090	Uncollected pymts, Fed sources, end of year	-9	-9	-9
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	2,675	2,861	2,807
3200	Obligated balance, end of year	2,861	2,807	2,907

Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	973	918	1,387
Outlays, gross:				
4010	Outlays from new discretionary authority	29	146	203
4011	Outlays from discretionary balances	783	978	998
4020	Outlays, gross (total)	812	1,124	1,201
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources	-5	-10	-10
4033	Non-Federal sources	-6	.....	.....
4040	Offsets against gross budget authority and outlays (total)	-11	-10	-10
Additional offsets against gross budget authority only:				
4050	Change in uncollected pymts, Fed sources, unexpired	-2	.....	.....
4052	Offsetting collections credited to expired accounts	8	.....	.....
4060	Additional offsets against budget authority only (total)	6	.....	.....
4070	Budget authority, net (discretionary)	968	908	1,377
4080	Outlays, net (discretionary)	801	1,114	1,191
Mandatory:				
4090	Budget authority, gross	214	162	159
Outlays, gross:				
4100	Outlays from new mandatory authority .....	.....	10	9
4101	Outlays from mandatory balances	122	179	236
4110	Outlays, gross (total)	122	189	245
4180	Budget authority, net (total)	1,182	1,070	1,536

4190	Outlays, net (total)	923	1,303	1,436
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The STEM Education (EDU) (formerly Education and Human Resources) 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, EDU collaborates with other NSF research units and Federal agencies, and promotes public-private partnerships. EDU 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. EDU 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 EDU programs aim to broaden participation of groups underrepresented in STEM fields by, for example, improving infrastructure and academic programs at minority-serving institutions. EDU 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	2021 actual	2022 est.	2023 est.
Direct obligations:			
11.8 Personnel compensation: Special personal services payments	6	6	6
25.1 Advisory and assistance services	26	26	26
25.3 Other goods and services from Federal sources	2	2	2
41.0 Grants, subsidies, and contributions	1,106	1,215	1,502
99.0 Direct obligations	1,140	1,249	1,536
99.0 Reimbursable obligations	4	10	10
99.9 Total new obligations, unexpired accounts	1,144	1,259	1,546

Trust Funds

DONATIONS

Special and Trust Fund Receipts (in millions of dollars)

Identification code 049-8960-0-7-251	2021 actual	2022 est.	2023 est.
0100 Balance, start of year .....	.....	.....	.....
Receipts:			
Current law:			
1130 Donations, National Science Foundation	32	10	10
2000 Total: Balances and receipts	32	10	10
Appropriations:			
Current law:			
2101 Donations	-32	-10	-10
5099 Balance, end of year .....	.....	.....	.....

Program and Financing (in millions of dollars)

Identification code 049-8960-0-7-251	2021 actual	2022 est.	2023 est.
Obligations by program activity:			
0002 Gemini Telescope	11	.....	.....
0003 International Ocean Drilling	10	.....	.....

DONATIONS—Continued
Program and Financing—Continued

Identification code 049-8960-0-7-251	2021 actual	2022 est.	2023 est.
0005 General Trust Fund	5	48	10
0900 Total new obligations, unexpired accounts (object class 41.0)	26	48	10
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	32	38	
Budget authority:			
Appropriations, mandatory:			
1201 Appropriation (special or trust fund)	32	10	10
1930 Total budgetary resources available	64	48	10
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	38		
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	53	35	48
3010 New obligations, unexpired accounts	26	48	10
3020 Outlays (gross)	-44	-35	-14
3050 Unpaid obligations, end of year	35	48	44
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	53	35	48
3200 Obligated balance, end of year	35	48	44
Budget authority and outlays, net:			
Mandatory:			
4090 Budget authority, gross	32	10	10
Outlays, gross:			
4100 Outlays from new mandatory authority		6	6
4101 Outlays from mandatory balances	44	29	8
4110 Outlays, gross (total)	44	35	14
4180 Budget authority, net (total)	32	10	10
4190 Outlays, net (total)	44	35	14

This account consists of contributions from organizations and individuals to fund various efforts in science, research, and education supported by NSF.

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 504 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.

NSF NONRECURRING EXPENSES FUND

There is hereby established in the Treasury of the United States a fund to be known as the nonrecurring expenses fund (the Fund): Provided, That unobligated balances of expired discretionary funds appropriated for this or any succeeding fiscal year from the general fund of the Treasury to the National Science Foundation by this or any other Act may be transferred (not later than the end of the fifth fiscal year after the last fiscal year for which such funds are available for the purposes for which appropriated) into the Fund: Provided further, That amounts deposited in the Fund shall be available until expended, and in addition to such other funds as may be available for such purposes, for information and business technology system modernization and facilities infrastructure improvements, including nonrecurring maintenance, necessary for the operation of the Foundation or its funded research facilities subject to approval by the Office of Management and Budget: Provided further, That amounts in the Fund may be obligated only after the Committees on Appropriations of the House of Representatives and the Senate are notified at least 15 days in advance of the planned use of funds.

GENERAL FUND RECEIPT ACCOUNTS

(in millions of dollars)

	2021 actual	2022 est.	2023 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	3	5	5
General Fund Offsetting receipts from the public	3	6	6