

TECHNICAL INFORMATION

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FY 2011 Appropriations Language

National Science Foundation

RESEARCH AND RELATED ACTIVITIES

For necessary expenses in carrying out the National Science Foundation Act of 1950, as amended (42 U.S.C. 1861-1875), and the Act to establish a National Medal of Science (42 U.S.C. 1880-1881); services as authorized by 5 U.S.C. 3109; maintenance and operation of aircraft and purchase of flight services for research support; acquisition of aircraft; and authorized travel; \$6,018,830,000, to remain available until September 30, 2012, of which not to exceed \$590,000,000 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, including up to \$54,000,000 for the procurement of polar icebreaking services from the Coast Guard: *Provided*, That the National Science Foundation shall only reimburse the Coast Guard for such sums as are agreed to according to the existing memorandum of agreement: *Provided further*, 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.

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, as amended (42 U.S.C. 1861-1875), including services as authorized by 5 U.S.C. 3109, authorized travel and rental of conference rooms in the District of Columbia, \$892,000,000, to remain available until September 30, 2012.

MAJOR RESEARCH EQUIPMENT AND FACILITIES CONSTRUCTION

For necessary expenses for the acquisition, construction, commissioning, and upgrading of major research equipment, facilities, and other such capital assets pursuant to the National Science Foundation Act of 1950, as amended (42 U.S.C. 1861-1875), including authorized travel, \$165,190,000, to remain available until expended.

AGENCY OPERATIONS AND AWARD MANAGEMENT

For agency operations and award management necessary in carrying out the National Science Foundation Act of 1950, as amended (42 U.S.C. 1861-1875); services authorized by 5 U.S.C. 3109; hire of passenger motor vehicles; not to exceed \$9,000 for official reception and representation expenses; uniforms or allowances therefor, as authorized by 5 U.S.C. 5901-5902; rental of conference rooms in the District of Columbia; and reimbursement of the Department of Homeland Security for security guard services; \$327,190,000: *Provided*, That contracts may be entered into under this heading in fiscal year 2011 for maintenance and operation of facilities, and for other services, to be provided during the next fiscal year.

Commerce, Justice, Science Appropriations Title V General Provisions:

SEC. 525. For an additional amount for the "Agency Operations and Award Management", National Science Foundation account, \$2,000,000, to increase the agency's acquisition workforce capacity and capabilities: *Provided*, That such funds shall be available only to supplement and not to supplant existing

acquisition workforce activities: Provided further, That such funds shall be available for training, recruitment, retention, and hiring additional members of the acquisition workforce as defined by the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 401 et seq.): Provided further, That such funds shall be available for information technology in support of acquisition workforce effectiveness or for management solutions to improve acquisition management.

OFFICE OF INSPECTOR GENERAL

For necessary expenses of the Office of Inspector General as authorized by the Inspector General Act of 1978, as amended, \$14,350,000, to remain available until September 30, 2012.

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, as amended (42 U.S.C 1863) and Public Law 86-209 (42 U.S.C. 1880 et seq.), \$4,840,000: *Provided*, That not to exceed \$2,500 shall be available for official reception and representation expenses.

SUMMARY OF FY 2011 BUDGETARY RESOURCES BY APPROPRIATION

(DOLLARS IN MILLIONS)

	FY 2009 Omnibus Actual	FY 2009 ARRA Actual	FY 2010 Estimate	FY 2011 Request	Change Over FY 2010 Estimate Amount	Percent
RESEARCH AND RELATED ACTIVITIES						
Appropriation	\$5,183.10	\$2,500.00	\$5,617.92	\$6,018.83	\$400.91	7.1%
Unobligated Balance Available Start of Year	0.56	-	\$481.95			
Unobligated Balance Available End of Year	-44.59	-437.36				
Adjustments to Prior Year Accounts ¹	10.26	-				
Subtotal, R&RA	5,149.33	2,062.64	6,099.87	\$6,018.83	-\$81.04	-1.3%
Transferred to/from other funds ²	3.07		-54.00	-		
Total Budgetary Resources	\$5,152.39	\$2,062.64	\$6,045.87	\$6,018.83	-\$27.04	-0.4%
EDUCATION AND HUMAN RESOURCES						
Appropriation	\$845.26	\$100.00	\$872.76	\$892.00	\$19.24	2.2%
Unobligated Balance Available Start of Year	0.01	-	15.02			
Unobligated Balance Available End of Year	-0.02	-15.00				
Adjustments to Prior Year Accounts ¹	0.28	-				
Total Budgetary Resources	\$845.52	\$85.00	\$887.78	\$892.00	\$4.22	0.5%
MAJOR RESEARCH EQUIPMENT & FACILITIES CONSTRUCTION						
Appropriation	\$152.01	\$400.00	\$117.29	\$165.19	\$47.90	40.8%
Unobligated Balance Available Start of Year	66.43	-	203.73			
Unobligated Balance Available End of Year	-57.73	-146.00				
Adjustments to Prior Year Accounts ¹	0.04	-				
Total Budgetary Resources	\$160.76	\$254.00	\$321.02	\$165.19	-\$155.83	-48.5%
AGENCY OPERATIONS AND AWARD MANAGEMENT						
Appropriation	\$294.00	-	\$300.00	\$329.19	\$29.19	9.7%
Unobligated Balance Available Start of Year	-	-	-			
Unobligated Balance Available End of Year	-0.06	-				
Adjustments to Prior Year Accounts ¹	-	-				
Subtotal, AOAM	293.94					
Transferred to/from other funds ²	0.15					
Total Budgetary Resources	\$294.09	-	\$300.00	\$329.19	\$29.19	9.7%

