Congressional Research Service
Informing the legislative debate since 1914

The National Science Foundation: FY2016 Budget Request and Funding History

(name redacted)
Specialist in Science and Technology Policy

August 28, 2015

Congressional Research Service
7-....
www.crs.gov
R44170

CRS REPORT
Prepared for Members and
Committees of Congress

Summary

The National Science Foundation (NSF) supports both basic research and education in the non-medical sciences and engineering. Congress established the foundation in 1950 and directed it to "promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." The NSF is a major source of federal support for U.S. university research, especially in certain fields such as mathematics and computer science. It is also responsible for significant shares of the federal science, technology, engineering, and mathematics (STEM) education program portfolio and federal STEM student aid and support.

Overall, the Obama Administration seeks $7.724 billion for the NSF in FY2016, a $379 million (5%) increase over the FY2015 estimate of $7.344 billion. Under the request, the main research account (Research and Related Activities or RRA) would increase by $253 million or 4%. The main education account (Education and Human Resources) would grow by nearly $100 million (11%).

H.R. 2578 (Commerce, Justice, Science, and Related Agencies Appropriations Act, 2016) as passed by the House would provide $7.394 billion to the NSF in FY2016, or $50 million more than the FY2015 estimated funding level. The same bill as reported by the Senate Committee on Appropriations would provide $7.344 billion, or no change from the prior year. The Obama Administration threatened to veto H.R. 2578 when it was considered by the House (for a variety of reasons, only some of which related to the NSF).

As passed by the House and as reported by the Senate committee, H.R. 2578 would provide close to FY2015 levels to five of six major NSF accounts in FY2016. The primary difference between the House and the Senate committee is on funding for RRA. The House proposes a $50 million increase; the Senate committee recommends the FY2015 estimated level. The main education account would not increase (as requested) under either proposal. **Table 1** tracks FY2016 proposed funding levels for NSF.

The report that accompanied H.R. 2578 when it was reported from the House Committee on Appropriations contains language that would alter the balance of NSF research funding in favor of certain fields of science. The House report also directs NSF to describe—and publish with each award abstract—how each award serves the national interest. The Senate Appropriations Committee report includes no such provisions.

Growth in the NSF budget (year-over-year) slowed after FY2003 and has remained close to flat since FY2010. (Median year-over-year growth in NSF funding was 7% between FY1953 and FY2015, 4% between FY2004 and FY2015, and 2% between FY2011 and FY2015.) **Table 2**, **Figure 1**, and **Figure 2** show the long-term trends in NSF authorizations, budget requests, and appropriations since the foundation was first authorized in the early 1950s.

Most NSF funding supports scientific and technological research. Further, the portion of NSF spending that goes to research increased over the past decade. Within the NSF total, RRA has accounted for the lion's share of growth in NSF obligations since FY2003. (See **Table 3**.)

Table 4 shows FY2013 authorized funding levels, as well as FY2014 actual and FY2015 estimated appropriations to the NSF. It also includes proposed FY2016 funding levels under various NSF reauthorization measures introduced in the 114th Congress.

For more information about the NSF, see CRS Report R43585, *The National Science Foundation: Background and Selected Policy Issues*, by (name redacted); or CRS Report R43880, *The America COMPETES Acts: An Overview*, by (name redacted) .

Contents

Introduction 1
FY2016 Budget and Appropriations Actions 1
Research and Related Activities (RRA) 4
Education and Human Resources (EHR) 5
Major Research Equipment and Facilities Construction (MREFC) 6
NSF Funding History 6
FY2015 Budget and Appropriations (Final Summary) 7
FY2014 Budget and Appropriations (Final Summary) 8
Long-term Funding Trends (Tables and Figures) 8
Appropriations Authorizations 14

Figures

Figure 1. Current Dollar NSF Authorizations, Budget Requests, and Appropriations: FY1951 to FY2016 Request 11
Figure 2. Constant Dollar NSF Authorizations, Budget Requests, and Appropriations: FY1951 to FY2016 Request 12

Tables

Table 1. NSF Funding by Major Account 3
Table 2. NSF Authorizations, Budget Requests, and Appropriations: FY1951-FY2016 9
Table 3. NSF Obligations by Major Account: FY2003-FY2015 12
Table 4. NSF Funding Under Selected, Proposed Reauthorization Acts 14

Contacts

Author Contact Information 15

Introduction

The National Science Foundation (NSF) supports both basic research and education in the non-medical sciences and engineering. Congress established the foundation in 1950 and directed it to "promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." The NSF is a major source of federal support for U.S. university research, especially in certain fields such as mathematics and computer science. It is also responsible for significant shares of the federal science, technology, engineering, and mathematics (STEM) education program portfolio and federal STEM student aid and support.

This report describes selected items from the Administration's FY2016 budget request for NSF and tracks legislative action on FY2016 appropriations to the foundation. It also details selected NSF appropriations authorizations proposed in the 114th Congress, summarizes budget and appropriations action from FY2015 and FY2014, and presents information on historical funding for the foundation.

NSF adopted its current appropriations account structure in FY2003. In general, NSF's major accounts have been comparable since then.[1] NSF has six major appropriations accounts: Research and Related Activities (RRA), Education and Human Resources (EHR), Major Research Equipment and Facilities Construction (MREFC), Agency Operations and Award Management (AOAM), National Science Board (NSB), and the Office of the Inspector General (OIG). The majority of NSF's primary mission activities are funded through RRA, EHR, and MREFC.

