

U N I T E D S T A T E S

# National Science Foundation

## FY 2008 ANNUAL FINANCIAL REPORT



Advancing Discovery, Innovation, & Education

## THE NSF STATUTORY MISSION

To promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense (NSF Act of 1950)



## THE NSF VISION

Advancing discovery, innovation and education beyond the frontiers of current knowledge, and empowering future generations in science and engineering.

### **About the cover:**

An NSF-supported University of Washington-led team has taken a sample of mud collected at Lake Washington and successfully sequenced a complete genome for an unknown microorganism. Their method provides a way to discover new microscopic life in complex communities. Using the genetic technique of metagenomics, University of Washington researchers have revealed the possibility to uncover the genomes of unknown species with this approach. This is a particularly important finding for microbial research since few microbes survive in the lab and have therefore gone largely unidentified. Such techniques could allow scientists and engineers to identify microbial species based on particular, desired functions and to develop such microbes for practical applications.

Shown on the cover are microorganisms from a mud sample collected in Lake Washington. For more information see [www.nsf.gov/news/news\\_summ.jsp?cntn\\_id=112138&org=NSF&from=news](http://www.nsf.gov/news/news_summ.jsp?cntn_id=112138&org=NSF&from=news).

*Credit: Photo by Dennis Kunkel (Dennis Kunkel Microscopy, Inc.); color by E. Letypova (University of Washington)*

# NATIONAL SCIENCE FOUNDATION

## FY 2008 Annual Financial Report

[www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf0902](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf0902)

<b>NSF Mission and Vision Statement/About the Cover</b> .....	i
<b>Table of Contents</b> .....	ii
<b>A Message from the Director</b> .....	iv
<b>I. Management’s Discussion and Analysis</b>	
About this Report .....	I-1
Agency Overview.....	I-1
Mission and Vision	
Organizational Structure	
President’s Management Agenda	
Management Challenges	
Meeting Future Opportunities and Challenges	
Performance Highlights.....	I-7
FY 2008 Results	
Assessing the Outcomes of Long-Term Research	
Research and Education Highlights	
Management Assurances.....	I-11
Financial Discussion and Analysis.....	I-13
Understanding the Financial Statements	
Limitations of the Financial Statements	
Budgetary Integrity: NSF Resources and How They Are Used	
Financial System Strategy	
Key Financial Metrics	
Future Business Trends and Events	
<b>II. Financials</b>	
A Message from the Chief Financial Officer .....	II-1
Independent Auditor’s Report and Management’s Response .....	II-3
Financial Statements and Notes	
Principal Financial Statements.....	II-12
Notes to the Principal Financial Statements .....	II-19
Required Supplementary Stewardship Information	
Stewardship Investments.....	II-36
Required Supplementary Information	
Deferred Maintenance .....	II-39
Budgetary Resources by Major Budgetary Accounts.....	II-41
Other Financial Reporting Information	
Debt Collection Improvement Act of 1996.....	II-46
Cash Management Improvement Act .....	II-46

### III. Appendix

1	Summary of NSF FY 2008 Financial Statement Audit and Management Assurances	
	A. Table 1. Summary of Financial Statement Audit .....	III-1
	B. Table 2. Summary of Management Assurances .....	III-1
2	Improper Payments Information Act (IPIA) Reporting .....	III-2
3	Management Challenges	
	A. Inspector General’s Memorandum on FY 2009 Management Challenges .....	III-3
	B. Director’s Response to IG’s Memorandum on FY 2009 Management Challenges and NSF FY 2008 Management Challenges Report.....	III-11
4	Patents and Inventions Resulting from NSF Support.....	III-17
5	Acronyms .....	III-18

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*We welcome suggestions on how to make this report more informative. Please provide your comments to Shirley Watt, 4201 Wilson Blvd., Arlington, VA 22230 ([smwatt@nsf.gov](mailto:smwatt@nsf.gov)).*



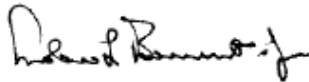
## A MESSAGE FROM THE DIRECTOR

I am pleased to share with you the *Annual Financial Report (AFR)* of the National Science Foundation (NSF) for Fiscal Year (FY) 2008. This report focuses on the agency's financial management, the results of the agency's financial audit, and compliance with the Federal Managers' Financial Integrity Act (FMFIA) and the Federal Financial Management Improvement Act (FFMIA).

NSF is the only federal agency dedicated to the support of fundamental research across all fields of science and engineering and all levels of science and engineering education. NSF funds the best ideas and most promising people, searching out the frontiers of science and engineering to foster high-risk, potentially transformative research that will generate important discoveries and new technology. An example of the outstanding research supported by NSF is the work reported this year by investigators at the University of Michigan. Professor Victor Li and his team have developed a new type of concrete that maintains all the advantages of current concrete but can be bent without fracturing when overloaded. It also exhibits self-healing properties that enhance its durability. NSF's Advisory Committee for Government Performance and Results Act (GPRA) Performance Assessment commented in their report that this work "may establish the United States as the global leader in 'designer' cement-based composites ... and has potential consequences in the design of sustainable structures resistant to earthquakes and weather events." In FY 2008, NSF received nearly 45,000 proposals and made 11,484 new awards to almost 1,900 colleges, universities, and other public and private institutions throughout the country.

It is NSF's commitment to efficient and effective management practices and sound financial oversight that allows the Foundation to pursue critical investments in science and engineering research and education like the work of Professor Li. Ultimately, NSF's investments in basic research and education help ensure the nation remains globally competitive, prosperous, and secure. Two notable NSF management accomplishments in FY 2008 are the annual financial audit and the full implementation of NSF's new internal control program. NSF received its eleventh consecutive unqualified ("clean") audit opinion from an independent audit of its financial statements. No material weaknesses or significant deficiencies were identified and all prior year significant deficiencies were closed. As discussed in more detail in the report's management assurance discussion, based on a review of entity-level controls, NSF is able to provide reasonable assurance that the agency is in substantial compliance with FMFIA and FFMIA, and that internal control over financial reporting is operating effectively to produce reliable financial reporting. I invite you to peruse the report for information about additional NSF management accomplishments.

For a second year, NSF is participating in OMB's Pilot Program for Alternative Approaches to Performance and Accountability Reporting. The *Annual Financial Report* is the first part of this activity. In January 2009, NSF will provide an *Annual Performance Report* which will include a comprehensive discussion of the Foundation's FY 2008 GPRA performance results. In addition, NSF will prepare a *Budget, Financial, and Performance Snapshot* and a *Citizens' Report*. The *Citizens' Report*—previously the *Performance Highlights* report—is a summary report of NSF's key performance and financial information. The *Snapshot* will be available in December; the *Citizens' Report* will be available in January 2009. All reports will be accessible on NSF's website at [www.nsf.gov/about/performance](http://www.nsf.gov/about/performance).



Arden L. Bement, Jr.  
Director

November 14, 2008

# CHAPTER I: MANAGEMENT'S DISCUSSION AND ANALYSIS

## About This Report

For a second year, the National Science Foundation (NSF) is participating in the Office of Management and Budget (OMB) Pilot Program for Alternative Approaches to Performance and Accountability Reporting. The pilot is an alternative to the consolidated Performance and Accountability Report (PAR) prepared in previous years. NSF believes this approach will improve performance reporting by presenting information in a more focused and accessible format. As part of this project, NSF is producing four annual reports for FY 2008, pursuant to OMB Circular A-136, *Financial Reporting Requirements*. All four reports will be available on NSF's website at [www.nsf.gov/about/performance](http://www.nsf.gov/about/performance).

- This report, the **Annual Financial Report (AFR)**, focuses on NSF's financial management, the results of the agency's annual financial audit, and its compliance with the Federal Managers' Financial Integrity Act (FMFIA) and the Federal Financial Management Improvement Act (FFMIA).
- The **Budget, Financial, and Performance Snapshot** is a new report that will provide the reader with a quick picture of the agency's mission, organization, performance, and financial results. OMB will compile the agency reports into a government-wide Performance Results Report. The **Snapshot** will be available December 15, 2008.
- The **Annual Performance Report (APR)** will present the results of NSF's FY 2008 Government Performance Results Act (GPRA) goals and a comprehensive discussion of NSF's performance assessment process. The APR will be available January 15, 2009. NSF's performance website will include additional, more detailed performance information.
- NSF's **Citizens' Report**, previously known as NSF's Performance Highlights report, summarizes key performance and financial information. It will be available January 15, 2009.

## AGENCY OVERVIEW

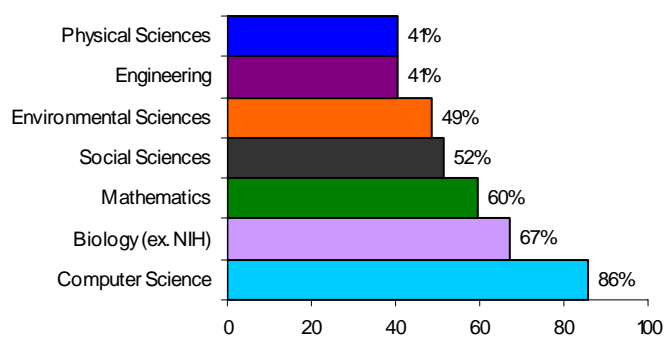
### Mission and Vision

The National Science Foundation (NSF) was established in 1950 to promote and advance the progress of science and engineering in the United States. With a budget of about \$6 billion, NSF supports research across all fields of fundamental science and engineering and all levels of science and engineering education. NSF funds the best ideas and most promising people, searching out the frontiers of science and engineering to foster high-risk, potentially transformative research that will generate important discoveries, new technologies, and a dynamic workforce. This catalytic role is captured in NSF's vision statement: *Advancing discovery, innovation and education beyond the frontiers of current knowledge, and empowering future generations in science and engineering.*

Although NSF's annual budget represents less than 4 percent of the total federal budget for research and development, NSF provides nearly half of the federal support for non-medical basic research at America's colleges and universities. As shown in *Figure 1*, in many fields, NSF is the principal source of federal

Figure 1.

NSF Support as a Percent of Total Federal Support of Academic Basic Research in Selected Fields



academic support.<sup>1</sup> NSF supports research and education through a competitive, merit-based review process that is recognized throughout government as the exemplar for effective and efficient use of public funds. Ninety percent of NSF funding is allocated through this merit-based, competitive process.<sup>2</sup> In FY 2008, NSF received over 44,000 grant proposals and made 11,162 new awards, mostly to individual investigators or small groups of investigators at nearly 1,900 colleges, universities, and other public and private institutions throughout the United States. These awards directly involved an estimated 197,000 people, including researchers, teachers, and students from kindergarten through graduate school.

**HOW NSF'S INVESTMENTS IN BASIC RESEARCH AND EDUCATION BENEFIT SOCIETY**

NSF's investments produce both tangible and intangible benefits that keep the United States at the forefront of science and engineering.

***New Knowledge*** such as *Quantum Computing, Nanotechnology, Computer Visualization Techniques, Metagenomics, Science of Science and Innovation Policy, and Plant Genome Mapping.*

NSF's support for basic research is at the core of its mission of advancing the frontier of science and engineering. The quality of these investments is reflected in the fact that since its inception NSF has supported 180 Nobel laureates for their seminal work. This broad and long-standing commitment sustains the nation's ability to generate and harness advances in science and technology.

***World Class Facilities*** such as *the National Center for Atmospheric Research, the U.S. South Pole Station, and the Large Interferometer Gravitational-Wave Observatory.*

State-of-the-art facilities provide unique capabilities at the cutting edge of science and engineering that are necessary to expand the boundaries of technology and offer significant new research opportunities, often in totally new directions. NSF's polar research facilities, for example, provide access to the Earth's most extreme environments and advance discovery in fields as diverse as climate change, astronomy, geology, and biology.