Totals may not add due to rounding.

¹Adjustments include upward and downward adjustments to prior year obligations

²In FY2009, NSF obligated incoming transfers \$3.22 million from USAID for Civilian Research and Development Foundation (CRDF). These transfers were allocated as follows: \$3.07 million Research and Related Activities, \$0.15M Agency Operations and Award Management. In FY2010, NSF transferred \$54 million to U.S. Coast Guard Operating Expenses for ice breaking services.

SUMMARY OF FY 2011 BUDGETARY RESOURCES BY APPROPRIATION

(DOLLARS IN MILLIONS)

	FY 2009 Omnibus Actual	FY 2009 ARRA Actual	FY 2010 Estimate	FY 2011 Request	Change Over FY 2010 Estimate Amount	Percent
<i>NATIONAL SCIENCE BOARD</i>						
Appropriation	\$4.03	-	\$4.54	\$4.84	\$0.30	6.6%
Unobligated Balance Available Start of Year	-	-				
Unobligated Balance Available End of Year	-0.01	-				
Adjustments to Prior Year Accounts ¹	-	-				
Total Budgetary Resources	\$4.02	-	\$4.54	\$4.84	\$0.30	6.6%
<i>OFFICE OF INSPECTOR GENERAL</i>						
Appropriation	\$12.00	\$2.00	\$14.00	\$14.35	\$0.35	2.5%
Unobligated Balance Available Start of Year	-	-	1.98			
Unobligated Balance Available End of Year	-0.01	-1.98				
Adjustments to Prior Year Accounts ¹	-	-				
Total Budgetary Resources	\$11.99	\$0.02	\$15.98	\$14.35	-\$1.63	-10.2%
<i>TOTAL DISCRETIONARY, NATIONAL SCIENCE FOUNDATION</i>	\$6,468.76	\$2,401.66	\$7,575.19	\$7,424.40	-\$150.79	-2.0%
<i>EDUCATION AND HUMAN RESOURCES, H-1B</i>						
Appropriation, Mandatory	\$88.66	-	\$100.00	\$100.00	\$100.00	100.0%
Unobligated Balance Available Start of Year	50.83	-				
Unobligated Balance Available End of Year	-52.62	-				
Adjustments to Prior Year Accounts ¹	-	-				
Total Budgetary Resources	\$86.87	-	\$100.00	\$100.00	\$0.00	0.0%
<i>TOTAL, NATIONAL SCIENCE FOUNDATION</i>	\$6,555.63	\$2,401.66	\$7,675.19	\$7,524.40	-\$150.79	-2.0%

Totals may not add due to rounding.

¹ Adjustments include upward and downward adjustments to prior year obligations

NSF FY 2011 FUNDING BY PROGRAM
(Dollars in Millions)

