

U N I T E D S T A T E S
National Science Foundation

NSF

FY 2013

Agency Financial Report

THE NSF STATUTORY MISSION

**To promote the progress of science; to advance the national health, prosperity, and welfare;
and to secure the national defense; and for other purposes.**

—From The National Science Foundation Act of 1950 (P.L. 81-507)



THE NSF VISION

**NSF envisions a nation that capitalizes on new concepts in science and engineering
and provides global leadership in advancing research and education.**

*—From “Empowering the Nation Through Discovery and Innovation, NSF Strategic Plan for
Fiscal Years 2011-2016”*



www.nsf.gov

About This Report

For FY 2013, in accordance with Office of Management and Budget (OMB) Circular A-136, *Financial Reporting Requirement*, the National Science Foundation (NSF) is preparing three reports to provide financial management and program performance information to demonstrate accountability to our stakeholders and the American public. These reports can be found on NSF's website at www.nsf.gov/about/performance.

- This report, the **Agency Financial Report (AFR)**, focuses on financial management and accountability. It includes the results of NSF's annual financial statement audit, management's assurance statement, the NSF Inspector General's (IG) memorandum on the agency's FY 2014 management challenges, as well as management's report on the progress made on the management challenges identified by the IG for FY 2013. The **AFR** also includes a summary of NSF's key performance metrics.
- The **Annual Performance Report (APR)** will include the results of NSF's FY 2013 performance goals, including the agency's priority goals, related to the Government Performance and Results Act of 1993 (GPRA) and the GPRA Modernization Act of 2010. The **APR** will be included in NSF's *FY 2015 Budget Request*.
- NSF's **Performance and Financial Highlights** report summarizes key information from the **AFR** and **APR**.

For copies of these reports, please send a request to accounta@nsf.gov. We welcome your suggestions on how we can make these reports more informative.

| NSF By The Numbers | |
|--------------------|--|
| \$6.9 billion | FY 2013 Appropriations (does not include mandatory accounts) |
| 1,922 | Colleges, universities, and other institutions receiving NSF funding in FY 2013 |
| 49,000 | Proposals evaluated in FY 2013 through a competitive merit review process |
| 10,800 | Competitive awards funded in FY 2013 |
| 233,000 | Proposal reviews conducted in FY 2013 |
| 299,000 | Estimated number of people NSF supported directly in FY 2013 (researchers, postdoctoral fellows, trainees, teachers, and students) |
| 47,800 | Students supported by NSF Graduate Research Fellowships since 1952 |

NATIONAL SCIENCE FOUNDATION FY 2013 Agency Financial Report

www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14002

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A MESSAGE FROM THE DIRECTOR



Credit: Sandy Schaeffer

I am pleased to present the National Science Foundation's (NSF) Agency Financial Report for fiscal year (FY) 2013. NSF's mission is to promote and advance progress in science and engineering research and education in the United States. We achieve this mission through investments that focus on key national and scientific policy priorities by providing broad-based support of science and engineering research and education at the nation's colleges and universities. We support the best people and the best ideas, including more than 200 Nobel laureates since the Foundation's establishment in 1951, and 8 of the 2013 Nobelists. We are dedicated to preserving the federal investment in multidisciplinary fundamental research, infrastructure, and education, to ensure the future vitality of the U.S. science and engineering enterprise and our global competitive edge. Over the past 60 years, the agency's investments in science and engineering have led to important innovations that have been an indispensable driver of economic prosperity and increased national security.

Like all federal agencies, in FY 2013, NSF was challenged by the discretionary funding sequestration. NSF was able to largely mitigate the impact of sequestration on agency activities and operations for FY 2013. The programmatic impact of sequestration was seen principally in a reduced number of new awards. On the management front, the agency pursued a range of operational efficiencies, particularly in connection with travel expenditures and conference spending. We nonetheless remain deeply concerned about NSF's long-term ability to support the U.S. science and engineering research enterprise should sequestration continue in FY 2014 and beyond.

In FY 2013, we reviewed 49,000 competitive proposals and made 10,844 new awards to 1,922 institutions in 50 states, the District of Columbia, and 3 U.S. territories. Of the agency's 18 performance goals, 9 were fully achieved. NSF will report the complete results of our FY 2013 Government Performance and Results Act (GPRA) performance goals in NSF's *Annual Performance Report* as part of the agency's *FY 2015 Budget Request to Congress*. All NSF's GPRA performance data undergo a rigorous verification and validation review by an independent, external management consultant based on guidance from the U.S. Government Accountability Office. A more detailed discussion about NSF's endeavors and accomplishments is included in this report.

I am pleased to report that NSF received its 16th consecutive unqualified opinion from an independent audit of its financial statements. The audit report identified no material weaknesses. In addition, NSF can provide reasonable assurance that the agency is in substantial compliance with the Federal Managers Financial Integrity Act of 1982 and related laws and regulations. Moreover, internal control over financial reporting is operating effectively to produce reliable financial reporting; no material weaknesses were found in the design or operation of internal controls.

Thank you for your interest in the National Science Foundation.

A handwritten signature in blue ink that reads 'Cora B. Marrett'.

Cora B. Marrett
Acting Director

December 16, 2013



INSE

Chapter 1

**Management's Discussion
and Analysis**

Agency Overview

Mission and Vision

The mission of the National Science Foundation (NSF), “to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense,”¹ is indispensable to the long-term economic health and well-being of our nation. The agency’s investments in basic research in science and engineering have enhanced the science and engineering enterprise in the United States, ensuring its future vitality and leading to important innovations that drive economic prosperity and increase national security.²

NSF’s vision is a nation that capitalizes on new concepts in science and engineering and provides global leadership in advancing research and education.³ As the only federal agency dedicated to the support of non-biomedical research and education across all fields of science and engineering, NSF is the funding source for 24 percent of all the federally supported basic scientific research conducted by America’s colleges and universities, and this share increases to 60 percent when medical research supported by the National Institutes of Health is excluded.⁴

NSF’s investment builds on its 60-plus year legacy of supporting basic research and spawning innovation by broadening the impact of select, NSF-funded, basic-research projects by preparing scientists and engineers to extend their focus beyond the laboratory and make contributions to the 21st century science and engineering enterprise from the frontiers of science. In addition, our investments integrate research and education to support the development of a world-class scientific workforce that can engage fully and contribute imaginatively in a 21st century life that increasingly relies on technology to meet challenges and leverage opportunities.

As part of our focus on investing in the development of a world-class workforce, since 1952 NSF has funded nearly 47,800 Graduate Research Fellows. The ranks of NSF fellows include numerous individuals who have made transformative breakthroughs in science and engineering research. Many of them have become leaders in their chosen careers, 413 of them have become members of the National Academies of Science or Engineering, and 40 have been honored as Nobel laureates. In fact, 212 Nobel

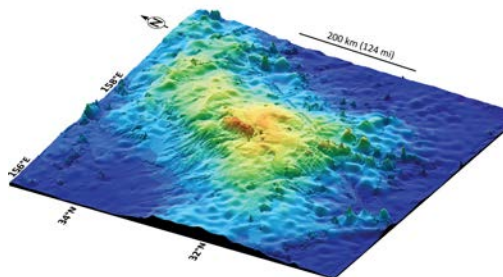


Photo Credit: Will Sager

Largest single volcano on Earth: Scientists in 2013 confirmed that the Northwest Pacific is home to the largest single volcano yet documented on Earth. Covering an area roughly equivalent to the British Isles or the State of New Mexico, Tamu Massif is nearly as big as the giant volcanoes of Mars, placing it among the largest in the solar system. The researchers used several sources of evidence, including core samples and data collected on board the *JOIDES Resolution*. This research sheds new light on the nature of oceanic volcanos, how oceanic plateaus form, and the mantle-crust system. For more information see www.nsf.gov/news/news_summ.jsp?org=NSF&cntn_id=128991&preview=false.

¹ The National Science Foundation Act of 1950 (Public Law 81-507).

² Bush, V. (1945). *Science—The Endless Frontier: A Report to the President* available at www.nsf.gov/about/history/vbush1945.htm.

³ *Empowering the Nation Through Discovery and Innovation—NSF Strategic Plan for Fiscal Years (FY) 2011-2016* available at www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf11047.

⁴ NSF/National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FY 2011.

Prize winners have received NSF support at some point in their careers, and 6 of the scientists and engineers recognized in *Popular Science*'s "Brilliant Ten 2013" were NSF-funded.⁵ These investments are a critical means by which NSF achieves its mission; we excel at identifying, nurturing, and investing in scientific potential.

Overall, NSF achieves its mission and vision by making awards and managing portfolios of the highest quality research and education projects that further our strategic goals, reflect our national priorities, and keep the United States at the forefront of innovation and as a global leader of the 21st century science and engineering enterprise. In doing so, NSF is visionary, pursuing transformational work, new fields, and new theoretical paradigms, particularly through multidisciplinary mechanisms that reflect the increasingly interdisciplinary nature of modern science and engineering. We are dedicated to excellence and efficiency, always striving to be wise stewards of federal funding, investing in priorities that will address key national challenges and promote innovation and economic growth.

All NSF programs and activities are driven by three interrelated strategic goals—*Transforming the Frontiers*, *Innovating for Society*, and *Performing as a Model Organization*. Our pursuit of these goals can be assessed through our success in achieving our performance goals, which include measurable targets for our near-, mid-, and long-term actions. Figure 4 on page I-9 depicts our current strategic plan, which we continued to implement in FY 2013, utilizing it as our roadmap to achieving the NSF mission and vision, as we prepare for launch and implementation of a new strategic plan.⁶

Following the Money

NSF is funded primarily through six congressional appropriations, which totaled \$6,884 million in FY 2013 (Figure 1). This includes the \$356 million reduction required as part of the government-wide sequester, as well as two across-the-board rescissions that were imposed on all federal agencies in FY 2013. By comparison, NSF's FY 2012 budget authority was \$7,033 million—about 2 percent higher.

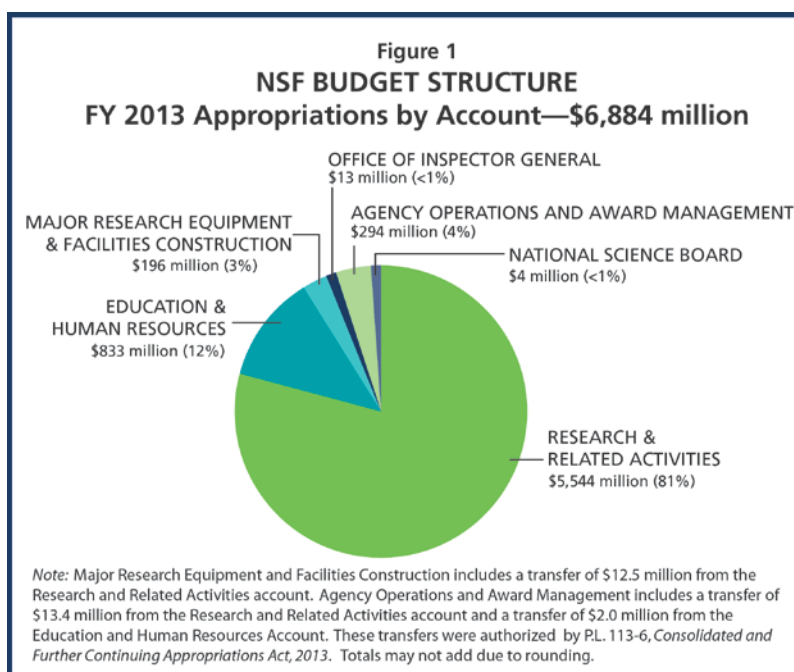
Research and Related Activities (R&RA), Education and Human Resources (EHR), and Major Research Equipment and Facilities Construction (MREFC) fund the agency's programmatic activities and account for 95 percent of NSF's total appropriations.

- R&RA, which supports basic research and education activities at the frontiers of science and engineering, including high-risk and transformative research, accounted for 81 percent of FY 2013 funding. The FY 2013 R&RA net funding of \$5,544 million was \$145 million or 2.6 percent below its prior year FY 2012 level. As authorized by P.L. 113-6, *Consolidated and Further Continuing Appropriations Act, 2013*, transfers from the R&RA were made to the MREFC and the Agency Operations and Award Management (AOAM) accounts in FY 2013.
- EHR, which supports activities that ensure a diverse, competitive, and globally engaged U.S. science, technology, engineering, and mathematics workforce and a scientifically literate citizenry is NSF's second largest appropriation, accounting for 12 percent of the agency's budget. The FY 2013 funding of \$833 million was about \$4 million or 0.5 percent above its prior year level.

⁵ See <http://www.popsci.com/category/tags/brilliant-ten-2013>.

⁶ The NSF strategic plan details the mission and vision, along with core values, strategic and performance goals, targets and core strategies, and finally evaluation and assessment mechanisms designed to ensure that we are achieving the mission and vision; see www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf11047. NSF is currently updating its strategic plan.

- The MREFC appropriation, which supports the construction of unique national research platforms and major research equipment that enable cutting-edge research, accounted for 3 percent of the agency's total appropriations. A transfer of \$12.5 million from the R&RA account boosted the MREFC account to \$196 million—about \$1 million below its prior year FY 2012 level.
- The AOAM appropriation supports NSF's administrative and management activities and accounted for about 4 percent of the agency's FY 2013 funding. A transfer of \$13.4 million from the R&RA account and \$2.0 million from the EHR account helped increase AOAM funding to \$294 million—about 2 percent below its FY 2012 level.
- Separate appropriations support the activities of the Office of Inspector General (OIG) and National Science Board (NSB); each account for less than 1 percent of NSF's FY 2013 budget. The OIG and NSB FY 2013 accounts were \$13 million and \$4 million, respectively; each was about 7 percent below their respective prior year levels.⁷



In FY 2013, 89 percent of research funding was allocated based on competitive merit review.⁸ About 36,500 members of the science and engineering community participated in the merit review process as panelists and proposal reviewers.⁹ Awards were made to 1,922 institutions in 50 states, the District of Columbia, and 3 U.S. territories. These institutions employ America's leading scientists, engineers, and educators and train the leading-edge innovators of tomorrow. In FY 2013, an estimated 299,000 people

⁷ In Figure 1, FY 2013 Appropriations by Account of \$6,884 million plus Trust Funds (\$40.37 million) and H1-B Nonimmigrant Petitioner Receipts (\$115.84 million) equal Appropriations (Discretionary and Mandatory) of \$7,040 million as shown on the Statement of Budgetary Resources.

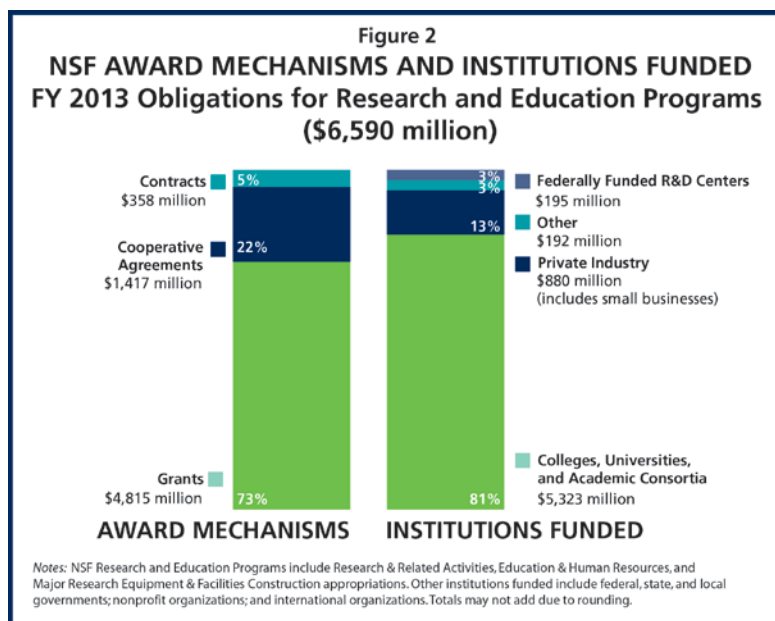
⁸ NSF does not require merit review for certain kinds of proposals, including proposals for international travel grants and some conferences, symposia, and workshops.

⁹ For more information about NSF's merit review process, see http://www.nsf.gov/bfa/dias/policy/merit_review and *Report to the National Science Board on the National Science Foundation's Merit Review Process FY 2011* (NSB-12-28) at www.nsf.gov/nsb/publications/pub_summ.jsp?ods_key=nsb1333.

were directly involved in NSF programs and activities, receiving salaries, stipends, or participant support. Beyond these figures, NSF programs indirectly impact millions of people. These programs reach K-12 students and teachers, the general public, and researchers through activities including workshops; informal science activities such as museums, television, videos, and journals; outreach efforts; and dissemination of improved curriculum and teaching methods.

In FY 2013, NSF funded 10,844 new awards, mostly to academic institutions. As shown in Figure 2, 81 percent of support for research and education programs (\$5,323 million) was to colleges, universities, and academic consortia. Private industry including small businesses accounted for 13 percent (\$880 million) and support to Federally Funded Research and Development (R&D) Centers accounted for 3 percent (\$195 million). Other recipients included federal, state, and local governments; nonprofit organizations; and international organizations. A small number of awards fund research in collaboration with other countries, which adds value to the U.S. scientific enterprise and maintains the U.S. leadership at the helm of the global scientific enterprise.

Most NSF awards (95 percent) were funded through grants or cooperative agreements (Figure 2). Grants can be funded either as standard awards, in which funding for the full duration of the project is provided in a single fiscal year, or as continuing awards, in which funding for a multi-year project is provided in increments. Cooperative agreements are used when the project requires substantial agency technical involvement during the project performance period (e.g., research centers, multi-use facilities). Contracts (procurement instruments) are used to acquire products, services, and studies (e.g., program evaluations) required primarily for NSF or other government use.

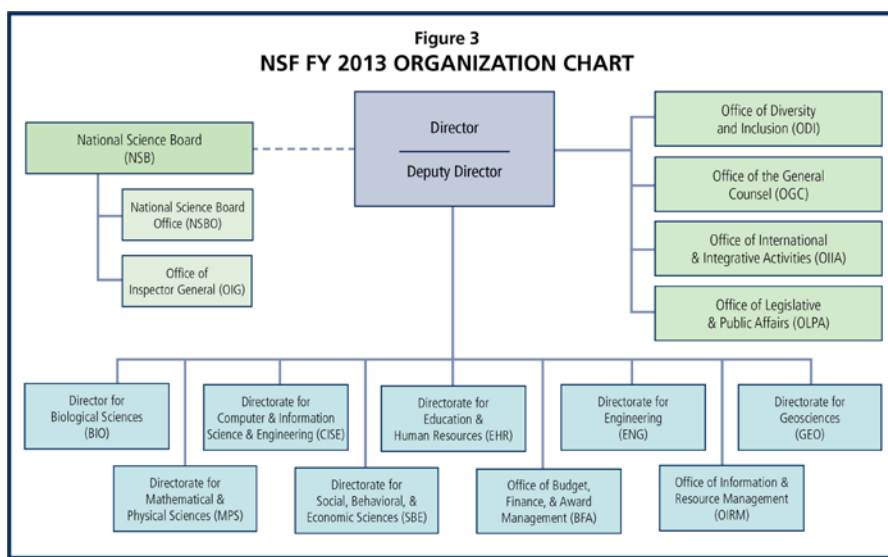


Organizational Structure

NSF is an independent federal agency headed by a Director appointed by the President and confirmed by the U.S. Senate. In March 2013, NSF Director, Dr. Subra Suresh, stepped down to accept an appointment as Carnegie Mellon University's president, and NSF Deputy Director, Dr. Cora Marrett, also appointed by the President and Senate confirmed, assumed the position of Acting Director.¹⁰ A 25-member NSB

¹⁰ Dr. Marrett's biography is available at www.nsf.gov/od.

meets five times a year to establish the overall policies of the Foundation. NSB members are also appointed by the President and are prominent contributors to the science and engineering research and education community.¹¹ The NSF Director is a member *ex officio* of the Board. Both the Director and the other NSB members serve 6-year terms. The NSF workforce includes about 1,400 permanent staff.¹² NSF also regularly recruits visiting scientists, engineers, and educators as rotators who work at NSF for up to 4 years.¹³ The blend of permanent staff and rotators who infuse new talent and expertise into the agency is reflective of our core values and integral to effectuating NSF's mission to support the entire spectrum of science and engineering research and education at the frontier.



As shown in Figure 3, NSF's organizational structure aligns with the major fields of science and engineering (www.nsf.gov/staff/organizational_chart.pdf). In October 2012, NSF realigned three program offices, moving them out of the Office of the Director and reintegrating them into units where there is more programmatic and administrative depth and expertise. The Office of Cyberinfrastructure became a division within the Directorate for Computer and Information Science and Engineering; the Office of Polar Programs became a division within the Directorate for Geosciences; and the Office of International Science and Engineering merged with the Office of Integrative Activities.¹⁴

In addition to the agency's headquarters located in Arlington, Virginia, NSF maintains offices in Paris, Tokyo, and Beijing to facilitate its international activities and an office in Christchurch, New Zealand, to support the U.S. Antarctic Program (USAP).

Management Challenges

For FY 2013, the OIG identified eight major management and performance challenges facing the agency: establishing accountability over large cooperative agreements, improving grant administration,

¹¹ For additional information about the NSB, see Appendix 5 and www.nsf.gov/nsb.

¹² Full-time equivalents.

¹³ As of September 30, 2013, temporary appointments included 180 under the Intergovernmental Personnel Act.

¹⁴ This realignment has improved the efficiency of the Office of the Director by reducing the number of reporting elements and by providing the Director and the Deputy Director greater opportunity to address agency-wide opportunities and challenges. Longer-term, it also promises to improve the scientific impact and organizational efficiency of the affected organizations, by creating stronger integration across programs and setting a tone for considering organizational arrangements more broadly.

strengthening contract administration, ensuring proper stewardship of American Recovery and Reinvestment Act (ARRA or Recovery Act) funds, managing the U.S. Antarctic Program, implementing recommendations to improve workforce management and the workplace environment, encouraging the ethical conduct of research, and managing programs and resources in times of budget austerity.¹⁵ Management's report on the significant activities undertaken in FY 2013 to address these challenges is included as Appendix 3B. The report also discusses activities planned for FY 2014 and beyond. Some of the agency accomplishments in FY 2013 are highlighted below:

- *To establish accountability over large cooperative agreements:* A report to the NSF Director was issued that assessed agency processes, policies, and mechanisms supporting large research facilities from conception through construction and operation to sun-setting. NSF continued to ensure that awardees of large construction projects were managing their risks and properly accounting for contingency. NSF also assessed compliance performance of large facility awardees by conducting Business Systems Reviews (BSR) and related post-BSR monitoring activities.
- *To improve grant administration:* Throughout FY 2013, NSF continued to align its policies and business practices with changes in federal regulations, legislative mandates, and agency-specific requirements, as well as made major contributions to the Office of Management and Budget (OMB) Council on Financial Assistance Reform (COFAR) in its development of uniform guidance on cost principles for federal research awards. NSF also completed its transition to a new awardee payment process, Award Cash Management Service (ACM\$), which has enabled the agency to obtain award-specific data based on real-time cash transactions. Jointly with the OIG, NSF developed audit templates to strengthen documentation requirements for questioned costs. NSF also reduced the time needed to resolve and close OMB Circular A-133 audits. NSF successfully expanded use of virtual Award Monitoring and Business Assistance Program site visits to mitigate current travel and resource restraints while still maintaining oversight quality.
- *To strengthen contract administration:* NSF has continued to take a comprehensive approach by improving policies, procedures, and human capital initiatives. Specifically, NSF achieved certification for all of the agency's acquisition staff. NSF also issued new guidance on Price Negotiation Memorandums to



Photo Credit: TACC

Stampede: In 2013, NSF dedicated a world-class supercomputer called Stampede. Even before the official launch, the computer had enabled research teams to predict where and when earthquakes may strike, how much sea levels could rise, and how fast brain tumors grow. Stampede is a cornerstone of NSF's investment in an integrated advanced cyberinfrastructure, which empowers America's scientists and engineers to share advanced computational resources, data and expertise. See www.nsf.gov/news/news_summ.jsp?cntn_id=127194&org=NSF&from=news.

¹⁵ The NSF Inspector General's Memorandum on Management Challenges for NSF in FY 2013 can be found in NSF's *FY 2012 Agency Financial Report* (www.nsf.gov/publications/pub_summ.jsp?ods_key=afir), Appendix 3A.

ensure proper documentation of pre-award requirements. In addition, NSF continued to take affirmative action to receive additional incurred cost audits on its largest contract.

- *To ensure proper stewardship of ARRA funds:* NSF continued to implement a robust, comprehensive, and multi-stage review program for recipient reporting with an average reporting compliance rate of 99.65 percent, which exceeded the government-wide reporting compliance rate in each quarter. NSF also submitted and subsequently received OMB approval for its narrowly tailored request for waiver under OMB Memorandum M-11-34, which included only about 10 percent of its more than 5,000 ARRA-funded awards. In addition, NSF implemented an aggressive outreach strategy to ensure that awardees who were not granted a waiver would complete their projects by September 30, 2013. All NSF communications have emphasized *responsible* acceleration of ARRA expenditures, in accordance with the award terms and conditions and applicable cost principles.
- *To manage the U.S. Antarctic Program:* NSF funds and manages the USAP through its Division of Polar Programs in order to support research and national policy goals in the Antarctic. The extreme environment and the short period of time during which regular access to the continent is possible presents significant challenges for providing the necessary logistics and operational support, in addition to the environmental, health, and safety issues unique to the remote location. In July 2012, a Blue Ribbon Panel conducted a review and issued a report finding that the logistics system was badly in need of repair and that failure to upgrade the system would continue to increase costs and squeeze out funding for scientific research. In response to the Panel's recommendations, NSF has taken steps to prioritize logistical support needs, develop contingency plans, and work toward establishing a long-range strategy to address the critical needs.
- *To implement recommendations to improve workforce management and the workplace environment:* NSF has successfully addressed numerous workforce management and workplace environment recommendations in alignment with NSF's Human Capital Strategic Plan and Diversity and Inclusion Strategic Plan, as well as within the context of the agency's Strategic Plan and annual Government Performance and Results Modernization Act performance goals. In addition, NSF has continued to address the OIG's recommendations with respect to the use of Intergovernmental Personnel Act assignees and to enhance its orientation for program and performance management of rotators with particular attention to rotating executives.
- *To encourage the ethical conduct of research:* As part of NSF's response to the America Competes Act, NSF requires that each institution submitting a proposal certify that it has a plan to provide appropriate training and relevant oversight in the ethical conduct of research to all undergraduates, graduate students, and postdoctoral researchers who will conduct NSF-sponsored research and to have the plan available for review upon request. In addition, ethical conduct of research is addressed in policy guidance, incorporated into program funding opportunities, and emphasized through the development of resources to enhance the quality of such training provided by research institutions.
- *To manage programs and resources in times of budget austerity:* NSF has made significant progress toward reducing certain administrative costs by identifying and implementing efficiencies, by prioritizing work, by eliminating or scaling back the scope of some activities, and by exploring innovations for increasing productivity. Approval and reporting procedures were implemented to closely monitor the costs of major conferences and travel costs have been reduced by 38 percent below FY 2010 travel obligations for a savings of \$12.1 million in FY 2013. A key driver in travel savings has been realized through increased use of virtual merit review panels. In addition, efforts are underway to reduce telecommunications costs by participating in a U.S. General Services Administration (GSA) strategic sourcing initiative.

Performance

This discussion of NSF's FY 2013 performance management activities focuses on the agency's efforts related to the Government Performance and Results Act of 1993 (GPRA), the GPRA Modernization Act of 2010,¹⁶ the American Recovery and Reinvestment Act (ARRA or Recovery Act), and management workload metrics.

FY 2013 Strategic Framework

NSF is subject to GPRA and the GPRA Modernization Act of 2010, as well as related performance reporting guidance issued by OMB.¹⁷ NSF's Strategic Plan, *Empowering the Nation Through Discovery and Innovation: NSF Strategic Plan for Fiscal Years (FY) 2011–2016*,¹⁸ lays out the following strategic goals:

- *Transform the Frontiers* emphasizes the seamless integration of research and education as well as the close coupling of research infrastructure and discovery.
- *Innovate for Society* points to the tight linkage between NSF program and societal needs and highlights the role that new knowledge and creativity play in economic prosperity and society's general welfare.
- *Perform as a Model Organization* emphasizes the importance to NSF of attaining excellence and inclusion in all operational aspects.

These three strategic goals are broken down into ten specific objectives (Figure 4). Progress toward these objectives is monitored through annual performance targets. In FY 2013, 15 targets were set.

In addition to these strategic goals and objectives, which are intended to monitor agency performance against its entire mission, NSF set three Priority Goals for FY 2012–FY 2013, to monitor progress in specific areas where near-term focus on agency execution can have the most impact. In FY 2013, NSF continued its practice of having agency leaders conduct quarterly data-driven performance reviews for each of the three Priority Goals.

The following discussion of NSF's performance goals and results summarizes information available to date. NSF's *FY 2013 Annual Performance Report* (APR) will provide a fuller discussion of all the agency's performance measures, including descriptions of the metrics, methodologies, results, and trends, along with a list of relevant external reviews. All of NSF's FY 2013 performance goals have undergone an independent verification and validation review by an external consultant using U.S. Government Accountability Office guidance.¹⁹ More detailed information about NSF's GPRA verification and validation review will be part of the APR. NSF's FY 2013 APR will be included in the agency's *FY 2015 Budget Request to Congress*, which will be available at www.nsf.gov/about/performance.

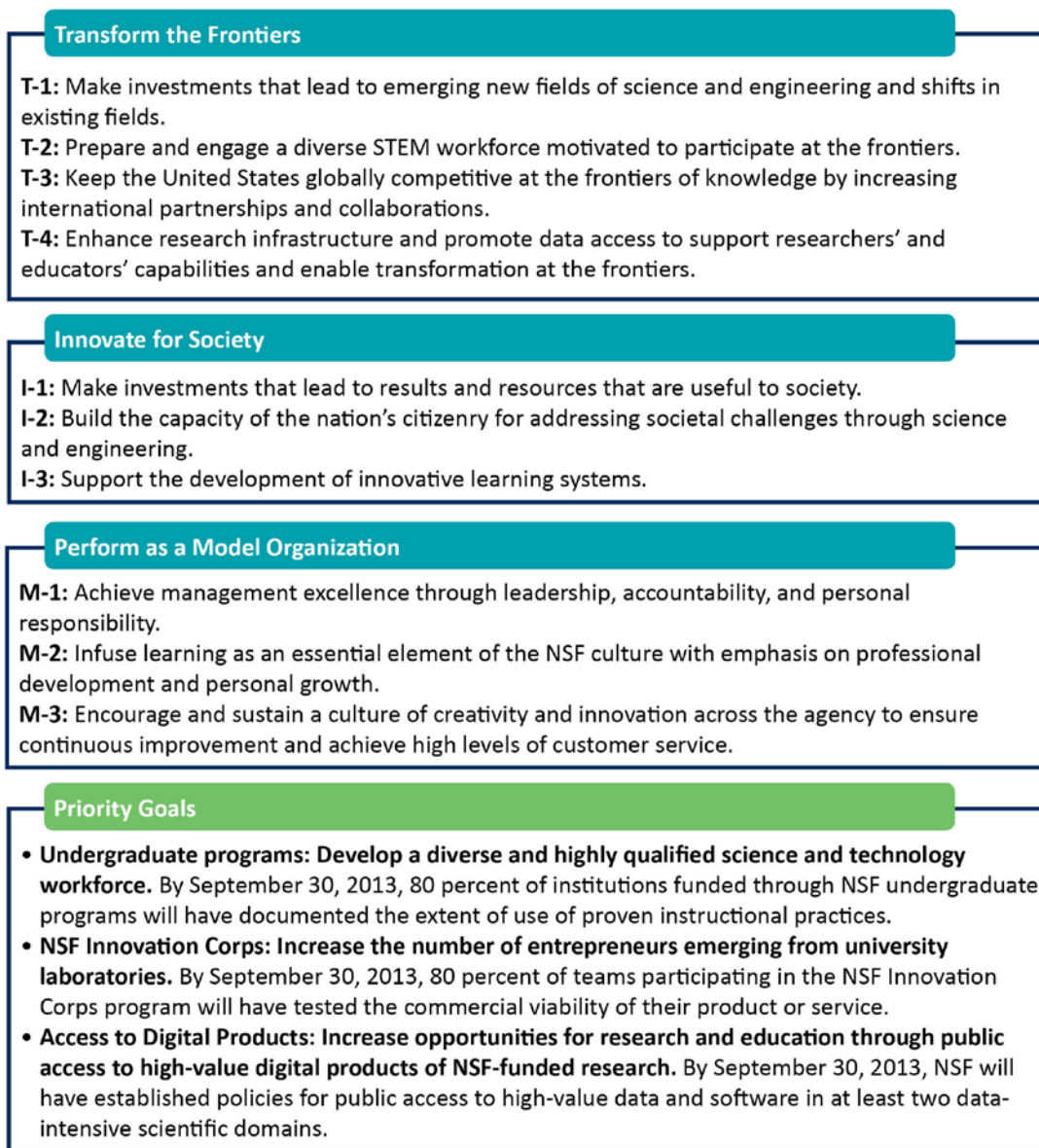
¹⁶ See www.whitehouse.gov/omb/mgmt-gpra/index-gpra.

¹⁷ OMB Circular A-11, *Preparation, Submission, and Execution of the Budget* (Part 6); see www.whitehouse.gov/omb/circulars_a11_current_year_a11_toc.

¹⁸ See www.nsf.gov/news/strategicplan.

¹⁹ U.S. Government Accounting Office. *The Results Act: An Evaluator's Guide to Assessing Agency Annual Performance Plans* (GAO/GGD-10.1.20) (April 1998) (www.gao.gov/special.pubs/gg10120.pdf)

Figure 4: NSF Strategic Goals and Objectives



*STEM: Science, Technology, Engineering, and Mathematics.

FY 2013 Progress Toward Strategic and Priority Goals

In FY 2013, NSF tracked progress toward three strategic goals and three Priority Goals. All program activities within the agency were covered by the 15 targets used to monitor the three strategic goals.

Transform the Frontiers. Progress toward this goal's objectives involved tracking key indicators for NSF-wide activities at various stages in their implementation.

- Two recently created programs worked to establish funding mechanisms more flexible and adaptable to current realities: INSPIRE supports unusually novel, potentially transformative, and

interdisciplinary research, while Career-Life Balance investments support greater use of the talents of Americans in all sectors of the population.