Appropriations to NSF are typically included in annual Commerce, Justice, Science and Related Agencies Appropriations Acts. (The Congressional Research Service tracks these acts on CRS.gov, at http://www.crs.gov/appropriationsstatustable/index.) NSF's budget justifications are published on the agency's website at http://www.nsf.gov/about/budget/. More information about the NSF may also be found in CRS Report R43585, *The National Science Foundation: Background and Selected Policy Issues*, by (name redacted) ; and CRS Report R43880, *The America COMPETES Acts: An Overview*, by (name redacted) .

FY2016 Budget and Appropriations Actions

Overall, the Obama Administration seeks $7.724 billion for the NSF in FY2016, a $379 million (5%) increase over the FY2015 estimate of $7.344 billion.[2] Under the request, RRA would increase by $253 million or 4%. EHR would grow by nearly $100 million (11%). (See **Table 1**.)

As passed by the House, H.R. 2578 (Commerce, Justice, Science, and Related Agencies Appropriations Act, 2016) would provide a total of $7.394 billion to NSF in FY2016. This amount is $50 million (1%) more than the FY2015 estimated funding level and $329 million (4%) less than the Administration request. The House bill would keep most NSF accounts at FY2015 levels. The $50 million increase in total NSF funding would accrue to RRA. (A small increase in funding for the OIG would be offset by a similar reduction in MREFC.) When it was reported from the House Committee on Appropriations, H.R. 2578 was accompanied by H.Rept. 114-130 (referred to as the "House report" in the section). The House report directs NSF to comply with section 106 of H.R. 1806 (America COMPETES Reauthorization Act of 2015) as

[1] In FY2008, NSF shifted the EPSCoR program from EHR to RRA.

[2] NSF's congressional budget justifications typically refer to current fiscal year funding levels in "estimated" amounts.

reported, which requires NSF to publicly articulate (in the award abstract from NSF's public awards database) how each award serves the national interest. The Obama Administration threatened to veto H.R. 2578 when it was considered by the House (for a variety of reasons, only some of which related to the NSF—see text box titled, "Veto?").

As amended and reported by the Senate Committee on Appropriations, H.R. 2578 would provide close to the FY2015 estimated funding levels to all major NSF accounts in FY2016. RRA and MREFC would receive slightly less than their FY2015 funding levels; OIG would receive slightly more. When it was reported from the Senate Committee on Appropriations, H.R. 2578 was accompanied by S.Rept. 114-66 (referred to as the "Senate report" in this section).

NSF identified eight priorities in its FY2016 budget documents. Four of these programs have been foundation priorities since at least FY2013: Cyber-enabled Materials, Manufacturing, and Smart Systems (CEMMSS, $257 million requested, 11% increase); Cyberinfrastructure Framework for 21st Century Science, Engineering, and Education (CIF21, $143 million requested, 11% increase); Science, Engineering, and Education for Sustainability (SEES, $81 million requested, 42% reduction); and Secure and Trustworthy Cyberspace (SaTC, $124 million requested, 1% increase). New priorities in FY2016 include Clean Energy Technology ($377 million, 2% increase), Innovation Corps (I-Corps, $30 million, 14% increase), NSF Research Traineeships (NRT, $62 million, 1% increase), and Research at the Interface of Biological, Mathematical, and Physical Sciences (BioMaPS, $33 million, 12% increase).

Table 1. NSF Funding by Major Account

(budget authority in millions of dollars)

Account	FY2015 Estimate	FY2016 Request	FY2016 House-Passed	FY2016 Senate-Reported	FY2016 Enacted
Research and Related Activities (RRA)					
Biological Sciences (BIO)	*731.0*	*747.9*	*see note[a]*	*n/s*	
Computer and Information Science and Engineering (CISE)	*921.7*	*954.4*	*see note[a]*	*n/s*	
Engineering (ENG)	*892.3*	*949.2*	*see note[a]*	*n/s*	
Geosciences (GEO)	*1,304.4*	*1,365.4*	*see note[a]*	*n/s*	
Mathematical and Physical Sciences (MPS)	*1,336.7*	*1,366.2*	*see note[a]*	*n/s*	
Social, Behavioral, and Economic Sciences (SBE)	*272.2*	*291.5*	*see note[a]*	*n/s*	
Office of International Science and Engineering (OISE)[a]	*48.5*	*51.0*	*48.5[a]*	*n/s*	
Integrative Activities (IA)[a]	*425.3*	*459.2*	*425.3[a]*	*n/s*	
U.S. Arctic Research Commission (USARC)	*1.4*	*1.5*	*1.4[a]*	*n/s*	
RRA Subtotal	**5,933.7**	**6,186.3**	**5,983.6**	**5,933.6**	
Education and Human Resources (EHR)	**866.0**	**962.6**	**866.0**	**866.0**	
Major Research Equipment and Facilities Construction (MREFC)	**200.8**	**200.3**	**200.0**	**200.3**	
Agency Operations and Award Management (AOAM)	**325.0**	**354.8**	**325.0**	**325.0**	
National Science Board (NSB)	**4.4**	**4.4**	**4.4**	**4.4**	
Office of the Inspector General (OIG)	**14.4**	**15.2**	**15.2**	**14.5**	
NSF, Total	**7,344.2**	**7,723.6**	**7,394.2**	**7,343.8**	

Source: FY2016 *NSF Budget Request to Congress*; H.R. 2578, as passed by the House, and H.Rept. 113-130; as well as, H.R. 2578, as amended and reported in the Senate, and S.Rept. 114-54.