PROGRAM	FY 2009 Omnibus Actual	FY 2009 ARRA Actual	FY 2009 Total Actual	FY 2010 Estimate	FY 2011 Request	Change Over FY 2010 Estimate	
						Amount	Percent
BIOLOGICAL SCIENCES							
MOLECULAR AND CELLULAR BIOSCIENCES	\$121.28	\$61.53	\$182.81	\$125.59	\$133.69	\$8.10	6.4%
INTEGRATIVE ORGANISMAL SYSTEMS	212.34	61.71	274.05	216.25	226.70	10.45	4.8%
ENVIRONMENTAL BIOLOGY	120.37	63.23	183.60	142.55	155.59	13.04	9.1%
BIOLOGICAL INFRASTRUCTURE	117.95	38.74	156.69	126.86	145.63	18.77	14.8%
EMERGING FRONTIERS ¹	84.68	34.80	119.48	103.29	106.20	2.91	2.8%
Total, BIO²	\$656.62	\$260.00	\$916.62	\$714.54	\$767.81	\$53.27	7.5%
COMPUTER AND INFORMATION SCIENCE AND ENGINEERING							
COMPUTING & COMMUNICATION FOUNDATIONS	\$156.92	\$41.17	\$198.09	\$170.35	\$186.95	\$16.60	9.7%
COMPUTER & NETWORK SYSTEMS	188.30	92.25	280.55	204.42	227.08	22.66	11.1%
INFORMATION & INTELLIGENT SYSTEMS	150.93	61.17	212.10	163.32	189.74	26.42	16.2%
INFORMATION TECHNOLOGY RESEARCH	78.35	40.41	118.76	80.74	80.74	-	N/A
Total, CISE²	\$574.50	\$235.00	\$809.50	\$618.83	\$684.51	\$65.68	10.6%
ENGINEERING							
CHEMICAL, BIOENGINEERING, ENVIRONMENTAL & TRANSPORT SYSTEMS	\$146.00	\$60.57	\$206.57	\$156.82	\$169.07	\$12.25	7.81%
CIVIL, MECHANICAL & MANUFACTURING INNOVATION	174.93	57.96	232.90	188.00	206.50	18.50	9.84%
ELECTRICAL, COMMUNICATIONS & CYBER SYSTEMS	87.21	45.57	132.78	94.00	103.00	9.00	9.57%
INDUSTRIAL INNOVATION & PARTNERSHIP ³ SBIR/STTR	112.12 [90.39]	54.70 [49.91]	166.82 [140.3]	152.00 [125.77]	177.70 [142.86]	25.70 [17.09]	16.91% [13.59%]
ENGINEERING EDUCATION & CENTERS	118.23	32.18	150.41	124.11	138.40	14.29	11.51%
EMERGING FRONTIERS IN RESEARCH & INNOVATION	26.50	14.00	40.50	29.00	31.00	2.00	6.90%
Total, ENG²	\$664.99	\$264.99	\$929.98	\$743.93	\$825.67	\$81.74	10.99%

¹Centers moved from Emerging Frontiers to the Division of Biological Infrastructure in FY 2010. Science of Learning Centers (SLC) is cofunded with the Directorate for Social, Behavioral and Economic Sciences as of FY 2010. Funding for the Science of Learning Centers (SLC) is shown comparably for all years.

²In FY 2010, Science of Learning Centers (SLC) is transferred from the Office of Integrative Activities and is co-funded by SBE, BIO, CISE, and ENG. Funding for SLC is shown comparably for all years.

³Management responsibilities for PFI and SLC are transferred to the Directorate for Engineering and the Directorate for Social, Behavioral and Economic Sciences, respectively, as of FY 2010. Funding for the Partnerships for Innovation (PFI) and Science of Learning Centers (SLC) is removed for all years for comparability.

⁴The SBE Office of Multidisciplinary Activities (OMA) is created in FY2010, and program funding responsibilities are transferred from SES and BCS to OMA. Also in FY 2010, Science of Learning Centers (SLC) is transferred from the Office of Integrative Activities to SBE and split between BCS and OMA. Funding for OMA and SLC is shown comparably for all years.

⁵Within IA, EPSCoR, MRI, and ARI carried forward a combined \$420.15 million from the ARRA appropriation because solicitations occurred late in FY 2009. Awards will be made in FY 2010.

⁶Excludes \$89.08 million in obligations in FY 2009, and an estimated \$100.0 million in FY 2010 and FY 2011 receipts from H-1B Nonimmigrant Petitioner Fees.

⁷Funding for FY 2010 excludes a one-time appropriation transfer of \$54.0 million to U.S. Coast Guard per P.L. 111-117.

NSF FY 2011 FUNDING BY PROGRAM

(Dollars in Millions)