- Five of six NSF-funded facilities kept cost variance within 10 percent of targets. Four of six construction projects kept schedule variance within 10 percent of targets.
- Funding opportunities were screened for possible international implications by the Office of International and Integrative Activities.

Innovate for Society. In FY 2013, NSF met the objectives under this strategic goal by applying new approaches to the design and monitoring of existing portfolios.

- In the Directorate for Engineering, the Division of Industrial and Innovation Partnerships (IIP) continued to develop tools to monitor its portfolio of investments. Baseline data were collected for the number of partnerships made by companies in IIP.
- The Directorate for Education and Human Resources has been leading efforts to establish a single set of evidentiary standards for education programs that are thematically linked. In FY 2013, the themes were: K-12 education ready for scale-up, public understanding and communication of science, and innovative learning systems/cyberlearning.

Perform as a Model Organization. Targets to achieve this strategic goal focused in FY 2013 on customer service, human resources development, and technological upgrades.

- Seventy-seven percent of applicants were informed whether their proposals were declined or recommended for funding within 6 months of submission. This exceeded the target of 70 percent.
- Nearly 29 percent of review panels were conducted virtually, exceeding the target of 5 percent.
- NSF continued to make progress toward achieving “Model Equal Employment Opportunity (EEO) Agency” status. Five of the six essential elements required by the Equal Employment Opportunity Commission to attain a model EEO agency program have been met.
- For the third year, NSF’s temporary scientific staff members were included under the same performance management system used for full-time employees.
- The Division for Human Resources Management made significant progress toward employee performance management related goals. Increased Federal Employee Viewpoint Survey (FEVS)²⁰ scores from all employee groups suggest that improvements made to performance management training, the development of sample critical elements for all supervisors, a focus on targeted and timely communications around performance management processes, and the sharing of best practices resulted in positive change. In particular, NSF saw a jump in the FEVS scores of its temporary scientific staff members, including its Intergovernmental Personnel Act (IPA) assignees. Increased satisfaction in this group may be attributed to the implementation of a new IPA performance process that better articulated expectations. In FY 2013, NSF piloted a new Senior Executive Service (SES) performance management process rounding out NSF focus on improving performance management for all types and levels of employees. The Office of Personnel Management approved NSF’s plans for implementation of the government-wide SES performance system for the coming performance cycle.
- Efforts to improve training and development opportunities resulted in the implementation of an updated suite of courses on the merit review process and mandatory merit review training for all new program officers. NSF anticipates significant business process- and mission-related improvements in future years based upon the implementation of this requirement.

²⁰ For more information about the FEVS, see www.fedview.opm.gov.

- In an important financial modernization step, NSF successfully transitioned to the Award Cash Management Service (ACM\$), a grant-by-grant payment process. More information about ACM\$ can be found on page I-15.

Priority Goal—Undergraduate Programs.

This goal was achieved in FY 2013. Greater than 80 percent of academic institutions funded by NSF undergraduate programs documented the extent of use of proven instructional practices.

NSF has a long-term core commitment to the role of undergraduate education in engaging and preparing a diverse and highly qualified science and engineering workforce. While many factors influence whether students stay in science, technology, engineering, and mathematics (STEM) majors, one challenge students report is lackluster introductory courses that do not provide the support they need to succeed in STEM classes. Research shows that evidence-based instructional practices lead to improved student learning, making them a useful metric for assessing the impact of educational practices on a well-prepared workforce. In order to encourage and facilitate the use of empirically based instructional practices in STEM undergraduate education, NSF must first establish baseline information about their use.

For this goal, NSF adopted multiple strategies, which cover a wide variety of regular NSF processes such as solicitation development, monitoring system development, data collection, and outreach. Progress toward quantitatively meeting this goal should also contribute to improvement on and better coordination of these NSF processes. For more details, refer to the Priority Goal section of www.performance.gov.

Priority Goal—NSF Innovation Corps.

This goal was achieved in FY 2013. One hundred percent of teams participating in the Innovation Corps program tested the commercial viability of their product or service, exceeding the target of eighty percent.

The NSF Innovation Corps (I-Corps) is a set of activities and programs that prepares scientists and engineers to extend their focus beyond the laboratory and broadens the impact of select, NSF-funded basic research projects. While knowledge gained from these projects frequently advances a particular field of science or engineering, some of the research results also show immediate potential for broader applicability and impact in the commercial world. These results may be translated through I-



SHIFT teacher participants at biofuels algae ponds

Credit: University of Kansas

SHIFT Inspires Biofuels Innovation: To help teachers relate lessons to real-world needs, the University of Kansas developed the Shaping Inquiry from Feedstock to Tailpipe (SHIFT) program. The summer program engages high-school and community college educators in the topic of biofuels—everything from how biofuels are made to how they burn and their impact on the environment. Participants create and share lesson plans and activities and each participant receives a \$100 tool kit to teach the new activities. Throughout the year, the teachers continue to collaborate on the lessons, which are inspiring students to seek new opportunities in biofuels research. One student group's energy exhibit won first place—and a \$50,000 award—in the Burns and McDonnell "Battle of the Brains" competition, and a Kansas City-based science center is developing a hands-on exhibit based on their work.

Corps into technologies with near-term benefits for the economy and society. Combining experience and guidance from established entrepreneurs with a targeted curriculum, I-Corps is a public-private partnership program that teaches grantees to identify valuable product opportunities that might emerge from academic research. I-Corps also offers entrepreneurship training to student participants.

Cumulatively in FY 2012 and FY 2013, a total of 235 teams were accepted into the 6-month program. The completion rate over the 2-year period was 98.3 percent, well above the 80 percent target. For more details, refer to the Priority Goal section of www.performance.gov.

Priority Goal—Access to Digital Products. This goal was achieved in FY 2013. Digital data are increasingly becoming one of the primary products of scientific research. Access to the digital products of research enhances openness and transparency in the scientific enterprise and enables new types of multi-disciplinary research and education. Therefore, it is increasingly important for NSF to facilitate and encourage access to data and research results. This Priority Goal supports collaborative and multidisciplinary science by enabling data to flow more easily across traditional disciplinary boundaries.

In FY 2012, NSF convened a cross-agency group that assessed the state of NSF's policies in this area. The group determined that many NSF-funded large facilities, which represent their scientific domains, already have established policies for public access to high-value data and software, and recommended a shift in focus from large facilities to other types of NSF investments. In FY 2013, test beds were identified to increase opportunities through data sharing and public access to data. By June 2013, two of the projects identified had data policies in place that have expanded the opportunities for access to high-value digital products of NSF-funded research (Data ONE and nanoHUB). For more details, refer to the Priority Goal section of www.performance.gov.

Recovery Act Performance Results

The broad agency goals for NSF's ARRA program are derived directly from the purposes and principles expressed in the Recovery Act: long-term investments in basic research, education, and research infrastructure are needed "to increase economic efficiency by spurring technological advances in science and health."²¹ NSF targeted investments that would fuel economic growth by yielding new discoveries that will enhance productivity for many years to come and will contribute to the preparation of a dynamic U.S. workforce.

- In initial years (FY 2009 and FY 2010), targets were set for the numbers of awards made under the R&RA and EHR programs.
- Investments in the EHR ARRA program were designed to increase the number of well-trained teachers and master's degree holders in the workforce. The longer-term goals for those programs relate to the number of students enrolled and the number of graduates of the funded programs.
- Investments in research infrastructure—the MREFC program—were intended to monitor that construction projects funded by ARRA were on time and within budget.

Final information for the EHR and MREFC program awards are still being collected and will be included in NSF's *FY 2013 Annual Performance Report*.

²¹ The American Recovery and Reinvestment Act of 2009 is available at www.gpo.gov/fdsys/pkg/BILLS-111hr1enr/pdf/BILLS-111hr1enr.pdf.

In FY 2013, NSF began the process of winding down implementation of our three ARRA programs. NSF's entire ARRA portfolio of more than 5,000 awards and \$3 billion has been obligated since the end of FY 2010. As of September 30, 2013, the portfolio was 92 percent expended since the vast majority of the ARRA projects had concluded by this date. The key focus for FY 2013 was implementation of OMB's guidance requiring the acceleration of ARRA expenditures,²² and the complementary awardee communication, outreach, and oversight that such implementation required. NSF also focused on monitoring awardee performance, including compliance with requirements for quarterly recipient reporting and lessons learned.

OMB Memorandum M-11-34, *Accelerating Spending of Remaining Funds from the American Recovery and Reinvestment Act for Discretionary Grant Programs*, required all recipients of federal financial assistance in connection with ARRA to accelerate expenditures and complete projects by September 30, 2013. NSF had been particularly challenged by this OMB guidance because our ARRA program had been purposely designed to advance the long-term reinvestment goals of the Act, and encompassed many projects that were specifically designed to last 3, 4, and 5 years. To meet this challenge, NSF designed an extensive model by which the agency could analyze and submit worthy projects to OMB for waiver consideration from the acceleration requirement. Implementation of this effort, however, required detailed expenditure monitoring and extensive and robust communication and outreach to our awardees to ensure the timely and responsible expenditure of ARRA funds. Ultimately, NSF sought and was granted a waiver constituting less than 5 percent of its ARRA obligations.

As noted previously, we continued to implement NSF's comprehensive, multi-stage review program for recipient reporting. Our effective program and 99 percent compliance rate over the last 15 reporting quarters firmly establish NSF as a leader on which the accountability and transparency community can rely for government-wide process-improvement recommendations.²³

Though the bulk of the program has now concluded, in FY 2014, NSF will continue to implement our ARRA program. Although the Recovery Accountability and Transparency Board had been scheduled to sunset on September 30, 2013, its activities have been extended through September 30, 2015. Recipient reporting will continue, as will periodic expenditure monitoring and targeted outreach and communication with ARRA awardees, albeit on a much smaller scale. Finally, we will use ARRA "lessons learned" to inform NSF-wide management practices, particularly in the areas of expenditure monitoring, integrated program and administrative management, NSF-OIG stewardship collaborations, and increased stakeholder outreach and engagement.

Workload and Management Trends

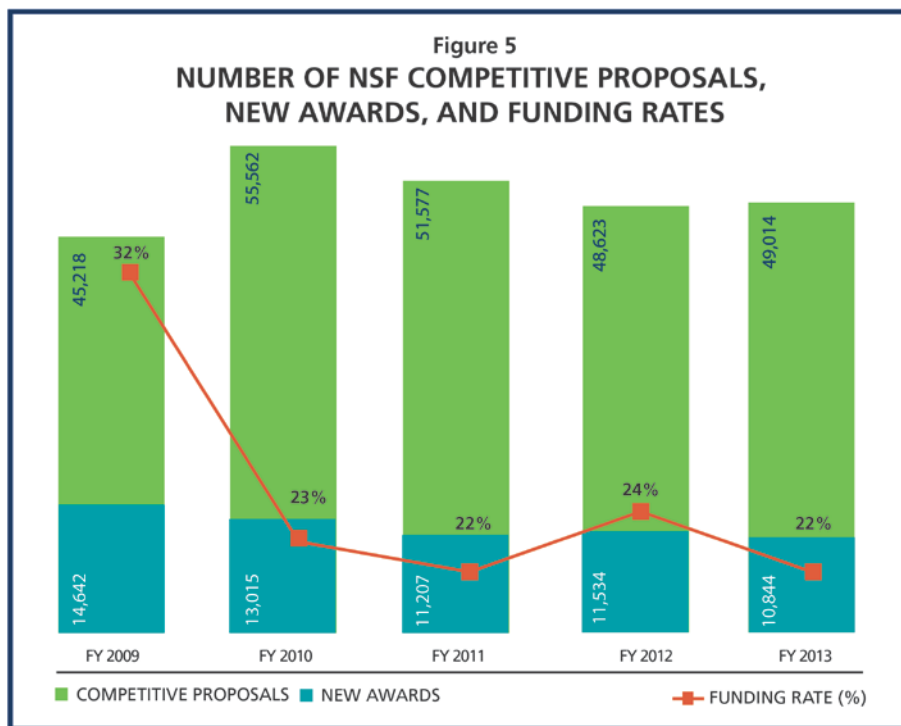
NSF continuously monitors key portfolio, workload, and financial measures to understand short- and long-term trends and to help inform management decisions.

- In FY 2013, the number of competitive proposals reviewed by NSF increased by about 400—from 48,623 in FY 2012 to 49,014 in FY 2013 (Figure 5).
- The number of new awards decreased by 6 percent (690) to 10,844. The number of new awards in FY 2013 is the lowest since FY 2006. This decrease is in line with the overall reduction of 2.1 percent in total NSF funding from FY 2012 to FY 2013.

²² OMB Memorandum M-11-34.

²³ NSF has overseen 12 recipient reporting quarters to date, delivering compliance rates of 99 percent over the last 11 quarters, with several quarters at 99.8 percent.

- The decrease in new award actions coupled with a 0.8 percent increase in the number of competitive proposals resulted in a funding rate of 22 percent.



- As shown in Figure 6, in FY 2013, the average annual award size of competitive awards decreased slightly, from \$169,217 in FY 2012, to \$169,107. The average annual award size in FY 2013 is nearly 4 percent or \$6,807 below the average annual award size of the previous 4-year period (\$175,914), which included funding from ARRA. Adequate award size is important for enabling science of the highest quality and ensuring that the proposed work can be accomplished as planned. Larger award size may also permit the participation of more students and allow investigators to devote a greater portion of their time to conducting research.²⁴
- In FY 2013, NSF's workforce in terms of full-time equivalents (FTE) was at 1,414. The agency's FTE has essentially remained unchanged since FY 2011.
- The number of active awards decreased 1.6 percent (890) in FY 2013, from 56,432 in FY 2012 to 55,542 in FY 2013. This decrease reflects a combination of factors including the expiration of the majority of NSF's ARRA grants and the fact that the number of new awards made in the years following ARRA have dropped back to levels observed in pre-ARRA years.

²⁴ See *Report to the National Science Board on the NSF's Merit Review Process, FY 2012* (NSB-13-33) at www.nsf.gov/nsb/publications/pub_summ.jsp?ods_key=nsb1333.

Figure 6: Workload and Management Trends

| Measure | | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | Percent Change (FY 2013/ FY 2012) | Average, FY 2009- FY 2012 |
|-----------|--|-----------|-----------|-----------|-----------|-----------|-----------------------------------|---------------------------|
| Portfolio | Competitive proposal actions | 45,218 | 55,562 | 51,577 | 48,623 | 49,014 | 0.8% | 50,245 |
| | Competitive award actions | 14,642 | 13,015 | 11,207 | 11,534 | 10,844 | -6.0% | 12,600 |
| | Average annual award size (competitive awards) | \$172,569 | \$189,338 | \$172,533 | \$169,217 | \$169,107 | -0.1% | \$ 175,914 |
| | Funding rate | 32% | 23% | 22% | 24% | 22% | -2% points | 25% |
| Workload | Number of employees (FTE, usage) | 1,386 | 1,424 | 1,415 | 1,415 | 1,414 | -0.1% | 1,410 |
| | Number of active awards * | 52,858 | 55,449 | 56,414 | 56,432 | 55,542 | -1.6% | 55,288 |
| | Proposal reviews conducted | 241,712 | 287,017 | 262,005 | 235,654 | 233,116 | -1.1% | 256,597 |
| Financial | Number of grant payments | 25,723 | 22,782 | 29,214 | 28,016 | 27,649 | -1.3% | 26,434 |
| | Federal Financial Reports (FFR) submitted | 99.60% | 99.80% | 99.89% | 99.91% | 100.00% | <1% point | 99.80% |

* Active awards include all active awards regardless of whether funds were received during the fiscal year.

- During the period April through June 2013, NSF transitioned grantees to the ACM\$. In the ACM\$ environment, awardee institutions are required to submit payment requests at the award level. Award expenses are posted to the NSF financial system at the time of the payment request. This enables NSF financial and program staff to have access to up-to-date expense and award balance information. As a result, NSF grantees no longer have to report their expenditures at the end of each quarter by submitting a Federal Financial Report (FFR). In preparation for the ACM\$ transition during the first half of FY 2013, 100 percent of the FFRs—all 3,291—were submitted for the reporting periods. High FFR submission levels enabled NSF to ensure award balances were reconciled between NSF and awardee financial systems and contributed significantly to the smooth and timely conversion of all grantees onto the ACM\$ payment process without interruption or delay in program activity.
- For FY 2013, the number of NSF grant payments decreased by 1.3 percent, reflecting the closeout process of the ARRA awards.

Financial Discussion and Analysis

In FY 2013, NSF focused resources to achieve performance results through enhancing financial accountability, improving transparency, and implementing risk management across the agency. At a time of both growing agency responsibilities and budget austerity, increasing NSF's ability to provide useful and reliable financial information is critical for better management and more effective resource allocation decisions that will ensure sound stewardship of the public trust. In FY 2013, NSF improved financial management on several fronts:

- Implementation of the ACM\$ ended the "pooling" method of paying awards. Under ACM\$, requests for funds must now be submitted at the award level. This enables NSF financial management and program staff to have access to up-to-date expense and award balance information, which allows for more effective monitoring and management of funds.
- NSF continued to seek ways to improve accountability and effectiveness of operations through an effective internal control system. To improve how the agency detects and prevents improper payments, NSF leveraged its internal control system to develop a revised risk assessment methodology for improper payments.
- NSF's ongoing effort to modernize its 25-year-old financial management system made significant progress during the year. The new iTRAK system will increase the agency's capabilities for more informed operational and programmatic decisionmaking, improve effectiveness and efficiency of financial and business processes, and enhance financial and business accountability, integrity, and compliance with OMB requirements.

In addition, NSF has made significant progress towards reducing certain administrative costs by identifying and implementing efficiencies, prioritizing work, and exploring new ways of getting the job done. As an example, NSF revised policy to standardize and accelerate the time period when outstanding travel obligations are financially closed. This has minimized the amount of time funds remain obligated on completed travel. Overall, in FY 2013, agency travel obligations were 38 percent below the FY 2010 level.

In accordance with the Chief Financial Officers Act of 1990 and the Government Management Reform Act of 1994, NSF prepares financial statements in conformity with generally accepted accounting principles (GAAP) for U.S. federal entities. The financial statements present NSF's detailed financial information relative to its mission and the stewardship of those resources entrusted to the agency. It also provides readers with an understanding of the resources that NSF has available, the cost of our programs, and the status of resources at the end of the fiscal year. NSF subjects its financial statements to an independent audit to ensure that they are free from material misstatement and can be used to assess NSF's financial status and related financial activity for the years ending September 30, 2013 and September 30, 2012.

For FY 2013, NSF received its 16th consecutive unqualified audit opinion. The audit report noted no material weaknesses. However, it repeated a significant deficiency related to the monitoring of construction-type agreements. NSF continues to work to strengthen controls for awarding and managing construction-type cooperative agreements, including working with the OIG to find agreement on the oversight of cooperative agreements and contingency budgets and resolve the audit findings. Although we continue to disagree with this significant deficiency, we are committed to building on the progress that we have made this year. For a more detailed discussion of the independent audit results, see the audit report on page II-3. Management's response to the audit report can be found on page II-17.

Understanding the Financial Statements

NSF's FY 2013 financial statements and notes are presented in accordance with OMB Circular A-136, *Financial Reporting Requirements*. NSF's current year financial statements and notes are presented in a comparative format. The Stewardship Investment schedule presents information over the last 5 years. Figure 7 summarizes the changes in NSF's financial position in FY 2013.

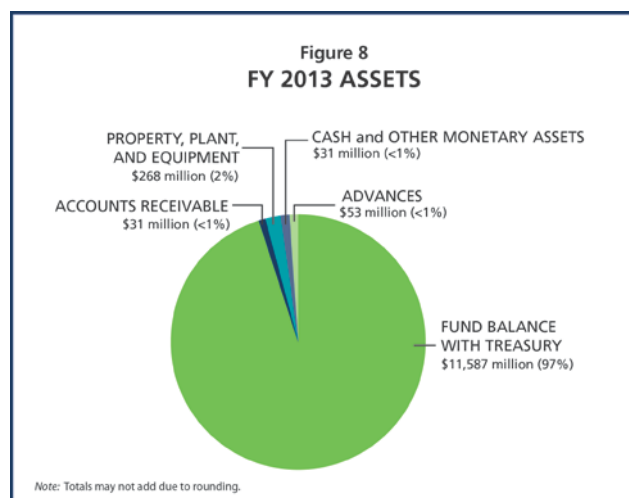
Figure 7. Changes in NSF's Financial Position in FY 2013 (dollars in thousands)

| Net Financial Condition | FY 2013 | FY 2012 | Increase/ (Decrease) | % Change |
|-------------------------|--------------|--------------|----------------------|----------|
| Assets | \$11,970,603 | \$12,388,642 | (\$418,039) | -3.4% |
| Liabilities | \$259,846 | \$543,474 | (\$283,628) | -52.2% |
| Net Position | \$11,710,757 | \$11,845,168 | (\$134,411) | -1.1% |
| Net Cost | \$7,117,071 | \$7,335,657 | (\$218,586) | -3.0% |

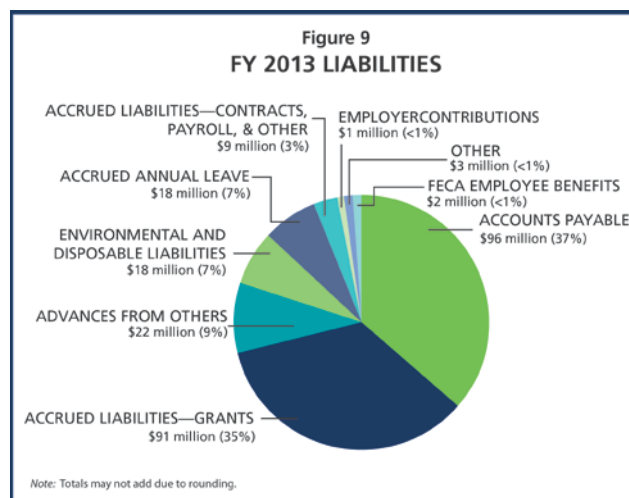
Balance Sheet

The Balance Sheet presents the total amounts available for use by NSF (assets) against the amounts owed (liabilities) and amounts that comprise the difference (net position). NSF's total assets are largely composed of *Fund Balance with Treasury*. A significant balance also exists in the *General Property, Plant, and Equipment* account.

In FY 2013, Total Assets (Figure 8) decreased 3.4 percent from FY 2012. The bulk of the change occurred in the *Fund Balance with Treasury* account, which decreased by \$460.2 million in FY 2013. *Fund Balance with Treasury* is funding available from which NSF is authorized to make expenditures and pay amounts due through the disbursement authority of the Department of Treasury. It is increased through appropriations and collections and decreased by expenditures and rescissions. The FY 2013 decrease is largely attributed to sequestration and across-the-board rescissions.



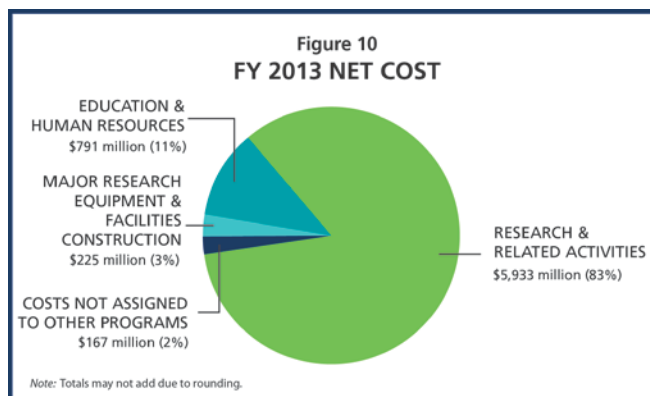
NSF's Total Liabilities (Figure 9) decreased by 52.2 percent in FY 2013. The majority of this change is related to the decrease in *Accrued Liabilities—Grants*. This decrease is attributed to the implementation of a new grantee cash request and reporting system, Awardee Cash Management Service (ACM\$). The previous system did not enable grantees to request funds at the award level and resulted in the reporting of detailed expenditure data subsequent to financial reporting deadlines. As such, NSF was required to accrue for grant expenditures incurred but not yet reported, resulting in a large *Accrued Liabilities—Grants* balance at the end of FY 2012. ACM\$ allows grantees to request cash at



the award level, enabling NSF to record grant expenditures as incurred. This change in reporting eliminated the previous grant accrual methodology and resulted in a significantly lower *Accrued Liabilities—Grants* balance.

Statement of Net Cost

This statement presents the annual cost of operating NSF programs. The net cost of each specific NSF program operation equals the program's gross cost less any offsetting revenue. Intragovernmental earned revenues are recognized when related program or administrative expenses are incurred. *Earned revenue* is deducted from the full cost of the programs to arrive at the *Net Cost of Operation*.



Approximately 95 percent of all current year NSF Net Costs of Operations incurred were directly related to the support of the Research and Related Activities (R&RA), Education and Human Resources (EHR), Major Research Equipment and Facilities Constructions (MREFC) programs; and Donations and Funds from Dedicated Collections, which are classified as *Costs Not Assigned to Other Programs* in the Statement of Net Cost. Additional costs were incurred for indirect general operation activities (e.g., salaries, training, and activities related to the advancement of NSF information systems technology) and activities of the NSB and the OIG. These costs were allocated to R&RA, EHR, MREFC, and Costs Not Assigned to Other Programs and account for 5 percent of the total current year Net Cost of Operations (Figure 10). These administrative and management activities are focused on supporting the agency's program goals.

Statement of Changes in Net Position

The Statement of Changes in Net Position presents the agency's cumulative net results of operation and unexpended appropriations for the fiscal year. NSF's Net Position decreased slightly by 1.1 percent, or \$134.4 million, in FY 2013.

Statement of Budgetary Resources

This statement provides information on how budgetary resources were made available to NSF for the year and the status of those budgetary resources at year-end. For FY 2013, *Total Budgetary Resources* decreased by \$113.8 million. *Budgetary Resources—Appropriations* for the R&RA, EHR, and MREFC accounts were \$5,543.7 million, \$833.3 million, and \$196.2 million, respectively. The combined *Budgetary Resources—Appropriations* in FY 2013 for the NSB, OIG, and AOAM accounts totaled \$310.9 million. NSF also received funding via warrant from the special earmarked H-1B receipt account in the amount of \$115.8 million, and via donations from foreign governments, private companies, academic institutions, nonprofit foundations, and individuals in the amount of \$40.3 million. In FY 2013, the *Budgetary Resources—Appropriations* line was also affected by sequestration and across-the-board rescissions.

Stewardship Investments

NSF-funded investments yield long-term benefits to the general public. NSF investments in research and education produce quantifiable outputs, including the number of awards made and the number of researchers, students, and teachers supported or involved in the pursuit of science and engineering research and education. NSF incurs stewardship costs to empower the nation through discovery and

innovation. In FYs 2013 and 2012, these costs amounted to \$327.4 million and \$333.7 million, respectively.

Limitations of the Financial Statements

In accordance with the guidance provided in OMB Circular A-136, NSF discloses the following limitations of the agency's FY 2013 financial statements, which appear in Chapter 2 of this report: The principal financial statements have been prepared to report the financial position and results of operations of NSF, pursuant to the requirements of 31 U.S.C. 3515(b). While the statements have been prepared from NSF books and records in accordance with GAAP for federal entities and the format prescribed by OMB, the statements are in addition to the financial reports used to monitor and control budgetary resources, which are prepared from the same books and records. The statements should be read with the realization that they are for a component of the U.S. Government, a sovereign entity.

Other Financial Reporting Information

Debt Collection Improvement Act of 1996

Net Accounts Receivable totaled \$31.0 million at September 30, 2013. Of that amount, \$28.2 million is due from other federal agencies. The remaining \$2.8 million is due from the public. NSF fully participates in the Department of the Treasury Cross-Servicing Program. In accordance with the Debt Collection Improvement Act, this program allows NSF to refer debts that are delinquent more than 180 days to the Department of the Treasury for appropriate action to collect those accounts. In FY 2004, OMB issued M-04-10, *Memorandum on Debt Collection Improvement Act Requirements*, which reminded agencies of their responsibility to comply with the policies for writing off and closing out debt. In accordance with this guidance, NSF has now incorporated the policy of writing off delinquent debt more than 2 years old. Additionally, NSF seeks Department of Justice concurrence for action items over \$100 thousand.

Cash Management Improvement Act

In FY 2013, NSF had no awards covered under Cash Management Improvement Act Treasury-State Agreements. The timeliness of NSF's payments to grantees through its payment systems makes the timeliness of payment issue under the Act essentially not applicable to the agency. No interest payments were made in FY 2013.

Systems, Controls, and Legal Compliance



National Science Foundation FY 2013 Statement of Assurance

The National Science Foundation (NSF) management is responsible for maintaining effective internal control and financial management systems that meet the objectives of the Federal Managers Financial Integrity Act of 1982 (Integrity Act), as well as related laws and regulations. The agency is required to perform an evaluation of management and financial system internal control as required by Sections 2 and 4 of the Integrity Act.

NSF's internal control program is designed to ensure full compliance with the objectives of the Integrity Act, laws and regulations, and Office of Management and Budget (OMB) guidance including: (1) OMB Circular A-123, Management's Responsibility for Internal Control, including Appendix A, Internal Control over Financial Reporting; Appendix B, Improving the Management of Government Charge Card Programs; Appendix C, Requirements for Effective Measurement and Remediation of Improper Payments; and Conducting Acquisition Assessments under OMB Circular A-123; (2) OMB Circular A-127, Financial Management Systems; and (3) OMB Circular A-130, *Management of Federal Information Resources*.

NSF completed its evaluation and carefully considered the appropriate balance between controls and risk in programs and operations. Based on the results of these evaluations, NSF provides reasonable assurance that as of September 30, 2013, its internal control over programs and operations were operating effectively to ensure compliance with applicable laws and regulations. No material weaknesses were identified in the design or operation of internal control under Section 2 of the Integrity Act and no system non-conformances were identified under Section 4 of the Integrity Act.

In accordance with Appendix A of OMB Circular A-123, NSF conducted an assessment of the effectiveness of internal control over financial reporting, which included the safeguarding of assets and compliance with applicable laws and regulations. Based on the results of this assessment for the period ending June 30, 2013, NSF provides reasonable assurance that internal control over financial reporting was operating effectively and no material weaknesses were identified in the design or operation of internal control.

For FY 2013, NSF is providing an unqualified statement of assurance that its internal control and financial management systems meet the objectives of the Integrity Act, as well as related laws and guidance.

A handwritten signature in blue ink that reads "Cora B. Marrett".

Cora B. Marrett
Acting Director

December 16, 2013

Management Assurances

Federal agencies are striving to obtain better performance results in an ever-changing environment with growing demands and changing priorities. An effective internal control system is a necessity in obtaining desired outcomes and minimizing operational problems. Implementation of new technology and improvements to the operational processes require continual reassessments of internal control systems to ensure it is updated and functioning effectively.

The Federal Managers Financial Integrity Act of 1982 (Integrity Act or FMFIA) requires each federal agency to conduct ongoing evaluations and reporting of the adequacy of the systems of internal accounting and administrative control. OMB Circular A-123, *Management's Responsibility for Internal Control*, provides guidance to federal managers on improving accountability and effectiveness of federal programs and operations by establishing, assessing, correcting, and reporting on internal control. The head of the agency is required to provide a Statement of Assurance as to whether the agency has met these requirements based on an annual evaluation.

The NSF Acting Director provides an unqualified Statement of Assurance for FY 2013. The statement is management's assessment of the effectiveness of NSF's internal control over financial reporting as of June 30, 2013. The assessment provides reasonable assurance that the objectives of the Integrity Act were achieved for FY 2013, concluding the internal controls over financial reporting are effective.

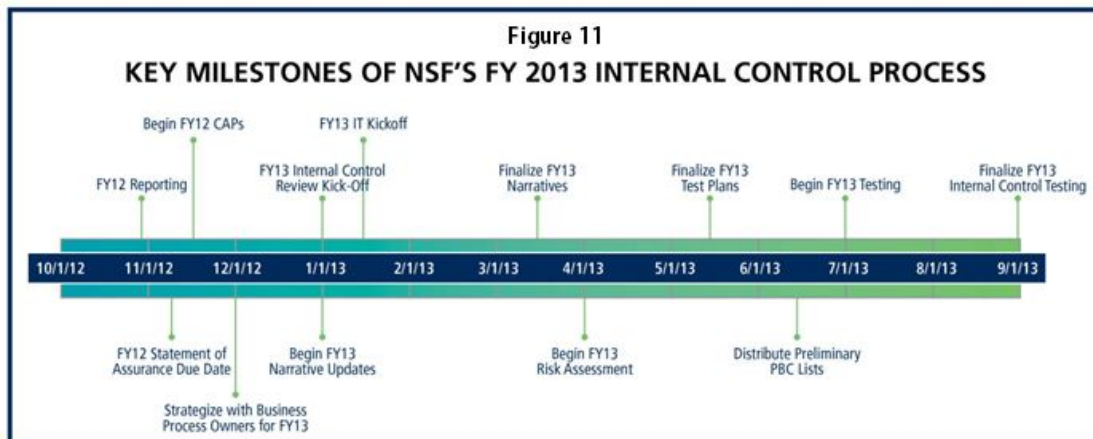
FY 2013 Internal Control Assessment and Results

NSF has worked diligently to embrace the intent and requirements of OMB Circular A-123, *Management's Responsibility for Internal Control* as amended including Appendix A, *Internal Control over Financial Reporting*. To maximize efficiencies and eliminate duplication of efforts, NSF's Internal Control Quality Assurance Program annually conducts a review and incorporates changes to key NSF processes and procedures. The key components comprise an effective internal control process.

To perform the internal control review, NSF uses a proven principle-based approach, which consists of a thorough understanding of the internal control environment at the entity and process levels followed by testing of the control design and operating effectiveness at the transaction level. The five integrated components of the internal control process are: Control Environment, Risk Assessment, Control Activities, Monitoring, and Information and Communication, utilized for effective internal control.

The internal control process is a continuous process effected by people. The components provide management with reasonable assurance that internal control over operations, financial reporting, and compliance with laws and regulations are designed and operating effectively. NSF management develops and maintains documentation of its internal control system to support the design, implementation, and operating effectiveness of the five components. The NSF internal control process includes evaluation of internal control issues and a determination for the appropriate corrective actions for resolution. Corrective Action Plans for remediation are tracked to ensure completion is timely. The annual internal control review is conducted in accordance with the OMB Circular A-123; no significant deficiencies were identified for FY 2013.