Notes: The account structure in **Table 1** reflects the realignment (in FY2015) of OISE and IA as separate budget activities. The term "n/s" means "not specified." Totals may not add due to rounding.

a. H.Rept. 114-130 directs NSF to ensure that the BIO, CISE, ENG, and MPS directorates receive 70% of the committee recommendation for RRA, or $4.189 billion, in FY2016. The remaining $1.795 billion would be distributed to the other RRA accounts: GEO, SBE, OISE, IA, and USARC. Of the $1.795 billion provided for GEO, SBE, OISE, IA, and USARC, $475 million would go to OISE, IA, and USARC. (This is because the House report further directs NSF to provide no less than the FY2015 estimate for OISE, IA, and USARC in FY2016.) The remaining funds, $1.320 billion, would go to GEO and SBE.

Research and Related Activities (RRA)

The Administration seeks $6.186 billion for RRA in FY2016. This amount is $253 million (4%) more than the FY2015 estimated funding level of $5.934 billion. H.R. 2578, as passed by the House, would provide $5.984 billion to this account in FY2016. As amended and reported by the Senate Committee on Appropriations, H.R. 2578 would provide $5.934 billion.

FY2015 House report language (H.Rept. 113-448) directed NSF to apply any additional appropriations (over FY2015 RRA requested levels) to four major RRA subaccounts: BIO, CISE, ENG, and MPS.[3] NSF received $126 million more than requested for RRA in FY2015. As directed, NSF applied the additional funding to the specified major RRA subaccounts, which each received 3% to 4% increases over FY2015 requested levels. Funding for GEO, SBE, IIA/OISE, and USARC was at FY2015 requested levels.

The FY2016 request seeks increases ranging from 2% to 8% for all major RRA subaccounts. However, the request seeks slightly more (on average, as a percentage over the prior year) for accounts that did not receive extra funding over requested levels in FY2015 (i.e., GEO, SBE, IIA/OISE, and USARC).[4] Nevertheless, more than half of the total requested increase for RRA (54% of $253 million) would go to BIO, CISE, ENG, and MPS.

As previously noted, H.R. 2578, as passed by the House, would provide a total of $5.984 billion to RRA in FY2016—about $50 million more than the FY2015 estimate. The House report further directs NSF to provide no less than 70% of total FY2016 RRA funding to BIO, CISE, ENG, and MPS. Under these provisions, BIO, CISE, ENG, and MPS would split $4.189 billion in FY2016. This amount represents an 8% increase ($307 million) over the combined total that these four major subaccounts received in FY2015 ($3.882 billion).

Veto?

On June 1, 2015, the Obama Administration issued a "Statement of Administration Policy" on H.R. 2578, as considered by the House. That statement indicated that the Administration strongly opposed House passage of H.R. 2578 and that senior advisors would recommend a veto. The statement described a number of concerning provisions from the bill, most of which were not related to NSF. However, the statement also cited perceived insufficiencies in the NSF top line, as well as the allocation of RRA funding by discipline.[5]

The remaining major RRA subaccounts (GEO, SBE, OISE, IA, and USARC) would split $1.795 billion. This amount is $257 million or 13% less than the combined total these accounts received in FY2015 ($2.052 billion). Other House report provisions further direct NSF to provide at least FY2015 levels to OISE, IA, and USARC. Therefore, of the $1.795 billion total provided for GEO, SBE, OISE, IA, and USARC in the House report, $475 million would go to OISE, IA, and USARC, while GEO and SBE would split $1.320 billion. GEO and SBE received $1.577 billion (combined) in FY2015, which is $257

[3] Policymakers actively debate Congressional funding directives at the major subaccount level in RRA. Some analysts assert that legislators have a role in establishing funding priorities by scientific field within RRA, as part of the legislative oversight function and in order to assure accountability for taxpayer funds. Other analysts argue that the scientists who manage NSF ought to determine the distribution of funding by field, based on their deeper knowledge of (1) research needs and scientific possibilities within each field, and (2) how these needs are best balanced across the NSF portfolio. For more information, see CRS Report R43585, *The National Science Foundation: Background and Selected Policy Issues*, by (name redacted) .

[4] The average requested percentage increase for BIO (2%), CISE (4%), ENG (6%), and MPS (2%) is 4%. The average requested percentage increase for GEO (5%), SBE (7%), IIA/OISE (8%), and USARC (5%) is 6%.

[5] Executive Office of the President, Office of Management and Budget, "Statement of Administration Policy: H.R. 2578—Commerce, Justice, Science, and Related Agencies Appropriations Act, 2016," June 1, 2015, at https://www.whitehouse.gov/sites/default/files/omb/legislative/sap/114/saphr2578r_20150601.pdf.

million (16%) more than they would receive in FY2016 under the House report. Distributed proportionally, which the House report does not require but has been past practice at NSF in some instances, this 16% decrease in funding would reduce support for GEO by $212 million (from $1.304 billion in FY2015 to $1.092 billion in FY2015) and would reduce support for SBE by $44 million (from $272 million in FY2015 to $228 million in FY2016).

Other RRA provisions in the House report provide $147 million for the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) initiative; $177 million for Advanced Manufacturing; and $50 million for the International Ocean Drilling Program (IODP).

As amended and reported by the Senate Committee on Appropriations, H.R. 2578 would provide $5.934 billion to RRA in FY2016—the same amount as the FY2015 estimate, $253 million less than the request, and $50 million less than the House. The Senate report is silent on the question of the distribution of funding by major subaccount within RRA. Provisions in the Senate report include $15 million for research in biomanufacturing; $159 million for cybersecurity research; and $10 million for a pilot program to provide research funding to Historically Black Colleges and Universities (HBCUs) from within RRA. (HBCUs already receive targeted funding through EHR.)