***New Tools, Methods, and Processes*** such as *the Internet, DNA Fingerprinting, Magnetic Resonance Imaging, and Novel Materials.*

The basic research supported by NSF is a proving ground for tools, methods, and processes that drive discovery and technology development. For example, fundamental work supported by NSF to create "libraries" of chemical compounds has since become a staple for drug design in the pharmaceutical industry.

***Insight into National and Global Challenges*** such as *Green Gasoline, Climate Change, Environmental Protection, Cybersecurity, and Homeland Security.*

The fundamental knowledge generated by NSF's investments has time and again proved vital in addressing national and global challenges. NSF-supported work on ocean/atmosphere dynamics, for example, has led to more accurate and useful predictions of the weather cycles known as El Niño and La Niña.

***A Highly Trained Workforce*** such as *Graduate Research Fellowships, Advanced Technological Education, and Louis Stokes Alliances for Minority Participation.*

By supporting science, technology, engineering, and mathematics (STEM) education at all levels, NSF is working to build a highly trained future workforce that will help the United States maintain its world-class status in science and engineering. NSF directly supports the advanced education of over 40,000 graduate and postdoctoral students in science and engineering.

***Resources for Teachers and Students*** such as *Graduate Teaching Fellows in K-12 Education, Math and Science Partnership Program, and Curriculum and Laboratory Improvement Programs.*

NSF supports more effective approaches to teaching science, mathematics, and engineering. Research on how students learn provides the knowledge to train highly qualified teachers, develop effective curricular materials, and improve student learning. In FY 2008, for example, over 60,000 K-12 teachers were directly engaged in NSF-supported activities that provide intensive professional development activities in science and mathematics.

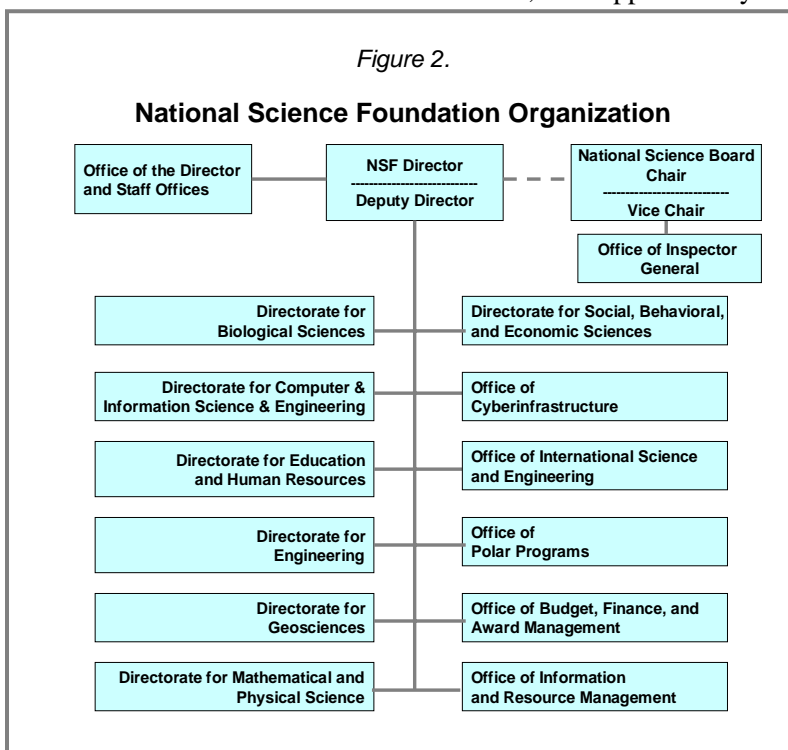
<sup>1</sup> Source: NSF/SRS/R&D Statistics Program, Survey of Federal Funds for R&D, FY 2005-2008.

<sup>2</sup> For more information about NSF's merit review process, see *Report to National Science Board on the NSF's Merit Review Process, FY 2007* at [www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsb0847](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsb0847).



## Organizational Structure

NSF is an independent federal agency headed by a Director and Deputy Director who are appointed by the President and confirmed by the Senate. A 24-member National Science Board, also appointed by the President with the consent of the Senate, meets about six times a year to establish the overall policies of the Foundation.<sup>3</sup> The Director is a member *ex officio* of the Board. The NSF workforce includes over 1,300 full-time staff. NSF regularly recruits visiting scientists, engineers, and educators who are leaders in their fields. Recruiting active researchers and educators to fill rotating assignments infuses new talent and expertise into NSF and is integral to NSF's mission of supporting the entire spectrum of science and engineering research and education, particularly research at the frontier.<sup>4</sup> In addition to the agency's headquarters located in Arlington, Virginia, NSF maintains offices in Paris, Tokyo, and Beijing to facilitate its international activities.



## President's Management Agenda

The President's Management Agenda (PMA) is a government-wide effort to improve the management, performance, and accountability of federal agencies. The PMA initiatives remain a high agency priority as management implements them to yield the best overall benefits for the agency (*Figure 3*).<sup>5</sup> In FY 2008, the ratings dropped for the *Strategic Management of Human Capital* and *Performance Improvement* initiatives, as NSF was not able to meet all the deliverables for each initiative.

► NSF's efforts in the area of *Strategic Management of Human Capital* during FY 2008 were focused on the alignment of the Foundation's workforce with its business processes; the agency's ability to attract, develop and retain a diverse, world-class workforce; and the transformation of the human resources (HR) service model at the Foundation. These efforts were undertaken in pursuit of the goals set forth in the NSF Strategic Plan and articulated in the NSF Human Capital Strategic Plan. In December 2005, NSF completed an in-depth study of the administrative work performed at the Foundation, which resulted in recommendations to redesign administrative positions in NSF's program directorates and to better align the new positions with the Foundation's business processes. The findings from this study were tested in a year-long pilot during FY 2008. NSF is improving its ability to attract, develop, and retain a diverse, world-class workforce through initiatives such as a new executive transition program, a revamped new employee welcome process, a childcare subsidy program, and enhanced advertising and outreach efforts. NSF has also transformed its HR service model to form strategic business partnerships between HR and

<sup>3</sup> For more information about the National Science Board, see [www.nsf.gov/nsb](http://www.nsf.gov/nsb).

<sup>4</sup> As of September 2008, temporary appointments included 149 under the Intergovernmental Personnel Act.

<sup>5</sup> For more information about the President's Management Agenda, see [www.Results.gov](http://www.Results.gov).

its internal customer organizations. These partnerships have resulted in dramatic improvements in agency-wide workforce planning efforts as well as improved accuracy and timeliness of all HR services.

► NSF has no projected or actual savings from completed competitions. However, an independent validation confirms that competition for post-award monitoring for grant, contract, and cooperative agreement activities has resulted in significantly improved performance and the first financial statement audit report since FY 2001 with no negative findings on post-award monitoring practices.

► NSF continues to use an integrated strategy in its *Financial Performance* and *Performance Improvement* initiatives. During FY 2008, the Foundation refined its performance data to include milestones and measures to monitor stewardship project results. By integrating financial and budgetary information, management can gain additional insight into current stewardship and other projects and improve planning for future projects.

► NSF is a federal leader in the use of information technology, actively promoting simpler, faster, more accurate, and less expensive electronic business solutions. The agency is actively engaged in supporting numerous E-Gov and Line of Business initiatives, including the Grants Management Line of Business (GMLoB) through *Research.gov*, a partnership of federal research-oriented grant-making agencies led by NSF that is working to enhance customer service through streamlining and standardizing processes among partners. *Research.gov* leverages the capabilities of FastLane—NSF's own web-based system used by NSF customers to electronically conduct business with the agency—to deliver a single web portal for research institutions to find relevant information and conduct grants business with federal research agencies. In addition to providing electronic business solutions, the security of information technology systems remains a high management priority. During FY 2008, NSF focused on protection of privacy information, removing over 350,000 social security numbers from agency systems and encrypting mobile devices.

► As part of the *Performance Improvement* initiative, NSF has actively implemented Executive Order 13450 on Improving Government Performance by appointing a Performance Improvement Officer to focus on agency performance and efficiency goals and improvement plans. NSF's senior management meets regularly to coordinate Foundation-wide efforts to promote continuous improvement in all aspects of supporting excellence in science and engineering research and education. Significant improvements were made in the process by which the Advisory Committee for GPRA Performance Assessment conducts an annual evaluation of performance results under the Foundation's strategic outcome goals.

*Figure 3.*

<b>President's Management Agenda Scorecard</b>			
	Status	Status	Progress
	9/30/07	9/30/08	
Strategic Management of Human Capital	Y	R	G
Commercial Services Management	R	R	R
Improving Financial Performance	G	G	G
Expanded E-Government	G	G	G
Performance Improvement	G	Y	G
<i>Notes:</i>			
Eliminating Improper Payments Initiative: OMB has moved NSF from an annual to a three-year reporting cycle as a result of reporting low improper payments.			
Green (G) indicates success; Yellow (Y), mixed results; and Red (R), unsatisfactory. Ratings are issued quarterly by OMB.			

### Management Challenges

The Office of Inspector General's (OIG) annual statement of management challenges for FY 2008 covered six broad areas: Award and Contract Administration; Human Capital; Budget, Cost and

Performance Integration; U.S. Antarctic Program; and Merit Review. Many of the management challenges noted are fundamental issues that the agency is dealing with on a continuing basis. The following chart presents several key management challenges and significant agency actions taken in the past year and anticipated actions to be taken in the near term. Appendix 3a of this report is the OIG's statement of management challenges for FY 2009 and Appendix 3b is the Director's response which includes a report of the significant actions taken in the past year by management with respect to each of the OIG's FY 2008 management challenges.

**Figure 4.**

**Office of Inspector General FY 2008 Management Challenges**

<b>OIG's FY 2008 Management Challenge</b>	<b>NSF's Significant Actions Taken in FY 2008</b>	<b>NSF's Anticipated Next Steps</b>
<b>Post-Award Administration Policies</b>	<p>Assessed administrative performance of 29% of awardees managing 93% of NSF funds through advanced monitoring (30 site visits; 138 desk reviews) under the Award Monitoring and Business Assistance Program (AMBAP).</p> <p>Updated policies and procedures, including NSF's suite of grant administrative manuals, and the Standing Operating Guidance that outlines AMBAP procedures for ensuring grantee compliance in administering NSF funds.</p> <p>Fully implemented Portfolio Facilitation Model providing comprehensive support for NSF grant administration.</p> <p>Initiated implementation of "Division Director-concur" for awards in eJacket as the last step in establishing a paperless awards process.</p>	<p>Continue to develop new administrative tools to strengthen post award oversight.</p> <p>Incorporate additional business rules into NSF corporate business systems to further strengthen accountability.</p> <p>Implement policies and procedures to address new programmatic requirements legislated under the America COMPETES Act (ACA).</p> <p>Develop strategies and resources for training NSF staff on federal and agency policies, regulations, and procedures.</p>
<b>Contract Monitoring</b>	<p>Expanded the contract oversight program to include comprehensive post-award monitoring policies and procedures and training.</p>	<p>Continue administration of the contract post-award monitoring program.</p>
<b>U.S. Antarctic Program Property, Plant, and Equipment (PP&amp;E)</b>	<p>Commenced verification and validation of PP&amp;E activities.</p> <p>Implemented new methodology for freight cost estimation.</p>	<p>Complete the assessment of cost documentation for Construction-in-Progress and Real Property assets;</p> <p>Determine how best to expand the scope of financial management modernization effort.</p>
<b>Reporting Results of Scientific Research</b>	<p>Implemented data migration for Project Reporting System enhancements.</p> <p>Finalized agency recommendations on final project reporting requirements mandated by the ACA.</p>	<p>Develop additional flexibility to report on special award categories.</p>

**Meeting Future Opportunities and Challenges**

NSF continually strives to be a dynamic and agile organization that employs a range of programmatic and organizational mechanisms and strategies to fulfill its mission and goals. NSF is now pursuing

fundamental changes in a number of areas in order to stay focused on the frontiers of science and engineering.