The following timeline (Figure 11) displays the major agency events related to the key components and the timeframe for NSF's FY 2013 internal control process. The timeline of events and dates displays NSF's structured, detailed approach. The NSF internal control process provides a thoughtful assessment approach that elevates the agency's internal control evaluations beyond a "compliance only" approach to meaningful and comprehensive evaluations.



Highlights from NSF's Internal Control Quality Assurance Program

In FY 2013, NSF's Internal Control Quality Assurance Program had significant accomplishments related to both new and ongoing initiatives. Management's ongoing internal control review for 11 business processes for the period July 1, 2012, through June 30, 2013, determined that the agency's internal control was adequately designed, properly executed, and effective. This is the result of an annual effort, on an ongoing basis, to systematically document, test, evaluate, and improve NSF's internal control processes. This process also encourages standardization of similar processes for use in different parts of the agency. Emphasizing transparency, collaboration, and participation throughout NSF's internal control reviews and corrective actions directly supports the agency's strategic goal of "Perform as a Model Organization" through leadership, accountability, and personal responsibility.

- **NSF's Integrated Approach Internal Control System:** NSF continues to seek ways to improve accountability and effectiveness of operations through an effective internal control system. The NSF internal control system supports the organization to adapt to new federal mandates, resource constraints, and emerging priorities. Management evaluates its internal control system to assure it is effective and updated when necessary.

Internal control reviews are conducted in accordance with the Integrity Act requirements to assure achieving the three objectives of internal control:

- Effectiveness and efficiency of operations
- Compliance with regulations and applicable laws
- Reliability of financial reporting

NSF conducts reviews of the agency's business processes (assessable units) to attain an appropriate balance between controls and risk. In accordance with FMFIA, the agency head provides an annual Statement of Assurance on whether the agency has met these requirements.

- **NSF Internal Control Training:** "NSF Internal Control and You" is an online course intended for all NSF employees featuring and narrated by the NSF Internal Control Team. The course addresses the use of internal control at NSF to reduce fraud, waste, and abuse. It describes how the Internal Control Team can assist NSF staff in meeting federal requirements for internal

control, how to prepare for an internal control review, and how to generally improve NSF internal control processes.

- ***The United States Antarctic Program Property, Plant, and Equipment:*** In FY 2013, the United States Antarctic Program successfully transitioned to a new contractor. In the past, an independent validation and verification (IV&V) of additions, deletions, and transfers of real property and capital equipment was conducted. NSF management determined conducting an internal control review in place of the IV&V would provide reasonable assurance that the objectives were met through a more integral part of the operational processes. This change in approach required a shift in focus from property, plant, and equipment (PP&E) to conducting an internal control review of the business processes, which includes PP&E. The review provided validation that proper property balances and activity were transferred and recorded by the new contractor.
- ***Information Technology Assessments:*** NSF performed the information technology review in accordance with the National Institute of Standards and Technology Special Publication 800-53. In recent years, NSF has implemented a systematic approach for providing and accessing documentation using an automated tool, which has improved accountability, responsiveness, and efficiencies. The internal control review utilized the U.S. Government Accountability Office Federal Information Security Management Act of 2002 (FISMA) guidance to develop an information system assessment strategy. The top-down, risk-based approach considered materiality and significance as internal control review objectives. The objectives provided assurance that the transactions and data utilized during application processing were complete, accurate, valid, and confidential.

Improper Payments Elimination and Recovery Act

In March 2013, the OIG issued an audit report on NSF's compliance with the Improper Payments Elimination and Recovery Act of 2010 (IPERA). The scope of the audit was limited to the agency's improper payments reporting in its FY 2012 *Agency Financial Report* (AFR) and concluded that NSF is in partial compliance with OMB reporting requirements. The OIG report is available at www.nsf.gov/oig/IPERA_13-2-007.pdf.

To improve compliance with IPERA and the Improper Payments Elimination and Recovery Improvement Act of 2012, NSF is taking a retrospective and prospective view to develop and implement a revised risk assessment methodology (see Appendix 2). NSF will review its grants program and other activities the agency administers to identify whether they are susceptible to significant improper payments with the objective to detect and prevent improper payments in the future.

The IPERA review process is a 2-year effort undertaken in coordination with OMB. In FY 2013, NSF is reporting on risk assessment. Any required testing results will be done and reported in FY 2014. NSF is taking a holistic view of its single program, Research and Education Grants and Cooperative Agreements, as well as the funding types associated with its appropriations.

Financial System Strategy

NSF's financial system goals are to increase capabilities for more informed operational and programmatic decision-making, improve effectiveness and efficiency of financial and business processes, and enhance financial and business accountability, integrity, and compliance. In an effort to achieve these goals, NSF is replacing its current Financial Accounting System (FAS) with a commercial-off-the-shelf (COTS) core

financial management system and key interfaces that will be hosted in a shared service environment. This effort is part of a Foundation-wide initiative known as iTRAK.

Strategic Overview

The Chief Financial Officers Act of 1990 assigns clear responsibilities for planning, developing, maintaining, and integrating financial management systems within federal agencies. NSF currently maintains a core accounting system, FAS, and various grants management systems to support NSF's mission. Financial systems strategies include:

- 1) Implementing iTRAK Phase 1, a COTS core financial management solution hosted in a shared services environment in accordance with OMB Memorandum M-10-26, *Immediate Review of Financial Systems IT Projects*, and compliant with federal financial system guidance including OMB Circular A-127, *Financial Management Systems*, and government-wide accounting and reporting requirements. NSF will be implementing Oracle Federal Financials.
- 2) Implementing future iTRAK phases including integration of acquisition, property, and budget formulation systems with the COTS core financial system (upon funding availability).

Ongoing Financial System Initiatives

In FY 2013, NSF continued to make substantial progress in its financial systems modernization efforts. In FY 2012, NSF successfully completed the planning and acquisition phases of the NSF Project Management Lifecycle by awarding a systems implementation contract to Accenture Federal Services, LLP. The iTRAK Core Financial project is broken down into six phases: Planning and Initiation, Requirements, Design, Develop, Test, and Deploy. In FY 2013, iTRAK began activities for implementing core financials and completed the Initiation/Planning and Requirements phases of the project. Accomplishments include:

- Establishing a Project Management Office
- Creating a Change Control Board
- Passing the Initiation and Planning Gate Review
- Passing the Requirements Phase Gate Review
- Defining the Solution Strategy
- Completing the Integration Solution Analysis
- Validating more than 1,100 system requirements
- Completing the Reporting Strategy
- Completing the Data Conversion Strategy
- Continuing data cleanup efforts
- Creating a comprehensive Change Management Strategy
- Establishing a Change Champions Working Group with more than 35 Change Champions
- Completing preliminary solution preview sessions
- Beginning activities that focus on workforce analysis
- Purchasing Oracle Federal Financial software

These activities were completed within schedule and budget.

In FY 2014, iTRAK will continue to implement core financials and should complete the Design, Development, and Testing phases of the project. Activities in these phases include: continuing stakeholder outreach; finalizing data cleanup; building system interfaces; performing mock data conversions; performing system testing; developing and conducting training; standing up the iTRAK help desk; completing the work force Transformation Plan; and finally, taking the system live October 2014.

Future Financial System Initiatives: Implement Future iTRAK Phases

iTRAK will help to improve NSF's operational excellence and enable efficient and effective execution of financial activities and business operations by integrating an Acquisition Module, Fixed Asset Module, and Budget Formulation Module with the COTS core financial system. NSF plans to integrate these applications in later phases as resources permit.

The logo for INSE (Institut National Supérieur de l'Éducation) is centered in the upper half of the page. It features the letters 'INSE' in a large, bold, serif font. Behind the text is a circular emblem containing a gear-like pattern. The entire logo is rendered in a dark blue color against a dark blue background.

INSE

Chapter 2

Financials



A MESSAGE FROM THE CHIEF FINANCIAL OFFICER



Credit: Sandy Schaeffer

This is a time of extraordinary challenges for all federal agencies, shaped by national fiscal austerity, tightened federal budgets, and demands for increased efficiency, accountability, and transparency to U.S. taxpayers. Over the past fiscal year and looking to FY 2014 and beyond, NSF is prioritizing work, eliminating or scaling back the scope of some non-critical activities, and implementing new ways of getting the job done. We are adopting creative monitoring tools, innovative and productive uses of virtual technologies, and setting priorities so that we can do “less with less” while continuing to advance the agency’s core mission.

I am pleased to report that for fiscal year (FY) 2013 the National Science Foundation (NSF) received its 16th consecutive unqualified audit opinion, affirming that NSF’s financial statements for the year ended September 30, 2013, were presented fairly in all material respects and in conformity with U.S. generally accepted accounting principles. The audit report included no material weaknesses. However, it included one repeat significant deficiency related to the monitoring of construction-type cooperative agreements. NSF continues to work to strengthen controls for awarding and managing these agreements, including working with the Office of Inspector General (OIG) to find agreement on the oversight of cooperative agreements and contingency budgets and resolve audit findings. Although we remain in disagreement with this significant deficiency, we are committed to continuing this year’s progress into the future. In FY 2013, we made key improvements to controls and facility oversight, several of which are discussed below, and we look forward to continuing our collaboration with the OIG to improve our operations and financial management. A more detailed discussion about how we are addressing this significant deficiency can be found in Management’s Response to the FY 2013 Audit Report, which appears elsewhere in this report.

Noteworthy financial operations and management efforts undertaken during the year include the following:

- NSF’s Award Cash Management Service (ACM\$) is a new approach to award payments and post-award financial processes. ACM\$ transitions financial processing of award payments from the “pooling” method to a grant-by-grant method, enabling awardee institutions to submit award-level payment and expenditure amounts each time funds are requested. As a result, ACM\$ eliminates the need for institutions to submit quarterly Federal Financial Reports. Transitioning to ACM\$ gives NSF better and timelier access to financial data, funds status monitoring, and expenditure reports, all which contribute to more transparency and accountability in the stewardship of federal funds.
- As the first rotating member on the Council on Financial Assistance Reform (COFAR), NSF partnered with OMB and senior policy officials from the eight federal agencies that provide the largest amounts of financial grants assistance to help develop and advance federal grants policy. We worked extensively on the OMB proposal for the reform of policies relating to grants and cooperative agreements, including cost principles and administrative requirements. Looking forward, NSF will continue its leadership role in the federal grants community. In 2014, NSF will complete its two-year COFAR term, but will participate in its federal stakeholder group, the

Grants & Loans Committee for E-gov, as the only non-COFAR agency to have been a COFAR member.

- NSF launched the Award Manager Dashboard, the first tool built on NSF's data warehouse and business intelligence platform. Award Manager provides staff with easy access to accurate, well-defined award information, including detailed financial information to support award and post-award management activities. The tool provides a single access point to formerly inaccessible multi-sourced data in easy-to-comprehend formats so NSF staff can make quick informed business decisions. Through rich visualization, reports, and enhanced analytic capabilities, users can effectively manage their award portfolio, spot portfolio outliers, and apply drill down capabilities to view detailed award information.
- NSF continued to make substantial progress in its financial systems modernization initiative known as iTRAK. Over the course of the year, there were a number of accomplishments that will support a successful implementation process: a Governance Structure was established including the creation of an executive panel to expedite decision making; the agency's requirements for technical and reporting capabilities were confirmed; the data conversion and reporting strategies were created; and a comprehensive change and communication strategy for NSF users and stakeholders was developed.
- The concentration of award processing during the late summer has always been a significant workload issue for NSF. An agency-wide working group developed strategies to level-out the award workload across all quarters of the fiscal year, including shifting work cycles and setting deadlines, making information technology improvements, and improving operating procedures. NSF's Business and Operations Advisory Committee has endorsed the working group's findings and in FY 2014, implementation of several pilot efforts will begin. Leveling award workload will result in improved business practices across NSF in both the business offices and program directorates, and it will do the same for the awardee community.

NSF's commitment to accountability reporting, transparency, and good government was recently recognized by the Association of Government Accountants, which awarded NSF's *FY 2012 Performance and Financial Highlights* (www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf13003) with a Certificate of Excellence in Member-Centric Reporting. Sound business operations and practices underpin NSF's programmatic activities and are critical to the achievement of the agency's mission and investments in science and engineering research and education that help ensure our nation's security and economic future.

As always, I welcome your feedback on how we can make this report more informative to our stakeholders and readers.



Martha A. Rubenstein
Chief Financial Officer and
Head, Office of Budget, Finance and Award Management

December 16, 2013



National Science Foundation • Office of Inspector General
4201 Wilson Boulevard, Suite I-1135, Arlington, Virginia 22230

TO: Dr. Cora Marrett
Director (Acting), National Science Foundation

Dr. Dan E. Arvizu
Chair, National Science Board

FROM: Allison Lerner *Allison Lerner*
Inspector General, National Science Foundation

DATE: December 12, 2013

SUBJECT: Audit of the National Science Foundation's
Fiscal Years 2013 and 2012 Financial Statements

This memorandum transmits CliftonLarsonAllen LLP's financial statement audit report of the National Science Foundation (NSF) for Fiscal Years 2013 and 2012.

Results of Independent Audit

The Chief Financial Officer's (CFO) Act of 1990 (P.L. 101-576), as amended, requires NSF's Inspector General or an independent external auditor, as determined by the Inspector General, to audit NSF's financial statements. Under a contract monitored by the Office of Inspector General (OIG), CliftonLarsonAllen LLP (CliftonLarsonAllen), an independent public accounting firm, performed an audit of NSF's Fiscal Years 2013 and 2012 financial statements. The contract required that the audit be performed in accordance with the *Government Auditing Standards* issued by the Comptroller General of the United States and the United States Office of Management and Budget (OMB) Bulletin 14-02, *Audit Requirements for Federal Financial Statements*.

CliftonLarsonAllen issued an unqualified opinion on NSF's financial statements. In its Report on Internal Control over Financial Reporting, CliftonLarsonAllen did not report any material weaknesses in internal control, but did report a significant deficiency related to NSF's monitoring of construction type cooperative agreements that was initially identified in 2011. CliftonLarsonAllen also reported that there were no instances of noncompliance with applicable provisions of laws and regulations it tested, including those relating to the financial management systems requirements of the Federal Financial Management Improvement Act of 1996 (FFMIA).

NSF management's response, dated December 12, 2013, follows CliftonLarsonAllen's report.

Evaluation of CliftonLarsonAllen's Audit Performance

To fulfill our responsibilities under the CFO Act of 1990, as amended, and other related federal financial management requirements, the OIG:

- Reviewed CliftonLarsonAllen's approach and planning of the audit;
- Evaluated the qualifications and independence of CliftonLarsonAllen and its auditors;
- Monitored the progress of the audit at key points;
- Coordinated periodic meetings with NSF management to discuss audit progress, findings, and recommendations;
- Reviewed CliftonLarsonAllen's audit report to ensure compliance with *Government Auditing Standards* and OMB Bulletin No. 14-02; and
- Coordinated issuance of the audit report.

CliftonLarsonAllen is responsible for the attached auditor's report dated December 12, 2013, and the conclusions expressed in the report. We do not express any opinion on NSF's financial statements, or conclusions on the effectiveness of internal control, on compliance with laws and regulations, or on whether NSF's financial management systems substantially complied with FFMIA.

The Office of Inspector General appreciates the courtesies and cooperation NSF extended to CliftonLarsonAllen and OIG staff during the audit. If you or your staff has any questions, please contact me or Dr. Brett M. Baker, Assistant Inspector General for Audit on 703-292-2985.

Attachment

cc: Dr. G. P. Peterson, Chair, Audit and Oversight Committee

INDEPENDENT AUDITORS' REPORT

Inspector General, National Science Foundation
Director, National Science Foundation
Chair of National Science Board

In our audits of the fiscal years (FY) 2013 and 2012 financial statements of National Science Foundation (NSF), we found:

- The financial statements are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America (U.S.);
- One significant deficiency in internal control over financial reporting; and
- No instances of reportable noncompliance with applicable provisions of certain laws and regulations tested, including the requirements of the Federal Financial Management Improvement Act of 1996 (FFMIA).

The following sections and Exhibits discuss in more detail: (1) these conclusions, (2) Management's Discussion and Analysis (MD&A), other required supplementary information (RSI), and other information included with the financial statements, (3) management's responsibilities, (4) our responsibilities, (5) an assessment of the prior year control deficiency, and (6) management's response to this Independent Auditor's Report.

Report on the Financial Statements

We have audited the accompanying financial statements of NSF, which comprise the balance sheets as of September 30, 2013 and 2012, and the related statements of net cost and changes in net position, and the statements of budgetary resources for the years then ended, and the related notes to the financial statements. The objective of our audit was to express an opinion on the fairness of these financial statements.

Management's Responsibility for the Financial Statements

NSF management is responsible for the (1) preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the U.S., (2) preparation, measurement, and presentation of the RSI in accordance with the prescribed accounting principles generally accepted in the U.S., (3) preparation and presentation of other information in documents containing the audited financial statements and auditors' report, and consistency of that information with the audited financial statements and the RSI; (4) design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

INDEPENDENT AUDITORS' REPORT (Continued)

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the U.S.; and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement. We also conducted our audits in accordance with Office of Management and Budget (OMB) Bulletin 14-02, *Audit Requirements for Federal Financial Statements*, (OMB Bulletin 14-02).

In order to fulfill these responsibilities, we (1) obtained an understanding of NSF and its operations, including its internal control over financial reporting; (2) assessed the risk of financial statement misstatement; (3) evaluated the design and operating effectiveness of internal control based on the assessed risk; (4) considered the NSF process for evaluating and reporting on internal control under the Federal Managers Financial Integrity Act (FMFIA) and financial management systems under FFMIA; (5) tested whether NSF's financial management systems substantially complied with the three FFMIA requirements referred to above; (6) tested compliance with applicable provisions of certain laws and regulations; (7) examined, on a test basis, evidence supporting the amounts and disclosures in the financial statements; (8) evaluated the appropriateness of the accounting policies used and the reasonableness of significant accounting estimates made by management; (9) evaluated the overall presentation of the financial statements; (10) conducted inquiries of management about the methods of preparing the RSI and compared this information for consistency with management's responses to the auditors' inquiries, the financial statements, and other knowledge we obtained during the audit of the financial statements, in order to report omissions or material departures from FASAB guidelines, if any, identified by these limited procedures; (11) read the other information included with the financial statements in order to identify material inconsistencies, if any, with the audited financial statements; and (12) performed such other procedures as we considered necessary in the circumstances.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion on the Financial Statements

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of National Science Foundation as of September 30, 2013 and 2012, and its net costs, changes in net position, and budgetary resources for the years then ended, in accordance with accounting principles generally accepted in the U.S.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the U.S. require that NSF's MD&A, and other RSI (including stewardship information) listed in section II of the table of contents, be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Federal Accounting Standards Advisory Board (FASAB), which considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the MD&A and other RSI in accordance with auditing standards generally accepted in the U.S., which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during

INDEPENDENT AUDITORS' REPORT (Continued)

our audit of the financial statements. We do not express an opinion or provide any assurance on the MD&A and other RSI because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

As noted in the table of contents sections i, ii, v, section II - Schedule of Spending, and III – Appendices, NSF's Annual Financial Report (AFR) contains a wide range of information other than the required basic financial statements. This information, including the Schedule of Spending, is presented for purposes of additional analysis and is not a required part of the financial statements or RSI. This other information has not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Reports on Internal Control over Financial Reporting and on Compliance Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards

Report on Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered NSF's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of NSF's internal control or on management's assertion on internal control included in the MD&A. Accordingly, we do not express an opinion on the effectiveness of NSF's internal control or on management's assertion on internal control which is included in the MD&A.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of NSF's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that were not identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. We did identify a certain deficiency in internal control, described in Exhibit A, that we consider to be a significant deficiency.

Report on Compliance

As part of obtaining reasonable assurance about whether NSF's financial statements are free from material misstatement, we performed tests of its compliance with applicable provisions of certain laws and regulations, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not

INDEPENDENT AUDITORS' REPORT (Continued)

express such an opinion. The results of our tests, exclusive of those required by FFMIA as discussed below, disclosed no instances of noncompliance that are required to be reported in accordance with *Government Auditing Standards*, issued by the Comptroller General of the United States or OMB Bulletin 14-02.

Systems Compliance with FFMIA Requirements

Under FFMIA, we are required to report whether the financial management systems used by NSF substantially comply with the (1) Federal financial management systems requirements, (2) applicable Federal accounting standards, and (3) the United States Standard General Ledger (USSGL) at the transaction level. To meet this requirement, we performed tests of compliance with FFMIA Section 803(a) requirements. However, providing an opinion on compliance with FFMIA was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests of FFMIA disclosed no instances in which NSF's financial management systems did not substantially comply with (1) Federal financial management systems requirements, (2) applicable Federal accounting standards, or (3) the application of USSGL at the transaction level.

Management's Responsibility for Internal Control and Compliance

Management is responsible for (1) evaluating the effectiveness of internal control over financial reporting based on criteria established under the FMFIA, (2) providing a statement of assurance on the overall effectiveness on internal control over financial reporting, (3) ensuring NSF's financial management systems' are in substantial compliance with FFMIA requirements, and (4) ensuring compliance with other applicable provisions of certain laws and regulations.

Auditors' Responsibilities

We are responsible for: (1) obtaining a sufficient understanding of internal control over financial reporting to plan the audit; (2) testing whether NSF's financial management systems substantially comply with the FFMIA requirements referred to above; (3) testing compliance with certain provisions of applicable laws and regulations that could have a direct and material effect on the financial statements and other applicable laws for which OMB Bulletin 14-02 requires testing; and (4) applying certain limited procedures with respect to the RSI and all other information included with the financial statements.

We did not evaluate all internal controls relevant to operating objectives as broadly established by the FMFIA, such as those controls relevant to preparing statistical reports and ensuring efficient operations. We limited our internal control testing to testing controls over financial reporting. Because of inherent limitations in internal control, misstatements due to error or fraud, losses, or noncompliance may nevertheless occur and not be detected. We also caution that projecting our audit results to future periods is subject to risk that controls may become inadequate because of changes in conditions or that the degree of compliance with controls may deteriorate. In addition, we caution that our internal control testing may not be sufficient for other purposes.

We did not test compliance with all laws and regulations applicable to NSF. We limited our tests of compliance to applicable provisions of certain laws and regulations that have a direct and material effect on the financial statements and those required by OMB Bulletin 14-02 that we deemed applicable to NSF's financial statements for the fiscal year ended September 30, 2013. We caution that noncompliance with laws and regulations may occur and not be detected by these tests and that such testing may not be sufficient for other purposes. Also, our work on FFMIA would not necessarily disclose all instances of noncompliance with FFMIA requirements.

INDEPENDENT AUDITORS' REPORT (Continued)

Assessment of Prior Year's Control Deficiency

We have reviewed the status of NSF's corrective actions with respect to the significant deficiency finding included in the prior year's Independent Auditors' Report, dated November 9, 2012. Some progress has been made in FY 2013 by NSF in addressing the significant deficiency noted in the FY 2012 Independent Auditors' Report; however, many of the conditions detailed in that report continue to exist and, along with others, is reported herein as a significant deficiency. The status of each specific prior year finding is presented in Exhibit B.

Purpose of the Report on Internal Control over Financial Reporting and the Report on Compliance

The purpose of the Report on Internal Control over Financial Reporting and the Report on Compliance and Other Matters sections of this report is solely to describe the scope of our testing of internal control and compliance and the result of that testing, and not to provide an opinion on the effectiveness of NSF's internal control or on compliance. These reports are an integral part of an audit performed in accordance with *Government Auditing Standards* in considering NSF's internal control and compliance. Accordingly, these reports are not suitable for any other purpose.

Management's Response to Independent Auditor's Report

Management's response to our report is presented in Exhibit C. We did not audit NSF's response and, accordingly, we express no opinion on it.

CliftonLarsonAllen LLP

Calverton, Maryland
December 12, 2013

INDEPENDENT AUDITORS' REPORT (Continued)

Exhibit A

National Science Foundation

Significant Deficiency

September 30, 2013

Monitoring of Construction Type Cooperative Agreements

Background and Control Deficiency Criteria:

As of September 30, 2013, NSF had 16 active construction type cooperative agreements aggregating approximately \$1.9 billion in obligations, which includes approximately \$303 million in contingency funds, representing approximately 16 percent of the total award obligation amount.

Beginning with our fiscal year (FY) 2010 Audit Report, we noted a variety of deficiencies in NSF's internal controls relating to the monitoring of construction type cooperative agreements. In FY 2011 and 2012, NSF engaged in discussions with NSF Office of Inspector General (OIG) and Defense Contract Audit Agency (DCAA) regarding the concerns raised in the prior year audit reports. However, agreement on a plan of action was not achieved, and both our tests and additional reports issued by the OIG in FY 2012 reconfirmed the existence of these deficiencies. Accordingly, these control deficiency matters were repeated in our FY 2012 Audit Report.

During FY 2013, some progress was made by NSF in designing procedures to rectify certain of the weaknesses noted in prior year audits reports and the OIG Alert Memo as it pertains to future awards of cooperative agreements; however, little progress has been made in addressing the issues concerning current cooperative agreements with contingency funding as of September 30, 2013.

The following section describes the specific conditions that continue to exist in FY 2013.

Conditions:

1. DCAA Audits of Construction Type Cooperative Agreements with Contingency Funds

Beginning with our FY 2010 Audit Report and continuing in our FY 2012 Audit Report, we noted that DCAA issued audit reports and inadequacy memoranda (DCAA communications) through FY 2012 on behalf of the NSF OIG that questioned the allowability of approximately \$223 million in contingency costs included in proposal budgets related to construction type cooperative agreements. DCAA specifically indicated that the contingency costs were unallowable for the following reasons:

- a) Budgeted proposal costs did not meet the definition for "contingency" costs pursuant to standard cost principles; used by the Office of Management and Budget (OMB) in its accounting guidance to federal agencies; i.e. contingency costs are only allowed for events the occurrence of which can be foretold with certainty as to time, intensity, or with an assurance of their happening (as detailed in Title 2 Code of Federal Regulations); and
- b) Supporting documentation for budgeted proposal costs was inadequate.

In certain of these communications, DCAA also raised the following concerns:

- a) Awardees could draw down contingency funds without advance approval by NSF;
- b) Proposals do not have adequate supporting documentation for proposed costs; and
- c) Deficiencies in an awardee's accounting system and estimating practices.

INDEPENDENT AUDITORS' REPORT (Continued)

Exhibit A (Continued)

DCAA also noted in an audit of a proposal that the inadequacies were so significant that the five year \$434 million proposal was not considered acceptable for negotiation of a fair and reasonable price\award. DCAA indicated that the price and/or cost analysis provided by the awardee for all costs was insufficient due to (a) reliance on historical data that was not current; (b) lack of adequate documentation of the analyses in general; and (c) less than sufficient competition by offerors. DCAA is still in the process of reviewing and assessing additional information provided by another awardee for a proposal that was previously determined to be unacceptable for audit. Pending the resolution of these fundamental matters, no additional audit work was performed by DCAA regarding these proposals in FY 2013.

NSF continues to address the causes of the above conditions; however, these conditions remain largely uncorrected at September 30, 2013.

2. OIG Audit Report

In our FY 2012 Audit Report, we also discussed the NSF OIG report issued in September 2012 (Report No. 12-2-010) on its *Audit of NSF's Management of Contingency in the EarthScope Awards* which examined cooperative agreements that have been closed. The primary findings of the OIG report were:

- a) The \$10 million in proposed contingency costs were not supported by cost data and not compliant with OMB costs principles;
- b) Instances in which NSF approved the use of some contingency funds for matters that did not appear to represent the materialization of contingent events;
- c) Some awardees were not tracking the use of the contingency funds within their accounting systems; and
- d) The format of the cost proposal submitted by the awardee did not clearly identify allowable and unallowable costs or the specific amount allocated for contingency.

NSF continues to address the causes of the above conditions; however, the conditions remain largely uncorrected at September 30, 2013.

3. OIG Alert Memo

Also, in our FY 2012 Audit Report, we discussed the NSF OIG's Alert Memo issued in September 2012 (Report No. 12-6-001), *NSF's Management of Cooperative Agreements*. The Alert Memo, based in part on the findings from the aforementioned DCAA audits and a separate OIG audit, reiterated concerns about the adequacy of NSF's review of proposed costs, the proposer's financial management capabilities, and NSF's post-award monitoring. The main points of the OIG Alert Memo were as follows:

- a) NSF does not require a proposal audit for high-risk, high-dollar cooperative agreements prior to award to ensure that awardee's cost estimates are adequate to form an acceptable basis for the negotiation of a fair and reasonable price.
- b) NSF does not require audits of the accounting systems of awardees that will be managing large cooperative agreements, prior to making awards to ensure that they are adequate to bill the government.
- c) NSF does not require the use of OMB's SF 424C Form (Budget Information - Construction Programs), which identifies allowable and unallowable costs as well as amounts for contingencies, when proposals are submitted. This situation increases the risk that NSF could be unknowingly funding unallowable costs, especially if an awardees' accounting system has not been determined to be adequate by the cooperative agreement officer.

INDEPENDENT AUDTORS' REPORT (Continued)

Exhibit A (Continued)

- d) Large cooperative agreement awardees are not required to provide NSF with annual incurred cost submissions unless the awardee is also performing under a federal cost-reimbursement contract for which NSF is the cognizant agency for the contract, nor does NSF routinely have those submissions audited to ensure that the costs claimed are allowable. Absent incurred cost submissions and audits, NSF cannot adequately monitor awardees' expenditure of government funds during the active award stage, compounding the concern that unallowable costs could be charged to awards and remain undetected.
- e) Awardees did not separately account for contingency expenditures in their accounting records, therefore they could not demonstrate how their contingency funds were actually spent in comparison to how they were budgeted and approved.

NSF continues to address the causes of the above conditions; however, the conditions remain largely uncorrected.

4. Internal Controls for Monitoring Use of Contingency Funds

In addition to the DCAA and OIG audits discussed above, our specific internal control testing procedures, which included the examination of several cooperative agreements with contingency funds, noted the following exceptions:

- a) Awardees can draw down on the contingency funds budget without prior NSF approval, if the amount is below an established threshold. Above this established threshold, per NSF policy, prior approval is required to draw down on the contingency funds budget. However, systematic barriers to prevent an awardee from drawing down an amount in excess of the threshold without prior approval were not in place at September 30, 2013. A system control of that nature would reduce the risk of contingency funds being used for unallowable purposes.
- b) For certain cooperative agreements examined, we noted the following:
 - The awardee did not report the allocation of the contingency budget authority to specific project Work Breakdown Structure (WBS) elements on a monthly basis as required by NSF. This lack of information on how the contingency funds are being spent limits NSF management's ability to assess how and when the contingency funds are being used; and
 - NSF was unable to provide evidence to document that it had approved the awardee's change order process for managing contingency expenditures. A requirement to document NSF's approval of the awardee's change order process for managing contingency expenditures and requests above the stipulated threshold would reduce the risk of funds being disbursed for costs that are unreasonable, unallowable or unallocable.

NSF continues to address the causes of the above conditions; however, the conditions remain largely uncorrected at September 30, 2013.

5. Additional Findings Noted During FY 2013 Tests of Internal Control

Our FY 2013 testing also noted the following:

- a) In October 2012, DCAA issued an incurred cost audit report of a large NSF cooperative agreement at a major university. The major issue in the report was that the university's contingency costs were not accumulated and tracked in a manner consistent with how such costs were originally estimated and did not separately track and account for these funds in its formal accounting, memoranda or subsidiary records. As a result, DCAA concluded that the university's cost accounting practices

INDEPENDENT AUDTORS' REPORT (Continued)

Exhibit A (Continued)

used in accumulating and reporting costs were not consistent with its practices used in estimating costs. Accordingly, performing a comparison of the university's actual contingency expenditures with its estimated contingencies was not feasible.

- b) We noted that NSF's accounting system shows the cooperative agreement award amount in total without separate identification of the contingency funding portion of such award. NSF relies on information provided by the awardees to track the allocation of the contingency funds to budgeted line items in the award. However, this information does not track the contingency funds to the actual expense incurred by the awardee. NSF does not track the expenditure of contingency funds to ensure that they are in line with the amount of contingency funds budgeted in the award. This lack of control increases the risk that contingency funds may be used for non-contingent type expenditures which are unallowable.

In summary, as noted above, the causes of the prior year conditions described in the forepart of this Significant Deficiency remain largely uncorrected at September 30, 2013, either due to NSF's continued disagreement with the severity of the conditions, its timeframe for implementation of new procedures to rectify the conditions, or the fact that management has not identified specific corrective actions that would apply to existing cooperative agreements.

As a result, the DCAA communications, NSF OIG audit report and Alert Memo, and the results of our internal control testing in FY 2013 continue to indicate significant risks related to NSF's administration of cooperative agreements with budgeted contingency funds in terms of the validity of cost proposals, the allowability of contingency funds budgeted, and the adequacy of NSF's controls over monitoring cooperative agreements that include contingency fund provisions.

The status of each of the recommendations relating to the repeat conditions noted above and NSF's corrective action, which are not planned for implementation until FY 2014, are summarized in **Exhibit B** of this Audit Report.

Recommendations:

NSF continues to disagree with the severity of certain conditions in reports and other communications issued by DCAA and the OIG, or has been unable to fully implement changes to its cooperative agreement award and monitoring procedures. Accordingly, we recommend that NSF strive to resolve these disagreements and continue to focus its efforts on resolving conditions initially identified in our FY 2010 Audit Report, in the following areas:

1. Work closely with the OIG to quickly resolve remaining conceptual differences of opinion or actively participate in the final OMB A-50 Audit Follow-up resolution process.
2. Closely monitor the finalization of new OMB regulations (Federal Register -Vol. 77, No. 39, 11778) and reform its policies relating to grants and cooperative agreements regarding the cost principles, including those relating to contingency costs, once such regulations are finalized.
3. Prior to the finalization of OMB's proposed new rules, continue to emphasize to its Cooperative Agreement awardees that: a) proposal cost data must be prepared and maintained in accordance with contingency cost definitions provided for in Title 2 Code of Federal Regulations; b) all cost proposal data should be in a format that both reconciles to the underlying source data and is auditable; and 3) failure to do so would result in suspension of draw privileges.