PROGRAM	FY 2009 Omnibus Actual	FY 2009 ARRA Actual	FY 2009 Total Actual	FY 2010 Estimate	FY 2011 Request	Change Over FY 2010 Estimate Amount	Percent
GEOSCIENCES							
ATMOSPHERIC & GEOSPACE SCIENCES	\$245.54	\$68.20	\$313.74	\$259.80	\$280.80	\$21.00	8.1%
EARTH SCIENCES	171.01	85.22	256.23	183.00	199.00	16.00	8.7%
INTEGRATIVE & COLLABORATIVE EDUCATION AND RESEARCH	61.47	79.58	141.05	97.92	97.60	-0.32	-0.3%
OCEAN SCIENCES	330.51	114.00	444.51	348.92	377.89	28.97	8.3%
Total, GEO	\$808.53	\$347.00	\$1,155.53	\$889.64	\$955.29	\$65.65	7.4%
MATHEMATICAL AND PHYSICAL SCIENCES							
ASTRONOMICAL SCIENCES	\$228.67	\$85.80	\$314.47	\$245.69	\$251.77	\$6.08	2.5%
CHEMISTRY	211.67	87.36	299.03	233.73	247.56	13.83	5.9%
MATERIALS RESEARCH	282.52	108.17	390.69	302.67	319.37	16.70	5.5%
MATHEMATICAL SCIENCES	224.84	97.34	322.18	241.38	253.46	12.08	5.0%
PHYSICS	262.47	96.30	358.77	290.04	298.19	8.15	2.8%
MULTIDISCIPLINARY ACTIVITIES	33.70	-	33.70	38.33	39.56	1.23	3.2%
Total, MPS	\$1,243.88	\$474.97	\$1,718.85	\$1,351.84	\$1,409.91	\$58.07	4.3%
SOCIAL, BEHAVIORAL AND ECONOMIC SCIENCES							
SOCIAL AND ECONOMIC SCIENCES	\$94.82	\$41.10	\$135.92	\$99.05	\$104.12	\$5.07	5.1%
BEHAVIORAL AND COGNITIVE SCIENCES	88.12	43.16	131.28	94.58	99.21	4.63	4.9%
SCIENCE RESOURCES STATISTICS	38.71	-	38.71	34.62	36.72	2.10	6.1%
OFFICE OF MULTIDISCIPLINARY ACTIVITIES	18.91	0.71	19.62	27.00	28.74	1.74	6.4%
Total, SBE^{2,4}	\$240.56	\$84.97	\$325.53	\$255.25	\$268.79	\$13.54	5.3%

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NSF FY 2011 FUNDING BY PROGRAM

(Dollars in Millions)

PROGRAM	FY 2009 Omnibus	FY 2009 ARRA	FY 2009 Total	FY 2010	FY 2011	Change Over FY 2010 Estimate	
	Actual	Actual	Actual	Estimate	Request	Amount	Percent
OFFICE OF INTERNATIONAL SCIENCE AND ENGINEERING	\$47.45	\$13.98	\$61.43	\$47.83	\$53.26	\$5.43	11.4%
OFFICE OF CYBERINFRASTRUCTURE	\$199.23	\$80.00	\$279.23	\$214.28	\$228.07	\$13.79	6.4%
OFFICE OF POLAR PROGRAMS							
ARCTIC SCIENCES	\$98.60	\$91.86	\$190.46	\$106.31	\$111.36	\$5.05	4.8%
ANTARCTIC SCIENCES	68.64	64.53	133.17	71.08	75.18	4.10	5.8%
ANTARCTIC INFRASTRUCTURE & LOGISTIC	246.66	15.50	262.16	266.76	280.18	13.42	5.0%
U.S. Antarctic Logistical Support Activities	[69.24]	[0.00]	[69.24]	[67.52]	[67.52]	-	-
POLAR ENVIROMENT, HEALTH & SAFETY	6.12	-	6.12	7.01	7.27	0.26	3.7%
USCG POLAR ICEBREAKING ²	53.52	-	53.52	[54.00]	54.00	54.00	N/A
Total, OPP	\$473.55	\$171.89	\$645.43	\$451.16	\$527.99	\$76.83	17.0%
INTEGRATIVE ACTIVITIES²							
EXPERIMENTAL PROGRAM TO STIMULATE COMPETITIVE RESEARCH (EPSCoR)	[133.00]	[30.00]	[163.00]	[147.12]	[154.36]	[7.24]	[4.9%]
MAJOR RESEARCH INSTRUMENTATION (MRI)	[99.98]	[99.85]	[199.83]	[90.00]	[90.00]	-	-
ACADEMIC RESEARCH INFRASTRUCTURE (ARI)	-	-	-	-	-	-	-
Total, IA^{3,5}	\$241.58	\$129.85	\$371.43	\$275.04	\$295.93	\$20.89	7.6%
U.S. ARCTIC RESEARCH COMMISSION	\$1.50	-	\$1.50	\$1.58	\$1.60	\$0.02	1.3%
Total, RESEARCH AND RELATED ACTIVITIES²	\$5,152.39	\$2,062.64	\$7,215.02	\$5,563.92	\$6,018.83	\$454.91	8.2%
EDUCATION AND HUMAN RESOURCES							
RESEARCH ON LEARNING IN FORMAL AND INFORMAL SETTINGS	\$226.68	-	\$226.68	\$242.00	\$247.85	\$5.85	2.4%
UNDERGRADUATE EDUCATION	283.08	85.00	368.08	292.41	289.98	-2.43	-0.8%
GRADUATE EDUCATION	181.67	-	181.67	181.44	185.26	3.82	2.1%
HUMAN RESOURCE DEVELOPMENT	154.08	-	154.08	156.91	168.91	12.00	7.6%
Total, EHR⁶	\$845.52	\$85.00	\$930.52	\$872.76	\$892.00	\$19.24	2.2%