*Support for Potentially Transformative Research (PRT):* Both the National Science Board and the Congress have recently underscored NSF's vital role in supporting transformative research. Transformative research involves ideas, discoveries, or tools that radically change our understanding of an important existing scientific or engineering concept or educational practice or leads to the creation of a new paradigm or field of science, engineering, or education. NSF is now establishing new funding mechanisms and providing additional guidance for the merit review process to enhance its ability to identify and support research that is potentially transformative.

*Investing in Technology to Support Program Oversight and Management:* To ensure that critical, program-related information technology systems and solutions are appropriately acquired, developed, and maintained, NSF is undertaking efforts to make certain these investments meet current as well as future agency information, reporting, and accountability requirements. This approach gives staff who are the customers a stronger incentive to drive the requirements for IT systems, consistent with the best practices in industry and other federal agencies.

*Addressing Decreased Funding Rate:* The competition for NSF funds has always been intense, and it has grown more so in recent years. Since 2000, NSF's overall funding rate for research proposals decreased from 30 percent to 21 percent. To address this challenge, NSF is pursuing a variety of approaches that balance trade-offs between keeping the proposal workload at a productive and manageable level—for both NSF and the applicant community—and encouraging the free flow of ideas to NSF.

## PERFORMANCE HIGHLIGHTS

NSF's leadership in advancing the frontiers of science and engineering research and education is demonstrated, in part, through internal and external performance assessments. The results of this process provide stakeholders and taxpayers with vital information about the return on their investments. In FY 2008, performance assessment at NSF was guided by the Government Performance and Results Act of 1993 (GPRA) and by NSF's *FY 2006–2011 Strategic Plan*.<sup>6</sup> To accomplish its mission to promote the progress of science and engineering, NSF invests in the best ideas generated by scientists, engineers, and educators working at the frontier of knowledge and across all fields of research and education. NSF's *FY 2006–2011 Strategic Plan* establishes four overarching strategic outcome goals by which NSF measures its annual performance: *Discovery*, *Learning*, *Research Infrastructure*, and *Stewardship*. The four interrelated outcome goals establish an integrated strategy to deliver new knowledge at the frontiers, meet vital national needs, and work to achieve the NSF vision. The first three goals focus on NSF's long-term investments in science and engineering research and education. *Stewardship* includes both qualitative and quantitative performance measures that focus on improving the effectiveness and efficiency of the agency's management practices.

Figure 5.

### NSF Performance Assessment Framework



### FY 2008 Results

The results of three strategic outcome goals—*Discovery*, *Learning*, and *Research Infrastructure*—are shown in *Figure 6*. The results for the remaining goals under *Stewardship* will be reported in NSF's FY 2008 Annual Performance Report (APR).<sup>7</sup> In addition to a comprehensive discussion of each of NSF's performance goals, the APR will also include a discussion of NSF's performance assessment process, use of the R&D investment criteria, NSF's extensive data verification and validation process, and trend data.<sup>8</sup>

<sup>6</sup> NSF's *FY 2006–FY 2011 Strategic Plan* is available at [www.nsf.gov/pubs/2006/nsf0648/nsf0648.jsp](http://www.nsf.gov/pubs/2006/nsf0648/nsf0648.jsp).

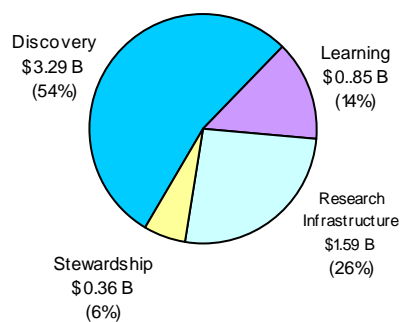
<sup>7</sup> NSF's FY 2008 Annual Performance Report will be available January 15, 2009 at [www.nsf.gov/about/performance](http://www.nsf.gov/about/performance).

<sup>8</sup> NSF's performance assessment website at [www.nsf.gov/about/performance](http://www.nsf.gov/about/performance) includes additional performance-related information.

<b>Figure 6.</b> <b>FY 2008 Strategic Outcome Goals and Results</b>	
<b>Performance Goal</b>	<b>Results</b>
<p><b>DISCOVERY</b></p> <p>Foster research that will advance the frontiers of knowledge, emphasizing areas of greatest opportunity and potential benefit, and establishing the nation as a global leader in fundamental and transformational science and engineering.</p>	<ul style="list-style-type: none"> <li>● FY 2004</li> <li>● FY 2005</li> <li>● FY 2006</li> <li>● FY 2007</li> <li>● FY 2008</li> </ul>
<p><b>LEARNING</b></p> <p>Cultivate a world-class, broadly inclusive science and engineering workforce, and expand the scientific literacy of all citizens.</p>	<ul style="list-style-type: none"> <li>● FY 2004</li> <li>● FY 2005</li> <li>● FY 2006</li> <li>● FY 2007</li> <li>● FY 2008</li> </ul>
<p><b>RESEARCH INFRASTRUCTURE</b></p> <p>Build the nation's research capability through critical investments in advanced instrumentation, facilities, cyberinfrastructure, and experimental tools.</p>	<ul style="list-style-type: none"> <li>● FY 2004</li> <li>● FY 2005</li> <li>● FY 2006</li> <li>● FY 2007</li> <li>● FY 2008</li> </ul>
<p><i>Note</i></p> <p>● Indicates successful achievement. Assessments by a committee of external experts determined that NSF demonstrated significant achievement of the goal and successfully met all performance objectives. The assessment process itself was validated by an independent external review.</p>	

In FY 2008, *Discovery*, *Learning*, and *Research Infrastructure* accounted for 94 percent of NSF's investment portfolio (*Figure 7*).<sup>9</sup> Outcomes under these goals are assessed annually by an external review panel, the Advisory Committee for GPRA Performance Assessment (AC/GPA), composed of experts in various disciplines and fields of science, engineering, mathematics, and education. The Committee determined that NSF had demonstrated significant achievement of the *Discovery*, *Learning*, and *Research Infrastructure* goals and met all performance objectives based on a review of more than 1,200 outstanding accomplishments compiled by NSF program officers, award abstracts, investigator project reports, and Committees of Visitors (COV) reports.<sup>10</sup> Moreover, the process of assessment by the AC/GPA committee was itself reviewed and validated by IBM Global Business Services, an independent management consulting firm.

**Figure 7.**  
**FY 2008 Budget Obligations**  
**\$6.08 Billion\***



\*Totals may not add due to rounding.

### Assessing the Outcomes of Long-Term Research

GPRA requires federal agencies to develop a strategic plan, establish annual performance goals, and report annually on the progress made toward achieving these goals. NSF's mission is to fund long-term

<sup>9</sup> Base obligation of \$6.08 billion plus Trust Funds (\$49 million), H1-B Nonimmigrant Petitioner Receipts (\$121 million), and upward adjustments posted against expired authority in FY 2008 (\$5 million) equals Direct Obligations Incurred as shown on the Statement of Budgetary Resources (\$6.26 billion).

<sup>10</sup>The FY 2008 AC/GPA report is available at [www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf08207](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf08207).

science and engineering research and education where outcomes and results can be unpredictable. Science and engineering research projects can generate discoveries in an unrelated area, and it can take years to recognize discoveries and their impact. Moreover, serendipitous results can be the most interesting and most important. Assessing the impact of advances in science and engineering is inherently retrospective and is best performed using the qualitative judgment of experts.

The value of expert review has been affirmed in two studies by the National Academies. In a 2001 report, the Committee on Science, Engineering, and Public Policy (COSEPUP) stated, "Because we do not know how to measure knowledge while it is being generated and when its practical use cannot be predicted, the best we can do is ask experts in the field—a process called *expert review*—to evaluate research regularly while it is in progress." In a 2008 report, a COSEPUP committee states, "EPA and other agencies should use expert-review panels to evaluate the *investment efficiency* of research programs." COSEPUP adds that "*Investment efficiency* is used ...to indicate whether an agency is 'doing the right research and doing it well.'"<sup>11</sup>

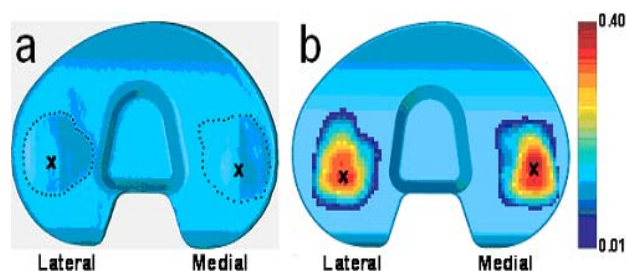
As shown in *Figure 5*, NSF uses a multi-layer assessment approach, integrating quantitative metrics and qualitative reviews. The use of external experts to review results and outcomes is a longstanding practice in the academic community. NSF's use of such panels as the Committees of Visitors (COVs) and Advisory Committees pre-dates GPRA. On broader issues, NSF often uses external third parties such as the National Academies for review. NSF also convenes external panels of experts for special studies.<sup>12</sup> As previously noted, the AC/GPA was formed by NSF to provide an annual review of the agency's accomplishment with respect to its GPRA strategic goals. In addition, all NSF programs have been evaluated by OMB's Program Assessment Rating Tool (PART). All received a rating of "Effective" except one which was rated "Moderately Effective."<sup>13</sup>

### Research and Education Highlights

The following are examples of NSF-supported research results reported in FY 2008 that were used by the AC/GPA in forming its assessment of the agency's success. Additional results can be found at [www.nsf.gov/discoveries](http://www.nsf.gov/discoveries).

► **Virtual Prototyping of Artificial Knees:** Dr. Benjamin Fregly (University of Florida) and his team are addressing a growing need for the aging American population. By one estimate, 40 million Americans will be affected by osteoarthritis in the year 2020. This project could lead to an entirely new

approach for designing knee replacements and testing innovative designs using computer software rather than physical simulator machines. This work is unique because of its ability to predict long-term wear characteristics of knee replacement designs in a matter of minutes or hours using computer simulations. In terms of broader impacts, high school students from underrepresented groups have been involved in the knee research, through the University of Florida



Comparison of experimental (a) and simulated (b) wear regions for a total knee replacement design after 5 million cycles of walking performed in a knee simulator machine. Xs indicate locations of maximum wear. Dotted lines in (a) indicate boundaries of experimental wear regions. Color bar in (b) indicates depth in millimeters of simulated wear regions.

Credit: B.J. Fregly, University of Florida.

underrepresented groups have been involved in the knee research, through the University of Florida

<sup>11</sup> *Implementing the Government Performance and Results Act for Research: A Status Report* is available at [www.nap.edu/catalog.php?record\\_id=10106](http://www.nap.edu/catalog.php?record_id=10106) and *Evaluating Research Efficiency in the U.S. Environmental Protection Agency* is available at [www.nap.edu/catalog.php?record\\_id=12150](http://www.nap.edu/catalog.php?record_id=12150).

<sup>12</sup> A schedule of NSF's program evaluations and a summary of the findings of the external evaluations completed in FY 2008 will be available on NSF's performance assessment website in January 2009.

<sup>13</sup> PART results are available at [www.expectmore.gov](http://www.expectmore.gov).

Summer Science Training Program. In addition, an orthopedic implant company has already enlisted the research team to participate in designing the next generation of knee replacements. Significant ethical and safety issues implicit in this study are ripe for further examination.

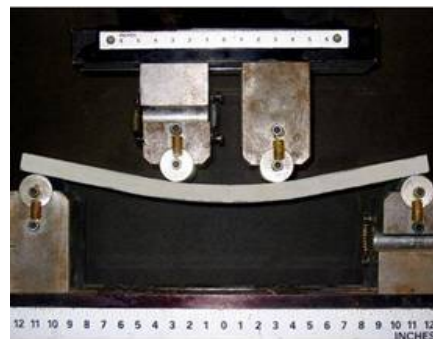


Damage from an EF1 tornado. CASA graduate student Patrick Marsh (University of Oklahoma) conducted a damage survey to verify the EF1 tornado identified in CASA data. Credit: CASA.