The House report would provide $160 million for the Experimental Program to Stimulate Competitive Research (EPSCoR); the Senate report would provide just under this amount. The Administration seeks $170 million for EPSCoR in FY2016, $10 million (6%) more than the FY2015 estimated funding level of just under $160 million.

Education and Human Resources (EHR)

The FY2016 request for EHR is $963 million, or $97 million (11%) more than the FY2015 estimated level of $866 million. Most of the requested increase ($81 million) would go to activities classified as research and development (R&D). This additional investment would further shift the balance between R&D and education and training within EHR.[6] If Congress adopts the FY2016 request, the portion of EHR dedicated to R&D activities would increase to 49%. By comparison, in FY2008 (the earliest year for which comparable budget data are available), R&D activities constituted 11% of EHR funding. The character of EHR's R&D funding has also shifted, moving from about 91% basic research in FY2008 to about 33% basic research in the FY2016 request. It is not entirely clear what has driven these changes or how these changes have affected program activities and constituencies.[7]

EHR programs that are widely tracked by congressional policymakers include the Graduate Research Fellowship (GRF) and National Research Traineeship (NRT). The FY2016 request for GRF is $338 million, $4 million (1%) over the FY2015 estimated level of $333 million. GRF funding would be split equally between RRA and EHR, which would each contribute $169 million. The FY2016 request for NRT is $62 million, which is essentially the same as the FY2015 estimate. Funding for the NRT would not be evenly split between EHR and RRA. The RRA

[6] According to Office of Management and Budget (OMB) character classification definitions, most EHR funding goes to R&D or to education and training. As described by OMB, the education and training classification includes scholarships, as well as operating assistance for schools and colleges. For more information, see OMB Circular A-11, Section 84, "Character Classification (Schedule C)" at http://www.whitehouse.gov/sites/default/files/omb/assets/a11_current_year/s84.pdf.

[7] The NSF asserts that some of the increases in activities classified as R&D be attributable to OMB-driven reclassification of EHR activities. However, some stakeholders perceive a general increase in research requirements across all EHR solicitations.

contribution would be $27 million, $7 million below the FY2015 estimate of $33 million. The EHR contribution would be $35 million, $7 million above the FY2015 estimate of $28 million.

The House-passed and Senate Committee on Appropriations-reported versions of H.R. 2578 agree on topline funding for EHR in FY2016. Each would provide $866 million. This amount is equal to the FY2015 estimate and $97 million below the request.

Provisions in the House report include $66 million for the Advanced Technological Education (ATE) program—the same as the FY2015 funding level, FY2016 request, and Senate report recommendation. The House report also recommends $65 million for Advancing Informal STEM Learning (AISL), which is $10 million more than the FY2015 estimate and $5 million more than both the FY2016 request and Senate report recommendation.

The Senate report recommends $61 million for the Robert Noyce Teacher Scholarship Program (same as FY2015 estimate and FY2016 request); $45 million for Cybercorps: Scholarships for Service (same as FY2015 estimate and FY2016 request); and $52 million for STEM+C Partnerships ($5 million less than the FY2015 estimate and equal to the FY2016 request). The House report is silent on these programs.

Broadening participation provisions in the House report would provide $35 million for the Historically Black Colleges and Universities Undergraduate Program (HBCU-UP). This amount is $3 million more than the FY2015 estimated funding level, the FY2016 request, and the Senate report recommendation. The House report also recommends $46 million for the Louis Stokes Alliance for Minority Participation (LSAMP) and $14 million for the Tribal Colleges and Universities Program (T-CUP). These amounts are equal to the FY2015 estimated funding levels, FY2016 requests, and Senate report recommendations for these two programs.

The Senate report recommends $8 million for Alliances for Graduate Education (AGEP) and $24 million for Centers for Research Excellence in Science and Technology (CREST). These amounts are the same as both the FY2015 estimated funding levels and FY2016 requests for these programs. The House report does not specify funding for these programs.

With respect to Hispanic Serving Institutions (HSIs), the Senate report would provide $5 million for NSF to implement an HSI program. The House report would require NSF to report on targeted funding opportunities (of at least $30 million) for HSIs.

Major Research Equipment and Facilities Construction (MREFC)

The Administration seeks just over $200 million for MREFC in FY2016, which is close to the FY2015 estimate of $201 million. In FY2016, MREFC funding would pay for the final year of National Ecological Observatory Network (NEON) construction, and would provide ongoing support for the Large Synoptic Survey Telescope (LSST) and Daniel K. Inouye Solar Telescope (DKIST).

The House-passed and Senate Committee on Appropriations-reported versions of H.R. 2578 would each provide around $200 million to MREFC in FY2016; with the Senate report recommending the requested level (exactly) and the House report recommending slightly less.

NSF Funding History

The following sections summarize NSF budget and appropriations action from the two most recent fiscal years (FY2015 and FY2014), and provide funding data and trends since the foundation was established in 1950.

FY2015 Budget and Appropriations (Final Summary)

FY2015 enacted funding for NSF is $7.344 billion. This amount is $213 million (3%) more than the FY2014 actual funding level of $7.131 billion and $89 million (1%) more than the FY2015 request for $7.255 billion. Under the Consolidated and Further Continuing Appropriations Act, 2015 (P.L. 113-235), RRA, EHR, NSB, and OIG received 3% to 4% more than their FY2014 actual levels. AOAM received 6% more; MREFC received no increase. Compared to the request, EHR and AOAM received 3% and 4% less, respectively, and RRA received 2% more. MREFC, NSB, and OIG received their requested levels.

The joint explanatory statement printed in the December 11, 2014, *Congressional Record* accompanied P.L. 113-325 and provided additional guidance on FY2015 funding for certain NSF programs and accounts.[8] Among other things, the explanatory statement adopted by reference House report language requiring NSF to apply any funding increases it received for RRA (above requested levels) to MPS, CISE, ENG, and BIO.