INDEPENDENT AUDTORS' REPORT (Continued)

Exhibit A (Continued)

4. Fully implement its corrective action plans and test the effectiveness of such new policies and procedures in FY 2014. Such plan should include:
 - a) Revisions to its proposal review process to ensure that the issues raised by DCAA in its reports are considered by NSF in the future before accepting an entity's cost proposal as a basis for the issuance of an award/cooperative agreement;
 - b) Strengthening controls over all cooperative agreement disbursements, especially with respect to the oversight of draws on contingency funds;
 - c) Ensuring that awardees are required to submit monthly reports showing the allocation of the contingency budget authority to the second level of detail within the project's Work Breakdown Structure;
 - d) Documenting NSF's approval of the awardee's process for managing contingency expenditures and requests above the stipulated threshold; and
 - e) Matters specifically identified in the following OIG reports:
 - Report No. 12-2-010 - *Audit of NSF's Management of Contingency in the EarthScope Awards.*
 - Alert Memo (Report No. 12-6-001), *NSF's Management of Cooperative Agreements.*
5. Continue to work with the OIG to resolve findings in its Incurred Cost Audit completed in September 2012.
6. Implement a process or control to track separately, within NSF's accounting system, the use of contingency funds in new awards to ensure that contingency funds are used for contingent type events and are, therefore, allowable.

INDEPENDENT AUDITORS' REPORT (Continued)

**EXHIBIT B
National Science Foundation
Auditors' Assessment of Prior Year Significant Deficiency
September 30, 2013**

The causes of the conditions in the FY 2012 Audit Report continue to require resolution at September 30, 2013, either due to management's continued disagreement with OIG's interpretation of OMB guidance on contingency, the time necessary for implementation of new procedures to rectify the conditions, or that management has not identified specific corrective actions that would apply to existing grant awards.

Our assessment of the current status of the each of the FY 2012 recommendations related to the control deficiency identified in the prior year audit is presented below:

| FY 2012 Recommendations | FY 2013 Status |
|---|---|
| <p>Significant Deficiency - Monitoring of Construction Type Cooperative Agreements NSF focus its efforts in the following areas:</p> <ol style="list-style-type: none"> 1. OMB recently proposed new rules in the Federal Register (Vol. 77, No. 39, 11778) to reform Federal policies relating to grants and cooperative agreements regarding the cost principles, including those relating to contingency costs. NSF should closely monitor the finalization of these new regulations and evaluate the impact that such new policies have on these conditions from a prospective basis and revise its operating procedures as necessary. 2. Prior to the finalization of OMB's proposed new rules, NSF should reemphasize to its Cooperative Agreement awardees that proposal cost data must be prepared and maintained in accordance with contingency cost definitions provided for in Title 2 Code of Federal Regulations. All cost proposal data should be in a format that both reconciles to the underlying source data and is auditable. Failure to do so should result in suspension of draw down privileges. 3. NSF should develop a corrective plan to address DCAA's final audit findings. Such plan should include revisions to its proposal review process to ensure that the issues raised by DCAA in its reports are considered by NSF in the future <u>before</u> accepting an entity's cost proposal as a basis for the issuance of an award/cooperative agreement. | <ol style="list-style-type: none"> 1. OMB's proposed new rules have not been finalized. Accordingly, this recommendation remains open. In the near term NSF must focus its attention to recommendation # 2. 2. NSF has not taken action to address the issues identified in both the DCAA reports and OIG Alert Memo. NSF is waiting for the finalization of the OMB guidance. Accordingly, this recommendation remains open. 3. There appears to be an impasse on the resolution of this matter. It is related to recommendations in the OIG report numbers 12-2-010 and 12-6-001 which are being elevated to the Deputy Director for resolution (See #7 below). Accordingly, this recommendation remains open. |

INDEPENDENT AUDITORS' REPORT (Continued)

Exhibit B (Continued)

| | |
|---|---|
| <p>4. NSF should strengthen controls over all cooperative agreement disbursements, especially with respect to the oversight of draws on contingency funds.</p> <p>5. NSF should ensure that the control requiring the awardees to submit monthly reports showing the allocation of the contingency budget authority to the second level of detail within the project's Work Breakdown Structure has been implemented and is operating effectively.</p> <p>6. NSF should develop and implement a formal policy for documenting NSF's approval of the awardee's process for managing contingency expenditures and requests above the stipulated threshold.</p> <p>7. NSF should develop an Action Plan to address the recommendations noted by the OIG in its:</p> <ul style="list-style-type: none">a) Report No. 12-2-010 - <i>Audit of NSF's Management of Contingency in the EarthScope Awards.</i>b) Alert Memo (Report No. 12-6-001), <i>NSF's Management of Cooperative Agreements.</i> | <p>4. NSF's has implemented a new grant payment system (ACM\$). However, management has indicated that the system's features intended to address the relevant condition will not be fully implemented until FY 2014. Accordingly, this recommendation remains open.</p> <p>5. NSF has begun preparing procedures to address this matter. However the procedures will not be implemented until FY 2014 and, accordingly, the recommendation remains open.</p> <p>6. NSF has begun preparing procedures to address this matter. However, the procedures will not be implemented until FY 2014 and, accordingly, the recommendation remains open.</p> <p>7. The IG notified NSF management that its corrective active plan is largely unacceptable for both reports and its reports will be elevated to the NSF Deputy Director for resolution in January 2014. Accordingly, several of the OIG recommendations remain open.</p> |
|---|---|

INDEPENDENT AUDITORS' REPORT (Continued)

EXHIBIT C NATIONAL SCIENCE FOUNDATION Management's Response to Independent Auditors' Report September 30, 2013



OFFICE OF BUDGET, FINANCE & AWARD MANAGEMENT

MEMORANDUM

Date: DEC 12 2013
To: Allison Lerner, Inspector General
From: Martha A. Rubenstein, Chief Financial Officer
Subject: Management's Response to Independent Auditor's Report for Fiscal Year 2013

I am gratified that the National Science Foundation (NSF) received its 16th consecutive clean audit opinion. This accomplishment is the result of the hard work of many individuals throughout the Foundation. The completion of the audit in a timely fashion is especially commendable because of the challenges we faced this year due to the lapse in appropriations and the resulting furlough of the federal workforce. I also appreciate the work performed by your staff and CliftonLarsonAllen.

The focus of this response will be the one Significant Deficiency identified in the audit – Monitoring of Construction Type Agreements. NSF continues to work to strengthen our controls for awarding and managing construction type cooperative agreements. In addition, we worked with the Office of Inspector General (OIG) to find agreement on the oversight of cooperative agreements and contingency budgets and resolve audit findings. Even though we continue to disagree with this Significant Deficiency, we are strongly committed to continuing this year's progress into the future.

The following are some of the key improvements we made to controls for monitoring cooperative agreements and to general facility oversight:

Implementation of the Award Cash Management Service (ACM\$). ACM\$ allows NSF to manage financial data at the award and institution level on a real-time basis thus enabling new controls at that level. For example, NSF may limit the ability of an awardee institution to drawdown cash for one or more specific awards within its NSF-funded portfolio, which enhances the Foundation's ability to fine-tune its monitoring efforts.

INDEPENDENT AUDITORS' REPORT (Continued) Exhibit C (Continued)

Progress on Corrective Action Plans (CAPs). Notwithstanding the continued disagreement between our offices on the full range of activities that will be necessary to strengthen our monitoring of both future and current large facility awards, NSF is beginning work to implement the improvements set forth in the CAPs that were drafted to address the OIG reports issued in September 2012. (Report No. 12-2-010 *Audit of NSF's Management of Contingency in the EarthScope Awards*; Report No. 12-6-001 *NSF's Management of Cooperative Agreements*.) We continue to see the implementation of the strengthened procedures set forth in the CAPs as key components of our financial oversight activities.

Reform of Federal Policies Relating to Grants and Cooperative Agreements; Cost Principles and Administrative Requirements (including Single Audit Act). As NSF's Chief Financial Officer, I have been the agency's senior policy representative to the Council on Financial Assistance Reform (COFAR), which is co-chaired by the OMB Controller. OMB, through the COFAR, sponsored a two-year effort to review and consolidate all financial, administrative, and audit requirements governing federal financial assistance. All federal agencies that use assistance mechanisms will be required to follow the consolidated Omni-Circular once it is released. The publicly available draft Circular includes a provision that, when finalized, affirms and clarifies the allowability of including contingency in proposal budgets for assistance awards.

Assessment of NSF-Supported Large Research Facilities. NSF has ten-plus years of experience with our established large facilities oversight system. In December 2012, the Director commissioned a review of the agency's facility portfolio, from conceptualization to construction to operation and sun-setting, including the importance of risk analysis and cost estimation and other-state-of-the-art project management practices required for accountability and transparency. In March 2013 the *Major Multi-User Research Facilities Report*, was delivered to the NSF Director and the National Science Board for consideration. The report contains recommendations on a range of issues related to these awards, including the sharing of best practices related to facility stewardship such as the GAO Cost Estimating and Assessment Guide.

We look forward to continued collaboration with the OIG to improve our operations and maintain financial management excellence. If you have any questions concerning our responses, please contact me at (703) 292-8200 or Shirl Ruffin, Deputy Chief Financial Officer at (703) 292-8280.

Copy: Dr. Cora B. Marrett



National Science Foundation

PRINCIPAL FINANCIAL STATEMENTS

As of and for the Years Ended
September 30, 2013 and 2012

Principal Financial Statements
September 30, 2013 and 2012

National Science Foundation
Balance Sheet
As of September 30, 2013 and 2012
(Amounts in Thousands)

| Assets | <u>2013</u> | <u>2012</u> |
|---|-----------------------------|-----------------------------|
| Intragovernmental Assets | | |
| Fund Balance With Treasury (Note 2) | \$ 11,586,927 | \$ 12,047,148 |
| Accounts Receivable | 28,186 | 6,479 |
| Advances | 52,656 | 16,307 |
| Total Intragovernmental Assets | <u>11,667,769</u> | <u>12,069,934</u> |
| Cash and Other Monetary Assets (Note 2) | 31,284 | 40,245 |
| Accounts Receivable, Net | 2,833 | 184 |
| Advances | 228 | 1,379 |
| General Property, Plant and Equipment, Net (Notes 3 and 4) | 268,489 | 276,900 |
| Total Assets | \$ <u>11,970,603</u> | \$ <u>12,388,642</u> |
| Liabilities | | |
| Intragovernmental Liabilities | | |
| Advances From Others | \$ 22,319 | \$ 7,552 |
| Employer Contributions | 825 | 706 |
| FECA Employee Benefits | 408 | 367 |
| Other Intragovernmental Liabilities | 3,010 | - |
| Total Intragovernmental Liabilities | <u>26,562</u> | <u>8,625</u> |
| Accounts Payable | 95,919 | 61,993 |
| FECA Employee Benefits | 1,424 | 1,366 |
| Environmental and Disposal Liabilities (Note 6) | 18,247 | - |
| Accrued Liabilities - Grants (Note 7) | 91,091 | 445,563 |
| Accrued Liabilities - Contracts and Payroll | 8,813 | 8,081 |
| Accrued Annual Leave | 17,790 | 17,846 |
| Total Liabilities | \$ <u>259,846</u> | \$ <u>543,474</u> |
| Net Position | | |
| Unexpended Appropriations - Other Funds | \$ 11,047,853 | \$ 11,158,221 |
| Cumulative Results of Operations - Dedicated Collections (Note 8) | 368,680 | 344,204 |
| Cumulative Results of Operations - Other Funds | 294,224 | 342,743 |
| Total Net Position | <u>11,710,757</u> | <u>11,845,168</u> |
| Total Liabilities and Net Position | \$ <u>11,970,603</u> | \$ <u>12,388,642</u> |

The accompanying notes are an integral part of these statements.

National Science Foundation
Statement of Net Cost
For the Years Ended September 30, 2013 and 2012
(Amounts in Thousands)

| Program Costs (Note 9) | <u>2013</u> | <u>2012</u> |
|---|----------------------------|----------------------------|
| Research and Related Activities | | |
| Gross Costs | \$ 6,035,128 | \$ 6,134,541 |
| Less: Earned Revenues | <u>(101,802)</u> | <u>(107,478)</u> |
| Net Research and Related Activities | <u>5,933,326</u> | <u>6,027,063</u> |
| Education and Human Resources | | |
| Gross Costs | \$ 796,459 | \$ 877,922 |
| Less: Earned Revenues | <u>(5,406)</u> | <u>(5,692)</u> |
| Net Education and Human Resources | <u>791,053</u> | <u>872,230</u> |
| Major Research Equipment and Facilities Construction | | |
| Gross Costs | \$ 225,403 | \$ 270,468 |
| Less: Earned Revenues | <u>-</u> | <u>-</u> |
| Net Major Research Equipment and Facilities Construction | <u>225,403</u> | <u>270,468</u> |
| Costs Not Assigned to Other Programs | | |
| Gross Costs | \$ 167,289 | \$ 165,896 |
| Less: Earned Revenues | <u>-</u> | <u>-</u> |
| Net Costs Not Assigned to Other Programs | <u>167,289</u> | <u>165,896</u> |
| Net Cost of Operations (Notes 9 and 16) | <u>\$ 7,117,071</u> | <u>\$ 7,335,657</u> |

The accompanying notes are an integral part of these statements.

Principal Financial Statements
September 30, 2013 and 2012

National Science Foundation
Statement of Changes in Net Position
For the Year Ended September 30, 2013
(Amounts in Thousands)

| | <u>2013</u> | | |
|---|-----------------------|--------------------|--------------------|
| | Funds From | | |
| | Dedicated Collections | All Other | Total |
| Cumulative Results of Operations | | | |
| Beginning Balances (Note 8) | \$ 344,204 | 342,743 | 686,947 |
| Adjustments | | | |
| Changes in Accounting Principle (Note 6) | - | (18,247) | (18,247) |
| Beginning Balances - Adjusted | 344,204 | 324,496 | 668,700 |
| Budgetary Financing Sources | | | |
| Appropriations Used | - | 6,945,406 | 6,945,406 |
| Non-exchange Revenue | - | 2,413 | 2,413 |
| Donations | - | 40,276 | 40,276 |
| Appropriated Funds from Dedicated Collections Transferred In / Out (Note 8) | 115,841 | - | 115,841 |
| Other Financing Sources | | | |
| Transfers In / (Out) Without Reimbursement | - | 781 | 781 |
| Imputed Financing From Costs Absorbed By Others | - | 11,358 | 11,358 |
| Other | - | (4,800) | (4,800) |
| Total Financing Sources | 115,841 | 6,995,434 | 7,111,275 |
| Net Cost of Operations (Notes 8 and 9) | (91,365) | (7,025,706) | (7,117,071) |
| Cumulative Results of Operations (Note 8) | \$ 368,680 | 294,224 | 662,904 |
| Unexpended Appropriations | | | |
| Beginning Balances | \$ - | 11,158,221 | 11,158,221 |
| Budgetary Financing Sources | | | |
| Appropriations Received | - | 7,393,100 | 7,393,100 |
| Rescissions and Cancelled Authority Adjustments (Note 10) | - | (558,062) | (558,062) |
| Appropriations Used | - | (6,945,406) | (6,945,406) |
| Total Budgetary Financing Sources | - | (110,368) | (110,368) |
| Total Unexpended Appropriations | - | 11,047,853 | 11,047,853 |
| Net Position | \$ 368,680 | 11,342,077 | 11,710,757 |

The accompanying notes are an integral part of these statements.

National Science Foundation
Statement of Changes in Net Position
For the Year Ended September 30, 2012
(Amounts in Thousands)

| | <u>2012</u> | | |
|---|-----------------------|--------------------|--------------------|
| | Funds From | | Total |
| | Dedicated Collections | All Other | |
| Cumulative Results of Operations | | | |
| Beginning Balances (Note 8) | \$ 324,083 | 348,639 | 672,722 |
| Adjustments | | | |
| Changes in Accounting Principle (Note 6) | - | - | - |
| Beginning Balances - Adjusted | 324,083 | 348,639 | 672,722 |
| Budgetary Financing Sources | | | |
| Appropriations Used | - | 7,162,409 | 7,162,409 |
| Non-exchange Revenue | - | 96 | 96 |
| Donations | - | 47,140 | 47,140 |
| Appropriated Funds from Dedicated Collections Transferred In / Out (Note 8) | 128,986 | - | 128,986 |
| Other Financing Sources | | | |
| Transfers In / (Out) Without Reimbursement | - | - | - |
| Imputed Financing From Costs Absorbed By Others | - | 11,364 | 11,364 |
| Other | - | (113) | (113) |
| Total Financing Sources | 128,986 | 7,220,896 | 7,349,882 |
| Net Cost of Operations (Notes 8 and 9) | (108,865) | (7,226,792) | (7,335,657) |
| Cumulative Results of Operations (Note 8) | \$ 344,204 | 342,743 | 686,947 |
| Unexpended Appropriations | | | |
| Beginning Balances | \$ - | 11,330,889 | 11,330,889 |
| Budgetary Financing Sources | | | |
| Appropriations Received | - | 7,033,095 | 7,033,095 |
| Rescissions and Cancelled Appropriation Activity (Note 10) | - | (43,354) | (43,354) |
| Appropriations Used | - | (7,162,409) | (7,162,409) |
| Total Budgetary Financing Sources | - | (172,668) | (172,668) |
| Total Unexpended Appropriations | - | 11,158,221 | 11,158,221 |
| Net Position | \$ 344,204 | 11,500,964 | 11,845,168 |

The accompanying notes are an integral part of these statements.

National Science Foundation
Statement of Budgetary Resources
For the Years Ended September 30, 2013 and 2012
(Amounts in Thousands)

| | <u>2013</u> | <u>2012</u> |
|--|----------------------------|----------------------------|
| Budgetary Resources | | |
| Unobligated Balance - Brought Forward, October 1 | \$ 277,140 | \$ 228,900 |
| Recoveries of Prior Year Unpaid Obligations | 150,973 | 147,227 |
| Other Changes in Unobligated Balance | <u>(48,773)</u> | <u>(43,353)</u> |
| Unobligated Balance from Prior Year Budget Authority, Net | 379,340 | 332,774 |
| Appropriations | 7,040,321 | 7,209,317 |
| Spending Authority from Offsetting Collections | <u>111,524</u> | <u>102,899</u> |
| Total Budgetary Resources (Note 13) | <u>\$ 7,531,185</u> | <u>\$ 7,644,990</u> |
| Status of Budgetary Resources | | |
| Obligations Incurred (Note 12 & 13) | \$ 7,237,741 | \$ 7,367,850 |
| Unobligated Balance, End of Year | | |
| Apportioned (Note 2) | 145,033 | 158,316 |
| Unapportioned (Note 2 & 13) | <u>148,411</u> | <u>118,824</u> |
| Total Unobligated Balance, End of Year | <u>293,444</u> | <u>277,140</u> |
| Total Status of Budgetary Resources | <u>\$ 7,531,185</u> | <u>\$ 7,644,990</u> |
| Change in Obligated Balance | | |
| Unpaid Obligations | | |
| Unpaid Obligations - Brought Forward, October 1 | \$ 11,946,749 | \$ 12,136,894 |
| Obligations Incurred | 7,237,741 | 7,367,850 |
| Gross Outlays | (7,562,248) | (7,410,768) |
| Recoveries of Prior Year Unpaid Obligations | <u>(150,973)</u> | <u>(147,227)</u> |
| Unpaid Obligations, End of Year | 11,471,269 | 11,946,749 |
| Uncollected Payments | | |
| Uncollected Payments from Federal Sources - Brought Forward, October 1 | \$ (136,496) | \$ (139,327) |
| Change in Uncollected Payments from Federal Sources | <u>(10,006)</u> | <u>2,831</u> |
| Uncollected Payments from Federal Sources, End of Year | (146,502) | (136,496) |
| Memorandum (non-add) Entries | | |
| Obligated Balance, Start of Year | \$ 11,810,253 | \$ 11,997,567 |
| Obligated Balance, End of Year (Note 2) | \$ 11,324,767 | \$ 11,810,253 |
| Budget Authority and Outlays, Net | | |
| Budget Authority, Gross | \$ 7,151,845 | \$ 7,312,216 |
| Actual Offsetting Collections | (101,518) | (105,730) |
| Change in Uncollected Customer Payments from Federal Sources | <u>(10,006)</u> | <u>2,831</u> |
| Budget Authority, Net | <u>\$ 7,040,321</u> | <u>\$ 7,209,317</u> |
| Gross Outlays | \$ 7,562,248 | \$ 7,410,768 |
| Actual Offsetting Collections | <u>(101,518)</u> | <u>(105,730)</u> |
| Net Outlays | <u>7,460,730</u> | <u>7,305,038</u> |
| Distributed Offsetting Receipts (Note 13) | <u>(43,514)</u> | <u>(48,891)</u> |
| Net Agency Outlays | <u>\$ 7,417,216</u> | <u>\$ 7,256,147</u> |

The accompanying notes are an integral part of these statements.

Notes to the Principal Financial Statements

Note 1. Summary of Significant Accounting Policies

A. Reporting Entity

The National Science Foundation (NSF or “Foundation”) is an independent federal agency created by the National Science Foundation Act of 1950, as amended (42 U.S.C. 1861-75). Its mission is to promote and advance scientific progress in the United States. NSF initiates and supports scientific research and research fundamental to the engineering process and programs to strengthen the Nation’s science and engineering potential. NSF also supports education programs at all levels in all fields of science and engineering. NSF funds research and education in science and engineering by awarding grants and contracts to educational and research institutions in all parts of the United States. NSF, by law, cannot operate research facilities except in the polar regions. NSF enters into relationships through awards, to fund the research operations conducted by grantees.

NSF is led by a presidentially-appointed Director and the policy-making National Science Board (NSB). The NSB, currently composed of 25 members, represents a cross section of American leaders in science and engineering research and education, who are appointed by the President for six-year terms. The NSF Director is an *ex officio* member of the Board.

B. Basis of Presentation

These financial statements have been prepared to report the financial position and results of operations of NSF as required by the Chief Financial Officers Act of 1990, the Government Management Reform Act of 1994, the Reports Consolidation Act of 2000, and the Office of Management and Budget (OMB) Circular No. A-136, *Financial Reporting Requirements*. While the statements have been prepared from the books and records of NSF in accordance with United States Generally Accepted Accounting Principles (U.S. GAAP) for federal entities and the formats prescribed by OMB, the statements are in addition to the financial reports used to monitor and control budgetary resources, which are prepared from the same books and records.

Pursuant to OMB Circular No. A-136, *Financial Reporting Requirements*, the presentation of the Change in Obligated Balance section in the FY 2013 Statement of Budgetary Resources (SBR) was modified. Certain reclassifications were made to the previously issued FY 2012 SBR to conform to the new format.

C. Basis of Accounting

The accompanying financial statements have been prepared in accordance with U.S. GAAP for federal entities using the accrual method of accounting. Under the accrual method, revenues are recognized when earned and expenses are recognized when a liability is incurred, without regard to receipt or payment of cash. The accompanying financial statements also include budgetary accounting transactions that ensure compliance with legal constraints and controls over the use of federal funds.

D. Revenues and Other Financing Sources

NSF traditionally receives the majority of its funding through appropriations contained in the Commerce, Justice, Science, and Related Agencies Appropriations Act. NSF receives annual, multi-year, and no-year appropriations that may be expended within statutory limits. NSF also receives funding via warrant from a receipt account for dedicated collections that is reported as H-1B funds. Additional amounts are obtained from reimbursements for services provided to other federal agencies as well as from receipts to

the NSF *Donations Account*. Also, NSF receives interest earned on overdue receivables. The interest earned on overdue receivables is returned to Treasury at the end of each fiscal year.

In FY 2013, The Science Appropriation Act, 2013 under Public Law 113-6 provided funding for each of NSF's appropriations. In addition, the Act provided an administrative provision allowing NSF to transfer up to five percent of current year funding between appropriations. In FY 2013, NSF was affected by the sequestration and across-the-board rescissions. Appropriations are recognized as a financing source at the time the related "funded" program or administrative expenditures are incurred. Appropriations are also recognized when used to purchase property, plant and equipment. "Unfunded" liabilities result from liabilities not covered by budgetary resources and will be paid when future appropriations are made available for these purposes. Donations are recognized as revenues when funds are received. Revenues from reimbursable agreements are recognized when the services are provided and the related expenditures are incurred. Reimbursable agreements are mainly for grant administrative services provided by NSF on behalf of other federal agencies.

Under the general authority of the Foundation, NSF is authorized to accept funds into the NSF *Donations Account* and to use both U.S. and foreign funds in that account. In accordance with 42 U.S.C. 1862 Section 3 (a)(3), NSF has authority "to foster the interchange of scientific and engineering information among scientists and engineers in the United States and foreign countries" and in 42 U.S.C. 1870 Section 11 (f), NSF is authorized to receive and use funds donated by others. Donations may be received from foreign governments, private companies, academic institutions, non-profit foundations, and individuals. These funds must be donated without restriction other than that they be used in furtherance of one or more of the general purposes of the Foundation. Funds are made available for obligations as necessary to support NSF programs.

E. Fund Balance with Treasury and Cash and Other Monetary Assets

Cash receipts and disbursements are processed by Treasury. *Fund Balance with Treasury* is composed primarily of appropriated funds that are available to pay current liabilities and finance authorized purchase commitments. *Cash and Other Monetary Assets* primarily include non-appropriated funding sources from donations and undeposited collections.

F. Accounts Receivable, Net

Accounts Receivable consists of amounts due from governmental agencies, private organizations, and individuals. Additionally, NSF has the right to conduct audits on awardees to verify billed amounts. These audits may result in monies owed back to NSF. Upon resolution of the amount owed by the awardee to NSF, a receivable is recorded.

NSF establishes an allowance for loss on accounts receivable from non-federal sources that are deemed uncollectible but regards amounts due from other federal agencies as fully collectible. NSF analyzes each account independently to assess collectability and the need for an offsetting allowance or write-off. NSF writes off delinquent debt from non-federal sources that is more than two years old.

G. Advances

Advances consist of advances to contractors and federal agencies. Advances to contractors are payments made in advance of incurring expenditures. Advances to federal agencies are issued when agencies are operating under working capital funds or are unable to incur costs on a reimbursable basis. Advances are reduced when documentation supporting expenditures is received and recorded.

H. General Property, Plant and Equipment

NSF capitalizes PP&E with costs exceeding \$25.0 thousand and useful lives of two or more years; items not meeting these criteria are recorded as operating expenses. NSF currently reports capitalized PP&E at original acquisition cost; assets acquired from the General Services Administration (GSA) excess property schedules are recorded at the value assigned by the donating agency; assets transferred in from other agencies are valued at the cost recorded by the transferring entity for the asset net of accumulated depreciation or amortization.

The PP&E balance consists of Equipment, Software, Software in Development, Aircraft and Satellites, Buildings and Structures, Leasehold Improvements, and Construction in Progress. These balances are comprised of PP&E maintained “in-house” by NSF to support operations and PP&E under the U.S. Antarctic Program (USAP). The majority of USAP property is currently under the custodial responsibility of the prime NSF contractor for the program.

Costs incurred to construct buildings and structures are accumulated and tracked as construction in progress. At 75 percent completion of construction, an on-site Conditional Occupancy inspection is performed to inspect for compliance to the approved plans, design, specifications, and changes. Items that pertain to the safety and health of any future occupants of the facility must be corrected before a Conditional Occupancy is granted and the facility occupied. When Conditional Occupancy is granted, the completed project is transferred from construction in progress to real property or capital equipment and depreciated over the respective useful life of the asset.

Equipment

| | |
|----------------|--|
| 5 years | Computers and peripheral equipment, fuel storage tanks, laboratory equipment, and vehicles |
| 7 years | Communications equipment, office furniture and equipment, pumps and compressors |
| 10 or 15 years | Generators, Department of Defense equipment |
| 20 years | Movable buildings (e.g. trailers) |

Aircraft and Satellites

| | |
|---------|--|
| 7 years | Aircraft, aircraft conversions, and satellites |
|---------|--|

Buildings and Structures

| | |
|------------|--|
| 31.5 years | Buildings and structures placed in service prior to 1994 |
| 39 years | Buildings and structures placed in service after 1993 |

Leases and Leasehold Improvements

In FY 2013, NSF entered into a 56 month lease with GSA under an occupancy agreement for the Headquarter buildings. The cancellation clause within the agreement allows NSF to terminate use with a 120-day notice. NSF is billed by GSA for the leased space as rent based upon estimated lease payments made by GSA plus an administrative fee. Therefore, the cost of the Headquarter buildings is not capitalized by NSF. All NSF leases are cancellable and/or in effect for a period of no more than one year. The cost of leasehold improvements performed by GSA is financed with NSF appropriated funds. Amortization is calculated using the straight-line half-year convention upon transfer from construction in progress. In the future, NSF will be moving to a new Headquarter building in Alexandria, VA. Information on the expected new lease can be found on NSF's website: http://www.nsf.gov/news/news_summ.jsp?cntn_id=128219.

Internal Use Software

NSF controls, values, and reports purchased or developed software as tangible property assets, in accordance with the Statement of Federal Financial Accounting Standards (SFFAS) No. 10, *Accounting for Internal Use Software*. NSF identifies software investments as accountable property for items that, in the aggregate, cost \$500.0 thousand or more to purchase, develop, enhance, or modify a new or existing NSF system. Software projects that are not completed at year end and are expected to exceed the capitalization threshold are recorded as software in development. All internal use software meeting the capitalization threshold is amortized over a five-year period using the straight-line half-year convention.

Assets Owned by NSF in the Custody of Other Entities: NSF awards grants, cooperative agreements, and contracts to various organizations, including colleges and universities, non-profit organizations, state and local governments, Federally Funded Research and Development Centers (FFRDCs), and private entities. The funds provided may be used in certain cases to purchase or construct PP&E to be used for operations or research on projects or programs sponsored by NSF. In these instances, NSF funds the acquisition of property, but transfers control of the assets to these entities. NSF's authorizing legislation specifically prohibits the Foundation from operating such property directly.

In practice, NSF's ownership interest in such PP&E is similar to a reversionary interest. To address the accounting and reporting of these assets, specific guidance was sought by NSF and provided by the Federal Accounting Standards Advisory Board (FASAB). This guidance stipulates that NSF should: (i) disclose the value of such PP&E held by others in its financial statements based on information contained in the audited financial statements of these entities (if available); and (ii) report information on costs incurred to acquire the research facilities, equipment, and platforms in the Research and Human Capital Activity costs as required by the SFFAS No. 8, *Supplementary Stewardship Reporting*. Very few entities disclose information on NSF titled property in their audited financial statements. Therefore, NSF has elected to disclose only the number of entities in possession of NSF owned property. Entities that separately present the book value of NSF titled property in their audited financial statements and all FFRDCs are listed in Note 4, *General Property, Plant and Equipment in the Custody of Other Entities*, along with the book value of the property held.

I. Advances From Others

Advances From Others consist of amounts obligated and advanced by other federal entities to NSF for grant administration and other services to be furnished under reimbursable agreements.

J. Accounts Payable

Accounts Payable consists of liabilities to federal agencies, commercial vendors, contractors, and disbursements in transit. *Accounts Payable* to federal agencies, commercial vendors, and contractors are expenses for goods and services received but not yet paid for by NSF at the end of the fiscal year. At year end, NSF accrues for the amount of estimated unpaid expenditures to commercial vendors for which invoices have not been received, but goods and services have been delivered and rendered. *Accounts Payable* also consists of disbursements in transit recorded by NSF but not paid by Treasury.

K. Accrued Liabilities—Grants

As of June 30, 2013, NSF adopted the full use of a new grantee cash request and expenditure reporting process, Awardee Cash Management Service (ACM\$). ACM\$ eliminated the need for the previous grant accrual methodology; however, NSF applied an accrual to account for the inability of grantees to

drawdown for three business days at year end. Additional detail is included in Note 7, *Accrued Liabilities - Grants*.

L. Accrued Liabilities—Contracts and Payroll

Accrued Liabilities - Contracts and Payroll consist of contract accruals and accrued payroll. The total contract liabilities for the year are determined based on an estimate of prior quarter expenditures incurred by contractors that are funded on an advance basis. Expenditures are estimated for each contractor by computing an average of the previous four quarters of actual expenditures reported. The accrual increases expenditures and decreases advances for the account. If the estimated accrual amount exceeds total advances, a liability is accrued for the excess. NSF's payroll services are provided by the Department of the Interior's Interior Business Center. Accrued payroll relates to services rendered by NSF employees, for which they have not yet been paid. At year end, NSF accrues the amount of wages earned, but not yet paid.

M. Employee Benefits

A liability is recorded for estimated and actual future payments to be made for workers' compensation pursuant to the Federal Employees' Compensation Act (FECA). The liability consists of the net present value of estimated future payments calculated by the U.S. Department of Labor (DOL) and the actual unreimbursed cost paid by DOL for compensation paid to recipients under FECA. The actual costs incurred are reflected as a liability because NSF will reimburse DOL two years after the actual payment of expenses. Future NSF Agency Operations and Award Management (AOAM) appropriations will be used for DOL's estimated reimbursement.

Annual leave is accrued as it is earned, and the accrual is reduced as leave is taken. Each year, the balance in the accrued annual leave account is adjusted to reflect changes. To the extent current and prior-year appropriations are not available to fund annual leave earned but not taken, funding will be obtained from future AOAM appropriations. Sick leave and other types of non-vested leave are expensed as taken.

N. Net Position

Net position is the residual difference between assets and liabilities and is composed of unexpended appropriations and cumulative results of operations. *Unexpended Appropriations* represent the amount of undelivered orders and unobligated balances of budget authority. Unobligated balances are the amount of appropriations or other authority remaining after deducting the cumulative obligations from the amount available for obligation. The *Cumulative Results of Operations* represent the net results of NSF's operations since its inception.

O. Retirement Plan

In FY 2013, approximately 11 percent of NSF employees participated in the Civil Service Retirement System (CSRS), to which NSF matches contributions equal to 7 percent of pay. The majority of NSF employees are covered by the Federal Employees Retirement System (FERS) and Social Security. A primary feature of FERS is a thrift savings plan to which NSF automatically contributes 1 percent of pay and matches employee contributions up to an additional 4 percent of pay. NSF also contributes the employer's matching share for Social Security for FERS participants.

Although NSF funds a portion of the benefits under FERS and CSRS relating to its employees and withholds the necessary payroll deductions, the Foundation has no liability for future payments to employees under these plans, nor does NSF report CSRS, FERS, Social Security assets, or accumulated

plan benefits on its financial statements. Reporting such amounts is the responsibility of the Office of Personnel Management (OPM) and the Federal Retirement Thrift Investment Board.