► **New Radar Network Evaluated in National Weather Service Experimental Warning Program:** Given the increasing frequency of tornadoes experienced today, new technologies to predict when and where tornadoes and other weather disturbances such as floods and severe thunderstorms will occur are of obvious importance. The NSF Engineering Research Center for Collaborative Adaptive Sensing of the Atmosphere (CASA), located at the University of Massachusetts at Amherst, has developed a method of weather sensing that utilizes dense, low-cost radar networks that can sense the lower atmosphere, an important area that is under-sampled by today's technologies. The finely grained observations of the lower atmosphere obtained by the CASA researchers allowed forecasters to see small meteorological structures that are close to the ground, such as mini-wind clusters that are embedded in larger storms. During the 2007 tornado season, CASA transmitted real-time data from its first prototype network in Oklahoma

to National Weather Service forecasters for evaluation in the Experimental Warning Program. Researchers continue to evaluate the Center's data in the Experimental Warning Program during the 2008 tornado season. The research is transformative because it will introduce a new dimension to weather forecasting and sensing, yielding capabilities that do not exist today.

► **Bendable Concrete for Safe, Durable, and Sustainable Infrastructure:** Investigators at the University of Michigan have designed a new type of concrete that maintains all the advantages of current concrete but adds ductility, allowing it to bend under stress without fracture. The new type of concrete has 300 to 500 times the tensile ductility of normal concrete; it can bend without fracturing when overloaded. The material also exhibits self-healing properties, which further enhances its durability. The work may establish the United States as the global leader in "designer" cement-based composites. It also embodies collaboration among several sectors: government, industry, and academic partners. It has potential consequences for the design of sustainable structures resistant to earthquakes and weather events. This research also exemplifies NSF's goal of integrating research with ethics and safety considerations.



This image shows the unique properties of Engineered Cementitious Composites in both its high ductility and ability to self-heal after fracture. Credit: Victor Li, University of Michigan Ann Arbor.



Two SEEDBED high school students use micropipettes to move enzyme digested DNA into an electrophoresis gel. Credit: Cindy Barton, Tulsa Community College.

► **Project SEEDBed (Stimulating Enthusiasm, Exploration, and Discovery through Biotechnology Education):** Project SEEDBed engages middle and high school students and teachers in summer academies at community colleges designed to increase knowledge, stimulate interest in biotechnology among students and teachers, and encourage students to pursue further study, possibly leading to careers as biotechnicians. Teachers are provided with "footlockers" with all of the equipment necessary to conduct new laboratory activities in their classrooms. Evaluation data indicate significant impact on both students and teachers.



## MANAGEMENT ASSURANCES

The Federal Managers' Financial Integrity Act of 1982 (FMFIA) requires agencies to establish internal control and financial management systems that provide reasonable assurance that the integrity of federal programs and operations are protected in accordance with guidance provided by the Office of Management and Budget (OMB) *Circular A-123, Management's Responsibility for Internal Control*. In December 2004, OMB issued a revision to *Circular A-123* which requires management to separately assess and document internal controls over financial reporting, prepare a separate assurance on internal controls over financial reporting, and identify material weaknesses and corrective actions.

In FY 2008, NSF fully implemented its agency-wide internal control program. Over the past three years, NSF has documented and tested all nine of its key business processes and 56 subprocesses. Through the establishment of the Accountability and Performance Integration Council (APIC) senior assessment team, the associated APIC Internal Controls Working Group (ICWG), numerous Business Process Owners, and the A-123 Team, NSF has developed a sustainable internal control program. Management has also enhanced the risk assessment aspect of the internal control program by adding additional levels of review which in turn has improved the methodology for determining the agency's 3-year cycle testing schedule.

In FY 2008, NSF refined its review process of entity-level controls by incorporating an annual assessment of the documented controls. NSF reviewed and evaluated significant entity-level control activities currently in place to support compliance with FMFIA and other applicable laws and regulations, including (but was not limited to) the NSF Act of 1950, as amended; Annual Appropriation Law; Government Performance and Results Act of 1993; Clinger-Cohen Act of 1996; Federal Information Security Management Act of 2002; Chief Financial Officers Act of 1990, as amended; Federal Financial Management Improvement Act of 1996; Improper Payments Information Act of 2002; Single Audit Act of 1984, as amended; and the Inspector General Act of 1978, as amended.

In the past year, in addition to conducting annual internal controls training for the ICWG and Business Process Owners, the A-123 team also conducted training sessions for program directorates. This facilitated the identification, documentation, and testing of the financial controls managed within the program directorates. The A-123 team also engaged in extensive outreach efforts to communicate the importance of agency internal controls and the agency's key role in ensuring effective and efficient operation of programmatic activities.

NSF conducted a review of its Financial Accounting System (FAS) in accordance with *OMB Circular A-127* and the Federal Financial Management Improvement Act (FFMIA). Based on the results of the review we can provide reasonable assurance that our financial management systems substantially comply with federal financial management systems requirements, applicable federal accounting standards, and the U.S. Government Standard General Ledger (SGL) at the transaction level. Based on the reviews conducted during the year, APIC and the Senior Management Round Table (SMaRT), with the concurrence of the Chief Operating Officer/Deputy Director, recommended an unqualified statement of assurance to the NSF Director for FY 2008. The recommendation noted that management found no evidence of material weakness in either financial controls or entity-wide controls. The recommendation also noted that NSF internal controls meet the provisions of FMFIA, as implemented by A-123, including compliance with *OMB Circular A-127, Financial Management Systems*.

In the FY 2008 Independent Auditor's Report, NSF received an unqualified opinion of our financial statements, with no material weaknesses.<sup>14</sup>

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<sup>14</sup> See Appendix 1, page III-1, for the Summary of Financial Statement and Management Assurances tables.

NSF FY 2008 Federal Managers' Financial Integrity Act  
Assurance Statement

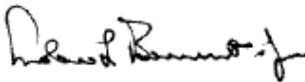
The National Science Foundation (NSF) is responsible for establishing and maintaining effective internal control and financial management systems that meet the objectives of the Federal Managers' Financial Integrity Act (FMFIA). These objectives are to ensure effective and efficient operations, compliance with applicable laws and regulations, and reliable financial reporting.

For Fiscal Year 2008, the Foundation is providing an unqualified statement of assurance that its internal controls and financial management systems meet the objectives of FMFIA.

NSF conducted its evaluation of internal control over the effectiveness and efficiency of operations and compliance with applicable laws and regulations in accordance with *OMB Circular A-123, Management's Responsibility for Internal Control*. Based on the results of this evaluation, NSF identified no material weaknesses under Section 2 of FMFIA and no system nonconformances under Section 4 of FMFIA. NSF provides reasonable assurance that its internal controls over the effectiveness and efficiency of operations and its compliance with applicable laws and regulations, as of September 30, 2008, were operating effectively, and no material weaknesses were found in the design or operation of these internal controls.

NSF management is responsible for establishing and maintaining effective internal control over financial reporting, which includes safeguarding of assets and compliance with applicable laws and regulations. NSF conducted its assessment of the effectiveness of the NSF internal control over financial reporting in accordance with Appendix A of *OMB Circular A-123*. Based on the results of this evaluation, the NSF can provide reasonable assurance that internal control over financial reporting as of June 30, 2008, was operating effectively and no material weaknesses were found in the design or operation of internal controls over financial reporting.

The Federal Financial Management Improvement Act of 1996 (FFMIA) requires agencies to implement and maintain financial management systems that are substantially in compliance with federal financial management systems requirements, federal accounting standards, and the United States Government Standard General Ledger at the transaction level. NSF financial management systems substantially comply with FFMIA.



Arden L. Bement, Jr.  
Director  
National Science Foundation

November 7, 2008

## FINANCIAL DISCUSSION AND ANALYSIS

The National Science Foundation (NSF) is committed to excellence, transparency, and results-oriented financial management. The Foundation's goals for financial management stewardship are to deliver the highest level of business services to our customers, stakeholders, and employees through effective internal controls and efficient work processes; and to provide reliable and timely financial information to support sound management decisions. The result has been a long established record of effectiveness in federal financial management documented by clean audit opinions and "Green" scorecards along with a leadership role in government-wide grants management activities.

In FY 2008, NSF successfully maintained "Green" ratings in both the President's Management Agenda (PMA) financial performance initiative and the Department of Treasury's Financial Management scorecard. With respect to improper payments, since NSF has been below the OMB reporting threshold, the agency is now reporting on a three-year cycle. The next reporting year will be FY 2009.<sup>15</sup> In addition, NSF implemented the new Federal Financial Report (FFR) for grant recipients and for the second year is participating in OMB's Pilot Program for Alternative Approaches to Performance and Accountability Reporting. NSF has a leadership role in a number of federal initiatives, including the CFO Council Grants Policy Committee and the Federal Funding Accountability and Transparency Act (FFATA) initiative. Consistent with our leadership role, the agency is pursuing an integrated approach in its involvement with the grants and financial management lines of business initiatives.

As part of our stewardship commitment, NSF prepares annual financial statements in conformity with generally accepted accounting principles (GAAP) of U.S. federal government entities and subjects them to an independent audit to ensure their integrity and reliability in assessing performance. For FY 2008, NSF received its eleventh consecutive unqualified (clean) audit opinion with no material weaknesses or significant deficiencies. This was largely the result of the Foundation's efforts in strengthening its Contract Monitoring Program and accounting and reporting for property, plant and equipment, which closed the prior year significant deficiencies.

### Understanding the Financial Statements

NSF's FY 2008 financial statements and notes are presented in accordance with *OMB Circular No. A-136, Financial Reporting Requirements* dated June 3, 2008. NSF's current year financial statements and notes are presented in a comparative format. The Stewardship Investment schedule presents information over the last five years. *Figure 8* summarizes the significant changes in NSF's financial position in FY 2008.

**Figure 8.**  
**Significant Changes in NSF's Financial Position in FY 2008<sup>16</sup>**  
(Dollars in Thousands)

Net Financial Condition	FY 2008	FY 2007	Increase/ (Decrease)	% Change
<b>Assets</b>	\$9,055,028	\$8,726,006	\$329,022	3.8%
<b>Liabilities</b>	\$555,048	\$515,430	\$39,618	7.7%
<b>Net Position</b>	\$8,499,980	\$8,210,576	\$289,404	3.5%
<b>Net Cost</b>	\$5,944,807	\$5,636,129	\$308,678	5.5%

<sup>15</sup> For more information about Improper Payments Information Act reporting, see Appendix 2, page III-3.

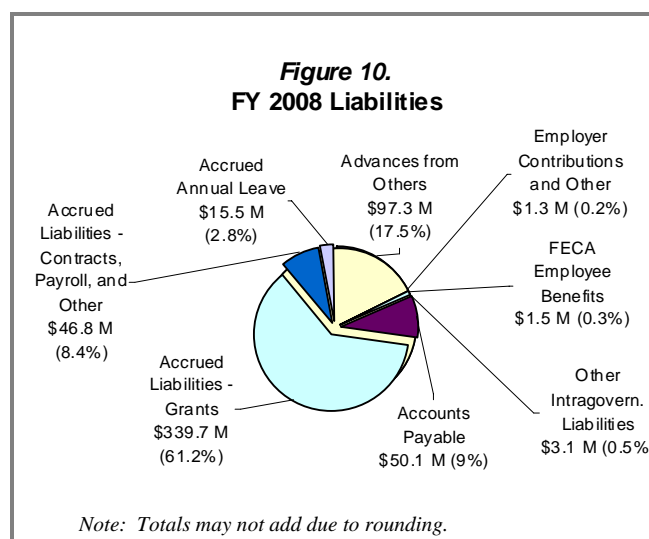
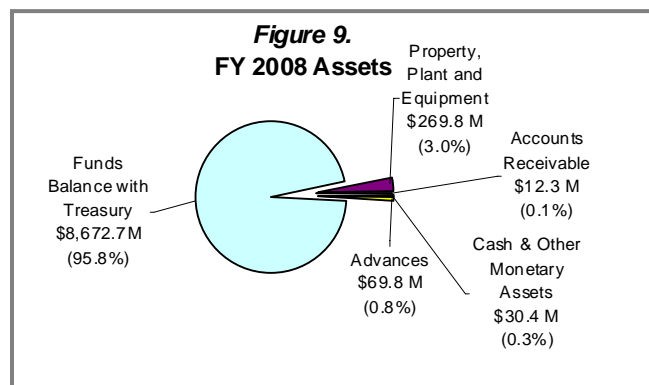
<sup>16</sup> The change in total asset primarily reflects a \$362 million increase in *Fund Balance with Treasury*. Most of the change in net cost is the result of a \$296 million increase in Research and Related Activities.