The Administration initially sought $7.255 billion in funding for the NSF in FY2015.[9] The request held funding levels for RRA and MREFC essentially constant while seeking a 7% increase for EHR as well as an 11% increase for AOAM. Most of the requested increase in AOAM funding was for the new NSF headquarters. NSF's FY2015 budget request to Congress highlighted five initiatives that were also foundation priorities in FY2014: Cognitive Science and Neuroscience ($29 million); Cyber-enabled Materials, Manufacturing, and Smart Systems ($213 million); Cyberinfrastructure Framework for 21st Century Science, Engineering, and Education ($125 million); Science, Engineering, and Education for Sustainability ($139 million); and Secure and Trustworthy Cyberspace ($100 million). The FY2015 NSF budget request incorporated STEM education program changes in accordance with the Administration's revised FY2015 government-wide reorganization of federal STEM education programs.[10]

The House passed H.R. 4660 (Commerce, Justice, Science, and Related Agencies Appropriations Act, 2015) by a vote of 321 to 87 on May 30, 2014. H.Rept. 113-448 accompanied H.R. 4660 when it was reported from the House Committee on Appropriations. Among other things, H.R. 4660 would have provided $7.394 billion to NSF in FY2015. This amount was $139 million (2%) more than the Administration's FY2015 request and $263 million (4%) over FY2014 actual. The House-passed bill would have provided a 3% increase over FY2014 actual and the FY2015 request for RRA, as well as increases (though smaller than the request) for EHR and AOAM. H.R. 4660 would have provided the requested levels for MREFC, NSB, and OIG.

The Senate Committee on Appropriations reported S. 2437 (Commerce, Justice, Science, and Related Agencies Appropriations Act, 2015) on June 5, 2014. S.Rept. 113-181 accompanied S. 2437 when it was reported from the committee. The Senate Committee on Appropriations recommended the requested level for NSF in FY2015. However, relative to the request, the committee would distribute funding slightly differently across two of NSF's major accounts. The Senate Committee on Appropriations recommended providing approximately $30 million more than the request to RRA and reducing AOAM by an equivalent amount. The committee recommended the requested levels for EHR, MREFC, NSB, and OIG.

---

[8] pp. H9343-H9363.

[9] See CRS Report R43509, *Commerce, Justice, Science, and Related Agencies: FY2015 Appropriations*, coordinated by (name redacted), (name redacted), and (name redacte d)

[10] For more information about the proposed FY2015 STEM education reorganization, see CRS Report IF00013, *The President's FY2015 Budget and STEM Education (In Focus)*, by (name redacted) ; and CRS Report IN10011, *The Administration's Proposed STEM Education Reorganization: Where Are We Now?*, by (name redacted) .

FY2014 Budget and Appropriations (Final Summary)

FY2014 enacted funding for NSF was $7.172 billion. This amount was $270 million (4%) more than NSF's FY2013 actual funding level of $6.902 billion.[11] Most of the $270 million increase ($250 million) went to RRA. FY2014 enacted funding for NSF's six major accounts was $5.809 billion for RRA (including $158 million for EPSCoR), $847 million for EHR, $200 million for MREFC, $298 million for AOAM, $4 million for NSB, and $14 million for OIG.

The Obama Administration initially sought $7.626 billion in funding for the NSF in FY2014. NSF's FY2014 budget request to Congress noted that its overarching priorities for FY2014 would include six programs: Cyber-enabled Materials, Manufacturing, and Smart Systems; Cyberinfrastructure Framework for 21st Century Science, Engineering, and Education; NSF Innovation Corps; Integrated NSF Support Promoting Interdisciplinary Research and Education; Science, Engineering, and Education for Sustainability; and Secure and Trustworthy Cyberspace.[12] The FY2014 NSF budget request also incorporated several changes to the foundation's STEM education programs in accordance with the Administration's proposed FY2014 government-wide reorganization of federal STEM education programs.[13]

The House and Senate Committees on Appropriations recommended $6.995 billion and $7.426 billion, respectively, for NSF in FY2014. Both committees initially rejected the Administration's proposed changes to the federal STEM education effort, including changes to NSF programs. The final FY2014 appropriations agreement reiterated this objection. The appropriations committees initially disagreed on funding for the Large Synoptic Survey Telescope (LSST) in the MREFC account—the Senate Committee on Appropriations sought to fund the new project, the House Committee on Appropriations would not. The final agreement provided some of the requested funding for the LSST and encouraged the foundation to seek permission to transfer funds from other accounts if the amount appropriated was insufficient.[14]

Long-term Funding Trends (Tables and Figures)

The following tables and figures include information about historical funding to NSF.

NSF Authorizations, Budget Requests, and Appropriations: FY1951-FY2016

Table 2, **Figure 1**, and **Figure 2** show the trends in NSF authorizations, budget requests, and appropriations since the foundation was first authorized in the early 1950s. Except in FY1957, current and constant dollar actual appropriations to NSF grew rapidly between FY1951 and FY1966. After FY1967, appropriations fluctuated (up some years and down in others) until about FY1988. NSF experienced two periods of generally sustained growth in current and constant dollar appropriations between FY1989 and FY1995, and again in between FY1998 and FY2003. Since FY2004, growth in the NSF budget has slowed compared to prior years.

[11] For more information about the NSF FY2014 budget request and appropriations, see CRS Report R43080, *Commerce, Justice, Science, and Related Agencies: FY2014 Appropriations*, coordinated by (name redacted), (name redacted), and (name redacted)

[12] With one exception—the Expeditions in Education program, which was not included in the FY2014 request—these were the same programs included in the "OneNSF Framework" from NSF's FY2013 budget request.