SFFAS No. 5, *Accounting for Liabilities of the Federal Government*, requires employing agencies to recognize the cost of pensions and other retirement benefits during their employees' active years of service. OPM actuaries determine pension cost factors by calculating the value of pension benefits expected to be paid in the future, and provide these factors to the agency for current period expense reporting. Information is also provided by OPM regarding the full cost of health and life insurance benefits on the OPM Benefit Administration Website: <http://www.opm.gov/retirement-services/publications-forms/benefits-administration-letters/2013/13-302.pdf>

P. Contingencies and Possible Future Costs

Contingencies - Claims and Lawsuits: NSF is a party to various legal actions and claims brought against it. In the opinion of NSF management and legal counsel, the ultimate resolution of the actions and claims will not materially affect the financial position or operations of the Foundation. NSF recognizes the contingency in the financial statements when claims are expected to result in a material loss (and the payment amounts can be reasonably estimated), whether from NSF's appropriations or the Judgment Fund, administered by the Department of Justice under Section 1304 of Title 31 of the United States Code.

Claims and lawsuits can also be made and filed against awardees of the Foundation by third parties. NSF is not a party to these actions and NSF believes there is no possibility that NSF will be legally required to satisfy such claims. Judgments or settlements of the claims against awardees that impose financial obligation on them may be claimed as costs under the applicable contract, grant, or cooperative agreement and thus may affect the allocation of program funds in future fiscal years. In the event that the claim becomes probable and amounts can be reasonably estimated, the claim will be recognized.

Contingencies – Unasserted Claims: For claims and lawsuits that have not been made and filed against the Foundation, NSF management and legal counsel determine, in their opinion, whether resolution of the actions and claims they are aware of will materially affect the Foundation's financial position or operations. NSF recognizes a contingency in the financial statements when unasserted claims are probable of assertion, and if asserted, would be probable of an unfavorable outcome and expected to result in a measurable loss, whether from NSF's appropriations or the Judgment Fund. NSF discloses unasserted claims if materiality or measurability of a potential loss cannot be determined or the loss is more likely than not to occur.

Termination Claims: NSF engages organizations, including FFRDCs, in cooperative agreements and contracts to manage, operate, and maintain research facilities for the benefit of the scientific community. As part of these agreements and contracts, NSF funds on a pay-as-you-go basis certain employee benefit costs (accrued vacation and other employee related liabilities, severance pay and medical insurance), long term leases, and vessel usage and drilling. In some instances, an award decision is made to continue operation of a facility with a different entity performing operation and management duties. In such an occurrence, NSF does not classify the facility as terminated. Claims submitted by the previous managing entity for expenditures not covered by the indirect cost rate included in the initial award are subject to audit and typically paid with existing program funds.

Agreements with FFRDCs include a clause that commits NSF to seek appropriations for termination expenses, if necessary, in the event a facility is terminated. NSF considers termination of these facilities only remotely possible. Should a facility be terminated, NSF is obligated to pay termination expenses for FFRDCs in excess of the limitation of funds set forth in the agreements, including any Post Retirement

Benefit liabilities, only if funds are appropriated for this specific purpose. Nothing in these agreements can be construed as implying that Congress will appropriate funds to meet the terms of any claims. Termination costs that may be payable to an FFRDC operator cannot be estimated until such time as the facility is terminated.

Environmental Liabilities: NSF manages the U.S. Antarctic Program. The Antarctic Conservation Act and its implementing regulations identify the requirements for environmental clean-up in Antarctica. NSF continually monitors the U.S. Antarctic Program in regards to environmental issues. NSF establishes its environmental liability estimates in accordance with the requirements of the SFFAS No. 5, *Accounting for Liabilities of the Federal Government*, and as amended by SFFAS No. 12, *Recognition of Contingent Liabilities Arising from Litigation*, and the Federal Financial Accounting and Auditing Technical Release No. 2, *Determining Probable and Reasonably Estimable for Environmental Liabilities in the Federal Government*.

While NSF is not legally liable for environmental clean-up costs in the Antarctic, there are occasions when the NSF Division of Polar Programs (PLR) chooses to accept responsibility and commit funds toward clean-up efforts of various sites as resources permit. Decisions to commit funds are in no way driven by concerns of probable legal liability for failure to engage in such efforts, but rather a commitment to environmental stewardship of Antarctic natural resources. Environmental clean-up projects started and completed during the year are reflected in NSF's financial statements as expenses for the current fiscal year. An estimated cost would be accrued for approved projects that are anticipated to be performed after the fiscal year end or will take more than one fiscal year to complete.

Separate from environmental clean-up costs related to the Antarctic Conservation Act, NSF discloses NSF-owned buildings in the Antarctic that have been identified as having, or can reasonably be expected to have, friable and non-friable asbestos containing material. NSF's estimated cost for asbestos related clean-up is shown on the Balance Sheet as a liability. Additional detail on the estimate methodology is included in Note 6, *Environmental and Disposal Liability*.

Q. Use of Estimates

Management has made certain estimates and assumptions when reporting assets, liabilities, revenues, and expenses, and also in the note disclosures. Estimates underlying the accompanying financial statements include accounting for grants, contracts, accounts payable, payroll, and property, plant and equipment. Actual results may differ from these estimates, and the difference will be adjusted for and included in the financial statements of the following fiscal year.

Note 2. Fund Balance With Treasury

Fund Balance with Treasury (FBWT) consisted of the following components as of September 30, 2013 and 2012:

| (Amounts in Thousands) | 2013 | | | |
|--------------------------|-----------------------|------------------|--|----------------------|
| | Appropriated Funds | Donated Funds | Funds from Dedicated Collections | Total |
| Obligated | \$ 11,025,648 | \$ 33,624 | \$ 265,495 | \$ 11,324,767 |
| Unobligated Available | 10,051 | 32,855 | 102,127 | 145,033 |
| Unobligated Unavailable | 146,080 | 12 | 2,319 | 148,411 |
| Less: Budgetary Non-FBWT | - | (31,284) | - | (31,284) |
| Total FBWT | \$ 11,181,779 | \$ 35,207 | \$ 369,941 | \$ 11,586,927 |

| (Amounts in Thousands) | 2012 | | | |
|--------------------------|-----------------------|------------------|--|----------------------|
| | Appropriated Funds | Donated Funds | Funds from Dedicated Collections | Total |
| Obligated | \$ 11,509,326 | \$ 51,978 | \$ 248,949 | \$ 11,810,253 |
| Unobligated Available | 20,500 | 42,054 | 95,762 | 158,316 |
| Unobligated Unavailable | 115,208 | 71 | 3,545 | 118,824 |
| Less: Budgetary Non-FBWT | - | (40,245) | - | (40,245) |
| Total FBWT | \$ 11,645,034 | \$ 53,858 | \$ 348,256 | \$ 12,047,148 |

The *Donations Account* includes amounts donated to NSF from all sources. Funds in the NSF Donations Account may be used to further one or more of the general purposes of the Foundation. The donated funds are held as FBWT or as non-FBWT with budgetary resources which represent cash held outside of Treasury at commercial banks in interest bearing accounts. These funds are collateralized up to \$40.9 million by the bank, through the Federal Reserve Bank of St. Louis, in accordance with Treasury Financial Manual Volume 1, Chapter 6-9000. *Unobligated Unavailable* balances include recoveries of prior year obligations and other unobligated expired funds that are unavailable for new obligations.

In FY 1999, in accordance with P.L. 105-277, a special fund named H-1B Non-immigrant Petitioner Fees Account was established in the general fund of the U.S. Treasury. These funds are considered Funds from Dedicated Collections and are not included in Appropriated Funds. The funds represent fees collected for each petition for non-immigrant status. Under the law, NSF was prescribed a percentage of these fees for specific programs.

Note 3. General Property, Plant and Equipment, Net

The components of General Property, Plant, and Equipment as of September 30, 2013 and 2012 were:

| (Amounts in Thousands) | 2013 | | |
|--------------------------|---------------------|-----------------------------|-------------------|
| | Acquisition Cost | Accumulated Depreciation | Net Book Value |
| Equipment | \$ 145,902 | \$ (124,214) | \$ 21,688 |
| Aircraft and Satellites | 138,487 | (138,487) | - |
| Buildings and Structures | 305,855 | (114,746) | 191,109 |
| Leasehold Improvements | 10,981 | (10,981) | - |
| Construction in Progress | 12,712 | - | 12,712 |
| Internal Use Software | 48,274 | (15,842) | 32,432 |
| Software in Development | 10,548 | - | 10,548 |
| Total PP&E | \$ 672,759 | \$ (404,270) | \$ 268,489 |

| (Amounts in Thousands) | 2012 | | |
|--------------------------|---------------------|-----------------------------|-------------------|
| | Acquisition Cost | Accumulated Depreciation | Net Book Value |
| Equipment | \$ 147,416 | \$ (121,262) | \$ 26,154 |
| Aircraft and Satellites | 138,487 | (138,487) | - |
| Buildings and Structures | 307,564 | (107,511) | 200,053 |
| Leasehold Improvements | 10,981 | (9,668) | 1,313 |
| Construction in Progress | 10,657 | - | 10,657 |
| Internal Use Software | 10,222 | (7,605) | 2,617 |
| Software in Development | 36,106 | - | 36,106 |
| Total PP&E | \$ 661,433 | \$ (384,533) | \$ 276,900 |

Note 4. General Property, Plant, and Equipment in the Custody of Other Entities

NSF received a ruling from FASAB on accounting for PP&E owned by NSF but in the custody of and used by others (see Note 1H. *General Property, Plant, and Equipment (PP&E)*). The FASAB guidance requires PP&E in the custody of others be excluded from NSF PP&E as defined in the SFFAS No. 6, *Accounting for Property, Plant and Equipment*. NSF is required to disclose the dollar amount of NSF PP&E held by others in the footnotes based on information contained in the most recently issued audited financial statements of the organization holding the assets.

At September 30, 2013, there were 34 colleges or universities, and 39 commercial entities that held property titled to NSF. With the exception of the FFRDCs listed below, none of the colleges, universities or commercial entities reported NSF titled property separately.

The amount of PP&E owned by NSF but in the custody of an FFRDC is identified in the table below. In some cases FFRDCs operate on a fiscal year end basis other than September 30th. If NSF PP&E is not separately stated on the FFRDC's audited financial statements or the FFRDC is not audited, the related amounts are annotated as Not Available (N/A) in the table.

Notes to the Principal Financial Statements
September 30, 2013 and 2012

(Amounts in Thousands)

| <u>Federally Funded Research and Development Centers</u> | <u>Amount</u> | <u>Fiscal Year</u> <u>Ending</u> |
|--|---------------|-------------------------------------|
| University Corporation for Atmospheric Research - UCAR | \$214,685 | 9/30 |
| Association of Universities for Research in Astronomy, Inc. - AURA | N/A | 9/30 |
| National Radio Astronomy Observatory - AUI | \$553,169 | 9/30 |

Note 5. Leases

In FY 2013, NSF entered into a new operating lease with GSA for its Headquarter buildings. The following is a schedule of future minimum lease payments for the Headquarter buildings and office space in Denver, Colorado. The current leases are active through FY 2021.

(Amounts in Thousands)

| <u>Fiscal Year</u> | <u>Operating Lease</u> <u>Amount</u> |
|-------------------------------------|---|
| 2014 | \$ 27,284 |
| 2015 | 28,730 |
| 2016 | 28,894 |
| 2017 | 29,064 |
| 2018 | 7,355 |
| After 2019 | 212 |
| Total Minimum Lease Payments | \$ 121,539 |

In addition to the Headquarter buildings, NSF occupies common spaces with other federal agencies overseas through the State Department's International Cooperative Administrative Support Services (ICASS) system. NSF uses ICASS in Beijing, Paris, and Tokyo for residential and non-residential space. ICASS is a voluntary cost distribution system and the agreement to receive ICASS services is through an annual Memorandum of Understanding (MOU) between the NSF and the State Department. Additionally, NSF occupies residential space in Tokyo; the lease to occupy the space is a cancellable and/or for a period not more than a year.

Note 6. Environmental and Disposal Liability

Pursuant to Federal Accounting Standards Advisory Board (FASAB) Technical Bulletin 2006-1, *Recognition and Measurement of Asbestos-related Cleanup Costs*, federal entities are required to recognize a liability for federal property asbestos cleanup costs. Some NSF owned buildings and structures used to support the United States Antarctic Program (USAP) have been identified as having, or can reasonably be expected to have, friable and non-friable asbestos containing material (ACM). Upon the effective date in FY 2013, NSF recognized the entire asbestos liability of \$18.2 million. The balance was recorded as a prior period adjustment due to a change in accounting principle since the majority of the real property has been in service for a significant portion of their estimated useful life. NSF based the asbestos liability on information supplied by the Antarctic Support Contractor (ASC). The ASC supplied information was based on asbestos surveys conducted in 2006 and includes updates for all abatements and encapsulations performed since that time. The liability incorporates the following estimates:

- Waste handling in Antarctica to include miscellaneous supplies
- Transportation and disposal costs once the waste arrives in the United States
- Current year subcontract pricing information for asbestos abatement

As required by SFFAS No. 6, *Accounting for Property, Plant and Equipment*, NSF will work with the current ASC to determine the need for asbestos liability adjustments on an annual basis. Actual asbestos remediation costs will be submitted quarterly by the ASC and the asbestos liability will be reduced by the reported amount as the information is received.

Note 7. Accrued Liabilities – Grants

At September 30, 2012, NSF's *Accrued Liabilities – Grants* balance included an estimate of prior quarter expenditures incurred, but not yet reported. Although the majority of NSF's grantees were reimbursed for incurred costs, expenditure reports were received 30 days after the end of the quarter. Consequently, NSF would post an advance or liability based on estimated grant expenditures. In FY 2013, NSF fully adopted the use of a new grantee cash request and expenditure reporting system, ACM\$, for all grantee institutions. ACM\$ enables grantees to request funds at the award level. At the time funds are requested, grantees are required to certify that funds will be expended within three days of receipt. As such, NSF considers funds expended when requested. Despite these reporting changes, actual grant expenditures are substantially consistent with prior years and, accordingly, the accrual needed at September 30, 2013 is substantially lower than at September 30, 2012.

Due to Treasury cut-off dates, NSF grantees were unable to drawdown funds in ACM\$ three business days before the end of FY 2013. To account for expenditures incurred but not reported during the ACM\$ cut-off period, NSF records an accrual based on the average daily ACM\$ draw during the last quarter of FY 2013. As of September 30, 2013 and 2012, the *Accrued Liabilities – Grants* portion of total grant expenditures was \$91.1 and \$445.6 million, respectively.

Note 8. Funds from Dedicated Collections

In FY 1999, Title IV of the American Competitiveness and Workforce Improvement Act of 1998 (P.L. 105-277) established an H-1B Nonimmigrant Petitioner account in the General Fund of the U.S. Treasury. Funding is established from fees collected for alien, nonimmigrant status petitions. This law requires that a prescribed percentage of the funds in the account be made available to NSF for the following activities:

- Computer Science, Engineering, and Mathematics Scholarship (CSEMS)
- Grants for Mathematics, Engineering, or Science Enrichment Courses
- Systemic Reform Activities

The H-1B Nonimmigrant Petitioner fees are available to the Director of NSF until expended. The funds may be used for scholarships to low income students, or to carry out a direct or matching grant program to support private and/or public partnerships in K-12 education. The H-1B Fund is set up as a permanent, indefinite appropriation by NSF. These funds are included in the President's budget. The funds from dedicated collections are accounted for in a separate Treasury Account Fund Symbol (TAFS), and the budgetary resources are recorded as *Appropriated Funds from Dedicated Collections Transferred In*. Funds from Dedicated Collections are reported in accordance with SFFAS No. 43, *Funds from Dedicated Collections: Amending Statement of Federal Financial Accounting Standards 27, Identifying and Reporting Earmarked Funds*.

Notes to the Principal Financial Statements
September 30, 2013 and 2012

| | | |
|------------------------|------|------|
| (Amounts in Thousands) | 2013 | 2012 |
|------------------------|------|------|

Balance Sheet as of September 30, 2013 and 2012

| | | |
|------------------------------------|------------|------------|
| Fund Balance With Treasury | \$ 369,941 | \$ 348,255 |
| Total Assets | 369,941 | 348,255 |
| Other Liabilities | 1,261 | 4,051 |
| Total Liabilities | 1,261 | 4,051 |
| Cumulative Results of Operations | 368,680 | 344,204 |
| Total Liabilities and Net Position | \$ 369,941 | \$ 348,255 |

Statement of Net Cost for the Years Ended September 30, 2013 and 2012

| | | |
|------------------------|-----------|------------|
| Program Costs | \$ 91,365 | \$ 108,865 |
| Net Cost of Operations | \$ 91,365 | \$ 108,865 |

Statement of Changes in Net Position For the Years Ended September 30, 2013 and 2012

| | | |
|--|------------|------------|
| Net Position Beginning of Period | \$ 344,204 | \$ 324,083 |
| Appropriated Dedicated Collection Transferred In / Out | 115,841 | 128,986 |
| Net Cost of Operation | (91,365) | (108,865) |
| Change in Net Position | 24,476 | 20,121 |
| Net Position End of Period | \$ 368,680 | \$ 344,204 |

Note 9. Statement of Net Cost

NSF has a singular program for supporting research and education awards. The net costs for this program are presented for the three primary appropriations that fund NSF's programmatic activities (Research and Related Activities (R&RA), Education and Human Resources (EHR), and Major Research Equipment and Facilities Construction (MREFC)). Donations and Funds from Dedicated Collections are classified in the Statement of Net Cost and its related footnote as *Costs Not Assigned To Other Programs*.

In pursuit of its mission, NSF incurs costs related to the Foundation's strategic plan for FY 2011-2016: *Empowering the Nation through Discovery and Innovation*. The strategic goals outlined in this plan are: "Transform the Frontiers", "Innovate for Society", and "Perform as a Model Organization". "Transform the Frontiers" emphasizes the seamless integration of research and education as well as the close coupling of research infrastructure and discovery. "Innovate for Society" points to the tight linkage between NSF programs and societal needs, and highlights the role that new knowledge and creativity play in economic prosperity and society's general welfare. "Perform as a Model Organization" emphasizes the importance to NSF of attaining excellence and inclusion in all operational aspects.

Stewardship costs directly reflect the third strategic goal, "Perform as a Model Organization", and are prorated among the Net Cost Programs. Stewardship costs include expenditures incurred from the AOAM, NSB, and Office of Inspector General (OIG) appropriations. These appropriations support salaries and benefits of persons employed at NSF; general operating expenses, including support of NSF's

Notes to the Principal Financial Statements
September 30, 2013 and 2012

information systems technology; staff training, audit and OIG activities; and OPM and DOL benefits costs paid on behalf of NSF.

At September 30, 2013 approximately 95 percent of NSF's expenses amounting to \$6.9 billion were directly related to the "Transform the Frontiers" and "Innovate for Society" strategic outcome goals. At September 30, 2012 approximately 96 percent of NSF's expenses amounting to \$7.1 billion was directly related to the "Transform the Frontiers" and "Innovate for Society" strategic outcome goals. At September 30, 2013 and 2012, costs related to the Stewardship activities totaled \$327.4 million and \$333.7 million, respectively.

In accordance with OMB Circular No. A-136, costs incurred for services provided by other federal entities are reported in the full costs of NSF programs and are separately identified in this note as "Federal." All earned revenues are offsetting collections provided through reimbursable agreements with other federal entities and are retained by NSF. Earned revenues are recognized when the related program or administrative expenses are incurred and are deducted from the full cost of the programs to arrive at the net cost of operating NSF's programs. NSF applies a cost recovery fee on other federal entities consistent with applicable legislation and Government Accountability Office decisions. NSF recovers the costs incurred in the management, administration, and oversight of activities authorized and/or funded by interagency agreements where NSF is the performing agency.

Intragovernmental and Public Costs and Earned Revenue by Program

(Amounts in Thousands)

| | 2013 | | |
|--|-------------------|---------------------|---------------------|
| | Federal | Public | Total |
| Research and Related Activities | | | |
| Gross Costs | \$ 204,129 | \$ 5,830,999 | \$ 6,035,128 |
| Less: Earned Revenue | (101,802) | - | (101,802) |
| Net Research and Related Activities | <u>102,327</u> | <u>5,830,999</u> | <u>5,933,326</u> |
| Education and Human Resources | | | |
| Gross Costs | \$ 4,636 | \$ 791,823 | \$ 796,459 |
| Less: Earned Revenue | (5,406) | - | (5,406) |
| Net Education and Human Resources | <u>(770)</u> | <u>791,823</u> | <u>791,053</u> |
| Major Research Equipment and Facilities Construction | | | |
| Gross Costs | \$ 19 | \$ 225,384 | \$ 225,403 |
| Less: Earned Revenue | - | - | - |
| Net Major Research Equipment and Facilities Construction | <u>19</u> | <u>225,384</u> | <u>225,403</u> |
| Costs Not Assigned To Other Programs | | | |
| Gross Costs | \$ 22 | \$ 167,267 | \$ 167,289 |
| Less: Earned Revenue | - | - | - |
| Net Costs Not Assigned To Other Programs | <u>22</u> | <u>167,267</u> | <u>167,289</u> |
| Net Cost of Operations | <u>\$ 101,598</u> | <u>\$ 7,015,473</u> | <u>\$ 7,117,071</u> |

Notes to the Principal Financial Statements
September 30, 2013 and 2012

| (Amounts in Thousands) | 2012 | | |
|---|-------------------|---------------------|---------------------|
| | Federal | Public | Total |
| Research and Related Activities | | | |
| Gross Costs | \$ 255,075 | \$ 5,879,466 | \$ 6,134,541 |
| Less: Earned Revenue | (107,478) | - | (107,478) |
| Net Research and Related Activities | <u>147,597</u> | <u>5,879,466</u> | <u>6,027,063</u> |
| Education and Human Resources | | | |
| Gross Costs | \$ 4,117 | \$ 873,805 | \$ 877,922 |
| Less: Earned Revenue | (5,692) | - | (5,692) |
| Net Education and Human Resources | <u>(1,575)</u> | <u>873,805</u> | <u>872,230</u> |
| Major Research Equipment and Facilities Construction | | | |
| Gross Costs | \$ 5,458 | \$ 265,010 | \$ 270,468 |
| Less: Earned Revenue | - | - | - |
| Net Major Research Equipment and Facilities Construction | <u>5,458</u> | <u>265,010</u> | <u>270,468</u> |
| Costs Not Assigned To Other Programs | | | |
| Gross Costs | \$ 292 | \$ 165,604 | \$ 165,896 |
| Less: Earned Revenue | - | - | - |
| Net Costs Not Assigned To Other Programs | <u>292</u> | <u>165,604</u> | <u>165,896</u> |
| Net Cost of Operations | <u>\$ 151,772</u> | <u>\$ 7,183,885</u> | <u>\$ 7,335,657</u> |

Note 10. Rescissions and Cancelled Authority Adjustments

The components of Rescissions and Cancelled Authority Adjustments as of September 30, 2013 and September 30, 2012 were:

| (Amount in Thousands) | 2013 | 2012 |
|---|---------------------|--------------------|
| Rescissions | \$ (508,986) | \$ - |
| Cancelled Authority Adjustments | (49,076) | (43,354) |
| Total Rescissions and Cancelled Authority Adjustments | <u>\$ (558,062)</u> | <u>\$ (43,354)</u> |

In accordance with Public Law 113-6, NSF was subject to FY 2013 across-the-board and sequestration rescissions. These rescission required NSF to reduce FY 2013 funding levels by 1.877% under section 3001 and 0.2% under section 3004. NSF was not subject to rescissions in FY 2012.

Note 11. Permanent Indefinite Appropriations

NSF maintains permanent indefinite appropriations for R&RA, MREFC, and EHR. The R&RA appropriation is used 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 USAP. In FYs 2013 and 2012 the permanent indefinite appropriations for R&RA were \$427.2 million and \$437.3 million, respectively, and are reported as current year transfers from the annual R&RA appropriation.

The MREFC appropriation supports the procurement and construction of unique national research platforms and major research equipment. In FYs 2013 and 2012, the permanent indefinite appropriations for MREFC were \$196.2 million and \$167.1 million, respectively. An additional, \$12.5 million and \$30.0 million, respectively, were transferred as a result of the exercise of the Administrative Provision described in Note 1D, *Revenue and Other Financing Sources*.

The EHR appropriation is used to support science and engineering education, and human resources programs and activities. In FYs 2013 and 2012, the permanent indefinite appropriations for EHR were \$50.5 million and \$54.9 million, respectively, and are reported as current year transfers from the annual EHR appropriation.

Note 12. Apportionment Categories of Obligations Incurred: Direct vs. Reimbursable Obligations

OMB Circular No. A-11, *Preparation, Submission, and Execution of the Budget*, requires direct and reimbursable obligations be reported as Category A, Category B, or Exempt from Apportionment. In FYs 2013 and 2012, NSF's SF-133, *Report on Budget Execution and Budgetary Resources*, reported all obligations incurred under Category B which is by activity, project, or object. As of September 30, 2013 and 2012, direct obligations amounted to \$7.1 billion and \$7.3 billion, respectively, and reimbursable obligations amounted to \$118.7 million and \$107.1 million, respectively.

Note 13. Explanation of Differences between the Statement of Budgetary Resources and the Budget of the United States Government

SFFAS No. 7, *Accounting for Revenue and Other Financing Sources and Concepts for Reconciling Budgetary and Financial Accounting*, calls for explanations of material differences between amounts reported in the Statement of Budgetary Resources (SBR) and the actual balances published in the Budget of the United States Government (President's Budget). However, the President's Budget that will include FY 2013 actual budgetary execution information has not yet been published. The President's Budget is scheduled for publication in the spring of FY 2014 and can be found on the OMB web site: <http://www.whitehouse.gov/omb>.

Balances reported in the FY 2012 SBR and the related President's Budget are shown in a table below for *Budgetary Resources, Obligations Incurred, Unobligated Balance - Unavailable, Distributed Offsetting Receipts*, and any related differences. The differences reported are due to differing reporting requirements for expired and unexpired appropriations between the Treasury guidance used to prepare the SBR and the OMB guidance used to prepare the President's Budget. The SBR includes both unexpired and expired appropriations, while the President's Budget discloses only unexpired budgetary resources that are available for new obligations. Additionally, the *Distributed Offsetting Receipts* amount on the SBR includes donations, while the President's Budget does not.

| (Amounts in Thousands) | 2012 | | | |
|---|------------------------|-------------------------|---|---------------------------------------|
| | Budgetary Resources | Obligations Incurred | Unobligated Balance - Unavailable | Distributed Offsetting Receipts |
| Combined Statement of Budgetary Resources | \$ 7,644,990 | \$ 7,367,850 | \$ 118,824 | \$ 48,891 |
| Budget of the U.S. Government | \$ 7,533,696 | \$ 7,364,644 | \$ 10,736 | \$ 2,000 |
| Difference | \$ 111,294 | \$ 3,206 | \$ 108,088 | \$ 46,891 |

Note 14. Undelivered Orders at the End of the Period

In accordance with SFFAS No. 7, *Accounting for Revenue and Other Financing Sources*, the amount of budgetary obligated for undelivered orders for the periods ended September 30, 2013 and 2012 amounted to \$11.3 billion and \$11.4 billion, respectively.

Note 15. Awards to Affiliated Institutions

NSB members may be affiliated with institutions that are eligible to receive grants and awards from NSF. NSF made awards totaling \$1.0 billion to board member affiliated institutions in FY 2013. The Board does not review all NSF award actions; however the following require NSB approval for the NSF Director to take action under delegated authority:

- Proposed awards, requests for proposals (RFPs), and solicitations that meet or exceed a threshold where the average annual award amount is the greater of one percent or more of the awarding Directorate's or Office's prior year plan or 0.1 percent or more of the prior year total NSF budget (enacted level);
- New programs where the total annualized awards exceed three percent of the awarding Directorate's or Office's prior year current plan, involve sensitive political or policy issues, or will be funded as an ongoing NSF-wide activity;
- Major construction projects.

The Director's Review Board (DRB) reviews proposed actions for evaluation adequacy and documentation, and compliance with Foundation policies, procedures and strategies. Items requiring DRB action include large awards and RFPs that meet or exceed a threshold of 2.5 percent of the prior year Division or Subactivity Plan. In addition, the DRB reviews all items requiring NSB action as well as NSB information items prior to submission.

NSF may fund awards meeting the above requirements to institutions affiliated with board members. Federal conflict-of-interest rules prohibit NSB members from participating in matters where they have a conflict of interest or there is an impartiality concern without prior authorization from the Designated Agency Ethics Official (DAEO). Prior to Board meetings, all NSB action items are screened for conflict-of-interest/impartiality concerns by the Office of the General Counsel. Members who have conflicts are either recused from the matter or receive a waiver from the DAEO to participate. In FY 2013, NSB approved one award to a board member affiliated institution.

Note 16. Reconciliation of Net Cost of Operations to Budget

| (Amounts in Thousands) | 2013 | 2012 |
|---|---------------------|---------------------|
| Resources Used To Finance Activities | | |
| Budgetary Resources Obligated | | |
| Obligations Incurred | \$ 7,237,741 | \$ 7,367,850 |
| Less: Spending Authority from Offsetting Collections and Recoveries | <u>(262,497)</u> | <u>(250,126)</u> |
| Obligations Net of Offsetting Collections and Recoveries | 6,975,244 | 7,117,724 |
| Less: Offsetting Receipts | <u>(43,514)</u> | <u>(48,891)</u> |
| Net Obligations | 6,931,730 | 7,068,833 |
| Other Resources | | |
| Transfers In / (Out) Without Reimbursement | 781 | - |
| Imputed Financing | 11,358 | 11,364 |
| Other Resources | <u>(4,800)</u> | <u>(113)</u> |
| Net Other Resources Used to Finance Activities | 7,339 | 11,251 |
| Total Resources Used to Finance Activities | 6,939,069 | 7,080,084 |
| Resources Used to Finance Items Not Part of the Net Cost of Operations | | |
| Change in Budgetary Resources Obligated for Goods, Services and | | |
| Benefits Ordered but Not Yet Provided | 124,450 | 204,760 |
| Resources that Fund Expenses Recognized in Prior Periods | (2,713) | 5 |
| Budgetary Offsetting Collections and Receipts that Do Not Affect | | |
| Net Cost of Operations | 43,514 | 48,891 |
| Resources that Finance the Acquisition of Assets | <u>(18,281)</u> | <u>(17,616)</u> |
| Total Resources Used to Finance Items Not Part of the | | |
| Net Cost of Operations | 146,970 | 236,040 |
| Total Resources Used to Finance Net Cost of Operations | 7,086,039 | 7,316,124 |
| Components of the Net Cost of Operations that will not Require or Generate | | |
| Resources in the Current Period | | |
| Components Requiring or Generating Resources in Future Periods | | |
| Other | <u>67</u> | <u>693</u> |
| Total Components of Net Cost of Operations that will Require | | |
| or Generate Resources in Future Periods | 67 | 693 |
| Components Not Requiring or Generating Resources | | |
| Depreciation and Amortization | 24,738 | 18,725 |
| Other | <u>6,227</u> | <u>115</u> |
| Total Components of Net Cost of Operations that will not | | |
| Require or Generate Resources | 30,965 | 18,840 |
| Total Components of Net Cost of Operations that Will Not | | |
| Require or Generate Resources in the Current Period | 31,032 | 19,533 |
| Net Cost of Operations | \$ 7,117,071 | \$ 7,335,657 |

Required Supplementary Stewardship Information

Stewardship Investments

For the Years Ended September 30, 2013 and 2012

Required Supplementary Stewardship Information
September 30, 2013 and 2012

Stewardship Investments
Research and Human Capital
(Amounts and Numbers in Thousands)

Research and Human Capital Activities

| | <u>2013</u> | <u>2012</u> | <u>2011</u> | <u>2010</u> | <u>2009</u> |
|--|----------------------------|----------------------------|----------------------------|----------------------------|-------------------------|
| Basic Research | \$ 5,446,790 | \$ 5,590,843 | \$ 5,401,356 | \$ 5,249,579 | 4,413,407 |
| Applied Research | 588,261 | 532,729 | 404,596 | 416,008 | 498,544 |
| Education and Training | 861,871 | 991,543 | 1,115,680 | 1,019,776 | 867,333 |
| Non-Investing Activities | 327,357 | 333,712 | 337,170 | 312,269 | 332,623 |
| Total Research & Human Capital Activities | \$ <u>7,224,279</u> | \$ <u>7,448,827</u> | \$ <u>7,258,802</u> | \$ <u>6,997,632</u> | <u>6,111,907</u> |

Inputs, Outputs and/or Outcomes

Research and Human Capital Activities

Investments In:

| | | | | | |
|------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|-------------------------|
| Universities | \$ 5,025,068 | \$ 5,445,926 | \$ 5,192,332 | \$ 5,103,835 | 4,340,871 |
| Industry | 337,818 | 280,452 | 350,115 | 286,419 | 253,114 |
| Federal Agencies | 208,806 | 264,846 | 195,652 | 203,635 | 219,367 |
| Small Business | 249,443 | 239,866 | 254,215 | 268,697 | 209,343 |
| Federally Funded R&D Centers | 280,032 | 229,474 | 231,234 | 246,217 | 232,319 |
| Non-Profit Organizations | 605,059 | 523,772 | 522,958 | 408,441 | 381,882 |
| Other | 518,053 | 464,491 | 512,296 | 480,388 | 475,011 |
| | \$ <u>7,224,279</u> | \$ <u>7,448,827</u> | \$ <u>7,258,802</u> | \$ <u>6,997,632</u> | <u>6,111,907</u> |

Support To:

| | | | | | |
|-----------------------|----------------------------|----------------------------|----------------------------|----------------------------|-------------------------|
| Scientists | \$ 539,713 | \$ 544,452 | \$ 540,865 | \$ 568,140 | 695,389 |
| Postdoctoral Programs | 190,564 | 192,863 | 196,071 | 188,665 | 252,639 |
| Graduate Students | 568,548 | 574,557 | 564,021 | 602,990 | 933,063 |
| | \$ <u>1,298,825</u> | \$ <u>1,311,872</u> | \$ <u>1,300,957</u> | \$ <u>1,359,795</u> | <u>1,881,091</u> |

Outputs & Outcomes:

Number of:

| | | | | | |
|-------------------------|---------|---------|--------|--------|--------|
| Award Actions | 20,000 | 23,000 | 22,000 | 24,000 | 28,000 |
| Senior Researchers | 44,000 | 56,000 | 53,000 | 55,000 | 54,000 |
| Other Professionals | 14,000 | 14,000 | 14,000 | 15,000 | 15,000 |
| Postdoctoral Associates | 6,000 | 6,000 | 7,000 | 7,000 | 8,000 |
| Graduate Students | 42,000 | 42,000 | 40,000 | 40,000 | 54,000 |
| Undergraduate Students | 29,000 | 31,000 | 27,000 | 34,000 | 33,000 |
| K-12 Students | 124,000 | 125,000 | 86,000 | 59,000 | 14,000 |
| K-12 Teachers | 40,000 | 45,000 | 48,000 | 85,000 | 63,000 |

NSF's mission is to support basic scientific research and research fundamental to the engineering process as well as science and engineering education programs. NSF's Stewardship Investments fall principally into the categories of Research and Human Capital. For expenses incurred under the Research category, the majority of NSF funding is devoted to basic research, with a relatively small share going to applied research. This funding supports both the conduct of research and the necessary supporting infrastructure, including state-of-the-art instrumentation, equipment, computing resources, and multi-user facilities such as digital libraries, observatories, and research vessels and aircraft. In FY 2011, NSF slightly modified the methodology for developing the Basic Research, Applied Research, Education and Training, and Non-Investing Activity costs. Basic and applied research and education and training expenses are determined by prorating the program costs of NSF's R&RA, EHR, and MREFC appropriations, donations, and funds from dedicated collections reported on the Statement of Net Cost. The proration uses the basic and applied research and education and training percentages of total estimated research and development obligations reported in the FY 2014 Budget Request to Congress. The actual numbers are not available until later in the following fiscal year. Non-Investing activities reflect stewardship costs incurred from the AOAM, NSB and OIG appropriations.