The following is a brief description of the nature of each required financial statement and its relevance. Certain significant balances or conditions are explained to help clarify their relationship to NSF operations.

**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). Two line items consisting of *Fund Balance with Treasury* and *Property, Plant, and Equipment* represent 98.8 percent of NSF's current year assets (*Figure 9*). *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. *Property, Plant, and Equipment* comprises capitalized property located at NSF headquarters and NSF-owned property located primarily in the continental U.S., New Zealand and Antarctica that support the U.S. Antarctic Program. *Advances* are funds advanced to NSF grantees, contractors, and other government agencies.

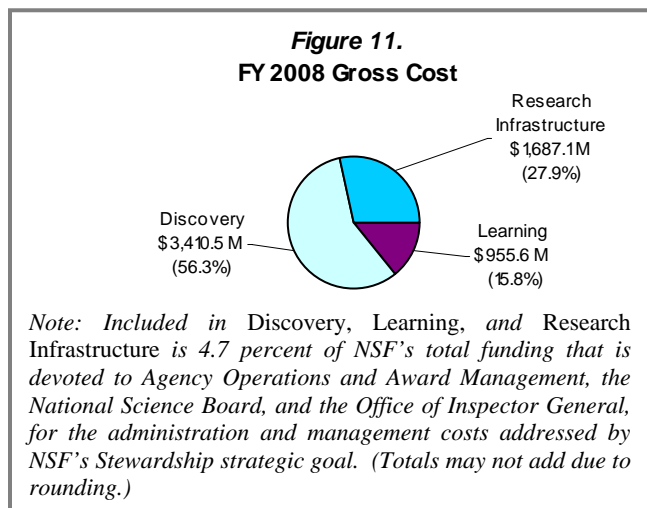
Three line items—*Accounts Payable*, *Accrued Liabilities-Grants*, and *Advances from Others*—represent 87.7 percent of NSF's current year liabilities (*Figure 10*). *Accounts Payable* includes liabilities to NSF vendors for unpaid goods and services received. *Accrued Liabilities-Grants* are amounts recorded for NSF's grants for which grantees have incurred costs but have not submitted their financial reports as either Federal Cash Transaction Reports (FCTR) or Federal Financial Reports (FFR). *Advances from Others* represents payments received in advance from other federal agencies through interagency agreements for services that have not been performed.

**Statement of Net Cost:** This statement presents the annual cost of operating NSF programs. Gross cost less any offsetting revenue for each NSF program is used to arrive at the net cost of specific program operations. *Intragovernmental Earned Revenues* are recognized when these related program or administrative expenses are incurred and deducted from the full cost of the programs to arrive at the *Net Cost of Operation*. Approximately 95.3 percent of all current year NSF costs incurred were directly related to the support of the *Discovery, Learning, and Research Infrastructure* strategic goals. Costs were incurred for indirect general operation activities (e.g., salaries, training, activities related to the advancement of NSF information systems technology) and activities of the National Science Board and the Office of Inspector General. These costs were allocated to the *Discovery, Learning, and Research*



*Infrastructure* strategic goals and account for 4.7 percent of the total current year *Net Cost of Operations*. These administrative and management activities are the focus of the agency's *Stewardship* strategic goal.

**Statement of Changes in Net Position:** This statement presents the cumulative net results of operation and unexpended appropriations in order to understand the nature of the changes to the net position as a whole. NSF's Net Position increased to \$8.5 billion in FY 2008 — an increase of 3.5 percent — primarily due to the increase in *Unexpended Appropriations* and *Cumulative Results of Operations*. *Unexpended Appropriations* is affected mainly by *Appropriations Received* and *Appropriations Used* while the *Cumulative Results of Operations* is affected by the net results of operations since inception.



**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 2008, new *Budgetary Authority* for Research and Related Activities, Education and Human Resources and, Major Research Equipment and Facilities Construction were \$4,844 million, \$766 million and \$221 million, respectively. The combined *Budgetary Authority* in FY 2008 for the National Science Board, OIG and Agency Operations and Award Management was \$297 million. *Total Budgetary Resources* increased by 3.4 percent and *Net Outlays* increased by 5.8 percent in FY 2008. The *Net Outlays* reported on this statement reflects the actual cash disbursed for the year by Treasury for NSF obligations and is reduced by the amount of *Distributed Offsetting Receipts*.

**Stewardship Investments:** NSF-funded investments yield long-term benefits to the general public. NSF investments in research and education yield quantifiable outputs, including the number of awards made and the number of researchers, students, and teachers supported or involved in the pursuit of discoveries in science and engineering and in science and math education. The FY 2008 increase in Research and Human Capital Activities reflects increased agency funding.

**Limitations of the Financial Statements**

In accordance with the revised guidance *OMB Circular No. A-136* we are disclosing the following limitations of NSF's FY 2008 financial statements, which appear in Chapter II of this report: The 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.

**Budgetary Integrity: NSF Resources and How They Are Used**

NSF is funded primarily through six Congressional appropriations that totaled \$6.13 billion in FY 2008, which includes \$62.50 million in supplemental funding. Other FY 2008 revenue sources included

\$102.30 million in reimbursable authority, \$104.43 in H-1B collections and \$62.00 million in donations to support NSF activities.<sup>17</sup> NSF made investments in fundamental science and engineering research and education in support of the Foundation's three strategic outcome goals of *Discovery*, *Learning*, and *Research Infrastructure*. About 5 percent of NSF's budget was for Stewardship activities that focus on internal agency operations and award management activities. Investment priorities included the Cyber-enabled Discovery and Innovation program, the Experimental Program to Stimulate Competitive Research (EPSCoR), undergraduate education including The Robert Noyce Teacher Scholarship Program and the Math and Science Partnership Program, and International Polar Year Leadership. NSF also supported several interagency R&D priorities including the Networking and Information Technology R&D, the National Nanotechnology Initiative, the U.S. Climate Change Science Program, and Homeland Security. Among major research facilities and equipment projects supported were the Alaska Region Research Vessel, the Atacama Large Millimeter Array, and the Advanced LIGO project. At the time of this report, NSF had not yet received its FY 2009 appropriations.

### Financial System Strategy

The goal of NSF's Financial Accounting System (FAS) is to provide quality business services to our customers through effective funds control, efficient award processes, and reliable and timely financial data to inform management decisions. FAS is a custom developed online, near real-time system that provides the full spectrum of financial transaction functionality required by a grants-making agency and complies with government-wide rules and regulations for financial management systems.

FAS is integrated with NSF's core business systems, including the Proposal and Reviewer System (PARS), Awards System, Guest (panelists) Travel and Reimbursement System, e-Travel System and the FastLane System that supports grants management. FAS supports both the grant and core financial processes and is used to monitor, control, and ensure the management and financial accountability of over 21,000 active awards with nearly 1,900 external grantee institutions. FAS distributes funds electronically to grantees in a seamless and controlled environment and interfaces information to the FastLane system that allows grantees the ability to check available funds in real-time on a daily basis. The reporting capabilities built into the FAS software include on-line lookups to verify funds, track commitments and obligations, and the ability to generate daily, weekly, monthly, and quarterly reports that provide up-to-date financial information about NSF operations for program and grantee decision support. All FAS-generated reports are posted electronically and are available to staff via *Report.web*, which is a web-based application that streamlines information distribution. In addition, information from FAS is captured and used in NSF's Enterprise Information System.

NSF's ability to meet interface and integration requirements of any government-wide initiative (e.g., e-Travel and e-Learning); to adopt new legislative, regulatory, and policy requirements as they are promulgated; and to implement required technical upgrades is resource dependent. Consistent with NSF's eGovernment Implementation Plan, FAS will remain in a steady-state phase in the FY 2008-FY 2012 timeframe. The Financial Management Line of Business (FMLoB) continues to define government-wide standards that all agencies will be required to implement. In order to meet these new requirements, NSF is beginning to develop a strategy for our future financial management system that complies with the FMLoB guidelines. A key element for the future financial management system is to ensure that NSF continues to support fully integrated grant financial requirements within the financial system framework. NSF has initiated planning activities, including documenting our current business processes and developing a business case. NSF will also identify the interrelationships between the FMLoB and the

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<sup>17</sup> Donations of \$62.00 million include \$508,880 of interest earned on the donations received in FY 2008.

Grants Management Line of Business (GMLoB) to ensure that all requirements will be identified to support NSF's status as a GMLoB Consortia Lead for grants management.

**Key Financial Metrics**

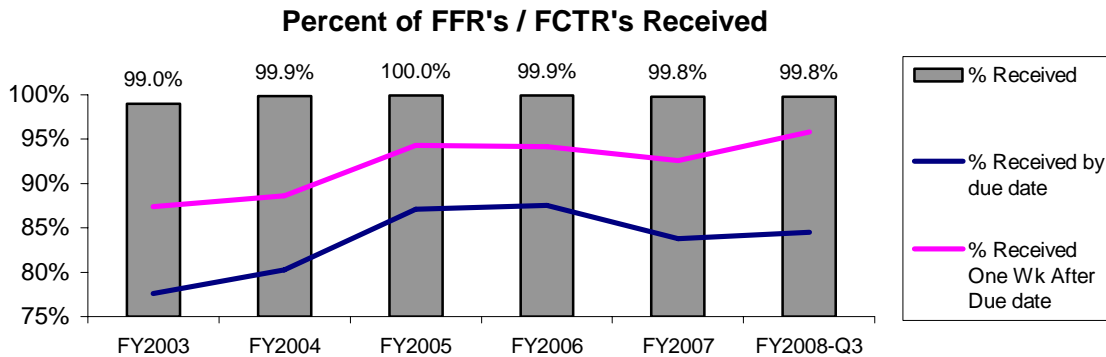
This section presents selected key financial measures of NSF's core business of awarding grants and our progress in associated electronic processes.

► **Treasury Scorecard:** Since inception of the Department of Treasury's Financial Management Service Scorecard in FY 2004, NSF has consistently received the highest ("Green") ratings for accuracy and timeliness of our financial reporting in the quarterly ratings (*Figure 12.*)

Figure 12. U.S. Department of Treasury Financial Management Scorecard		
Category	Standard	Results (as of 6/30/08)*
Accuracy of Reporting**	<p><i>Green:</i> If differences are outstanding for less than 3 months.</p> <p><i>Yellow:</i> If differences are older than 3 months but less than 6 months.</p> <p><i>Red:</i> If differences are older than 6 months.</p>	G
Timeliness of Reporting*	<p><i>Green:</i> If original and supplemental reporting are completed by the third workday.</p> <p><i>Yellow:</i> If original report is submitted by the 3rd workday and supplemental report submitted on the 4th workday.</p> <p><i>Red:</i> If original report is submitted after the 3rd workday and/or supplemental submitted after the 4th workday.</p>	G
*Most current data available.		
** FMS 224, SF1218/1221, and FMS 1219/1220.		

► **Federal Cash Transaction Report (FCTR) and Federal Financial Report (FFR):** *Figure 13* focuses on OMB's SF 272 FCTR and FFR processes, which are key elements of NSF's core grant business.