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						Amount	Percent
MAJOR RESEARCH EQUIPMENT AND FACILITIES CONSTRUCTION	\$160.76	\$254.00	\$414.76	\$117.29	\$165.19	\$47.90	40.8%
AGENCY OPERATIONS AND AWARD MANAGEMENT	\$294.09	-	\$294.09	\$300.00	\$329.19	\$29.19	9.7%
NATIONAL SCIENCE BOARD	\$4.02	-	\$4.02	\$4.54	\$4.84	\$0.30	6.6%
OFFICE OF INSPECTOR GENERAL	\$11.99	\$0.02	\$12.01	\$14.00	\$14.35	\$0.35	2.5%
NATIONAL SCIENCE FOUNDATION⁷	\$6,468.76	\$2,401.66	\$8,870.42	\$6,872.51	\$7,424.40	\$551.89	8.0%

Totals may not add due to rounding.

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OBJECT CLASSIFICATION
NSF Consolidated Obligations
(Dollars in Millions)

Object Class Code	Standard Title	FY 2009 Actual	FY 2010 Estimate	FY 2011 Request
11.1	Full-time permanent	\$142	\$156	\$163
11.3	Other than fulltime permanent	13	13	15
11.5	Other personnel compensation	7	8	9
11.8	Special personal service payment	1	2	2
	Total personnel compensation	163	179	189
12.1	Civilian personnel benefits	38	40	42
21.0	Travel and transportation of persons	32	31	35
23.1	Rental payments to GSA	27	26	26
23.3	Communications, utilities, and miscellaneous charges	2	2	2
25.1	Advisory and assistance services	166	166	172
25.2	Other services	18	18	19
25.3	Purchases of goods and services from Government accounts	31	29	31
25.4	Operation and maintenance of facilities	444	444	444
25.5	Research and development contracts	19	19	19
26.0	Supplies and materials	6	6	7
31.0	Equipment	5	5	6
41.0	Grants, subsidies, and contributions	8,066	6,820	6,557
	Total, Direct obligations ¹	\$9,017	\$7,785	\$7,549

Totals may not add due to rounding.

¹Includes mandatory obligations, but excludes obligations for reimbursable accounts.

REIMBURSABLE ACTIVITY

Reimbursements for the Research and Related Activities Appropriation and the Education and Human Resources Appropriation are realized from other federal agencies that have entered into interagency agreements with the Foundation. NSF enters into agreements (including Memoranda of Understanding) with other U.S. government agencies, as authorized by the NSF Act, 42 U.S.C. 1870 (c) and the Economy Act: 31 U.S.C. 1535, under which NSF assumes some responsibility for activities supported by these agencies. These activities can include jointly funded projects and programs, support of research operations and logistics, and access to NSF supported research facilities.

Reimbursements by Agency

(Dollars in Millions)

DEPARTMENT/AGENCY	FY 2009 Actual
DEFENSE	
<i>Air Force</i>	\$12.9
<i>Army</i>	\$13.3
<i>Other DOD (DARPA, NSA & Intelligence)</i>	\$19.4
Subtotal, DOD	\$45.5
Commerce (Including Census, NOAA, & NIST)	\$9.6
Education	\$0.6
Energy	\$4.5
Environmental Protection Agency	\$1.4
State	\$0.5
Agriculture	\$2.6
Health & Human Services	\$21.4
Homeland Security	\$6.0
NASA	\$8.8
National Archives	\$1.9
Transportation	\$8.8
OTHER (less than \$500,000)	\$2.1
TOTAL REIMBURSEMENTS	\$113.8

Consistent with applicable legislation and GAO decisions, agreements include reimbursement for costs that are incurred in the management and administration of these awards.

In FY 2009, the largest portion of NSF's reimbursable activity came from joint activities with the Department of Defense (40.0 percent), the Department of Health and Human Services (18.8 percent), Department of Commerce (including Census, NOAA, & NIST) (8.4 percent), National Aeronautics and Space Administration (7.8 percent), the Department of Transportation (7.7 percent), the Department of Homeland Security (5.2 percent), and the Department of Energy (3.9 percent). Reimbursable activities with the Department of Defense were primarily for the management of the National Center for Atmospheric Research (NCAR). Reimbursable activities with the Department of Health and Human Services are for non-medical biological research such as the human frontiers science program and the Macromolecular Structure Database (MSD) program.