The data provided for scientists, postdoctoral associates, and graduate students are obtained from NSF's award budget information as recorded at the time the award is made. The number of award actions are actual values from NSF's Enterprise Information System (EIS). The remaining outputs and outcomes are estimates provided annually by the NSF Directorates. These estimates are reported in the NSF annual Budget Request to Congress.

NSF's Human Capital investments focus principally on education and training, toward a goal of creating a diverse, internationally competitive and globally engaged workforce of scientists, engineers and well-prepared citizens. NSF supports activities to improve formal and informal science, mathematics, engineering and technology education at all levels, as well as public science literacy projects that engage people of all ages in life-long learning. In fiscal years prior to 2011, the number of K-12 students involved in NSF activities was based on estimates provided by staff in the Graduate Teaching Fellowships in K-12 Education (GK-12) program within EHR. For FY 2011 and after, the numbers are based on a more robust data collection and analysis process.

Required Supplementary Information

Deferred Maintenance and Repairs For the Years Ended September 30, 2013 and 2012

Deferred Maintenance and Repairs

NSF performs condition assessment surveys in accordance with FASAB Standards No. 6, No. 14, and No. 40 for capitalized property, plant and equipment (PP&E) to determine if any maintenance and repairs are needed to keep an asset in an acceptable condition or restore an asset to a specific level of performance. NSF considers deferred maintenance and repairs to be any maintenance and repairs that are not performed on schedule, unless it is determined from the condition of the asset that scheduled maintenance does not have to be performed. Deferred maintenance and repairs also include any other type of maintenance or repair that, if not performed, would render the PP&E non-operational. Circumstances such as non-availability of parts or funding are considered reasons for deferring maintenance and repairs.

NSF considered whether any scheduled maintenance or repair necessary to keep fixed assets of the agency in an acceptable condition was deferred at the end of the period for fiscal years 2013 and 2012. Assets deemed to be in excellent, good, or fair condition are considered to be in acceptable condition. Assets in poor condition are in unacceptable condition and the deferred maintenance and repairs required to get them to an acceptable condition are reported. NSF determines the condition of an asset in accordance with standards comparable to those used in the private industry. Due to the environment and remote location of Antarctica, all deferred maintenance and repairs on assets in poor condition is considered critical in order to maintain operational status.

At September 30, 2013, NSF determined that scheduled maintenance on one item of Antarctic capital equipment in poor condition was not completed and was deferred or delayed for a future period. The dollar amount of deferred maintenance for this item was \$1.8 thousand. The item is light mobile equipment and is considered critical to NSF operations.

At September 30, 2012, NSF determined that scheduled maintenance on two items of Antarctic capital equipment in poor condition was not completed and was deferred or delayed for a future period. The largest dollar amount of deferred maintenance for any single item in poor condition approximated \$23.9 thousand. The items are heavy mobile equipment and are considered critical to NSF operations. In total, these are estimated to require \$47.8 thousand in maintenance.

Required Supplementary Information

Budgetary Resources by Major Budget Accounts

In the following table, NSF budgetary information for the fiscal years ended September 30, 2013 and 2012, as presented in the Statement of Budgetary Resources, is disaggregated for each of NSF's major budget accounts. In FY 2012, NSF presented ARRA funds on a separate schedule. In FY 2013, due to diminishing ARRA balances, NSF has presented these funds in conjunction with the appropriate major budget account.

Required Supplementary Information
September 30, 2013 and 2012

The Science Appropriations Act, 2013

2013

(Amounts in Thousands)

| | <u>Research and Related Activities</u> | <u>Education and Human Resources</u> | <u>Major Research Equipment</u> | <u>OIG, AOAM, and NSB</u> | <u>Special and Donated</u> | <u>Total</u> |
|--|--|--|-------------------------------------|-------------------------------|--------------------------------|---------------------|
| Budgetary Resources | | | | | | |
| Unobligated Balance - Brought Forward, October 1 | \$ 98,939 | 29,090 | 686 | 6,993 | 141,432 | \$ 277,140 |
| Recoveries of Prior Year Unpaid Obligations | 119,486 | 23,504 | 12 | 3,180 | 4,791 | 150,973 |
| Other Changes in Unobligated Balance | (31,436) | (14,370) | - | (2,967) | - | (48,773) |
| Unobligated Balance from Prior Year Budget Authority, Net | 186,989 | 38,224 | 698 | 7,206 | 146,223 | 379,340 |
| Appropriations | 5,543,716 | 833,312 | 196,170 | 310,916 | 156,207 | 7,040,321 |
| Spending Authority from Offsetting Collections | 104,052 | 636 | - | 6,828 | 8 | 111,524 |
| Total Budgetary Resources | \$ 5,834,757 | 872,172 | 196,868 | 324,950 | 302,438 | \$ 7,531,185 |
| Status of Budgetary Resources | | | | | | |
| Obligations Incurred | \$ 5,717,430 | 839,624 | 196,488 | 319,074 | 165,125 | \$ 7,237,741 |
| Unobligated Balance, End of Year | | | | | | |
| Apportioned | 9,346 | 182 | 373 | 150 | 134,982 | 145,033 |
| Unapportioned | 107,981 | 32,366 | 7 | 5,726 | 2,331 | 148,411 |
| Total Unobligated Balance, End of Year | 117,327 | 32,548 | 380 | 5,876 | 137,313 | 293,444 |
| Total Status of Budgetary Resources | \$ 5,834,757 | 872,172 | 196,868 | 324,950 | 302,438 | \$ 7,531,185 |
| Change in Obligated Balance | | | | | | |
| Unpaid Obligations | | | | | | |
| Unpaid Obligations - Brought Forward, October 1, Gross | \$ 9,507,545 | 1,646,027 | 415,110 | 77,139 | 300,928 | \$ 11,946,749 |
| Obligations Incurred | 5,717,430 | 839,624 | 196,488 | 319,074 | 165,125 | 7,237,741 |
| Gross Outlays | (6,046,833) | (791,498) | (244,702) | (317,072) | (162,143) | (7,562,248) |
| Recoveries of Prior Year Unpaid Obligations | (119,486) | (23,504) | (12) | (3,180) | (4,791) | (150,973) |
| Unpaid Obligations - End of Year, Gross | 9,058,656 | 1,670,649 | 366,884 | 75,961 | 299,119 | 11,471,269 |
| Uncollected Payments | | | | | | |
| Uncollected Payments from Federal Sources - Brought Forward, October 1 | \$ (125,574) | (10,733) | - | (189) | - | \$ (136,496) |
| Change in Uncollected Payments from Federal Sources | (12,444) | 5,828 | - | (3,390) | - | (10,006) |
| Uncollected Payments from Federal Sources, End of Year | (138,018) | (4,905) | - | (3,579) | - | (146,502) |
| Memorandum (non-add) Entries | | | | | | |
| Obligated Balance - Start of Year | \$ 9,381,971 | 1,635,294 | 415,110 | 76,950 | 300,928 | \$ 11,810,253 |
| Obligated Balance - End of Year | \$ 8,920,638 | 1,665,744 | 366,884 | 72,382 | 299,119 | \$ 11,324,767 |
| Budget Authority, Gross | | | | | | |
| Actual Offsetting Collections | \$ 5,647,768 | 833,948 | 196,170 | 317,744 | 156,215 | \$ 7,151,845 |
| Change in Uncollected Customer Payments from Federal Sources | (91,608) | (6,464) | - | (3,437) | (9) | (101,518) |
| Budget Authority, Net | (12,444) | 5,828 | - | (3,390) | - | (10,006) |
| Budget Authority, Net | \$ 5,543,716 | 833,312 | 196,170 | 310,917 | 156,206 | \$ 7,040,321 |
| Gross Outlays | | | | | | |
| Gross Outlays | \$ 6,046,833 | 791,498 | 244,702 | 317,072 | 162,143 | \$ 7,562,248 |
| Actual Offsetting Collections | (91,608) | (6,464) | - | (3,437) | (9) | (101,518) |
| Net Outlays | 5,955,225 | 785,034 | 244,702 | 313,635 | 162,134 | 7,460,730 |
| Distributed Offsetting Receipts | - | - | - | - | (43,514) | (43,514) |
| Net Agency Outlays | \$ 5,955,225 | 785,034 | 244,702 | 313,635 | 118,620 | \$ 7,417,216 |

Required Supplementary Information
September 30, 2013 and 2012

The Science Appropriations Act, 2012

2012
(Amounts in Thousands)

| | <u>Research and Related Activities</u> | <u>Education and Human Resources</u> | <u>Major Research Equipment</u> | <u>OIG, AOAM, and NSB</u> | <u>Special and Donated</u> | <u>Total</u> |
|--|--|--|-------------------------------------|-------------------------------|--------------------------------|---------------------|
| Budgetary Resources | | | | | | |
| Unobligated Balance - Brought Forward, October 1 | \$ 81,845 | 26,375 | 877 | 6,538 | 113,265 | \$ 228,900 |
| Recoveries of Prior Year Unpaid Obligations | 123,022 | 15,969 | 835 | 3,778 | 3,623 | 147,227 |
| Other Changes in Unobligated Balance | (29,581) | (11,155) | - | (2,617) | - | (43,353) |
| Unobligated Balance from Prior Year Budget Authority, Net | 175,286 | 31,189 | 1,712 | 7,699 | 116,888 | 332,774 |
| Appropriations | 5,689,000 | 829,000 | 197,055 | 318,040 | 176,222 | 7,209,317 |
| Spending Authority from Offsetting Collections | 92,141 | 4,441 | - | 6,317 | - | 102,899 |
| Total Budgetary Resources | \$ 5,956,427 | 864,630 | 198,767 | 332,056 | 293,110 | \$ 7,644,990 |
| Status of Budgetary Resources | | | | | | |
| Obligations Incurred | \$ 5,857,488 | 835,540 | 198,081 | 325,063 | 151,678 | \$ 7,367,850 |
| Unobligated Balance, End of Year | | - | - | - | - | |
| Apportioned | 13,859 | 4,563 | 681 | 1,397 | 137,816 | 158,316 |
| Unapportioned | 85,080 | 24,527 | 5 | 5,596 | 3,616 | 118,824 |
| Total Unobligated Balance, End of Year | 98,939 | 29,090 | 686 | 6,993 | 141,432 | 277,140 |
| Total Status of Budgetary Resources | \$ 5,956,427 | 864,630 | 198,767 | 332,056 | 293,110 | \$ 7,644,990 |
| Change in Obligated Balance | | | | | | |
| Unpaid Obligations | | | | | | |
| Unpaid Obligations - Brought Forward, October 1, Gross | \$ 9,586,272 | 1,666,563 | 493,868 | 77,347 | 312,844 | \$ 12,136,894 |
| Obligations Incurred | 5,857,488 | 835,540 | 198,081 | 325,063 | 151,678 | 7,367,850 |
| Gross Outlays | (5,813,193) | (840,105) | (276,005) | (321,494) | (159,971) | (7,410,768) |
| Recoveries of Prior Year Unpaid Obligations | (123,022) | (15,969) | (835) | (3,778) | (3,623) | (147,227) |
| Unpaid Obligations - End of Year, Gross | 9,507,545 | 1,646,029 | 415,109 | 77,138 | 300,928 | 11,946,749 |
| Uncollected Payments | | | | | | |
| Uncollected Payments from Federal Sources - Brought Forward, October 1 | \$ (126,805) | (11,703) | - | (819) | - | \$ (139,327) |
| Change in Uncollected Payments from Federal Sources | 1,231 | 969 | - | 631 | - | 2,831 |
| Uncollected Payments from Federal Sources, End of Year | (125,574) | (10,734) | - | (188) | - | (136,496) |
| Memorandum (non-add) Entries | | | | | | |
| Obligated Balance - Start of Year | \$ 9,459,467 | 1,654,860 | 493,868 | 76,528 | 312,844 | \$ 11,997,567 |
| Obligated Balance - End of Year | \$ 9,381,971 | 1,635,295 | 415,109 | 76,950 | 300,928 | \$ 11,810,253 |
| Budget Authority and Outlays, Net | | | | | | |
| Budget Authority, Gross | \$ 5,781,141 | 833,441 | 197,055 | 324,357 | 176,222 | \$ 7,312,216 |
| Actual Offsetting Collections | (93,371) | (5,411) | - | (6,948) | - | (105,730) |
| Change in Uncollected Customer Payments from Federal Sources | 1,231 | 969 | - | 631 | - | 2,831 |
| Budget Authority, Net | \$ 5,689,001 | 828,999 | 197,055 | 318,040 | 176,222 | \$ 7,209,317 |
| Gross Outlays | | | | | | |
| Gross Outlays | \$ 5,813,193 | 840,105 | 276,005 | 321,494 | 159,971 | \$ 7,410,768 |
| Actual Offsetting Collections | (93,371) | (5,411) | - | (6,948) | - | (105,730) |
| Net Outlays | 5,719,822 | 834,694 | 276,005 | 314,546 | 159,971 | 7,305,038 |
| Distributed Offsetting Receipts | - | - | - | - | (48,891) | (48,891) |
| Net Agency Outlays | \$ 5,719,822 | 834,694 | 276,005 | 314,546 | 111,080 | \$ 7,256,147 |

Other Information

Schedule of Spending

For the Year Ended September 30, 2013

The Schedule of Spending (SOS) was new in FY 2012 and has been slightly modified in FY 2013 in accordance with updated OMB Circular No. A-136, *Financial Reporting Requirements*. It was developed to make information about government spending more accessible and transparent to the public. To achieve this goal, specific line items found in the Statement of Budgetary Resources (SBR), which relate to government spending, have been simplified and reorganized to help readers better understand accounting terminology. The focus of the SOS is to provide a user-friendly report that answers the following questions:

- 1) What money is available to spend?
- 2) How was the money spent/issued?
- 3) Who did the money go to?
- 4) How does the SOS compare to the SBR and USASpending.gov?

In accordance with OMB guidance, NSF has prepared three of the four sections of the Schedule for FY 2013—sections 1, 2 and 4. Section 3 will be presented in FY 2014.

- **What money is available to spend?** This section ties directly to the SBR and indicates the total resources available less funds that were unobligated or unavailable for spending.
- **How was the money spent/issued?** This section presents total obligations incurred and shows the most significant goods or services purchased, as well as payment types, by appropriation category. The Other line is comprised of management estimate accruals.
- **How does the SOS compare to the SBR and USASpending.gov?** This section describes the similarities and differences between the Schedule of Spending, Statement of Budgetary Resources, and the USASpending.gov website.

National Science Foundation
Schedule of Spending
For the Year Ended September 30, 2013
(Amounts in Thousands)

What Money is Available to Spend?

| | | |
|--|-----------|-------------------------|
| Total Resources | \$ | 7,531,185 |
| Less Amount Available but Not Agreed to be Spent | | 145,033 |
| Less Amount Not Available to be Spent | | 148,411 |
| Total Amounts Agreed to be Spent | \$ | <u>7,237,741</u> |

| How Was the Money Spent/Issued? | <u>Research and Related Activities</u> | <u>Education and Human Resources</u> | <u>Major Research Equipment</u> | <u>OIG, AOAM and NSB</u> | <u>Special and Donated</u> | <u>Total</u> |
|---|---|---|--|-------------------------------------|---------------------------------------|-------------------------|
| Compensation and Benefits | \$ 744 | 138 | - | 213,858 | 8 | 214,748 |
| Travel and Transportation of Persons | 13,088 | 2,262 | 18 | 4,850 | 223 | 20,441 |
| Contracts | 491,504 | 25,396 | 4,666 | 68,727 | 17,893 | 608,186 |
| Rent, Communications, and Utilities | 145 | 49 | - | 31,523 | 14 | 31,731 |
| Grants, Subsidies, and Contributions | 5,211,949 | 811,779 | 191,804 | 113 | 146,948 | 6,362,593 |
| Other | - | - | - | 3 | 39 | 42 |
| Total Amounts Agreed to be Spent | \$ <u>5,717,430</u> | <u>839,624</u> | <u>196,488</u> | <u>319,074</u> | <u>165,125</u> | <u>7,237,741</u> |

How Does the SOS Compare to the SBR and USASpending.gov?

The purpose of the SOS, the SBR, and the USASpending.gov website is the same—to provide transparency to the general public regarding how federal agencies obtain funding and where those funds are spent. These reports display NSF spending information at various levels of detail to provide a wide range of information to the readers. The SBR is prepared using the United States Standard General Ledger (USSGL) trial balance and provides information about how budgetary resources were made available as well as their status at the end of the period. Data reported on the SBR is ultimately reconcilable with data reported in the Budget of the United States Government. The SOS presents total budgetary resources and the total amounts agreed to be spent which equates to fiscal year-to-date obligations reported on the SBR. This schedule provides the reader with detailed agency information that describes the types of activities NSF's resources will be used for. Like the SOS, USASpending.gov also provides agency obligation information on awards and contracts that have been obligated over the past ten fiscal years. Variances between USASpending.gov and SOS data can be attributed to the following:

- USASpending.gov includes obligation information for contracts and grants, only. The SOS includes additional obligation information to include travel, employee salaries and benefits, and rent.
- USASpending.gov includes grant and contract data associated with specific Budget Object Classes. The SOS classifies a larger population of Budget Object Classes as a grant or contract.
- USASpending.gov is based on financial information that is included in the financial system as of September 30. The SOS includes accruals and other financial information applicable to FY 2013, but posted subsequent to September 30.

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INSE

Chapter 3

Appendices

Summary of FY 2013 Financial Statement Audit and Management Assurances

Table 1. Summary of Financial Statement Audit

| | | | | | |
|---------------------------|---------------------------------|-----|----------|--------------|----------------|
| Audit Opinion | <i>Unqualified (Unmodified)</i> | | | | |
| Restatement | <i>No</i> | | | | |
| Material Weakness | Beginning Balance | New | Resolved | Consolidated | Ending Balance |
| Total Material Weaknesses | 0 | - | - | - | 0 |

Table 2. Summary of Management Assurances

| Effectiveness of Internal Control over Financial Reporting (FMFIA § 2) | | | | | |
|---|--|-----|----------|--------------|----------------|
| Statement of Assurance | <i>Unqualified</i> | | | | |
| | Beginning Balance | New | Resolved | Consolidated | Ending Balance |
| <i>Total Material Weaknesses</i> | 0 | - | - | - | 0 |
| Effectiveness of Internal Control over Operations (FMFIA § 2) | | | | | |
| Statement of Assurance | <i>Unqualified</i> | | | | |
| | Beginning Balance | New | Resolved | Consolidated | Ending Balance |
| <i>Total Material Weaknesses</i> | 0 | - | - | - | 0 |
| Conformance with Financial Management System Requirements (FMFIA § 4) | | | | | |
| Statement of Assurance | <i>Systems conform to financial management system requirements</i> | | | | |
| | Beginning Balance | New | Resolved | Consolidated | Ending Balance |
| <i>Total Non-Conformances</i> | 0 | - | - | - | 0 |
| Compliance with Federal Financial Management Improvement Act (FFMIA) | | | | | |
| | Agency | | | Auditor | |
| 1. System Requirements | <i>No noncompliance noted</i> | | | | |
| 2. Accounting Standards | <i>No noncompliance noted</i> | | | | |
| 3. U.S. Standard General Ledger at Transaction level | <i>No noncompliance noted</i> | | | | |

National Science Foundation
FY 2013 Improper Payments Elimination and Recovery Act (IPERA)
Reporting Details

NSF is providing the following information about the first stage of a new two-year effort to update NSF's implementation of IPERA. For additional information about NSF IPERA reporting see Management's Discussion and Analysis, page I-23.

I. Risk Assessment. Briefly describe the risk assessment(s) performed (including the risk factors examined, if appropriate) subsequent to completing a full program inventory. List the risk susceptible programs (i.e., programs that have a significant risk of improper payments based on OMB guidance thresholds) identified by the agency risk assessments. Include any programs previously identified in the former Section 57 of OMB Circular No. A-II. Highlight any changes to the risk assessment methodology or results that occurred since the last report.

NSF revised its risk assessment methodology in conjunction with OMB coordination. The revised risk assessment methodology better aligns with the single NSF program, Research and Education Grants and Cooperative Agreements, identified in the former Section 57 of OMB Circular No. A-11.

The risk assessment, testing, and reporting of results is a two-year effort. The risk assessment results will feed into the risk-based testing of FY 2013 data. These testing results will be reported in the FY 2014 *NSF Agency Financial Report* (AFR). The risk-based testing is a four quadrant internal and external assessment approach for both the agency and grant recipients. The NSF risk assessment will leverage the OMB Circular A-123 internal control reviews and focus on the agency's contract invoice payment process. The assessment of the external recipients of grants will focus on cash requests and vendor payment processes and will use an assessment questionnaire.

The risk assessment factors include dollar amount and count pertaining to payments. The dollar amount criteria consider drawdowns, expenses, and cash-on-hand. The count criteria consider number of drawdowns annually and number of grants per recipient. The risk assessment also considers payment types— grants, cooperative agreements, and contracts— in determining risk.

II. Statistical Sampling. Any agency that has programs or activities that are susceptible to significant improper payments shall briefly describe the statistical sampling process conducted to estimate the improper payment rate for each program identified with a significant risk of improper payments. Please highlight any changes to the statistical sampling process that have occurred since the last report.

Not applicable. NSF is in the first phase of IPERA reporting related to the Risk Assessment above.

III. Corrective Actions: Describe the corrective action plans for:

- a. **Reducing the estimated improper payment rate and amount for each type of root cause identified. Agencies shall report root cause information (including error rate and error amount) based on the following three categories: Administrative and Documentation errors; Authentication and Medical Necessity errors; and Verification errors.**
- b. **What the agency has accomplished in the area of funds stewardship past the primary recipient. Discussion shall include the status of projects and results of any reviews.**

Not applicable.

IV. Improper Payment Reduction Outlook

Not applicable.

V. Recapture of Improper Payments Reporting: Discuss payment recapture audit (or recovery auditing) efforts, if applicable. Describe the payment recapture audit program; the actions and methods used to recoup overpayments; a justification of any overpayments that have been determined not to be collectable; and any conditions giving rise to improper payments and how those conditions are being resolved (e.g., the business process changes and internal controls instituted and/or strengthened to prevent further occurrences).

Not applicable.

VI. Accountability: Describe the steps the agency has taken and plans to take (including time line) to ensure that agency managers (including the agency head) are held accountable for reducing and recovering improper payments.

Not applicable.

VII. Agency Information Systems and Other Infrastructure

- a. **Describe whether the agency has the information systems and other infrastructure it needs to reduce improper payments to the levels the agency has targeted.**

Not applicable.

- b. **If the agency does not have such internal controls, human capital, and information systems and other infrastructure, describe the resources the agency requested in its most recent budget submission to Congress to establish and maintain the necessary internal controls, human capital, and information systems and other infrastructure.**

Not applicable.

Appendix 2: Improper Payments Elimination and Recovery Act Reporting

VIII. Barriers: Describe any statutory or regulatory barriers, which may limit the agency's corrective actions in reducing improper payments and actions taken by the agency to mitigate the barriers' effects.

Not applicable.

IX. Additional Comments: Discuss any additional comments, if any, on overall agency efforts, specific programs, best practices, or common challenges identified, as a result of IPERA implementation.

Not applicable.



National Science Foundation • 4201 Wilson Boulevard • Arlington, Virginia 22230
Office of the Inspector General

November 5, 2013

MEMORANDUM

To: Dr. Dan E. Arvizu
Chair, National Science Board

Dr. Cora Marrett
Acting Director, National Science Foundation

From: Allison Lerner *Allison Lerner*
Inspector General, National Science Foundation

Subject: Management Challenges for NSF in FY 2014

In accordance with the Reports Consolidation Act of 2000, I am submitting our annual statement summarizing what the Office of Inspector General considers to be the most serious management and performance challenges facing the National Science Foundation (NSF). We have compiled this list based on our audit and investigative work, general knowledge of the agency's operations and evaluative reports of others, including the Government Accountability Office and NSF's various advisory committees, contractors, and staff.

We have focused on eight issue areas that reflect fundamental program risk and are likely to require management's attention for years to come. They are:

- Establishing Accountability over Large Cooperative Agreements
- Improving Grant Administration
- Strengthening Contract Administration
- Managing the U.S. Antarctic Program
- Moving NSF Headquarters to a New Building
- Managing Programs and Resources in Times of Budget Austerity
- Ensuring Proper Stewardship of ARRA funds
- Encouraging Ethical Conduct of Research

We have also identified implementation of NSF's new financial management system, iTRAK, as an emerging management challenge.

If you have any questions, or need additional information, please call me at 703-292-7100.

CHALLENGE: Establishing Accountability over Large Cooperative Agreements

Overview: A federal agency can use a cooperative agreement (CA) when entering into a relationship with a recipient when the primary purpose is to transfer a thing of value to carry out a public purpose of support or stimulation, and substantial involvement between the federal agency and the recipient when carrying out the agreement is expected.¹ A CA is not subject to the same rigor and reporting mechanisms as a contract, and does not have the same level of transparency over transactions as a contract.

NSF reported that as of August 28, 2013, it had 480 active cooperative agreements, totaling nearly \$10.2 billion. Among other things, NSF uses CAs to construct and fund the operations and maintenance of large facility projects. Since NSF uses CAs for the construction, operation, and maintenance of high-risk, high-dollar large facility projects, it is imperative that it exercise strong cost surveillance controls over the lifecycle of such projects.

Over the last three years, audits of the proposed construction budgets for three of these non-competitive proposals valued at \$1.1 billion found that they contained approximately \$305 million (almost 28 percent), in unallowable or unsupported costs. Inadequate proposals which contain large amounts of unallowable and unsupported costs undermine NSF's ability to properly monitor and administer the CAs. Consequently, there are serious questions about NSF's accountability over the \$10.2 billion in cooperative agreements in its portfolio.

OIG has also identified serious weaknesses in NSF's post-award monitoring processes for high-risk projects that increase the prospect that unallowable costs could be charged to awards. NSF does not routinely obtain incurred cost submissions or audits of costs claimed on its largest CAs to determine the allowability of direct and indirect costs claimed on federal awards. While not required, such submissions and audits help to ensure accountability in high-risk, high-dollar projects. In addition, our audits have determined that NSF's awardees do not separately track the expenditure of contingency funds in their accounting, memorandum, or subsidiary records. Therefore, unallowable costs charged to large cooperative agreements may go undetected because they are not visible to those responsible for oversight.

NSF's cooperative agreement award and monitoring process was also cited as a significant deficiency in the FY 2011 and FY 2012 financial statement audits. Without improving end-to-end processes over CA monitoring from the proposal stage to award close-out, NSF cannot affirm that it has received reasonable value for taxpayer dollars and that those dollars are not misused. The audit reports recommended that NSF strengthen cost surveillance policies and procedures to ensure adequate stewardship over federal funds.

Challenge for the Agency: It is an ongoing challenge for NSF to establish accountability for the billions of federal funds in its large cooperative agreements. Proper accountability requires cost surveillance measures that include strong pre- and post- award monitoring, especially for high-risk, high-dollar facility projects. With regard to pre-award processes, NSF does not require audits of awardees' proposals for such projects to ensure that they have reasonable budgets and adequate accounting systems in place before the award is made. NSF should establish a clear threshold above which it would require price

¹ 31 United States Code §3605

proposal and accounting system audits prior to awarding new high-dollar, high-risk cooperative agreements.

During the post-award monitoring process, NSF does not routinely obtain awardees' incurred cost submissions (a list of award expenditures) or initiate audits of costs claimed on its largest CAs, and therefore lacks detailed information to effectively oversee these expenses. As a result, there is an increased risk of unallowable costs being charged to these awards and going undetected. Further, OIG continues to encounter significant delays in obtaining incurred cost submissions from awardees selected for audit that compromise the timeliness and effectiveness of these reviews. NSF should either require annual incurred cost submissions in major awards (at least for awardees in which it has cognizance); or, notify its recipients of high-dollar, high-risk awards to expect periodic audits and require them to produce incurred cost submissions in a timely manner.

Another ongoing challenge for NSF is the management and oversight of contingency costs in proposed budgets for its large construction projects. Contingency comprises a significant portion (up to 30%) of the budget of most large construction CAs. In total, recent audits have identified more than \$223 million in unallowable contingency costs out of total proposed costs of over \$1.1 billion. More than any other category of the budget, contingency funds are prone to being improperly used as discretionary reserve funds, if not properly overseen. Because NSF's awardees are not required to separately track the expenditure of contingency funds, these funds are vulnerable to unauthorized use without detection. The challenge for NSF is to correct this management control weakness by placing the requirement to track contingency expenditures in all applicable awards.

OIG's Assessment of the Agency's Progress: Over the past three years, the agency has participated in ongoing discussions with OIG regarding the resolution of audit findings and recommendations related to NSF's management of its large cooperative agreements. To its credit, NSF recognized the need to provide additional rigor to the review of costs for large facilities, as documented in the Report to the National Science Foundation Director on Major Multi-User Research Facilities (March 18, 2013). NSF has also agreed to strengthen its internal control (pre-award and post-award) processes over future NSF construction projects. However, NSF has not yet provided us with a plan that adequately addresses our most important concerns for establishing accountability over current large cooperative agreements as stated above.

CHALLENGE: Improving Grant Administration

Overview: In FY 2012, NSF competitively reviewed approximately 48,600 proposals for research, education and training projects. Each year the Foundation funds approximately 11,500 new awards, and as of June 2013, it had a portfolio of over 49,400 active awards totaling \$32.5 billion. In light of the fact that most of these awards are made as grants, it is vital that NSF's grant management processes ensure the most stringent level of accountability.

Challenge for the Agency: Oversight and management of awards that is sufficient to safeguard federal funds invested in scientific research has been an ongoing challenge for NSF. For FY 2012, the Foundation's financial statement auditors found that while NSF had made improvements in its processes for awarding and administering grants, improvements in internal controls over processing grant transactions were necessary and that follow-up on awardee corrective action plans remained a concern.

Oversight of grants is also challenging because, unlike contractors, grant recipients request payments as an aggregate dollar amount and are not required to present supporting documentation, such as invoices and receipts, to receive payment from the agency.

Recent proposed changes by OMB could further challenge NSF's ability to exercise adequate grants management. Single Audits are an important oversight tool in part because they identify internal control weaknesses that warrant additional scrutiny. If enacted, the proposed increase from \$500,000 to \$750,000 in the threshold to trigger a Single Audit means that NSF will have to do more to ensure appropriate oversight of awards from \$500,000 to \$750,000 as they will no longer be subject to Single Audits. In addition, proposed changes to the labor effort reporting requirements could make it more difficult to determine the allowability of salaries and related costs. Collectively, these and other changes could contribute to an increased workload for NSF's Division of Grants and Agreements staff.

OIG's Assessment of the Agency's Progress: NSF's Award Monitoring and Business Assistance Program (AMBAP) was designed in part to provide advanced monitoring to ensure that awardee institutions have adequate policies and systems to manage their NSF awards. NSF reported that it eliminated the backlog of AMBAP site visits in FY 2012. Additionally, NSF has created an AMBAP Site Visit Activity Status Report to keep appropriate senior management apprised of the status of all open AMBAP Site Visit reports with major concerns. In FY 2013, NSF increased the number of virtual site visits from four the previous year to seven. As of September 30, 2013, NSF has substantially completed all of the 30 AMBAPs planned for FY 2013.

CHALLENGE: Strengthening Contract Administration

Overview: Cost reimbursement contracts represent a significant portion of NSF's portfolio of contracts. In FY 2013, NSF reports that it obligated \$437 million for all contracts: \$259 million were for cost reimbursement contracts and \$65 million of that amount applied to contracts that allow advance payments for services on programs with two contractors. Cost reimbursement contracts are inherently risky because the government assumes much of the responsibility that poor performance on the part of the contractor will result in cost overruns. NSF has implemented a number of corrective actions aimed at strengthening its controls over cost reimbursement contracts since the agency's financial statement audit first identified their handling as a significant deficiency in 2009.

However, concerns with contract administration remain, especially with regard to the U.S. Antarctic Program (USAP), the largest NSF contract awarded worth nearly \$2 billion. NSF has worked with a new contractor since December 2011, and audits of the new contractor's incurred costs in FY 2011 and 2012 are needed to identify any potential problems in the early years of the contract. Periodic audits of the contractor's accounting system and timely reviews of disclosure statement revisions are also important to adequately monitor the contract. These audits will identify whether costs are being claimed and accounted for properly. Finally, in December 2012 the USAP contractor transferred the NSF contract to a different business segment within the company, which could potentially increase costs to the agency.

In addition, there are significant issues outstanding with NSF's prior USAP contract issued in 1999 that have yet to be resolved. Annual incurred cost audits of the prior USAP contract are currently in process; however, the annual revenues from the USAP stores have not been credited in the incurred costs

submitted by the contractor. NSF's full recovery of questioned costs sustained and uncredited revenues will depend on the completion of the audits that are currently ongoing. Final settlement of all contract claims may be some years in the future.