**Figure 13.**

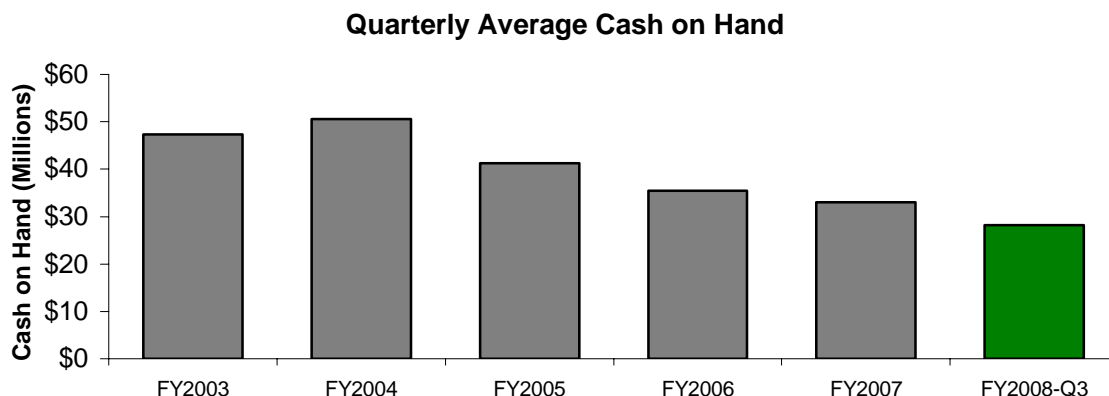


*Note: FY 2008 includes only the first three quarters, which is the most recent data available at this time.*

Grantees are required to report the status of funds received from NSF on a quarterly basis through the submission of a FCTR or FFR report. The reports are prepared and submitted electronically to NSF by the grantee through the FastLane Financial Function. NSF performs follow-up actions with the preparers to ensure receipt of reports, as evidenced by the increase in report submissions received by one week after the due date. As shown on the chart above, through the third quarter of FY 2008, nearly 85 percent of NSF grantees submitted their FCTR or FFR reports by the due date and over 95 percent of grantees submitted their FCTR or FFR reports within one week after the due date. By the end of the quarter, nearly 100 percent of grantees had submitted their reports.

► **Cash-on-Hand:** Figure 14 shows the results of NSF's increased emphasis on enhanced FFR/FCTR monitoring activities implemented in January 2005. Unexpended federal cash held by grantees has decreased by over \$19 million from a quarterly average of \$47.3 million in 2003 to a quarterly average of \$28.2 million in 2008. This decrease was due to improved cash management by grantees as a result of the effective NSF monitoring activities.

Figure 14.



Note: FY 2008 includes only the first three quarters, which is the most recent data available at this time.

► **FMLoB Financial Management Services Metrics (FMSM) Program:** In 2007, NSF began participating in the FMSM Program developed by the FMLoB, in collaboration with the federal financial management community. The FMSM Program established a set of metrics to facilitate an assessment of financial services government-wide. FMSM metrics have been designed to help identify opportunities to improve the performance and affordability of the financial services provided by Shared Service Providers and federal agencies. NSF's collaboration with the FMLoB maintains progress in improving financial performance.

► **CFO Council Metric Tracking System (MTS) Financial Management Indicators:** Generally, since the MTS was launched in January 2005, NSF has had the most consistently high scores of any government agency. To see scorecards and for additional information about the Metrics Tracking System, see <http://www.fido.gov/mts/cfo/public>.



Figure 15.

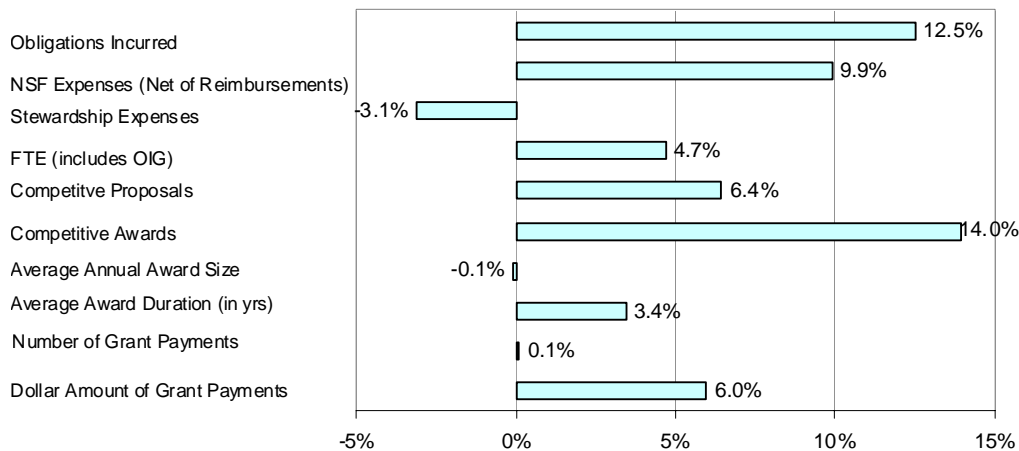
**Recent Trends**

The following table summarizes several of NSF's key workload and financial indicators. Obligations are a direct result of each year's appropriation while expenses reflect multiple years of prior obligations. Of significance is the 14 percent increase since FY 2005 in the number of competitive awards while staffing (FTE) has increased less than 5 percent.

	FY 2005	FY 2006	FY 2007	FY 2008	%Change FY 05-08
Obligations Incurred *	\$5,653.90	\$5,878.01	\$6,169.19	\$6,361.93	12.5%
NSF Expenses (Net of Reimbursements)*	\$5,408.17	\$5,595.76	\$5,636.13	\$5,944.81	9.9%
Stewardship (Expenses) *	\$292.43	\$321.09	\$275.99	\$283.25	-3.1%
FTE (includes OIG)	1,279	1,277	1,310	1,339	4.7%
Competitive Proposals	41,760	42,377	44,598	44,441	6.4%
Competitive Awards	9,794	10,450	11,484	11,162	14.0%
Average Annual Award Size	\$143,669	\$134,595	\$144,804	\$143,527	-0.1%
Average Award Duration (in years)	2.9	2.9	2.9	3.0	3.4%
Number of Grant Payments	19,464	19,714	19,074	19,481	0.1%
Dollar Amount of Grant Payments*	\$4,833.76	\$4,884.51	\$4,909.90	\$5,122.54	6.0%

\* Dollars in Millions

**Percent Change: FY 2005 to FY 2008**



**Future Business Trends and Events**

The future will require a continued focus on management excellence through increased attention to specific financial operations and strategic issues. New administrative policy initiatives mandate that NSF, like other federal agencies, demonstrate consistent progress in improving financial management practices as well as adapt to changing management and policy initiatives. We are committed to leveraging technology and human capital resources to improve operations and services to our customers and stakeholders. In addition, we proactively address management challenges identified through internal review and oversight. In this section, we describe some of the areas that the agency will be focusing on in both the immediate future and the long term.

► **Internal Controls:** In FY 2008, NSF fully implemented its agency-wide internal control program as required by *OMB Circular A-123, Management's Responsibility for Internal Control*. The Internal Control Program includes documentation of nine Key Business Processes relating to controls over financial reporting. NSF has developed a sustainable Internal Control Program and will continue making improvements to its program as it addresses emerging issues. The program also includes a practice of developing more effective and efficient ways of operating programmatic activities.

► **Federal Financial Report (FFR):** OMB has approved the FFR as the replacement for existing grant recipient financial reports with full implementation to be completed by all federal agencies not later than October 1, 2009. The FFR will simplify reporting requirements, procedures, and associated business processes by utilizing a standardized pool of data elements as defined by the Grants Policy Committee of the Federal Chief Financial Officers Council. NSF first implemented the FFR in FastLane Financial Functions as an optional grantee expenditure report during July 2007 and intends to make the FFR the required financial report in January 2009. Additionally, NSF developed an FFR within its *Research.gov* initiative that will be offered to other federal research-oriented agencies. NSF's FFR will assist OMB in advancing Federal Grants Streamlining initiatives. It will also reinforce NSF leadership within the federal grants management arena and maintain the customized integration of business processes and systems inherent in NSF's end-to-end systems.

► **Financial Service Offerings of the NSF FMLoB:** NSF has begun planning for a new financial and property management system under the FMLoB to replace the current legacy system. The current NSF financial management environment includes extensive integration with the grant systems and a host of other business systems. Implementing a new financial system will require extensive planning and coordination across all NSF business systems. One of the key success factors of NSF as a grant making agency is the integration between our financial and grant management systems.

Additionally, NSF is one of the federal government's consortia leads for the FMLoB in a fee-for-service environment to other federal agencies. As such, NSF is becoming a Shared Service Provider with its *Research.gov* initiative. Through *Research.gov*, NSF is in the process of developing financial service offerings that include grant payments, grantee financial reporting, and centralized grant accounting. These offerings will complement and extend the shared services to be offered for pre-and post-award grant management services. NSF is continuing to leverage the advantages of an integrated environment as it moves forward with its financial and property management systems' efforts.

► **Federal Funding Accountability and Transparency Act (FFATA) of 2006:** NSF has made significant progress in complying with the requirements of FFATA. In November 2007, NSF began submitting grants data in the required format for posting to *USASpending.gov*, and in December 2007 submitted a plan to OMB that identified data gaps, quality assurance measures, and a plan to address deficiencies for future data submissions. The future challenges for NSF in complying with the FFATA include the costs to be incurred and policy changes necessary to collect and report sub-award data as well as validation and certification of the data.

## CHAPTER II: FINANCIALS

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### A MESSAGE FROM THE CHIEF FINANCIAL OFFICER

I am pleased to report that in FY 2008 the National Science Foundation (NSF) received an unqualified audit opinion, affirming that NSF's financial statements for the year ended September 30, 2008, were presented fairly in all material respects, in conformity with U.S. generally accepted accounting principals. The audit report noted no material weaknesses or significant deficiencies. I am especially pleased that NSF has closed its FY 2007 significant deficiencies, largely as a result of our efforts in strengthening the Contract Monitoring Program and accounting and reporting for Property, Plant and Equipment (PP&E).

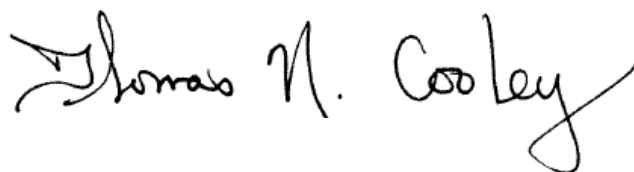
Of note this year is the agency's implementation of an agency-wide internal control program. In response to the Office of Management and Budget's (OMB) update of *Circular A-123*, NSF re-engineered the internal control program, from a "bottom up" to a "top down" approach. A "top down" approach more efficiently leverages existing control review processes, internal and external audit work, and other mandated reviews as well as provides greater assurance that all key controls are identified and assessed. In an effort that spanned three years, NSF documented and tested all key business processes and sub-processes. In the last year, emphasis was on refining our risk assessment methodology and strengthening documentation for grants and PP&E activities. The internal control review found no evidence of material weaknesses in either NSF's financial controls or entity-wide controls and management has determined that NSF programs and operations are protected in accordance with OMB guidance. (The management assurance statement is provided elsewhere in this report.) As we move forward, we will continue to examine our internal control structure to ensure it stays updated with changing events.

Other notable accomplishments during the year include the following:

- NSF successfully maintained a "Green" rating for the President's Management Agenda (PMA) financial performance initiative. NSF's financial performance initiative has been rated "Green" since inception of the PMA scorecard.
- NSF consistently received over 99 percent of quarterly Federal Cash Transaction Reports (FCTR) from grant recipients—a collection rate that significantly exceeds that of other federal agencies. As part of the Federal Grants Streamlining Initiative, beginning in January 2009, NSF will replace the FCTR with the new, more simplified Federal Financial Report (FFR). The NSF FFR pilot is the largest of the federal government; NSF will be the first federal agency to implement full use of the FFR. NSF continues to work with OMB to streamline and standardize federal grant recipient financial reporting and to replace the FCTR government-wide in FY 2009.
- NSF maintains an active leadership role in the federal grants management arena including the CFO Council Grants Policy Committee and the Grants Management Line of Business Initiative. NSF is forging the integration of grants and financial management that should result in considerable cost and operations efficiencies.