NSF Personnel Summary of Permanent Appointments

	FY 2009
	Actual
<u>Statutory Pay Systems</u>	<u>Appointments</u>
ES	81
AD	332
GS/GM-15	90
GS/GM-14	134
GS/GM-13	132
GS-12	107
GS-11	72
GS-10	13
GS-9	78
GS-8	36
GS-7	84
GS-6	14
GS-5	4
GS-4	1
Subtotal, GS/GM	765
Total, Permanent Appointments	1,178
Average Salary	\$112,450
All data are for permanent appointments.	

EXPLANATION OF CARRYOVER FOR FY 2009 INTO FY 2010 BY ACCOUNT

The National Science Foundation's (NSF) total unobligated balance of \$755.29 million from the FY 2009 Regular Discretionary, H-1B Nonimmigrant Petitioner account (Mandatory), and American Recovery and Reinvestment Act (ARRA) appropriations consist of amounts described below.

REGULAR DISCRETIONARY

Within the **Research and Related Activities (R&RA)** regular appropriation, NSF carried forward \$44.59 million into FY 2010. The major items include: awards and contracts from various programs throughout NSF that were not ready for obligation in FY 2009.

\$28.84 million: Directorate for Engineering: \$3.59 million for Small Business Innovation Research (SBIR) Phase I; \$16.19 million for SBIR Phase II; \$6.10 million for Small Business Technology Transfer (STTR) Phase I; and \$2.96 million for STTR Phase II.

- Reason for Carryover: The delay in obligation was due to two factors. First, ARRA provided for a significant increase in the total available funding for FY 2009, but the pool of candidate proposals in FY 2009 was received prior to the enactment of ARRA and therefore remained roughly the same as in previous years. Second, a significant influx of proposals was received in response to solicitations following the enactment of ARRA, but these were received too late to complete the merit review process by the end of the fiscal year.
- Obligated Q1 FY 2010: \$1.14 million for SBIR Phase I.
- Expected Obligation: \$27.70 million Q2 FY 2010.

\$14.73 million: Directorate for Mathematical and Physical Sciences: \$11.73 million for the Deep Underground Science and Engineering Laboratory (DUSEL); and \$3.0 million for the Mathematical Sciences Research Institutes.

- Reason for Carryover for DUSEL: Adjustments to proposal were required before obligation.
- Obligated January 2010.
- Reason for Carryover for Mathematical Sciences Research Institutes: Activity was pending final review and recommendation.
- Expected Obligation: Q2 FY 2010.

\$1.02 million: The remainder of R&RA regular appropriation carryover is for funding associated with projects/activities in various offices/directorates that were not ready for obligation. The delay in obligation is due to the significant increase in workload prompted by the receipt of Recovery Act appropriations. Obligation of these funds is expected in Q2 of FY 2010.

Within the **Education and Human Resources (EHR)** appropriation, a total of \$19,473 was carried forward into FY 2010.

Within the **Major Research Equipment and Facilities Construction (MREFC)** appropriation, a total of \$57.73 million was carried forward into FY 2010. This includes:

\$33.23 million: Alaska Region Research Vessel (ARRV).
\$5.91 million: Ocean Observatories Initiative (OOI).
\$7.39 million: IceCube Neutrino Observatory (IceCube).
\$1.20 million: South Pole Station Modernization (SPSM).
\$7.0 million: Advanced Technology Solar Telescope (ATST).

\$3.0 million: National Ecological Observatory Network (NEON).

- Reason for Carryover: For continuing costs associated with multi-year construction project.
- Expected Obligation: Funds will be obligated and expended over the remaining period of construction.

H-1B Nonimmigrant Petitioner Account (MANDATORY)

Within the **H-1B Nonimmigrant Petitioner** account (Mandatory), \$52.62 million was carried over into FY 2010. NSF's carryover for H-1B funded programs consists of \$45.06 million in S-STEM, and \$7.56 million in I-TEST. (These amounts include \$17.0 million in fourth quarter receipts received too late to be obligated by the end of the fiscal year.) All carryover funds were obligated Q1 FY 2010.

AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 (ARRA)

Note: The ARRA Chapter contains an obligation plan for all ARRA appropriated funds carried forward into FY 2010.

Within the **Research and Related Activities** appropriation, a total of \$437.36 million was carried forward into FY 2010. This includes:

Office of Integrative Activities: (\$200.15 million for MRI-R²; \$200.0 million for ARI-R²; and \$20.0 million for EPSCoR)

- Reason for Carryover: Solicitations occurred late in the year. The review process is ongoing.
- Expected Obligation during FY 2010: Q2 for MRI-R², Q2/Q3 for ARI-R², and Q3 for EPSCoR.