[13] National Science Foundation, *FY2014 Budget Request to Congress*, April 10, 2013, http://www.nsf.gov/about/budget/fy2014/index.jsp.

[14] H.Rept. 113-171, S.Rept. 113-78, and the Joint Explanatory Statement published in the January 15, 2014, *Congressional Record*.

Table 2. NSF Authorizations, Budget Requests, and Appropriations: FY1951-FY2016

In Millions, Current and Constant (FY2016) Dollars, Rounded

	Current ($ millions)			Constant (FY2016 $ millions)		
Fiscal Year	**Authorization**	**Request**	**Appropriation**	**Authorization**	**Request**	**Appropriation**
1951	such sums	—	0	such sums	—	2
1952	such sums	14	4	such sums	105	26
1953	such sums	15	5	such sums	110	35
1954	such sums	15	8	such sums	109	58
1955	such sums	14	14	such sums	101	103
1956	such sums	31	53	such sums	218	373
1957	such sums	41	40	such sums	280	271
1958	such sums	65	52	such sums	428	341
1959	such sums	140	138	such sums	907	891
1960	such sums	160	153	such sums	1,025	977
1961	such sums	190	176	such sums	1,198	1,108
1962	such sums	210	263	such sums	1,311	1,643
1963	such sums	358	323	such sums	2,207	1,988
1964	such sums	589	353	such sums	3,588	2,150
1965	such sums	488	420	such sums	2,919	2,516
1966	such sums	530	480	such sums	3,106	2,812
1967	such sums	525	481	such sums	2,985	2,735
1968	such sums	526	495	such sums	2,892	2,722
1969	525	500	400	2,760	2,628	2,103
1970	478	500	440	2,382	2,494	2,195
1971	538	513	513	2,553	2,435	2,435
1972	653	622	622	2,956	2,818	2,818
1973	697	653	649	3,026	2,836	2,819
1974	633	583	579	2,565	2,363	2,349
1975	808	672	764	2,969	2,471	2,809
1976	787	755	715	2,706	2,597	2,459
1977	811	802	776	2,600	2,572	2,488
1978	879	944	863	2,642	2,836	2,593
1979	930	934	911	2,586	2,598	2,534
1980	1,002	1,006	992	2,563	2,574	2,537
1981	1,115	1,148	1,025	2,597	2,675	2,388
1982	n/a	1,354	1,039	n/a	2,952	2,265
1983	n/a	1,073	1,094	n/a	2,241	2,284

	Current ($ millions)			Constant (FY2016 $ millions)		
Fiscal Year	Authorization	Request	Appropriation	Authorization	Request	Appropriation
1984	n/a	1,292	1,341	n/a	2,607	2,705
1985	n/a	1,502	1,502	n/a	2,932	2,932
1986	1,517	1,569	1,524	2,896	2,996	2,909
1987	1,685	1,686	1,623	3,147	3,148	3,031
1988	n/a	1,893	1,717	n/a	3,425	3,106
1989	2,050	2,050	1,923	3,567	3,567	3,345
1990	2,388	2,149	2,082	4,009	3,608	3,496
1991	2,782	2,485	2,316	4,511	4,029	3,755
1992	3,245	2,742	2,571	5,136	4,341	4,068
1993	3,505	3,037	2,734	5,419	4,695	4,226
1994	n/a	2,753	2,983	n/a	4,165	4,513
1995	n/a	3,200	3,264	n/a	4,741	4,835
1996	n/a	3,360	3,220	n/a	4,887	4,683
1997	n/a	3,325	3,270	n/a	4,752	4,674
1998	3,506	3,367	3,431	4,949	4,754	4,843
1999	3,773	3,773	3,676	5,260	5,260	5,125
2000	3,886	3,921	3,912	5,308	5,356	5,343
2001	n/a	4,572	4,431	n/a	6,098	5,909
2002	n/a	4,473	4,823	n/a	5,871	6,331
2003	5,536	5,036	5,323	7,131	6,486	6,856
2004	6,391	5,481	5,589	8,032	6,889	7,024
2005	7,378	5,745	5,482	8,991	7,001	6,681
2006	8,520	5,605	5,589	10,055	6,615	6,596
2007	9,839	6,020	5,890	11,306	6,918	6,768
2008	6,600	6,429	6,125	7,431	7,238	6,896
2009	7,326	6,854	6,494	8,152	7,627	7,226
2010	8,132	7,045	6,873	8,971	7,772	7,582
2011	7,424	7,424	6,806	8,034	8,034	7,365
2012	7,800	7,767	7,033	8,295	8,260	7,479
2013	8,300	7,373	6,884	8,676	7,707	7,196
2014	n/a	7,626	7,172	n/a	7,852	7,384
2015	n/a	7,255	7.344	n/a	7,370	7,461
2016	n/a	7,724	—	n/a	7,724	—