- For a second year, NSF is participating in OMB's Pilot Program for Alternative Approaches to Performance and Accountability reporting, for which we have prepared this *Annual Financial Report*. Our participation in the pilot is in line with the agency's commitment to continuing improvement in performance and accountability reporting to our stakeholders and the public. Our efforts have been recognized recently with awards from the League of American Communications Professionals and the Association of Marketing and Communications Professionals.

Sound financial management enables NSF to pursue the critical investments in science and engineering research and education that help ensure our nation's security, prosperity, and well being. As our work grows more complex and challenging with the increase in financial oversight and accountability requirements, I wish to acknowledge a diligent staff for their dedication to the Foundation.

A handwritten signature in black ink that reads "Thomas N. Cooley". The signature is written in a cursive style with a large, sweeping 'T' and a long, trailing 'y'.

Thomas N. Cooley  
Chief Financial Officer  
and Director of Budget, Finance, and Awards Administration

November 10, 2008

NATIONAL SCIENCE FOUNDATION  
4201 Wilson Boulevard  
ARLINGTON, VIRGINIA 22230

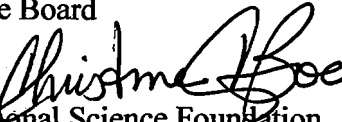
NOV 12 2008



OFFICE OF  
INSPECTOR GENERAL

TO: Dr. Arden L. Bement, Jr.  
Director, National Science Foundation

Dr. Steven C. Beering  
Chair, National Science Board

FROM: Dr. Christine C. Boesz   
Inspector General, National Science Foundation

SUBJECT: Audit of the National Science Foundation's  
Fiscal Years 2008 and 2007 Financial Statements

This memorandum transmits Clifton Gunderson LLP's financial statement audit report of the National Science Foundation (NSF) for Fiscal Years 2008 and 2007.

#### 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), Clifton Gunderson LLP, an independent public accounting firm (IPA), performed an audit of NSF's Fiscal Years 2008 and 2007 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 Bulletin 07-04, *Audit Requirements for Federal Financial Statements*, as amended, issued by the United States Office of Management and Budget.

Clifton Gunderson LLP issued an unqualified opinion on NSF's financial statements. In its Report on Internal Control over Financial Reporting, Clifton Gunderson LLP reported no material weaknesses in internal control over financial reporting. The two internal control deficiency conditions noted in the FY 2007 auditor's report are no longer considered to be significant deficiencies, however, additional improvements are needed

which will be reported to management in a separate management letter. Clifton Gunderson LLP also reported that there were no instances in which NSF's financial management systems did not substantially comply with the requirements of the Federal Financial Management Improvement Act of 1996 (FFMIA). Finally, Clifton Gunderson LLP found no instances of noncompliance with laws and regulations it tested, except for a potential matter of non-compliance with the Anti-Deficiency Act.

NSF management's response, dated November 10, 2008, follows Clifton Gunderson LLP's report.

### **Evaluation of Clifton Gunderson LLP'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 Clifton Gunderson LLP's approach and planning of the audit;
- Evaluated the qualifications and independence of the auditors;
- Monitored the progress of the audit at key points;
- Coordinated periodic meetings with NSF management to discuss audit progress, findings, and recommendations;
- Reviewed Clifton Gunderson LLP's audit report to ensure compliance with Government Auditing Standards and Office of Management and Budget Bulletin No. 07-04, as amended; and
- Coordinated issuance of the audit report.

Clifton Gunderson LLP is responsible for the attached auditor's report dated November 10, 2008, and the conclusions expressed in the report. We do not express any opinion on NSF's financial statements, internal control, conclusions 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 Clifton Gunderson LLP and OIG staff during the audit. If you or your staff has any questions, please contact me or Deborah H. Cureton, Associate Inspector General for Audit on 703-292-4985.

Attachment

cc: Dr. Dan E. Arvizu, Chair, Audit and Oversight Committee

## **INDEPENDENT AUDITOR'S REPORT**

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

In our audit of NSF for fiscal year (FY) 2008 we found:

- The NSF financial statements are presented fairly, in all material respects, in conformity with accounting principles generally accepted in the United States of America;
- No material weaknesses in internal control over financial reporting (including safeguarding assets) and compliance with laws and regulations;
- Significant progress has been made in FY 2008 on the two control deficiency conditions noted in the FY 2007 auditor's report and, accordingly, neither of those matters are considered to be a significant deficiency;
- No instances of noncompliance with the Federal Financial Management Improvement Act of 1996 (FFMIA);
- No instances of noncompliance with laws and regulations, except for a potential matter of non-compliance with respect to the Anti-Deficiency Act.

The following sections discuss in more detail: (1) these conclusions, (2) our conclusions on Management's Discussion and Analysis (MD&A) and other supplementary information, (3) our audit objectives, scope and methodology, and (4) agency comments and evaluation.

### **OPINION ON FINANCIAL STATEMENTS**

The accompanying financial statements including the accompanying notes present fairly, in all material respects, in conformity with accounting principles generally accepted in the United States, NSF's assets, liabilities, and net position as of September 30, 2008 and 2007; and net costs; changes in net position; and budgetary resources for the years then ended.

### **CONSIDERATION OF INTERNAL CONTROL**

In planning and performing our audit, we considered NSF's internal control over financial reporting as a basis for designing our auditing procedures and to comply with the Office of Management and Budget (OMB) audit guidance for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of the entity's internal control over financial reporting or on management's assertion on internal control included in the MD&A.

Our consideration of internal control over financial reporting was for the limited purpose described in the preceding paragraph and would not necessarily identify all deficiencies in internal control over financial reporting that might be significant deficiencies or material weaknesses.

A control deficiency 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 misstatements on a timely basis. A significant deficiency is a control deficiency, or combination of control deficiencies, that adversely affects the entity's ability to initiate, authorize, record, process, or report financial data reliably in accordance with generally accepted accounting principles such that there is more than a remote likelihood that a misstatement of the entity's financial statements that is more than inconsequential will not be prevented or detected by the entity's internal control.

A material weakness is a significant deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that a material misstatement of the financial statements will not be prevented or detected by the entity's internal control.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and would not necessarily identify all deficiencies in internal control that might be material weaknesses or other significant deficiencies. We did not identify any deficiencies in internal control over financial reporting that we consider to be material weaknesses, as defined above.

We did, however, note other matters involving internal control and its operation that are not considered significant deficiencies, but are communicated in a separate management letter to NSF management.

## **SYSTEMS' COMPLIANCE WITH FFMIA REQUIREMENTS**

Under the Federal Financial Management Improvement Act of 1996 (FFMIA), we are required to report whether the financial management systems used by NSF substantially comply with the Federal financial management systems requirements, applicable Federal accounting standards, and the United States Standard General Ledger (SGL) at the transaction level. To meet this requirement, we performed tests of compliance with FFMIA Section 803(a) requirements.

The objective of our audit was not to provide an opinion on compliance with FFMIA. Accordingly, we do not express such an opinion. However, our work disclosed no instances in which NSF's financial management systems did not substantially comply with Federal financial management systems requirements, Federal accounting standards or the SGL at the transaction level.



## **COMPLIANCE WITH LAWS AND REGULATIONS**

Except as noted below, our tests of NSF's compliance with selected provisions of laws and regulations for fiscal 2008 disclosed no instances of noncompliance that would be reportable under United States generally accepted government auditing standards or OMB audit guidance. However, the object of our audit was not to provide an opinion on overall compliance with laws and regulations. Accordingly, we do not express such an opinion.

The following matter was identified as a potential matter of non-compliance with the Anti-Deficiency Act:

- NSF's Office of General Counsel (OGC) is currently evaluating a potential Anti-Deficiency Act (ADA) violation pertaining to a FY 2006 \$88,000 payment to a contractor in excess of its related appropriation. In October 2008, OGC requested the Government Accountability Office (GAO) to assist them in determining NSF's compliance with the ADA for this matter. In addition, the matter was also shared with the OMB. NSF has not made a final legal determination on this potential non-compliance and, accordingly, has not yet needed to comply with the violation reporting requirements stipulated in OMB Circular A-11.

## **STATUS OF PRIOR YEAR'S CONTROL DEFICIENCIES**

As required by United States generally accepted government auditing standards and OMB Bulletin No. 07-04, as amended, we have reviewed the status of NSF's corrective actions with respect to the findings and recommendations included in the prior year's Independent Auditor's Report dated November 10, 2007. The prior year audit report noted two control deficiencies: 1) *Contract Monitoring* and 2) *Property, Plant and Equipment Accounting and Reporting*. NSF management has implemented substantial changes to its procedures in both these areas and, accordingly, neither of the prior year findings are considered a Significant Deficiency for purposes of this report.

## **CONSISTENCY OF OTHER INFORMATION**

NSF Management's Discussion and Analysis (MD&A) and other required supplementary information contains a wide range of information, some of which is not directly related to the financial statements. We compared this information for consistency with the financial statements and discussed the methods of measurement and presentation with NSF officials. Based on this limited work, we found no material inconsistencies with the financial statements, U.S. generally accepted accounting principles, or OMB guidance. However, we do not express an opinion on this information.

The introductory information, performance information and appendixes listed in the table of contents of the MD&A are presented for additional analysis and are not a required part of the financial statements. Such information has not been subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on them.

## **OBJECTIVES, SCOPE AND METHODOLOGY**

NSF management is responsible for (1) preparing the financial statements in conformity with accounting principles generally accepted in the United States, (2) establishing, maintaining, and assessing internal control to provide reasonable assurance that the broad control objectives of the Federal Managers' Financial Integrity Act (FMFIA), are met, (3) ensuring that NSF's financial management systems substantially comply with FFMIA requirements, and (4) complying with other applicable laws and regulations.

We are responsible for obtaining reasonable assurance about whether the financial statements are presented fairly, in all material respects, in conformity with accounting principles generally accepted in the United States. We are also responsible for: (1) obtaining a sufficient understanding of internal control over financial reporting and compliance to plan the audit, (2) testing whether NSF's financial management systems substantially comply with the three FFMIA requirements, (3) testing compliance with selected provisions of laws and regulations that have a direct and material effect on the financial statements and laws for which OMB audit guidance requires testing, and (4) performing limited procedures with respect to certain other information appearing in the Annual Financial Report.

In order to fulfill these responsibilities, we (1) examined, on a test basis, evidence supporting the amounts and disclosures in the financial statements, (2) assessed the accounting principles used and significant estimates made by management, (3) evaluated the overall presentation of the financial statements, (4) obtained an understanding of NSF and its operations, including its internal control related to financial reporting (including safeguarding of assets), and compliance with laws and regulations (including execution of transactions in accordance with budget authority), (5) tested relevant internal controls over financial reporting, and compliance, and evaluated the design and operating effectiveness of internal control, (6) considered the design of the process for evaluating and reporting on internal control and financial management systems under FMFIA, (7) tested whether NSF's financial management systems substantially complied with the three FFMIA requirements, and (8) tested compliance with selected provisions of certain laws and regulations.

We did not evaluate all internal controls relevant to operating objectives as broadly defined by the FMFIA, such as those controls relevant to preparing statistical reports and ensuring efficient operations. We limited our internal control testing to controls over financial reporting and compliance. 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 evaluation 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 selected provisions of laws and regulations that have a direct and material effect on the financial statements and those required by OMB audit guidance that we deemed applicable to NSF's financial statements for the fiscal year ended September 30, 2008. 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.

We performed our audit in accordance with auditing standards generally accepted in the United States; the standards applicable to the financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and OMB guidance.

## **AGENCY COMMENTS AND OUR EVALUATION**

In commenting on a draft of this report (Exhibit I), NSF concurred with the facts and conclusions in our report.

\*\*\*\*\*

This report is intended solely for the information and use of NSF's management, the National Science Board, NSF's Office of Inspector General, OMB, the Government Accountability Office, and the U.S. Congress, and is not intended to be, and should not be, used by anyone other than these specified parties.