Directorate for Mathematical and Physical Sciences: \$15.0 million for upgrade at the National High Magnetic Field Laboratory (NHMFL)

- Reason for Carryover: Cooperative agreement was still under negotiation.
- Obligated December 2009.

Other R&RA funding (\$2.21 million) is for activities that will be obligated in Q2 FY 2010.

Within the **Education and Human Resources** appropriation, the Division of Graduate Education carried forward a total of \$15.0 million for the Science Masters program.

- Reason for Carryover: Solicitation was issued late in FY 2009.
- Expected Obligation: Awards expected in Q2/Q3 FY 2010.

Within the **Major Research Equipment and Facilities Construction** appropriation, a total of \$146.0 million was carried forward for the Advanced Technology Solar Telescope (ATST).

- Reason for Carryover: Cooperative agreement was being implemented. Approved by NSB in August 2009.
- Obligated January 2010.

Within the **Office of Inspector General** appropriation, \$1.98 million was carried forward.

- Reason for Carryover: Five year funds intended explicitly for ARRA use.
- Expected Obligation: Will be obligated over the 5 year availability of the funds.

**Regular Discretionary, Mandatory, and ARRA Appropriations
Distribution of FY 2009 Carryover into FY 2010**

(Dollars in Millions)

	FY 2010 Carryover from FY 2009	ARRA FY 2010 Carryover from FY 2009	Total FY 2010 Carryover
Research and Related Activities	\$44.59	\$437.36	\$481.95
Education and Human Resources	0.02	15.00	15.02
Major Research Equipment and Facilities Construction	57.73	146.00	203.73
Office of Inspector General	-	1.98	1.98
Subtotal	102.34	600.34	702.68
H-1B Nonimmigrant Petitioner (Mandatory)	52.62	-	52.62
Total	\$154.96	\$600.34	\$755.30

Totals may not add due to rounding.

FULL BUDGETARY COSTING

The tables below show two methods for allocating the full budgetary cost of the NSF FY 2011 Budget Request. The first shows the full budgetary costs allocated to each of NSF's operating directorates. The second shows these costs allocated to three of NSF's strategic outcome goals: Discovery, Learning, and Research Infrastructure. Stewardship, NSF's fourth strategic goal encompasses the indirect costs to be allocated under full budgetary costing. These allocations represent part of the process, using readily available information, by which NSF achieved the integration of budget, cost, and performance.

What is Full Budgetary Cost? OMB Circular A-11 defines "full-cost" as the sum of all budget resources used by an agency to achieve program outputs and outcomes. These include both *direct* program costs and *indirect* costs, which generally include administrative costs and other activities that are not directly attributable to a single program or activity. For two of NSF's appropriations, Research and Related Activities (R&RA) and Education and Human Resources (EHR), all funds are directly attributable to directorates and outcome goals. For NSF's other appropriations, Major Research Equipment and Facilities Construction (MREFC), Agency Operations and Award Management (AOAM), the National Science Board (NSB), and the Office of Inspector General (OIG) funds are distributed using the methodologies described below.

Allocation by Directorate

The current budget structure contains program activities within R&RA and EHR that equate to directorates. Therefore, R&RA and EHR funding is already aligned by directorate. MREFC funds projects that are managed by a particular NSF directorate. Therefore, each MREFC project can be directly associated with a particular directorate. In addition, each managing directorate is responsible for the initial planning, design, and follow-on operations and maintenance costs that are funded through R&RA. The MREFC program funds are assigned to the managing directorate responsible for oversight of a particular project. (Table 1)

All budget items funded through the AOAM, NSB, and OIG appropriations accounts are defined as Stewardship and are allocated to directorates. More than half of the AOAM account can be precisely associated with an individual directorate. These direct AOAM budget items consist of distributed funding for travel, training, equipment, supplies, incentive awards, and premium pay. Also, space rental and personnel compensation and benefits (PC&B) of employees in a particular directorate are attributed to that directorate in the financial accounting system.