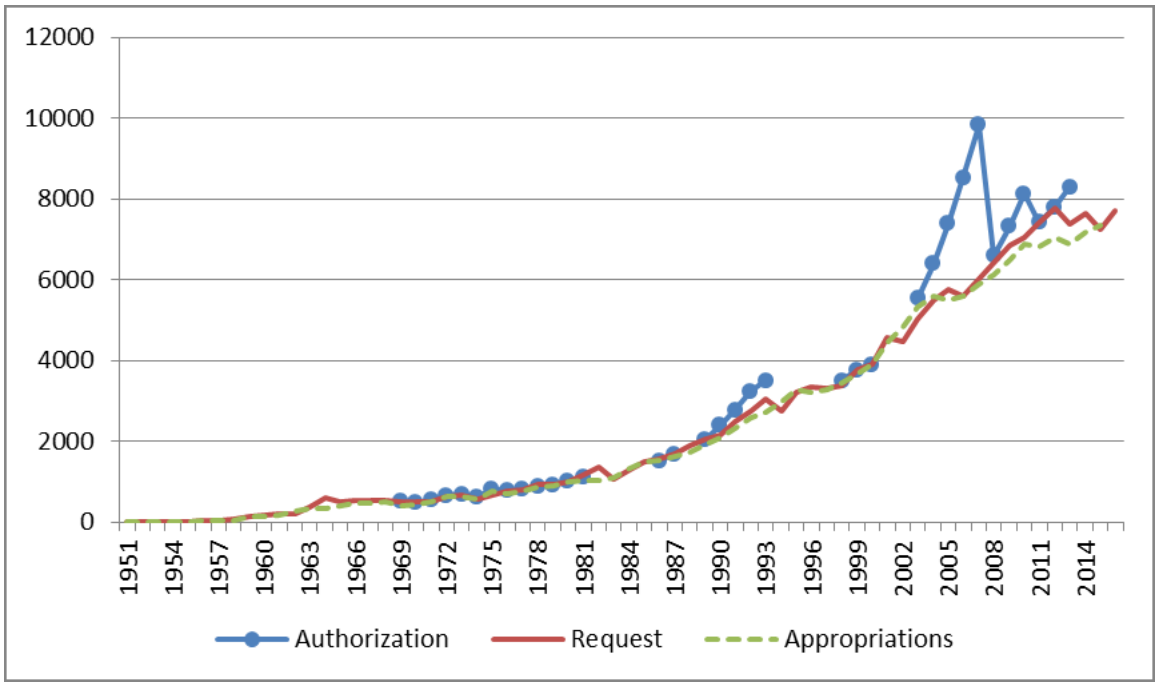
Source: Funding data in the "Authorization" columns are from selected FY1951 to FY2013 NSF authorization acts. Funding data in the "Request" and "Appropriations" columns are from National Science Foundation, Budget Internet Information System, "NSF Requests and Appropriations History," NSF.gov, February 25, 2015,

http://dellweb.bfa.nsf.gov/NSFRqstApproHist/NSFRequestsandAppropriationsHistory.pdf. To calculate constant FY2016 dollars, CRS used the Gross Domestic Product (Chained) Price Index found in Office of Management and Budget, *Historical Tables*, "Table 10.1," February 2, 2015, available at http://www.whitehouse.gov/sites/default/files/omb/budget/fy2015/assets/hist10z1.xls.

Notes: As per communication between CRS and NSF dated March 20, 2014, the "Appropriation" column shows funding provided in annual appropriations acts plus adjustments required in those acts, other laws, and committee reports, etc. Adjustments include rescissions, sequestration, funding transfers across NSF accounts, supplemental appropriations (not including American Recovery and Reinvestment Act, P.L. 111-5, funding in FY2009), and other changes. The resulting amounts most closely align with NSF's approved Current Plans. The term "n/a" means "not available."

Figure 1. Current Dollar NSF Authorizations, Budget Requests, and Appropriations: FY1951 to FY2016 Request

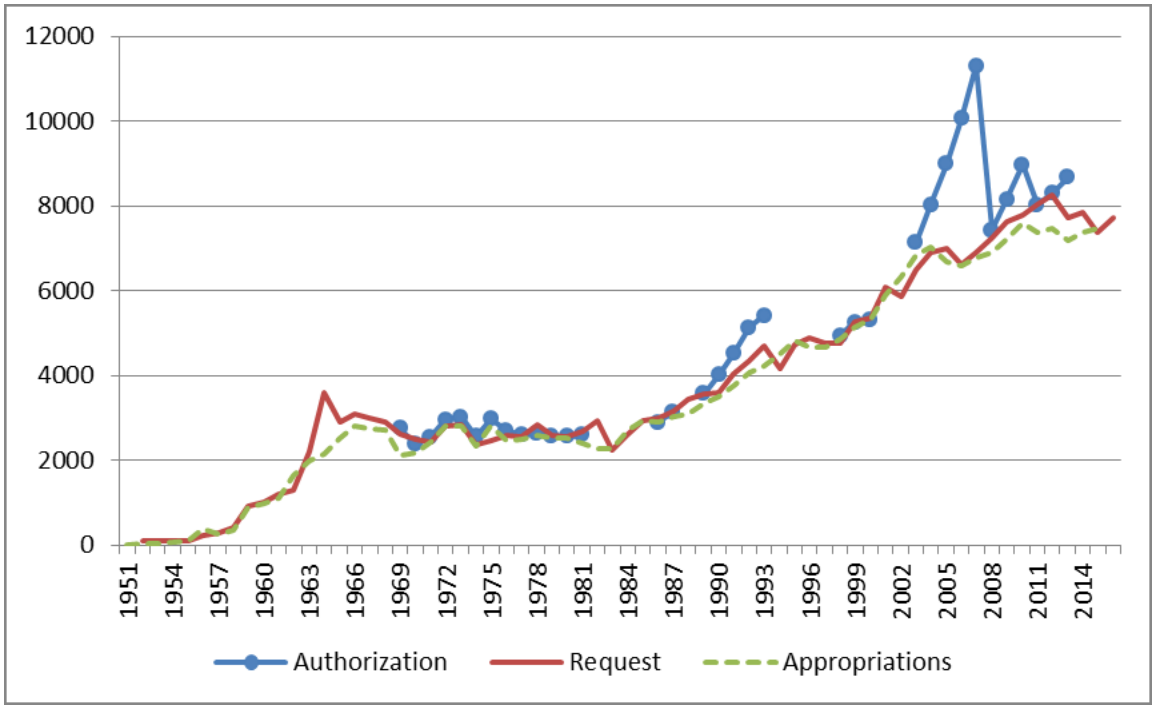
In Millions, Current Dollars, Rounded



Source: Table 2.