The FY 2012 management letter that accompanies NSF's financial statement audit recognizes the progress NSF has made in this area, but presents four recommendations for strengthening NSF's contract monitoring practices. They emphasize the importance of having incurred cost and disclosure statement audits completed; implementing NSF's Acquisition Manual; and ensuring use of accurate object class codes for accounting transactions. These recommendations were made to ensure NSF's contractors' compliance with contract terms and federal regulations. In March 2013, the Government Accountability Office (GAO) issued an audit report on contracting practices, also noting that the agency implemented improvements during the past decade. However, GAO found that NSF needs to supplement its guidance to focus on the early stages of acquisition planning, and arrange for audits, not funded by OIG, of major NSF contracts.

Challenge for the Agency: NSF's challenge is to strengthen controls over cost reimbursement contracts in order to reduce the risk of fraud, waste, and abuse. The agency should obtain disclosure statements, incurred cost submissions and incurred cost audits of its largest contracts on a regular basis and promptly resolve any questioned costs that arise. NSF should also review and verify the contractor's disclosure statement to determine if it is adequate and compliant with Cost Accounting Standards, prior to or shortly after awards are made and whenever the contractor submits major revisions. NSF must also continue to improve its contract oversight relating to: timely receipt of incurred cost submissions and procurement of audits, when needed; and the determination of adequacy of contractor's accounting systems during the post award period. With regard to the current USAP contract, NSF should request that the Defense Contract Audit Agency determine if the new USAP contractor's transfer of the NSF contract to a different segment within the company results in any increased costs to the agency.

Finally, NSF management should continue to implement its remaining planned corrective actions to ensure that it maintains adequate control over cost reimbursement contracts. The agency is still obtaining audits of its largest contracts, including millions of dollars in costs incurred from 2009 – 2012 by the former USAP contractor. These final audits will determine the resolution of at least \$10.4 million in unallowable sustained costs that previous audits have found that the contractor owes NSF, and should determine whether or not USAP revenues totaling \$24 million were properly credited against contract costs.

OIG's Assessment of the Agency's Progress: In FY 2013, NSF made progress in addressing some of the problems with contract administration. It has taken steps to strengthen its guidance and is receiving some audits of costs incurred on its two largest contracts. However, the most recent management letter indicates that work remains to be done to strengthen NSF's monitoring procedures, especially relating to cost reimbursement contracts. While the agency has made progress, the financial statement auditors indicate that the conditions identified in the previous management letter are only partially corrected.

As a result of the GAO report on NSF contracting, the agency is also working to develop new guidance for increasing lead times for acquisition, but the agency's draft response doesn't indicate how long it will need to prepare or implement the guidance. In response to GAO's second recommendation to fund audits of major contracts, NSF has placed the responsibility on the individual Program Offices to determine if an

audit is needed and to provide the funding. However we are concerned that Program Offices may not take the initiative to request an audit, particularly if they must fund it.

CHALLENGE: Management of the U.S. Antarctic Program

Overview: Antarctica is the coldest, driest, windiest, most remote continent on earth. The weather changes frequently and abruptly; temperature drops of as much as 65 degrees F in twelve minutes have been recorded.

Scientific investigators and supporting personnel make up the U.S. Antarctic Program (USAP), which implements the nation's goals of exerting an active and influential science presence in support of the Antarctic Treaty, including fostering cooperative research with other nations, and protecting the Antarctic environment in accord with the U.S. Antarctic Conservation Act. The USAP mission is accomplished largely through the support of peer-reviewed research conducted by scientists from universities and other research agencies often in collaboration with scientists from other nations. Operations and logistics are supported with contracts with commercial and government entities. NSF funds and manages the program through its Office of Polar Programs.

The extreme Antarctic environment and the short period of time during which access to the continent is possible, strain the effort to provide logistical support for the USAP. Logistical support activities include communications, health and safety programs, and vehicle and equipment maintenance. In July 2012, a Blue Ribbon Panel, commissioned by the Office of Science and Technology Policy and NSF, issued its report on infrastructure and logistical challenges in the Antarctic.

Challenge for the Agency: Establishing and maintaining a world-class scientific research program in Antarctica's remote and harsh environment is a formidable logistical challenge. The Blue Ribbon Panel report stated that U.S. activities in Antarctica are well-managed, but suffer from an aging infrastructure, lack of a capital budget, and the effects of operating in an extremely unforgiving environment. To address these pressing challenges, the Panel made recommendations pertaining to ten topic areas and provided 84 implementing actions to support these overarching recommendations.

In March 2013, NSF responded to the recommendations with a summary report and a working matrix describing the status of the 84 implementing actions. We recognize the challenges facing NSF in implementing the Panel recommendations and understand that some of these challenges are compounded because NSF has limited control over some of the necessary actions and others will require additional funding. Nevertheless, it is important for NSF to work toward implementation in a well-organized and structured manner, and we issued a memorandum to NSF making several suggestions to improve the usefulness of its working matrix, such as including timelines for action and identifying a responsible person for each action.

Cost containment issues are also a challenge for NSF. The Antarctic Support Contract, which was awarded to Lockheed Martin in December 2011 is the agency's largest contract, valued at approximately \$1.925 billion over 13 years, and is a cost reimbursement contract. Such contracts are inherently risky because the government assumes much of the risk that poor performance on the part of the contractor will result in cost overruns. In addition, the contract includes a provision for the contractor to receive an award fee for performance of the science support. An NSF official in the Office of Polar Programs makes the final decision about whether the contractor receives an award fee and then also determines the amount

of the award fee based on a panel recommendation. Absent input from an external, independent entity, it may be a challenge for NSF to objectively evaluate the contractor's performance.

Another challenge for NSF is to control the cost of the USAP and to ensure adequate oversight of payments to the USAP contractor. Our audit of the medical screening process for travelers to Antarctica found that NSF's medical review panel has made recommendations that could reduce the cost of this process, but NSF has not implemented these recommendations. For example, for the last five years the panel recommended that NSF base required medical tests on factors such as how long an individual will be in Antarctica, and what their duty station and job responsibilities will be. Revising the number of medical tests performed to reflect these criteria could lower costs of the screening process, which currently totals approximately \$860 per person.

Although the cost of the USAP medical screening process constitutes approximately \$1 million out of the first full year's contract value of \$173 million, NSF is largely reliant on the contractor to provide accurate invoices. We found that the contractor does not have policies and procedures for reviewing Antarctic support contract invoices. Our audit also found that NSF has limited oversight to ensure accuracy of medical screening costs billed to it by the contractor. As a result, NSF may be paying unallowable costs.

OIG's Assessment of the Agency's Progress: NSF's summary report responding to the Blue Ribbon Panel report and its creation of a matrix document for the 84 implementing actions are steps in the right direction. In response to our audit on reducing costs of the medical screening process, NSF concurred with the OIG's recommendations and agreed to formalize its process for addressing and tracking medical panel recommendations. Further, NSF will direct Lockheed Martin to document its internal controls over subcontractor management regarding receipt and flow-through of subcontractor's invoices costs for medical screening.

CHALLENGE: Moving NSF Headquarters to a New Building

Overview: On June 7, 2013, the General Services Administration (GSA) and representatives of the Hoffmann Company executed a 15-year lease for a new NSF headquarters in Alexandria, Virginia. The Alexandria facility has not been built yet, and it is estimated that construction will take three to four years. Because the current Arlington leases expire before NSF can move, GSA negotiated temporary lease extensions for the two Arlington office buildings, to enable NSF to stay in those buildings through December 30, 2017. NSF is currently planning to move at the end of 2016 and has the option to terminate the Arlington leases early.

Challenge for the Agency: NSF has major scheduling, design, cost, operational, and communications challenges associated with the move. In terms of scheduling, key milestones need to be met for the construction to be completed by 2016. According to NSF, the construction schedule is very aggressive and will be difficult to achieve; therefore, it will be a challenge for NSF to complete the move before December 30, 2017.

The primary challenge for NSF will be planning and managing the details of its space requirements and relocation. The Alexandria building has to meet the requirements set out in the lease agreement; but that agreement does not specify detailed design specifications that may be needed by individual directorates. Thus, NSF, GSA, and the building owner must negotiate a number of design issues that are not included

in the original space requirements. The agency will need to make timely and prudent decisions to ensure the building meets its objectives with minimal delay and cost. If NSF's requested changes will cost more money, the agency will have to determine whether to use part of the move allowance, make a trade off, or forego the change. Unused portions of the allowance may be applied to the rent to save the government money.

NSF stated that all computers, chairs and tables will be moved to the new buildings and that its primary cost will be for workstations that cannot be moved. NSF will need to control its moving expenses tightly. It will also need to plan how it will move successfully if it does not receive additional funding to cover moving costs.

During the move, NSF plans dual operations in Arlington and Alexandria, which will be an operational challenge. The agency has to ensure that the move does not disrupt its mission. For example, NSF told us that it will hold panel reviews during the move and may hold them in Alexandria before NSF staff begins to move from Arlington. As such, it will have to ensure operational capabilities in two places simultaneously. NSF indicated that it will consider more virtual panels during this transition.

In addition to the scheduling, design, and operational challenges, NSF has overarching communications challenges: Collaboration and communication internally within NSF and with external stakeholders including GSA, the Alexandria building owner, Congress, and OMB will be critical to the success of the NSF move.

OIG's Assessment of the Agency's Progress: NSF has been planning for a possible move since 2008, when it hired the project director. NSF created the Future NSF Headquarters Office (FNSF) to coordinate and manage the move. That office currently has five employees and a team of eight contractors, including a relocation manager, design specialist, interior designer, technology manager, budget specialist, and support and communications liaison. The FNSF's senior advisor and project director are the same staff who directed NSF's last move in 1993 from Washington DC to Arlington.

In addition, the agency created a Future NSF internal website, and has conducted a survey, feasibility study, and more than 300 meetings with NSF staff. To facilitate internal collaboration, FNSF meets regularly with Directorate and Division liaisons, union representatives, a FNSF relocation executive advisory group, and a relocation working team.

CHALLENGE: Managing Programs and Resources in Times of Budget Austerity

Overview: Fiscal Year 2013 presented significant financial challenges for NSF and other federal agencies, as sequestration pinched budgets and increased the pressure for managers to ensure that expenditures are cost-effective, and that investments in programs have real impact. While government budgets are developed long in advance, there are numerous discretionary purchases in every organization that occur on a weekly or monthly basis and offer real opportunities for savings.

Recently OIG has initiated several reviews to identify possible cost savings. For example, OIG is currently performing an audit of purchase cards and has found that NSF's controls over the purchase card

program needed to be strengthened to uncover and, if possible, prevent inappropriate purchases. During our audit, NSF issued a revised purchase card policy and improved training for cardholders. The Government Charge Card Abuse Prevention Act of 2012 requires all federal agencies to implement internal controls to prevent waste, fraud, and abuse of purchase cards, travel cards, and centrally billed accounts. In FY 2012, NSF incurred expenditures of approximately \$5.5 million for its purchase cards, \$1.0 million for its individually billed travel cards, and \$13.7 million for its centrally billed travel card account.

OIG's audit of costs associated with NSF's use of Intergovernmental Personnel Act (IPA) assignees found no indication that NSF has examined the additional costs incurred as a result of using IPAs or sought ways to reduce those costs. Because NSF pays IPA costs out of program funds, reducing these costs could free up more money for research grants. Our audit estimated that NSF paid an annual, additional cost of approximately \$6.7 million or an average of over \$36,000 per IPA, for 184 full-time IPAs in 2012 as compared to federal employees in equivalent positions. During a time of national austerity, it is important that NSF do its part in identifying all opportunities for savings.

Challenge for the Agency: There are many opportunities to conserve money within a \$7 billion dollar organization like NSF without compromising the accomplishment of the agency's core mission. The agency is therefore challenged to identify opportunities to streamline processes and cut costs where it can, in order to send a clear message to its employees and stakeholders that strong, sound management practices are being applied; reasonable ideas to reduce spending are welcome and will be implemented; and at a time of hardship for so many Americans, the public's continued financial support for science is not taken for granted.

OIG's Assessment of the Agency's Progress: NSF has generally contained and in some cases reduced its operational costs during FY 2013. It has also been receptive to considering and implementing more value-added business practices. The agency concurred with OIG's audit recommendation to evaluate ways the costs of using IPAs can be reduced. NSF has also been piloting the use of technology to cut costs related to its merit review process, and reports that it increased the share of virtual merit review panels over the past year from five to 20 percent. Due in part to those efforts, the agency has realized savings of \$9.4 million compared to what it spent on travel in 2010. Other cost cutting initiatives are being introduced or contemplated for conferences, printing, and telecommunications. It appears that NSF has made progress this year in fostering a culture of economy and efficiency and should continue to identify ways to reduce costs.

CHALLENGE: Ensuring Proper Stewardship of ARRA funds

Overview: Under the American Recovery and Reinvestment Act of 2009 (ARRA), NSF received \$3 billion of funding, with which it made more than 5,000 awards with a duration of two to five years. On September 15, 2011, the Office of Management and Budget (OMB) directed federal agencies to accelerate the spending of ARRA funds consistent with existing laws and regulations and the objectives of the programs. OMB stated that if those funds were not spent by September 30, 2013, agencies "shall reclaim them to the extent permitted by law."

At the time, NSF had about 700 awards expiring in FY 2013 that could be extended past September 30, 2013, using no-cost extensions. In response to OMB's directive, NSF amended those awards to remove

awardees' ability to unilaterally grant no-cost extensions past the new deadline. NSF subsequently obtained waivers from OMB from the deadline for 512 other awards. As of October 21, 2013, the remaining active awards with OMB waiver requests have collectively expended 74.1% of their ARRA funding. There are also 1,886 awards without OMB waiver requests that are still active that have thus far expended 97.3% of their ARRA funding.

Challenge for the Agency: At each stage of the award administration process, the additional ARRA funds that NSF received in 2009 have posed significant challenges for NSF's business model. Even as most ARRA awards wind down, post-award administration challenges remain. They include: 1) ensuring awardees' timely, complete, and accurate reporting on Federal Reporting.gov and; 2) monitoring the awards, especially those made to high-risk institutions, to ensure the funds are not subject to fraud, waste, and abuse. Assessing the accuracy of recipients' reporting has been a particular challenge, as it requires independent reviews or audits of additional corroborating data from ARRA awardees.

OMB's directive to accelerate funding required that NSF closely monitor ARRA spending rates during FY 2013 to ensure that awards without waivers completed all spending necessary for their projects by the new deadline. However, the agency must also pay attention to the increased risk of fraud, waste, and abuse that arises when a project's timeline is prematurely shortened. Specifically, there is an increased risk of unallowable cost transfers (e.g., spending ARRA funds on non-ARRA awards), and expenditures of ARRA funds for purposes unrelated to an ARRA award, as awardees rush to spend remaining funds prior to award expiration. In addition, there may be additional temptation for awardees to submit inflated claims during a period when science funding in general is declining.

Therefore, the primary management challenge is to determine if awardees have spent their ARRA funds in accordance with applicable federal and NSF requirements, including the special terms and conditions of their ARRA awards. Ongoing OIG audits of institutions that received ARRA money also address this issue, but do not replace NSF's responsibility and challenge to monitor its awardees' use of ARRA funds.

OIG's Assessment of the Agency's Progress: Each quarter NSF reports the results and trends for eight data elements including: the number of jobs created/retained, total ARRA funding obligated, and total reported ARRA expenditures. To determine if awardees used ARRA funds, as required, NSF has conducted 253 ARRA desk reviews, although of only one ARRA award in each review. It has used the results of the desk reviews as risk factors in conducting about 30 more comprehensive reviews annually. NSF appears to have adequate processes in place to monitor awardees' continuing and final reports on FederalReporting.gov and to close out ARRA awards in the NSF system. As the number of active awards decreases, NSF's vigilance should be maintained.

CHALLENGE: Encouraging the Ethical Conduct of Research

Overview: Congress passed the America COMPETES Act in 2007 to increase innovation through research and development, and to improve the competitiveness of the United States in the world economy. Amid indications of a decline in the ethics of those new to research, one important aspect of the law was to promulgate new proposal requirements that advance the professional and ethical development of young scientists, such as mentoring plans for all postdoctoral positions, and plans to provide training on the responsible conduct of research to undergraduates, graduate students, and

postdoctoral researchers. However, information collected from our site visits and investigations suggests that many institutions are not implementing these requirements effectively, thereby undermining the public's confidence in the research enterprise and potentially placing NSF funds at risk. At a time when opinion surveys indicate that more Americans are becoming distrustful of scientific findings, it is important that the conduct of research not be tainted by instances of misrepresentation or cheating.

Challenge for the agency: NSF is challenged to provide more meaningful guidance regarding institutional administration of Responsible Conduct of Research (RCR) training. Successful RCR programs should help foster a culture of academic integrity that extends to all levels of the university. Recent surveys suggest that significant numbers of high school and college students admit to cheating, and 30% of researchers admit to engaging in questionable research practices. In its research misconduct work, OIG has noted a dramatic increase in substantive allegations of plagiarism and data fabrication, especially as it relates to junior faculty members and graduate students. Over the past 10 years, the number of allegations received by our office has more than doubled, and the number of findings of research misconduct NSF has made based on OIG investigation reports has more than quadrupled. Effective RCR programs give institutions the means to address this issue and reverse the increasing rate of integrity-related violations.

The NSF Act² places responsibility on NSF to “strengthen scientific [and engineering] research potential at all levels in ... various fields”. NSF's research and related training programs reach individuals at all levels of academic pursuit who are ultimately employed by academia, industry, and government, and could have a broad and positive impact on the US science, engineering and education workforce. Based on our focused proactive reviews, we believe that over 2,000 of the 45,000 proposals NSF annually receives are at risk for containing plagiarism and/or falsified data. While NSF has been responsive to the recommendations contained in our research misconduct investigation reports, those actions only address incidents that occur after the fact. Since NSF funds research in virtually every non-medical research discipline, the agency is in a unique position to lead the government response addressing these disturbing trends at all levels of education.

OIG's Assessment of the Agency's Progress: The agency responded to the America COMPETES Act by instituting a requirement that grantees submit mentoring plans for all NSF-supported “post-docs” and have an RCR training plan for NSF-funded students. The NSF guidance was very limited and offered great flexibility to grantee institutions to develop plans tailored to their needs. OIG has observed a wide disparity among grantee RCR programs ranging from high quality mentoring programs to those that simply refer students to web-based or computer-based training. Early intervention remains critical to any effort to ensure that students understand proper professional practices and the implications of misconduct. Anecdotally, we continue to receive substantive data fabrication/falsification allegations involving students and post-docs; we currently have 15 active investigations regarding such allegations. Therefore, we continue to believe that more needs to be done and NSF should expand its influence with institutions regarding this important issue. In the coming year, OIG plans to systematically review a sample of institutional RCR plans to assess how the grantee community has implemented their training programs. We intend to initiate this review of institutional efforts in FY 2014.

² 42 USC Chapter 16 § 1862.

EMERGING CHALLENGE: Implementing a New Financial Management System

In September 2012, NSF awarded a \$24.4 million contract to Accenture Federal Services LLC to implement iTRAK, a new financial management system that will replace its current accounting system. The new system is designed to improve tracking and reporting of financial information across NSF systems and to enhance financial accountability and compliance. iTrak is expected to provide a number of new capabilities, including access to financial information and reports in real-time and the ability to link financial information to performance objectives.

The NSF Director at the time of the award, Dr. Subra Suresh, commented that "[t]his is one of the most complex projects NSF has undertaken. It is necessary to ensure that the agency has the tools it needs for informed operational and programmatic decision-making, and that it has superior financial and business accountability, integrity and compliance."

This complex undertaking involves risks, such as the lack of clear requirements and agency reluctance to change established business processes. NSF has developed a risk management strategy to address such concerns, and at this point the agency appears to be on schedule for iTrak implementation by October 1, 2014. The OIG is monitoring NSF's transition to iTrak and is bringing questions and concerns to the agency's attention as issues arise.



OFFICE OF THE
DIRECTOR

NATIONAL SCIENCE FOUNDATION
4201 WILSON BOULEVARD
ARLINGTON, VA 22230

November 22, 2013

MEMORANDUM

TO: Allison Lerner
Inspector General, NSF

FROM: Acting Director, NSF

SUBJECT: Acknowledgement of the Inspector General's FY 2014 Management Challenges Memorandum and Transmittal of NSF's Progress Report on the FY 2013 Management Challenges

This serves to acknowledge receipt of your memorandum dated November 5, 2013, regarding continuing and potential emerging management challenges for NSF in FY 2014. These challenges include ongoing responsibilities such as establishing accountability over large cooperative agreements, improving grant administration, strengthening contract administration, managing the U.S. Antarctic Program, moving NSF headquarters to a new building, managing programs and resources in times of budget austerity, ensuring proper stewardship of Recovery Act funds, and encouraging the ethical conduct of research. In addition, you have noted implementation of NSF's new financial management system, iTRAK, as an emerging management challenge. As in past years, your memorandum will be shared and discussed with the Foundation's executive and senior officers to ensure continuing and collaborative, cross-agency attention to addressing these issues.

In addition, NSF's progress report that highlights the significant actions taken in FY 2013 on the management challenges outlined in your October 15, 2013, memorandum is attached. The report also provides anticipated next steps, which will serve as a prospective guide for many of the actions planned for FY 2014.

As always, the Foundation remains committed to serving the research community effectively, to continually improve stewardship across the agency, and to safeguard federal funds awarded by NSF in support of the mission. We look forward to continuing to work with your office to achieve these goals.

A handwritten signature in blue ink that reads 'Cora B. Marrett'.

Cora B. Marrett

Attachment

cc: Chair, National Science Board
Chair, National Science Board Audit and Oversight Committee

National Science Foundation (NSF) FY 2013 Progress Report on OIG Management Challenges

CHALLENGE: Establishing Accountability over Large Cooperative Agreements

NSF Overview: This OIG challenge relates to NSF’s use of cooperative agreements to construct and fund the operations and maintenance of large research facilities. The Foundation currently utilizes end-to-end cost surveillance policies and procedures for its cooperative agreements to ensure adequate stewardship over federal funds. These activities are carried out via the decisional and governing responsibilities of the Office of the Director and the National Science Board, respectively, and through the management and oversight responsibilities of the sponsoring Science and Engineering Directorates and Offices and the NSF Chief Financial Officer (CFO), Office of Budget, Finance and Award Management (BFA). Additionally, the Major Research Equipment and Facility Construction (MREFC) Panel, comprised of NSF Senior Management representatives from across the agency, provides governance of the overall MREFC process, reviews specific cases as presented by the originating program office, and defines the specific implementation processes utilized by NSF to oversee, assess, prioritize, and fund major research infrastructure projects that utilize the MREFC account. Within BFA, the CFO relies on the Large Facilities Office (LFO) to develop policy related to large facilities, to advise NSF management on large facility issues, and to coordinate with and advise program offices on large facility management and oversight. Other BFA units, including the Budget Division (BD) and the Acquisition and Cooperative Support Division’s Cooperative Support Branch (DACS/CSB), are engaged in budget and award development and monitoring related to large facilities. NSF is currently planning and implementing enhancements to its pre-award and post-award budget and cost review processes for large research facility cooperative agreements to include additional analysis of awardee proposal budget information and the utilization of incurred cost audits, to the extent appropriate, to strengthen the review of billed costs. These strengthened procedures will include a mandatory requirement for independent assessment of potential awardee’s proposed cost estimates that will be performed separately from internal reviews conducted by the cognizant NSF project office or the current independent panel review process coordinated through the cognizant project office.

a. Ensure proper accountability for large cooperative agreements by strengthening pre- and post-award monitoring and cost surveillance policies and procedures.

NSF’s Significant Actions Taken in FY 2013

- Issued a report to the NSF Director assessing agency processes, policies, and mechanisms for supporting large research facilities from conception through construction and operation to sun-setting. A working group under the MREFC Panel endorsed five of the six report recommendations.
- Completed a review of NSF large facilities policy to: (i) determine consistency with federal and NSF-wide assistance policy, (ii) evaluate consistency between current practice and stated policies, (iii) identify subject matter presently unaddressed or requiring additional policy guidance, and (iv) consider if the NSF large facilities policy needs to be further developed or clarified.
- Initiated actions under Corrective Action Plans (CAPs) for two outstanding OIG reports: NSF OIG Alert Memo (Report No. 12-6-001) on *NSF’s Management of Cooperative Agreements*, and *Audit of NSF’s Management of Contingency in the EarthScope Awards* (Report No. 12-2-010).

NSF’s Anticipated Next Steps

- Convene additional working groups to be charged with developing agency policy to facilitate implementation of the report recommendations endorsed by the MREFC Panel.
- Utilize the results of the large facilities policy review for consideration in updating the agency’s large facilities policy and subsequent revisions to the Proposal and Award Manual (PAM).
- Accomplish corrective actions outlined in the CAPs with the goal of completing these tasks in FY 2014.

b. Improve oversight and

NSF’s Significant Actions Taken in FY 2013

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| <p><i>management for contingency in large construction projects.</i></p> | <ul style="list-style-type: none"> • Ensured that awardees of large construction projects were managing their risks and properly accounting for contingency by reviewing the project’s risk management process, monitoring the allocation of contingency to mitigate risk, and addressing resolution tasks in the project’s monthly report. • Assessed compliance performance of large facility awardees by conducting Business System Reviews (BSRs) and related post-BSR monitoring activities. • Initiated work under the CAP for improving traceability of budgeted funds allocated from and returned to contingency. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Continue review by LFO and program offices of contingency allocation and accounting through monthly reports and yearly progress reviews. • Provide training by LFO to facility program officers on risk management and the appropriate allocation and accounting of contingency for MREFC projects. • Continue BSR activities. • Accomplish action outlined in agency CAP to improve traceability of budgeted funds allocated from and returned to contingency. • Support NSF’s annual update of the PAM to address NSF-sponsored large facilities construction and operation and to ensure the PAM aligns correctly with OMB’s new guidance on <i>Reform of Federal Policies Relating to Grants and Cooperative Agreements; Cost Principles and Administrative Requirements</i> expected to be published in Quarter 1 FY 2014. |
| <p>CHALLENGE: Improving Grant Administration</p> <p>NSF Overview: In the last quarter of FY 2013, NSF was managing 43,354 active awards, representing \$29.0 billion in obligated funds to 3,100 unique institutions. Management and oversight of this portfolio fully engages NSF research and administrative offices and spans the entire project life-cycle from program planning, proposal review, award decision and processing, post-award monitoring, and dissemination of results to close-out. In FY 2013, NSF completed its transition to a new awardee payment process, Award Cash Management Service (ACM\$), which has enabled NSF to obtain award-specific data based on real-time cash transactions, and thus has increased the agency’s focus on transparency and accountability in the stewardship of Federal funds. Throughout FY 2013, NSF continued to align its policies and business practices with changes in federal regulations, legislative mandates, and agency-specific requirements. In addition to its own standardization and streamlining efforts, NSF has made major contributions to efforts of the Office of Management and Budget (OMB) Council on Financial Assistance Reform (COFAR) in its development of uniform guidance on cost principles for federal research awards. Anticipating continued resource constraints, NSF’s administrative divisions have begun a comprehensive assessment of resource deployment in support of its core processes by applying risk assessment to prioritize operations, eliminating unnecessary duplication of functions, and strengthening the professional development of staff. This activity complements NSF’s continued efforts to upgrade and leverage technology to address growing demands for accountability and the resulting increase in workload.</p> | |
| <p><i>a. Improve oversight and monitoring by minimizing delays in resolving open audit recommendations.</i></p> | <p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Reduced the number of days needed to resolve and close OMB Circular A-133 audits from an average of 128 days to just 73 days for the 240 resolved audits, representing a decrease of 43 percent in the time taken for resolution and close-out. • Developed, jointly with the OIG, audit templates to strengthen documentation requirements for questioned costs. The underlying motivation for this effort under the NSF-OIG Stewardship Collaborative was to bring clarity to reasons underlying the audit findings in order to expedite the NSF audit resolution process by specifically addressing the condition, criteria, cause, and effect. |

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| | <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Streamline NSF audit resolution functions without compromising quality and maintaining timeliness given increases in workload and anticipated resource constraints. • Collaborate with the OIG to integrate data analytics into audit and audit resolution processes in order to gain experience with its application in actual audit resolutions and to identify any need for potential process changes. • Continue staff training to ensure understanding and further standardize implementation of audit resolution procedures. |
| <p><i>b. Strengthen oversight through more aggressive follow up to AMBAP desk reviews to assess awardees’ business systems, policies and procedures, and adequacy of corrective actions for redressing deficiencies.</i></p> | <p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Focused on eliminating the backlog of open follow-up actions to Award Monitoring and Business Assistance Program (AMBAP) desk reviews and completed follow-up of 99% of all open activities for desk reviews conducted prior to FY 2012. Follow-up activities assure NSF that awardees understand the concerns related to business systems, policies, and procedures, which were identified during desk reviews, and that they are taking necessary actions to address these concerns. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Prioritize and streamline cost analysis, advanced monitoring, and audit resolution functions without compromising NSF’s capacity for aggressive follow-up on AMBAP desk reviews given anticipated resource constraints. |
| <p><i>c. Maintain strong program of award oversight in the face of budgetary constraints that could compromise the conduct of NSF’s advanced monitoring under AMBAP.</i></p> | <p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Completed the annual risk assessment used to prioritize AMBAP Site Visits (SVs) for FY 2013 and assessed risk levels to determine suitability of institutions for Virtual Site Visits (VSVs). • Performed 30 AMBAP SVs (23 on-site and 7 virtual)—expanding the number of VSVs in FY 2013 mitigated challenges associated with availability of travel funds and staff workload. • Conducted a comparative review of the quality of business assistance provided during a VSV versus a traditional AMBAP SV. No differences were discerned with respect to awardee participation, coverage of core modules, review/collection of artifacts, and level of analysis. Benefits accruing to VSVs include: direct access of VSV staff to NSF subject-matter experts in program and awarding divisions; reduced travel costs; and savings in staff time otherwise lost in travel status. • Provided training for the Budget, Finance and Award Management staff conducting AMBAP SVs and addressed special considerations for conducting VSVs. • Continued “in-reach” to NSF staff and outreach to external stakeholders to strengthen understanding of NSF’s risk assessment process and advanced monitoring performed under AMBAP. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Perform the FY 2014 risk assessment and select 30 institutions for SVs or VSVs after adjusting the FY 2014 risk profile to account for factors such as the accelerated spend-out of American Recovery and Reinvestment Act (ARRA) awards. • Continue to strengthen the quality of business assistance provided through NSF site visit activities (on-site and virtual). • Prioritize and streamline cost analysis, advanced monitoring, and audit resolution functions without compromising NSF’s conduct of advanced monitoring under AMBAP given anticipated staff and resource constraints. |

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| | <ul style="list-style-type: none"> • Complete development of a webpage as a resource to assist awardees in effective preparation for AMBAP advanced monitoring. |
| <p><i>d. Improve subrecipient oversight and monitoring efforts to minimize inadequately supported and unallowable costs from being charged to awards.</i></p> | <p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Included subrecipient oversight and monitoring requirements in outreach directed at all phases of the award process and conducted outreach to program and administrative staff across NSF, as well as with awardees and potential awardees at grants conferences and coincident with AMBAP site visits. • Developed a “fact sheet” for prime awardees explaining their responsibilities and providing references to appropriate OMB guidance. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Continue relevant outreach to NSF awardees to underscore their responsibilities. • Complete necessary upgrades to policy and procedures for NSF staff and awardees that might be precipitated by the release of OMB’s <i>Reform of Federal Policies Relating to Grants and Cooperative Agreements; Cost Principles and Administrative Requirements (Including Single Audit Act)</i>. |
| <p>CHALLENGE: Strengthening Contract Administration</p> <p>NSF Overview: Contract administration remains a critical function for NSF. As such, the Foundation continues to take a comprehensive approach to improving in this area. NSF has taken steps to strengthen contract administration through policy, procedure, and training initiatives. Specifically, NSF issued new guidance on Price Negotiation Memorandums and achieved certifications for all of the agency’s acquisition staff. NSF has also received incurred cost audits (ICAs) and taken affirmative action to receive additional ICAs on its largest contract.</p> | |
| <p><i>a. Correct deficiencies in contract administration that have been identified in NSF’s financial statement audit and increase use of firm-fixed price contracts.</i></p> | <p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Issued new guidance in the NSF Acquisition Manual along with appropriate forms for completion of Price Negotiation Memorandums, which are designed to ensure that the following are properly documented in the contract file: (1) cost realism analysis and price reasonableness determinations; (2) required pre-award determination of the adequacy of the contractor’s accounting system for all cost-reimbursement contracts; and (3) required pre-award determination of the adequacy of the contractor’s Cost Accounting System (CAS) Disclosure Statement for all CAS covered contracts. • Actively monitored the completion and resolution of any audits received on cost reimbursement contracts. • Continued to emphasize during acquisition planning the importance of utilizing fixed price contracts, where appropriate. • Released annual agency-wide notice to remind all administrative staff of the importance of using correct object class codes on funding commitment documents and held mandatory training to ensure proper implementation of this requirement for accounts payable. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Continue to monitor the completion and resolution of any audits received on cost reimbursement contracts. |
| <p><i>b. Continue to improve the effectiveness of NSF’s policies, practices, and contracting professionals.</i></p> | <p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Achieved 100% certification of its acquisition workforce in accordance with Federal requirements for Federal Acquisition Certification (FAC) in Contracting (FAC-C), for Contracting Officer Representatives (FAC-COR), and for Program/Project Managers (FAC-P/PM) programs. • Provided prompt notification of the availability of free acquisition training offered by the Federal Acquisition Institute (FAI) or other |