Once direct AOAM budget items that are associated with a particular directorate have been assigned, then budget items associated with the Office of Information and Resource Management (IRM), Office of Budget, Finance and Award Management (BFA), the staff offices in the Office of the Director (OD), the NSB, and OIG are allocated. These indirect AOAM budget items are allocated to a particular directorate based on its proportion of the total FY 2011 Request. The FY 2011 NSB and OIG budgetary costs are assigned using the same methodology as the Indirect AOAM costs total. (Table 1)

Allocations by Strategic Outcome Goal

The full budgetary costing by Discovery, Learning, and Research Infrastructure was derived by using the same methodology as stated above, except the Direct AOAM budget items, Indirect AOAM budget items, and total NSB, and OIG funding were assigned using the strategic goal percentages for each directorate. (Table 2)

FY 2011 FULL BUDGETARY COSTING

Table 1: Allocation of Major Research Equipment and Facilities Construction (MREFC),
Agency Operations and Award Management (AOAM), National Science Board (NSB), and the Office of Inspector General (OIG)
(Dollars in Thousands)

FY 2011 Congressional Request	BIO	CISE	ENG	GEO	MPS	SBE	OCI	OISE	OPP	IA	SUBTOTAL	EHR	TOTAL
R&RA & EHR	\$767,810	\$684,510	\$825,670	\$955,290	\$1,409,910	\$268,790	\$228,070	\$53,260	\$529,590	\$295,930	\$6,018,830	\$892,000	\$6,910,830
MREFC													
AdvLIGO					23,580						\$23,580		\$23,580
ALMA Construction					13,910						\$13,910		\$13,910
ARRV											-		-
ATST					17,000						\$17,000		\$17,000
EarthScope											-		-
HIAPER											-		-
IceCube Neutrino Observatory											-		-
NEES											-		-
NEON	20,000										\$20,000		\$20,000
OPP DOJ Judgment LC-130s											-		-
OOI				90,700							\$90,700		\$90,700
RSVP											-		-
Scientific Ocean Drilling											-		-
South Pole Station Modernization											-		-
Terascale Computing Systems											-		-
MREFC Subtotals	\$20,000	-	-	\$90,700	\$54,490	-	-	-	-	-	\$165,190	-	\$165,190
Total FY 2011 Submission by Activity including MREFC	\$787,810	\$684,510	\$825,670	\$1,045,990	\$1,464,400	\$268,790	\$228,070	\$53,260	\$529,590	\$295,930	\$6,184,020	\$892,000	\$7,076,020
STEWARDSHIP													
Direct AOAM													
Space Rental	4,953	2,644	5,205	4,281	5,330	4,491	420	1,637	1,805		\$30,766	\$5,624	\$36,390
PC&B	29,655	15,833	31,163	25,634	31,917	26,891	2,513	9,801	10,807		\$184,214	\$33,676	\$217,890
Distributed AOAM	1,858	992	1,952	1,606	1,999	1,685	157	614	677		\$11,540	\$2,110	\$13,650
Direct AOAM Subtotals	\$36,466	\$19,469	\$38,320	\$31,521	\$39,246	\$33,067	\$3,090	\$12,052	\$13,289		\$226,520	\$41,410	\$267,930
Indirect AOAM Cost Allocation	8,338	4,451	8,762	7,207	8,973	7,560	707	2,756	3,038		\$51,792	\$9,468	\$61,260
Direct & Indirect AOAM Subtotals	\$44,804	\$23,920	\$47,082	\$38,728	\$48,219	\$40,627	\$3,797	\$14,808	\$16,327		\$278,312	\$50,878	\$329,190
NSB Allocation	\$659	\$352	\$692	\$569	\$708	\$597	\$56	\$218	\$240		\$4,091	\$748	\$4,840
OIG Allocation	\$1,953	\$1,043	\$2,052	\$1,688	\$2,102	\$1,771	\$166	\$645	\$712		\$12,132	\$2,218	\$14,350
NSF TOTAL	\$835,226	\$709,825	\$875,496	\$1,086,975	\$1,515,429	\$311,785	\$232,089	\$68,931	\$546,869	\$295,930	\$6,478,555	\$945,844	\$7,424,400

FY 2011 FULL BUDGETARY COSTING

Table 2: Allocation by Discovery, Learning, and Research Infrastructure
(Dollars in Thousands)

Total Directorate FY 2011	BIO	CISE	ENG	GEO	MPS	SBE	OCI	OISE	OPP	IA	R&RA	EHR	TOTAL
Discovery	623,936	636,291	759,595	534,073	1,023,765	238,257	76,104	51,692	131,115	180,569	\$4,255,397	\$206,732	\$4,462,130
Learning	56,634	41,130	79,906	47,236	67,213	18,575	11,667	17,106	7,299	21,923	368,689	722,147	\$1,090,836
Research Infrastructure	154,656	32,404	35,995	505,666	424,451	54,953	144,318	133	408,455	93,438	1,854,469	16,965	\$1,871,434
FULL BUDGETARY COST	\$835,226	\$709,825	\$875,496	\$1,086,975	\$1,515,429	\$311,785	\$232,089	\$68,931	\$546,869	\$295,930	\$6,478,555	\$945,844	\$7,424,400

Totals may not add due to rounding.