Figure 2. Constant Dollar NSF Authorizations, Budget Requests, and Appropriations: FY1951 to FY2016 Request

In Millions, Constant (2016) Dollars, Rounded



Source: Table 2.

NSF Obligations by Major Account

Table 3 provides NSF obligations by major account since FY2003. (Because of changes in the NSF account structure, prior years are not comparable.) Most of the growth in total NSF obligations since FY2003 has accrued to the main research account, RRA, which increased by about $1.790 billion (43%) between FY2003 and the FY2015 estimate. Total NSF obligations increased by about $1.975 billion (36%) during this same period.

Table 3. NSF Obligations by Major Account: FY2003-FY2015

In Millions, Current Dollars, Rounded

Fiscal Year	RRA	EHR	MREFC	AOAM	NSB	OIG	NSF Total
2003	4,144	846	179	189	3	9	5,369
2004	4,388	850	184	219	2	9	5,652
2005	4,328	750	165	223	4	10	5,481
2006	4,449	700	234	247	4	11	5,646
2007	4,758	696	166	248	4	12	5,884
2008	4,853	766	167	282	4	12	6,084
2009	5,152	846	161	294	4	12	6,469

Fiscal Year	RRA	EHR	MREFC	AOAM	NSB	OIG	NSF Total
2010	5,615	873	166	300	4	14	6,972
2011	5,608	861	125	299	4	14	6,913
2012	5,758	831	198	299	4	14	7,105
2013	5,559	835	196	294	4	14	6,902
2014	5,775	832	200	306	4	14	7,131
2015[a]	5,934	866	201	325	4	14	7,344

Source: FY2005 to FY2016 annual NSF congressional budget justifications.

Notes: NSF adopted its current appropriations account structure in 2003. For this table, CRS adjusted FY2003 to FY2007 RRA and EHR obligations data to reflect the transfer of the EPSCoR program between these accounts in FY2008. This table treats EPSCoR as part of RRA for all years in the data set. Does not include American Recovery and Reinvestment Act (ARRA, P.L. 111-5) funding.

a. Estimated funding level, as per NSF's FY2016 budget request to Congress. All other years are actual.

Appropriations Authorizations

Appropriations authorizations to NSF, which were last enacted in the America COMPETES Reauthorization Act of 2010 (P.L. 111-358), expired in FY2013. Members of the 114th Congress have introduced measures to reauthorize provisions from P.L. 111-358, including provisions that authorize appropriations to NSF.[15]

Table 1 includes FY2013 NSF authorization levels under P.L. 111-358, actual and estimated appropriations to NSF in FY2014 and FY2015, as well as FY2016 proposed authorized funding levels for NSF under selected reauthorization measures from the 114th Congress.

Table 4. NSF Funding Under Selected, Proposed Reauthorization Acts

Dollars in Millions, Rounded

Account	FY2013 Authorized	FY2014 Actual	FY2015 Estimate	H.R. 1806	H.R. 1898
Biological Sciences (BIO)	n/s	720.8	731.0	823.0	n/s
Computer and Information Science and Engineering (CISE)	n/s	892.6	921.7	1,038.0	n/s
Engineering (ENG)	n/s	833.1	892.3	1,010.0	n/s
Geosciences (GEO)	n/s	1,321.3	1,304.4	1,200.0	n/s
Mathematical and Physical Sciences (MPS)	n/s	1,267.9	1,336.7	1,500.0	n/s
Social, Behavioral, and Economic Sciences (SBE)	n/s	256.8	272.2	150.0	n/s
Office of International Science and Engineering (OISE)	n/s	48.3	48.5	38.5	n/s
Integrative Activities (IA)	n/s	433.1	425.3	425.3	n/s
U.S. Arctic Research Commission (USARC)	n/s	1.3	1.4	1.5	n/s
Research and Related Activities (RRA) Subtotal	6,637.8	5,775.3	5,933.7	6,186.3	6,186.3
Education and Human Resources (EHR)	1,041.8	832.0	866.0	866.0	962.6
Major Research Equipment and Facilities Construction (MREFC)	236.8	200.0	200.8	200.3	200.3
Agency Operations and Award Management (AOAM)	363.7	306.0	325.0	325.0	354.8
National Science Board (NSB)	4.9	4.3	4.4	4.4	4.4
Office of the Inspector General (OIG)	15.0	13.8	14.4	15.2	15.2
NSF, Total	**$8,300.0**	**$7,131.4**	**$7,344.2**	**$7,597.1**	**$7,723.6**

Source: America COMPETES Reauthorization Act of 2010 (P.L. 111-358); FY2016 NSF congressional budget justification; H.R. 1806, as passed by the House; and, H.R. 1898, as introduced.

Notes: The term "n/s" means "not specified." Amounts in the "FY2014 actual" column represent total, actual budgetary resources, including annual appropriations, unobligated balances, transfers, and other adjustments.

[15] For more information, see CRS Report R43880, *The America COMPETES Acts: An Overview*, by (name redac ted) .

Author Contact Information

(name redacted)
Specialist in Science and Technology Policy
[redacted]@crs.loc.gov, 7-....