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| | <p>agency sponsored events to the appropriate community (FAC-C, FAC-COR and/or FAC-P/PM certified staff) to maintain a trained and professional acquisition workforce in today's constrained budget environment.</p> <ul style="list-style-type: none"> • Sponsored a basic COR training class in January 2013 for NSF staff seeking initial FAC-COR certification. • Issued answers for Frequently Asked Questions (FAQs) for all NSF certified CORs to describe FAC-COR related training or other eligible activities available for FAC-COR recertification credit. • Updated NSF's evaluation process guide to provide templates and best practice language on crafting solicitations and evaluation plans for competitive best value award actions in accordance with the Federal Acquisition Regulation (FAR) 8.4 and 16.5 procedures. • Participated in new on-boarding process training for NSF COR community to ensure proper processing of contractor employees working in NSF space or accessing NSF IT systems. <p>NSF's Anticipated Next Steps</p> <ul style="list-style-type: none"> • Actively monitor FAC-C, FAC-COR and FAC-P/PM certification expiration dates to ensure proper and timely required recertification is achieved. • Continue to provide basic COR or COR-related continuing education courses through the NSF Academy as funding permits. |
| <p><i>c. Complete incurred cost audits and close-out of the U.S. Antarctic Program (USAP) contract and decide on the Disclosure Statement to be used for the performance of these audits.</i></p> | <p>NSF's Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Obtained determination of adequacy and compliance from the Defense Contract Audit Agency (DCAA) on the Disclosure Statement for the audit of the Raytheon Antarctic Logistics Support Contract (RTSC Polar). • Received notification that DCAA commenced audit of RTSC incurred cost submissions for FY 2008/2009/2010. • Initiated weekly conference calls with DCAA to facilitate audit of RTSC Polar incurred cost submissions and resolution of audit issues on a real time basis. <p>NSF's Anticipated Next Steps</p> <ul style="list-style-type: none"> • Initiate prompt resolution of costs questioned by DCAA upon receipt of ICA reports for RTSC. |
| <p><i>d. Obtain disclosure statements and incurred cost audits for NSF's largest contracts and promptly resolve any questioned costs that arise.</i></p> | <p>NSF's Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Actively pursued audit completion for required CAS Disclosure Statements. • Promptly reviewed and resolved any ICA issues raised in such audits. <p>NSF's Anticipated Next Steps</p> <ul style="list-style-type: none"> • Continue to ensure that all accounting systems and CAS Disclosure Statements are determined adequate for all covered contracts and that supporting documentation is contained in the contract file for all new contracts as appropriate. |
| <p>CHALLENGE: Ensuring Proper Stewardship of American Recovery and Reinvestment Act (ARRA) Funds</p> <p>NSF Overview: The Foundation continues to actively manage its ARRA portfolio. As part of this effort, NSF has leveraged its risk-based approach to portfolio management by assigning higher risk to awardees with ARRA funding and the agency's advanced monitoring efforts now include an ARRA review. Over the past fiscal year, NSF implemented an aggressive outreach strategy to ensure that as many awardees as possible that had not been granted a waiver pursuant to OMB's</p> | |

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| <p>Memorandum M-11-34 would complete their projects on or before September 30, 2013. NSF’s ARRA portfolio includes over 5,000 awards to more than 1,000 awardees totaling almost \$3.0 billion and its narrowly tailored waiver request included only about 10% of its ARRA-funded awards. In consideration of efforts to encourage awardee acceleration of expenditures, NSF estimated that less than 5% of total ARRA funds obligated for the awards identified in the waiver request to OMB would remain unexpended at the end of FY 2013. Throughout communications with awardees regardless of their status on receiving a waiver, NSF continued to emphasize <i>responsible</i> acceleration of ARRA expenditures in accordance with the terms and conditions of the award and allowable pursuant to the applicable cost principles. Closeout of ARRA awards 90 days after award expiration has so far resulted in recovering less than 2% of obligated funds.</p> <p>In addition, NSF’s exemplary ARRA recipient reporting data quality review process, which resulted in an average reporting compliance rate of 99.65% during FY 2013, continues to be effective with final reporting as awardees complete their projects and close their awards. In FY 2014, recipient reporting for non-waiver awards will wind down with only awards granted waivers to M-11-34 continuing to report.</p> | |
| <p>a. <i>Ensure that ARRA funds are not subject to fraud, waste, and abuse.</i></p> | <p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> Continued to employ the ARRA review module as part of the AMBAP advanced monitoring to ensure that ARRA awardees have processes to effectively segregate financial information in their accounting systems, as well as report that information as required. Worked with awardee to ensure transparency of MREFC expenditures for the Advanced Technology Solar Telescope (ATST) through monthly reporting to OMB. Required ARRA and non-ARRA funded awardees of MREFC projects to report on earned value management and milestone status. |
| | <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> Continue to oversee ARRA-related processes for institutions with active ARRA awards as part of NSF’s advanced monitoring activities for all awardees. |
| <p>b. <i>Continue to encourage ARRA awardees that are able to accelerate spending by the end of FY 2013.</i></p> | <p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> Finalized the Foundation’s waiver request for submission to OMB on November 21, 2012, which identified 304 Faculty Early-Career Development Program (CAREER) awards and 149 awards from various programs that met the criteria for waiver due to contractual commitments, environmental review or special circumstances, including those projects that were long-term by design. This included two MREFC awards—ATST and the Alaska Region Research Vessel, which account for over \$294 million of ARRA funds. The 53 Robert Noyce Teaching Scholarship awards included in NSF’s waiver request were determined by OMB to be statutorily authorized and therefore exempt from the requirements of M-11-34. Implemented an aggressive communication strategy to notify ARRA awardees of the status of NSF’s waiver request submitted to OMB, to encourage continued responsible acceleration, and to provide reminders on liquidating expenditures and to close awards, as appropriate. Provided internal outreach to program offices on acceleration and status updates on active ARRA awards, including release of the Acceleration Module under the ARRA Reporting Database, which enables program staff to access details on their ARRA awards, as well as run custom or standard reports on their entire ARRA portfolio. Amended awards that did not receive waivers as necessary, and monitored non-waiver awardee requests for no-cost extensions to ensure awardees completed their ARRA-funded efforts on or before September 30, 2013. Issued new guidance through the posting of FAQs on NSF’s Recovery Act external site on close-out of non-waiver awards and related |

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| | <p>acceleration issues, as well as implemented an expenditure monitoring initiative for all ARRA awards with a focus on spend out of non-waiver awards by the September 30, 2013, deadline.</p> |
| | <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Continue monitoring expenditures and facilitate close-out of all waiver and non-waiver ARRA awards in accordance with standard NSF and ARRA-specific policies and procedures. • Communicate with NSF program officials, senior management, the OIG, OMB, and ARRA awardees as appropriate. |
| <p>CHALLENGE: Managing the U.S. Antarctic Program</p> <p>NSF Overview: NSF funds and manages the U.S. Antarctic Program (USAP) through its Division of Polar Programs in order to support research and national policy goals in the Antarctic. The extreme environment and the short period of time during which regular access to the continent is possible presents significant challenges for providing the necessary logistics and operational support, including stations, laboratories, field camps, airlift and vessels. In addition, there are environmental, health and safety issues unique to the remote location. In July 2012, a Blue Ribbon Panel, tasked to conduct a review of the logistics and infrastructure needs of the USAP, issued its report. The Panel found that the logistics system was badly in need of repair and that failure to upgrade the system would continue to increase costs and squeeze out funding for scientific research. The report also identified a number of single point failure risks that could jeopardize functioning of the entire system. In response to the Panel’s recommendations, NSF has taken steps to prioritize logistical support needs, developed contingency plans, and is working towards establishing a long-range strategy to address the critical needs.</p> | |
| <p><i>Develop an action plan and long range strategy for overhauling the logistics system to address issues involving capital budgeting, alternatives to McMurdo station, icebreakers, transportation on the continent, a hard surface ice runway, energy, communications, and safety/health of personnel in Antarctica.</i></p> | <p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Chartered a Tiger Team composed of senior managers within NSF to assist in developing a response to the recommendations of the Blue Ribbon Panel and to review proposed action plan. • Briefed the National Science Board to obtain approval of the proposed action plan. • Issued a public response to the recommendations of the Blue Ribbon Panel in March 2013 and developed an internal document to track progress of planned actions. The OIG reviewed the internal action plan and provided suggestions for improving the format of the document. • Participated with the U.S. Coast Guard to oversee bringing the Polar Star icebreaker back into service. As a result, it is expected that the Polar Star will conduct the McMurdo resupply mission in the 2013-14 season and perhaps for the next 7-10 years. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Continue to implement actions associated with the Blue Ribbon Panel’s recommendations. Progress will be contingent on funding and subject to other priorities that may arise. |
| <p>CHALLENGE: Implementing Recommendations to Improve Workforce Management and the Workplace Environment</p> <p>NSF Overview: The Foundation uses the Intergovernmental Personnel Act (IPA) of 1970 as its primary method to bring in top scientists, engineers, and educators from universities and industry on temporary rotational assignments, referred to as IPAs, to maintain its world-class scientific workforce. Challenges related to the use of IPA appointments in executive-level positions continue from past years. In the <i>Audit of Cost Associated with NSF’s Use of Intergovernmental Personnel Act Assignees</i>, Report No. 13-2-008, dated March 20, 2013, the OIG raised specific management challenges on the cost of IPA assignments. NSF has been addressing the OIG’s recommendations and continues to enhance its orientation for program and performance management of rotators with particular attention on rotating executives.</p> | |

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| <p>In addition, NSF has successfully addressed numerous workforce management and workplace environment recommendations from internal staff groups, as well as from the Office of Personnel Management (OPM), Congress, and the OIG. Many of the recommendations described in the <i>Audit of NSF's Actions to Improve Workforce Management and the Work Environment for Employees</i>, Report No. 11-02-006, dated March 17, 2011, have been resolved while others are in various stages of planning and action. Consistent progress in addressing past recommendations, as well as in responding to new or modified recommendations as they arise from internal or external sources, has been aligned with the NSF Human Capital Strategic Plan, the NSF Diversity and Inclusion Strategic Plan, and within the context of NSF's Strategic Plan, as well as the annual Government Performance and Results Act (GPRA) Modernization Act performance goals.</p> | |
| <p>a. <i>Take appropriate action to evaluate the ways the costs of using IPAs can be reduced.</i></p> | <p>NSF's Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Provided data and analyses on IPA costs in support of the OIG Audit Report No. 13-2-008. • Responded with a Corrective Action Plan (CAP) for OIG Audit Report No. 13-2-008 and initiated the following actions related specifically to IPAs: (i) study expanded use of telework; (ii) explore greater salary cost sharing by home institutions; (iii) evaluate limiting salary authorization to the federal pay rate; and (iv) review high fringe benefit rates. |
| | <p>NSF's Anticipated Next Steps</p> <ul style="list-style-type: none"> • Complete the evaluations and assessments cited in the CAP by November 30, 2013. • Inform the OIG of NSF's decision on what changes it plans to make in early 2014. |
| <p>b. <i>Continue to prepare and integrate its rotating executives into the federal government workplace and ensure new executives have the full set of skills (scientific, administrative, and leadership) necessary to lead the agency.</i></p> | <p>NSF's Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Updated the Executive Leadership Retreat, which is designed to prepare all new executives for their work at NSF, with added emphasis on rotators in executive positions. • Continued to require all executives to have an Executive Development Plan that incorporates the mandatory training requirements for new and continuing executives. • Initiated a review to evaluate the completion of mandatory training requirements for new and continuing executives. • Completed a review of the effectiveness of the IPA performance management process. |
| | <p>NSF's Anticipated Next Steps</p> <ul style="list-style-type: none"> • Share lessons learned and best practices on IPA performance management with the agency as a whole; update policies as needed. • Initiate a more formal suite of leadership development activities, as financial resources permit. |
| <p>c. <i>Finish implementing the remaining recommended workforce management changes identified by the working groups that were assembled to assess the issues.</i></p> | <p>NSF's Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Completed a Diversity and Inclusion (D&I) Action Plan following wide discussion within NSF of an initial draft. NSF is currently implementing high priority elements and has created a dashboard so that all employees and managers can track progress. An implementation working group meets weekly, and an executive-level steering committee meets bi-weekly. OPM lauded NSF's transparency in ensuring all employees were given an opportunity to review and comment on the D&I action plan. • Posted the FY 2012 and FY 2013 agency-wide Federal Employee Viewpoint Survey (FEVS) data on the agency's intranet to make it available to all staff. All FY 2012 data were summarized by directorate and office, and in most cases down to the division level, as well as stratified by various categories of employees. |

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| | <ul style="list-style-type: none"> • Developed an NSF-wide FEVS Employee Engagement Action Plan based on analyses of the FY 2012 FEVS results and subsequently updated with action plans at the directorate and office level. The plan was shared with employees and made available to OPM and OMB. NSF has prioritized actions for implementation and developed a dashboard to track progress. • Commenced a practice whereby NSF’s Chief Human Capital Officer (CHCO) meets monthly with the leadership of American Federation of Government Employees (AFGE) Union Local 3403, in conjunction with the Labor Relations Officer and others with interests in human capital management. In addition, there are more frequent, informal, focused discussions between union and management personnel on topics of mutual interest. • Enhanced internal employee communications through use of focus groups on specific workforce issues, held three diversity and inclusion Town Halls hosted by the CHCO and Head of the Office of Diversity and Inclusion, expanded employee events to encourage engagement through the first employee appreciation event during Public Service Recognition Week, and activities such as Take Our Daughters and Sons to Work Day. • Extended the period during which employees may earn credit hours and continued negotiations with the AFGE Local 3403 to complete revisions to NSF’s telework policy that would include the ability to earn credit hours while teleworking. • Established a schedule for updating the Personnel Manual and to ensure that the needed approval process is in place. • Provided quarterly updates to NSF senior managers on the progress on human capital management priorities through the HRStat process and utilized the annual GPRA goals related to human capital management as the basis for the presentation. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Expand coverage of human capital issues in the HRStat process to be consistent with developing priorities in the strategic plan. • Resolve the issue of earning credit hours while teleworking and revise NSF’s telework policy as needed. • Track progress on the D&I and FEVS Employee Engagement Action Plans; report regularly to NSF employees and managers; hold leadership accountable for implementation. • Incorporate workplace and workforce recommendations in planning for the move of NSF Headquarters to Alexandria as appropriate. • Finalize analysis of 2013 FEVS data and incorporate in the FEVS action plan and dashboard to track progress. |
| <p>CHALLENGE: Encouraging the Ethical Conduct of Research</p> <p>NSF Overview: The responsible and ethical conduct of research is critical to ensure excellence, as well as public trust, in science and engineering. Moreover, the globalization of science and engineering research and education poses unique challenges and risks due to variations in international codes of conduct. Recognizing the importance of the Responsible Conduct of Research (RCR) in accordance with the America COMPETES Act of 2009 (ACA), NSF requires that each institution submitting a proposal certify that it has a plan to provide appropriate training and relevant oversight in the ethical conduct of research to all undergraduates, graduate students, and postdoctoral researchers who will conduct NSF-sponsored research and to have the plan available for review upon request. NSF implementation of ACA promotes awareness of RCR in NSF staff, as well as U.S. and international scientific research and education communities. In addition, RCR is addressed in policy guidance, incorporated into program funding opportunities, and emphasized through the development of resources to enhance the quality of such training provided by research institutions.</p> | |
| <p><i>a. Ensure that awardees implement credible RCR</i></p> | <p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Included RCR coverage in NSF outreach materials and presented material at research administration conferences. |

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| <p><i>programs.</i></p> | <ul style="list-style-type: none"> • Issued a new solicitation under the Ethics Education in Science and Engineering (EASE) program to expand on the RCR work completed at the University of Illinois at Urbana-Champaign and elsewhere. Ten proposals were submitted and reviewed by a panel of experts and the EASE working group recommended one five-year award. In addition, NSF awarded 10 grants under the EASE program for projects to develop ethics education materials for the research community that NSF supports, and to test the efficacy of those materials. • Held Principal Investigator (PI) meeting on September 23-24, 2013, which involved approximately 35 PIs representing 24 projects, and provided an opportunity for disseminating findings, building community, addressing new directions for the field. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Draft a new EASE solicitation for FY 2014-16 in response to the new directions identified at the PI meeting. • Continue to emphasize the importance of RCR in outreach opportunities with NSF staff, as well as U.S. and international scientific research and education communities. |
| <p><i>b. Continue efforts to further the tenets of research integrity.</i></p> | <p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Actively participated in the activities of the Global Research Council. Assisted in the organization of Regional Meetings in Japan, Mexico, Belgium, Saudi Arabia and Ethiopia where research integrity was discussed. Helped draft a Statement of Principles on Research Integrity that was endorsed by more than 60 Heads of Research Councils from around the world at the 2nd Annual Meeting of the Global Research Council held in Berlin, Germany, in May 2013. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Sponsor 2nd Annual International Funding Agency Seminar (IFAS) in spring 2014. Approximately 20 representatives from funding agencies worldwide will meet in Washington to study best practices for funding agencies, including discussion of research integrity. |
| <p>CHALLENGE: Managing Programs and Resources in Times of Budget Austerity</p> <p>NSF Overview: NSF has made significant progress towards reducing certain administrative costs by identifying and implementing efficiencies, prioritizing work, and exploring new ways of getting the job done. In FY 2013, travel costs were reduced by approximately \$12.1 million below the FY 2010 baseline—a reduction of 38 percent. Efforts are underway to reduce telecommunications costs by participating in a GSA strategic sourcing initiative. In addition, approval and reporting procedures have been implemented to closely monitor the costs of major conferences.</p> | |
| <p><i>Identify opportunities to streamline processes and cut costs where it can in order to send a clear message to its employees and stakeholders that strong, sound management practices are being applied, reasonable ideas to reduce spending are welcome and will be acted</i></p> | <p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Merit Review Business Practice: <ul style="list-style-type: none"> ○ Successfully undertook a large-scale pilot of the use of synchronous virtual peer review panels as an alternative to face-to-face review panels. By investing in the development of training for panel moderators, deploying virtual meeting technology and providing human resources to support the use of that technology, NSF expanded its previous small-scale trial use of virtual panels and demonstrated the practicality of this tool as a review mechanism for small groups of proposals across NSF. ○ Conducted two small-scale pilots to explore whether an online asynchronous reviewer discussion forum could contribute to improving the efficiency of the peer review process. The results, including feedback from reviewers about the process, demonstrated the potential utility of this approach while highlighting the need to improve the technological approach used. ○ Increased the percentage of merit review panels that were wholly virtual from five percent in FY 2012 to over 20 percent in |

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| <p><i>upon, and at a time of hardship for so many, the public's continued financial support for science is not taken for granted.</i></p> | <p>FY 2013.</p> <ul style="list-style-type: none"> ○ Realized benefits that include a reduction in the average time commitment necessary from individual panel reviewers and a reduction in NSF's expenditure on panelists' travel and flat-rate compensation costs; the agency is considering assessments on the quality of the results. ● Travel: Instituted FY 2013 travel targets (December 2012) to promote and monitor achievement of the \$3.9 million reduction goal established in response to OMB Memorandum M-12-12. In FY 2013, NSF has realized savings totaling \$12.1 million—reductions of 38 percent below FY 2010 travel obligations. Savings have been achieved across most travel categories, but the key driver is reduced travel costs associated with merit review panels. <ul style="list-style-type: none"> ○ NSF held 25 percent of merit review panels virtually in FY 2013. As a result, spending on panel travel was reduced by \$5.5 million—a reduction of 46 percent below FY 2010. ○ Encouraged the use of non-refundable airline tickets for meetings required by the Federal Advisory Committee Act (panels, advisory committee meetings, committees of visitors), as well as for staff travel. Airline tickets savings totaled \$1.26 million in FY 2013. ● Travel: Implemented revised policy (NSF Bulletin No. 13-08) requiring NSF travelers to submit travel vouchers within five working days after travel has been completed and to accelerate the time period when outstanding travel obligations are financially closed. This has minimized the amount of time funds remain obligated on completed travel orders. ● Conferences: Instituted a new policy (NSF Bulletin No. 12-19) to ensure that all conference costs are appropriate, necessary, and managed in a way that minimizes expenses. This policy established requirements related to conference planning, approval, and reporting. To ensure full transparency to the public of the agency's major conferences, published the NSF OMB M-12-12 Annual Report – FY 2012 on the NSF public website. This report provided details on conferences hosted by NSF that cost over \$100,000. ● Conferences: Implemented the conference reporting and notification requirements set forth in Section 3003 of the 2013 Continuing Appropriations Act (P.L. 113-6). Started to compile information on NSF-sponsored conferences costing over \$100,000 in order to prepare the required annual report and ensure consistency with conferences tracked under the NSF Bulletin No. 12-19 approval process. Provided reports to the OIG on conferences costing over \$20,000 to meet notification requirements of Section 3003. ● Printing: Completed the cost-benefit analysis related to central procurement and management of NSF's suite of printing devices, with the long-term objective of identifying ways in which the NSF can lower the cost of printing across the agency. ● Telecommunications: In support of the Federal Strategic Sourcing Initiative (FSSI) Telecommunications Expense Management (TEMS) effort, completed an assessment of the agency's wireless telecommunications requirements, including the types of devices and the service plans. Contracted with iSYS, LLC for wireless TEMS services, which will allow NSF to achieve cost savings identified in the assessment and to realize other efficiencies from the use of TEMS services. ● Mobile Devices Telecommunications: Instituted a policy (NSF Bulletin No. 13-05) that requires documentation of a business need and eligibility before a mobile communications device can be purchased for each individual. The policy, in conjunction with the TEMS initiative, will help drive down the cost of mobile devices. ● IPA Costs: Submitted agency's Corrective Action Plan (CAP) to the OIG, which was developed in close consultation with the OIG and Office of Information and Resource Management staff, in response to issued identified in the OIG's final report on the "Audit of Costs Associated with NSF's Use of Intergovernmental Personnel Act (IPA) Assignees." The CAP will examine various ways that the costs of IPAs may be reduced to include expanding use of telework, increasing cost sharing, limiting authorization of IPA salaries to |
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| | <p>the federal pay rate and lowering fringe benefit rates.</p> <ul style="list-style-type: none"> • Real Property: Developed a plan to limit the amount of leased office space to the FY 2012 square footage level in accordance with OMB Memorandum M-12-12 (Freeze the Footprint). • Office Reconfigurations, Furniture and Equipment: Instituted a moratorium limiting the reconfiguration of office space and the purchase of certain furniture and equipment (O/D Staff Memorandum 13-14) to ensure all uses of funds for these activities and items are prudent in light of the agency’s upcoming relocation to Alexandria, VA. • SAVE Award: Received four 2013 SAVE award ideas submitted by NSF staff via NSF’s IdeaShare website. The four ideas were reviewed and rated by NSF subject-matter experts. One SAVE award idea, already implemented at NSF, was recommended to OMB for government-wide implementation. |
| | <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Merit Review Business Practice: <ul style="list-style-type: none"> ○ Continue evaluating use of virtual panels when appropriate, support further investments in virtual meeting infrastructure, and provide training for virtual panel participants. Extend the virtual panel pilot activity to the review of Graduate Research Fellowship Program (GRFP) applications. ○ Conduct a second pilot of asynchronous reviewer discussion using a different approach. ○ Undertake outreach to proposing institutions to boost institutional proposal success rates by reducing the numbers of uncompetitive proposals submitted to NSF. • Travel: Continue to aggressively manage travel costs to meet the agency’s long-term travel reduction goals and streamline travel order and voucher procedures. Solicit feedback from NSF directorates and offices on proposed changes to improve timeliness of traveler submission of vouchers and implement changes to NSF travel reimbursement procedures. • Conferences: Continue to monitor per person costs of light refreshments purchased for on-site panel and advisory committee meetings. • Conferences: Continue to follow the conference planning, approval, and reporting requirements established to minimize the cost of conferences hosted and attended by NSF. • Mobile Devices Telecommunications: Through the use of initial pilots, work with the TEMS support contractor, iSYS, LLC, to optimize wireless rate plans and reduce the cost of mobile devices and cellular services. Evaluate the results of the TEMS pilots. • Printing: Develop a plan based on the results of the printing cost-benefit assessment to streamline the number and type of printers used by NSF staff as part of the planning efforts to relocate in Alexandria, VA. • IPA Costs: Complete the examination of IPA costs through the CAP by November 30, 2013, and provide an update to the OIG in early 2014 on the status of possible actions that may be implemented to manage IPA costs. • SAVE Awards: Notify employees that SAVE award ideas may be submitted throughout the year via NSF IdeaShare. This mitigates the limitations created by the brief SAVE Award submission window provided by OMB. |

Undisbursed Balances in Expired Grant Accounts

In FY 2013, NSF funded research and education in science and engineering through grants and cooperative agreements to 1,922 colleges and universities and other institutions. NSF grants are funded in one of two ways: 1) the grant may be funded fully at the time of award, called a standard grant, or 2) the grant may be funded incrementally (one year at a time), called a continuing grant increment. In both cases, all costs on the grant must be incurred by the college, university, or institution during the term of the grant period. At NSF, grantees typically have 90 days after the grant expires to complete final drawdowns and expenditures.

The information provided here pertains to the agency's two grant making appropriation accounts: Research and Related Activities (R&RA) and Education and Human Resources (EHR). The data reported are based on the following definitions:

- An **expired grant** is a grant award that has reached the grant end date and is eligible for closeout. For NSF, this means grants whose period of performance has expired.
- **Undisbursed balances on expired grants** represent the unliquidated obligation amounts that remain available for expenditure on an expired grant award before it is closed out.

Once a grant has expired, NSF takes actions to close out the grant both administratively and financially. The financial closeout action takes place 90 days after the award expiration date when the undisbursed balances are de-obligated from the award. Administrative closeout is initiated after financial closeout is completed.

The methodology used to develop undisbursed balances on expired grant awards is consistent with the U.S. Government Accountability Office (GAO) conclusions documented in their April 2012 report, GAO-12-360, *Grants Management: Action Needed to Improve the Timeliness of Grant Closeouts by Federal Agencies*, along with discussion and clarifying information from GAO. The data reported here reflects the amount of undisbursed balances in grant accounts that have reached their end date and are eligible for closeout.¹

1. Details on future action the department, agency, or instrumentality will take to resolve undisbursed balances in expired grant accounts.

NSF continually monitors its grant awards throughout their lifecycle following a comprehensive post-award monitoring process. NSF grants are closed based on their period of performance end date. Ninety days after the grant period has expired, all unliquidated (or undisbursed) are de-obligated. Having small undisbursed balances at the end of the grant period is a routine occurrence, as not all grantees fully spend all of the funds obligated in the course of their research.

¹ The reporting methodology used in this report is the same methodology that was used in the prior year FY 2012 report. It is different from the methodology that was used in our *FY 2011 Agency Financial Report*. The data reported in FY 2011 reflected the amount of funding de-obligated as a result of successfully closing out grants. The change in NSF's approach reflects NSF's evolving interpretation of the statutory requirement and OMB reporting guidance, and is based on additional clarifying information from GAO.

2. The method that the department, agency or instrumentality uses to track undisbursed balances in expired grant accounts.

NSF completes financial closeout of expired grant awards on a monthly basis using a set of automated and manual activities. Eligibility for closeout for all NSF awards begins 90 days after the award expiration date. The NSF Financial Accounting System (FAS) closeout process automatically de-obligates any unliquidated (unspent) award balance, produces an award closeout transaction to flag the award as financially closed, and sends the financial closeout date to the NSF award management system. This initiates final administrative closeout procedures in the award management system.

The expected award closeout date is made available to awardees and staff through the Award Cash Management Service (ACM\$). ACM\$ is a new feature of Research.gov that went live for all grantees on July 1, 2013. ACM\$ is NSF's new approach to award payments and associated post-award processes. It requires the submission of award level payment amounts and expenditures each time funds are requested by awardees. ACM\$ allows NSF post-award monitoring at the individual award level throughout the lifecycle of the award.

3. Identification of undisbursed balances in expired grant accounts that may be returned to the Treasury of the United States.

When a grant is closed out, the unliquidated (or undisbursed) balances are de-obligated. The de-obligated grant balances are treated one of three ways:

- If the source appropriation is still active, the balances are recovered by NSF and remain available for valid new obligations until the source appropriation's expiration date.
- If the source appropriation has expired but funds have not yet been canceled, the grant balances are recovered by NSF and remain available for upward adjustments on other existing obligations within the source appropriation.
- If the source appropriation has been canceled, the grant balances are returned to the Treasury.

In reviewing the FY 2013 undisbursed balances in expired grant accounts, 474 grants totaling \$10,530,178 are in appropriations that will be canceled. These grant balances will be returned to Treasury.

4. In the preceding three fiscal years, details on the total number of expired grant accounts with undisbursed balances (on the first day for each fiscal year) for the department, agency, or instrumentality and the total finances that have not been obligated to specific project remaining in the accounts.

The number of expired grants with undisbursed balances for the preceding three fiscal years is provided in the table below. These numbers and balances reflect a point in time before they are closed out in our normal processes described above. The table shows that for FY 2013, there were 6,556 expired grants with undisbursed balances of \$118,371,186.

Appendix 4: Undisbursed Balances in Expired Grant Accounts

| Status of Undisbursed Balances in Expired Grants | | | |
|--|----------------------------|----------------------------|----------------------------|
| | FY 2013 (as of 9/30/13) | FY 2012 (as of 9/30/12) | FY 2011 (as of 9/30/11) |
| Number of expired grants | 6,556 | 7,986 | 7,154 |
| Undisbursed balances prior to closeout | \$118,371,186 | \$184,489,992 | \$126,010,457 |

Awards to Affiliated Institutions

The following table lists the institutions affiliated with members of the National Science Board (NSB) in FY 2013.

| Affiliated Institution ¹ | Awards Obligated in FY 2013 (Dollars in thousands) |
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| CURRENT MEMBERS | |
| American Association for the Advancement of Science | \$ 5,843 |
| California Institute of Technology | 88,612 |
| Clemson University | 14,614 |
| Cornell University | 120,018 |
| Georgia Institute of Technology | 72,667 |
| Massachusetts Institute of Technology | 72,937 |
| Princeton University | 52,929 |
| Purdue University | 82,999 |
| Stanford University | 66,418 |
| Texas A&M University | 29,394 |
| Tufts University | 17,295 |
| University of California – Berkeley | 104,500 |
| University of Chicago | 44,908 |
| University of Colorado | 78,014 |
| University of Michigan | 94,670 |
| University of Missouri – Columbia | 14,553 |
| University of Oklahoma | 10,765 |
| University of Oregon | 10,457 |
| William Marshall Rice University | 29,430 |
| TOTAL | \$ 1,011,023 |

¹ This table is provided solely in interest of openness and transparency. NSB establishes the policies of NSF within the framework of applicable national policies set forth by the President and Congress. Federal conflict of interest rules prohibit NSB members from participating in matters where they have a conflict of interest or there is an impartiality concern without prior authorization from the designated agency Ethics Official. Individual NSF grant awards are made pursuant to a peer-review based process and most are not reviewed by the Board. With regard to matters that are brought to the Board, NSB members are not involved in the review or approval of grant awards to their affiliated institutions.

Patents and Inventions Resulting From NSF Support

The following information about inventions is being reported in compliance with Section 3(f) of the National Science Foundation Act of 1950, as amended [42 U.S.C. 1862(f)]. There were 1,760 NSF invention disclosures reported to the Foundation either directly or through NIH's iEdison database during FY 2013. Rights to these inventions were allocated in accordance with Chapter 18 of Title 35 of the United States Code, commonly called the "Bayh-Dole Act."

Acronyms

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| ACA | America COMPETES Act | FEVS | Federal Employee Viewpoint Survey |
| ACM\$ | Award Cash Management Service | FFMIA | Federal Financial Management Improvement Act of 1996 |
| AFGE | American Federation of Government Employees | FFR | Federal Financial Report |
| AFR | Annual Financial Report | FFRDC | Federally Funded Research and Development Center |
| AMBAP | Award Monitoring and Business Assistance Program | FMFIA | Federal Managers' Financial Integrity Act of 1982 |
| AOAM | Agency Operations and Award Management | FNSF | Future NSF Headquarters Office |
| APR | Annual Performance Report | FTE | Full-Time Equivalent |
| ARI | Academic Research Infrastructure | FY | Fiscal Year |
| ARRA | American Recovery and Reinvestment Act of 2009 | GAAP | Generally Accepted Accounting Principles |
| ASC | Antarctic Support Contractor | GAO | Government Accountability Office |
| ATST | Advanced Technology Solar Telescope | GPRA | Government Performance and Results Act |
| BFA | Office of Budget, Finance and Award Management | GSA | General Services Administration |
| BSR | Business Systems Review | ICA | Incurred Cost Audit |
| CA | Cooperative Agreement | ICASS | International Cooperative Administrative Support Services |
| CAP | Corrective Action Plan | I-Corps | NSF Innovation Corps |
| CAS | Cost Accounting System | IDR | Interdisciplinary Research |
| CFO | Chief Financial Officer | IG | Inspector General |
| CHCO | Chief Human Capital Officer | IIP | Industrial and Innovation Partnerships |
| COFAR | Council on Financial Assistance Reform | INSPIRE | Integrated NSF Support Promoting Interdisciplinary Research and Education |
| COTS | Commercial Off-the-Shelf | IPERA | Improper Payments Elimination and Recovery Act of 2010 |
| CSRS | Civil Service Retirement System | IPA | Intergovernmental Personnel Act |
| D&I | Diversity and Inclusion | IV&V | Independent Validation and Verification |
| DAEO | Designated Agency Ethics Official | K-12 | Kindergarten to Grade 12 |
| DCAA | Defense Contract Audit Agency | LFO | Large Facilities Office |
| DOL | Department of Labor | MREFC | Major Research Equipment and Facilities Construction |
| DRB | Director's Review Board | NIH | National Institutes of Health |
| EEO | Equal Employment Opportunity | NSB | National Science Board |
| EEOC | Equal Employment Opportunity Commission | NSF | National Science Foundation |
| EESE | Ethics Education in Science and Engineering | OIG | Office of Inspector General |
| EHR | Education and Human Resources | OMB | Office of Management and Budget |
| EIS | Enterprise Information System | OPM | Office of Personnel Management |
| FAC-C | Federal Acquisition Certification in Contracting | PAM | Proposal and Award Manual |
| FAC-COR | Federal Acquisition Certification for Contracting Officer Representatives | PI | Principal Investigator |
| FAC-P/PM | Federal Acquisition Certification for Program/Project Managers | PP&E | Property, Plant, and Equipment |
| FAS | Financial Accounting System | R&D | Research and Development |
| FASAB | Federal Accounting Standards Advisory Board | R&RA | Research and Related Activities |
| FAQs | Frequently Asked Questions | RCR | Responsible Conduct of Research |
| FBWT | Fund Balance with Treasury | RFP | Request for Proposal |
| FECA | Federal Employees' Compensation Act | RTSC | Raytheon Antarctic Logistics Support Contract/Raytheon Technical Services Contract |
| FERS | Federal Employees Retirement System | SBR | Statement of Budgetary Resources |

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| SES | Senior Executive Service |
| SFFAS | Statement of Federal Financial Accounting Standards |
| SOS | Schedule of Spending |
| STEM | Science, Technology, Engineering, and Mathematics |
| SV | Site Visits |
| TEMS | Telecommunications Expense Management |
| USAP | United States Antarctic Program |
| VSV | Virtual Site Visit |