*Clifton Henderson LLP*

Calverton, Maryland  
November 10, 2008

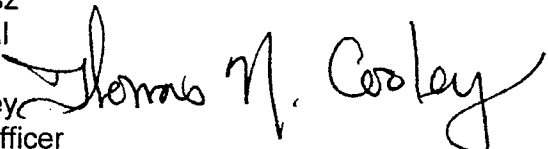
**NATIONAL SCIENCE FOUNDATION  
MANAGEMENT'S RESPONSE TO FY 2008  
INDEPENDENT AUDITOR'S REPORT  
November 10, 2008**

NATIONAL SCIENCE FOUNDATION

4201 WILSON BOULEVARD  
ARLINGTON, VIRGINIA 22230

NOV 10 2008

To: Christine C. Boesz  
Inspector General

From: Thomas N. Cooley   
Chief Financial Officer

Subject: Management's Response to Independent Auditor's Report for  
Fiscal Year 2008

I am pleased to receive Clifton Gunderson's audit report on the National Science Foundation's (NSF) Fiscal Year (FY) 2008 financial statements.

This year's unqualified opinion was the result of the commitment and professionalism that both our offices demonstrated during the FY 2008 financial statement audit. During the entire audit process, NSF has worked very closely with the audit team to provide necessary and timely information.

NSF's efforts in strengthening its Contract Monitoring Program and accounting and reporting for property, plant and equipment (PP&E) resulted in an important achievement. I am proud that the Foundation has closed the FY 2007 significant deficiencies on "Contract Monitoring," and "PP&E Accounting and Reporting." I am also proud that NSF fully implemented its agency-wide internal controls program in FY 2008, as required by the OMB Circular A-123, Management's Responsibility for Internal Control. NSF developed a sustainable internal control program. As we move forward, we will continue to examine our internal control structure to ensure it stays updated with changing events.

NSF is committed to improving management over the agency programs, and to provide excellent service to our stakeholders and taxpayers. We will continue to work in partnership with the Clifton Gunderson audit team and the Office of Inspector General for an effective audit.

copies: Dr. Arden L. Bement, Jr.  
Dr. Kathie Olsen



# **National Science Foundation**

**FINANCIAL STATEMENTS**  
**As of and for the years ended**  
September 30, 2008 and 2007

**National Science Foundation  
Balance Sheet  
As of September 30, 2008 and 2007  
(Amounts in Thousands)**

<b>Assets</b>	<b><u>2008</u></b>	<b><u>2007</u></b>
Intragovernmental Assets		
Fund Balance With Treasury (Note 2)	\$ 8,672,672	\$ 8,310,182
Accounts Receivable	11,928	24,561
Advances (Note 3)	15,284	35,255
Total Intragovernmental Assets	<u>8,699,884</u>	<u>8,369,998</u>
Cash and Other Monetary Assets	30,410	16,228
Accounts Receivable, Net	391	247
Advances (Note 3)	54,549	79,326
General Property, Plant and Equipment, Net (Notes 4 and 5)	269,794	260,207
<b>Total Assets</b>	<b><u>\$ 9,055,028</u></b>	<b><u>\$ 8,726,006</u></b>
<b>Liabilities</b>		
Intragovernmental Liabilities		
Advances From Others	\$ 97,260	\$ 72,018
Employer Contributions and Other	1,270	745
FECA Employee Benefits	298	292
Other Intragovernmental Liabilities (Notes 6 and 8)	3,050	3,050
Total Intragovernmental Liabilities	<u>101,878</u>	<u>76,105</u>
Accounts Payable	50,066	38,358
FECA Employee Benefits	1,198	1,182
Accrued Liabilities - Grants	339,652	360,475
Accrued Liabilities - Contracts, Payroll, and Other	46,779	25,046
Accrued Annual Leave	15,475	14,264
<b>Total Liabilities</b>	<b><u>\$ 555,048</u></b>	<b><u>\$ 515,430</u></b>
Commitments and Contingencies (Note 8)		
<b>Net Position</b>		
Unexpended Appropriations - Other Funds	\$ 7,813,135	\$ 7,587,271
Cumulative Results of Operations - Earmarked Funds (Note 9)	364,640	334,664
Cumulative Results of Operations - Other Funds	322,205	288,641
<b>Total Net Position</b>	<b><u>8,499,980</u></b>	<b><u>8,210,576</u></b>
<b>Total Liabilities and Net Position</b>	<b><u>\$ 9,055,028</u></b>	<b><u>\$ 8,726,006</u></b>

*The accompanying notes are an integral part of these statements.*

**National Science Foundation**  
**Statement of Net Cost**  
**For the Years Ended September 30, 2008 and 2007**  
**(Amounts in Thousands)**

<b>Program Costs</b>	<b><u>2008</u></b>	<b><u>2007</u></b>
Research and Related Activities		
Gross Costs	\$ 4,835,276	\$ 4,507,933
Less: Earned Revenues	<u>(99,471)</u>	<u>(68,500)</u>
<b>Net Research and Related Activities</b>	<b><u>4,735,805</u></b>	<b><u>4,439,433</u></b>
Education and Human Resources		
Gross Costs	\$ 870,111	\$ 904,482
Less: Earned Revenues	<u>(8,914)</u>	<u>(8,270)</u>
<b>Net Education and Human Resources</b>	<b><u>861,197</u></b>	<b><u>896,212</u></b>
Major Research Equipment and Facilities Construction		
Gross Costs	\$ 232,158	\$ 222,926
Less: Earned Revenues	<u>-</u>	<u>-</u>
<b>Net Major Research Equipment and Facilities Construction</b>	<b><u>232,158</u></b>	<b><u>222,926</u></b>
Costs Not Assigned to Other Programs		
Gross Costs	\$ 115,647	\$ 77,558
Less: Earned Revenues	<u>-</u>	<u>-</u>
<b>Net Costs Not Assigned to Other Programs</b>	<b><u>115,647</u></b>	<b><u>77,558</u></b>
<b>Net Cost of Operations (Note 10)</b>	<b><u>\$ 5,944,807</u></b>	<b><u>\$ 5,636,129</u></b>

*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, 2008**  
(Amounts in Thousands)

	<u>2008</u>		
	<u>Earmarked</u>	<u>All Other</u>	<u>Total</u>
<b>Cumulative Results of Operations</b>			
<b>Beginning Balances (Note 9)</b>	\$ 334,664	288,641	623,305
<b>Budgetary Financing Sources</b>			
Appropriations Used	-	5,833,031	5,833,031
Non-exchange Revenue	-	509	509
Donations	-	61,495	61,495
Appropriated Earmarked Receipts Transferred In (Note 9)	104,430	-	104,430
<b>Other Financing Sources</b>			
Imputed Financing From Costs Absorbed By Others	-	9,048	9,048
Other	-	(166)	(166)
<b>Total Financing Sources</b>	<b>104,430</b>	<b>5,903,917</b>	<b>6,008,347</b>
<b>Net Cost of Operations (Notes 9 and 10)</b>	<b>74,454</b>	<b>5,870,353</b>	<b>5,944,807</b>
<b>Cumulative Results of Operations (Note 9)</b>	<b>\$ 364,640</b>	<b>322,205</b>	<b>686,845</b>
 <b>Unexpended Appropriations</b>			
<b>Beginning Balances</b>	\$ -	7,587,271	7,587,271
<b>Budgetary Financing Sources</b>			
Appropriations Received	-	6,127,500	6,127,500
Appropriations Transferred In / (Out)	-	(2,240)	(2,240)
Other Adjustments	-	(66,365)	(66,365)
Appropriations Used	-	(5,833,031)	(5,833,031)
<b>Total Budgetary Financing Sources</b>	<b>-</b>	<b>225,864</b>	<b>225,864</b>
<b>Total Unexpended Appropriations</b>	<b>-</b>	<b>7,813,135</b>	<b>7,813,135</b>
<b>Net Position</b>	<b>\$ 364,640</b>	<b>8,135,340</b>	<b>8,499,980</b>

*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, 2007**  
**(Amounts in Thousands)**

	<u>2007</u>		
	<u>Earmarked</u>	<u>All Other</u>	<u>Total</u>
<b>Cumulative Results of Operations</b>			
<b>Beginning Balances (Note 9)</b>	\$ 279,282	271,120	550,402
<b>Budgetary Financing Sources</b>			
Appropriations Used	-	5,552,427	5,552,427
Non-exchange Revenue	-	407	407
Donations	-	40,874	40,874
Appropriated Earmarked Receipts Transferred In (Note 9)	107,359	-	107,359
<b>Other Financing Sources</b>			
Transfers In / (Out) Without Reimbursement	-	(2)	(2)
Imputed Financing From Costs Absorbed By Others	-	9,336	9,336
Other	-	(1,369)	(1,369)
<b>Total Financing Sources</b>	<b>107,359</b>	<b>5,601,673</b>	<b>5,709,032</b>
<b>Net Cost of Operations (Notes 9 and 10)</b>	<b>51,977</b>	<b>5,584,152</b>	<b>5,636,129</b>
<b>Cumulative Results of Operations (Note 9)</b>	<b>\$ 334,664</b>	<b>288,641</b>	<b>623,305</b>
<b>Unexpended Appropriations</b>			
<b>Beginning Balances</b>	\$ -	7,255,489	7,255,489
<b>Budgetary Financing Sources</b>			
Appropriations Received	-	5,917,165	5,917,165
Appropriations Transferred In / (Out)	-	5,710	5,710
Other Adjustments	-	(38,666)	(38,666)
Appropriations Used	-	(5,552,427)	(5,552,427)
<b>Total Budgetary Financing Sources</b>	<b>-</b>	<b>331,782</b>	<b>331,782</b>
<b>Total Unexpended Appropriations</b>	<b>-</b>	<b>7,587,271</b>	<b>7,587,271</b>
<b>Net Position</b>	<b>\$ 334,664</b>	<b>7,875,912</b>	<b>8,210,576</b>

*The accompanying notes are an integral part of these statements.*

**National Science Foundation**  
**Statement of Budgetary Resources (page 1 of 2)**  
**For the Years Ended September 30, 2008 and 2007**  
**(Amounts in Thousands)**

	<u>2008</u>	<u>2007</u>
<b>Budgetary Resources</b>		
Unobligated Balance - Brought Forward, October 1	\$ 218,677	\$ 203,544
Recoveries of Prior Year Unpaid Obligations	59,168	44,474
Budget Authority		
Appropriation	6,293,934	6,065,805
Spending Authority From Offsetting Collections		
Earned		
Collected	121,234	90,844
Change in Receivables From Federal Sources	(12,634)	(12,972)
Change in Unfilled Customer Orders		
Advance Received	25,243	70,425
Without Advance From Federal Sources	(31,520)	(41,296)
Subtotal - Budget Authority	<u>6,396,257</u>	<u>6,172,806</u>
Nonexpenditure Transfers, Net - Actual	(2,240)	5,710
Permanently Not Available	(66,365)	(38,666)
<b>Total Budgetary Resources (Note 13)</b>	<b>\$ <u>6,605,497</u></b>	<b>\$ <u>6,387,868</u></b>

*The accompanying notes are an integral part of these statements.*

**National Science Foundation**  
**Statement of Budgetary Resources (page 2 of 2)**  
**For the Years Ended September 30, 2008 and 2007**  
**(Amounts in Thousands)**

	<u>2008</u>	<u>2007</u>
<b>Status of Budgetary Resources</b>		
Obligations Incurred		
Direct (Note 12)	\$ 6,259,622	\$ 6,063,147
Reimbursable (Note 12)	102,305	106,044
Total Obligations Incurred (Notes 13 and 15)	<u>6,361,927</u>	<u>6,169,191</u>
Unobligated Balance - Apportioned (Note 2)	157,926	141,709
Unobligated Balance - Not Available (Notes 2 and 13)	85,644	76,968
<b>Total Status of Budgetary Resources (Note 13)</b>	<u><u>\$ 6,605,497</u></u>	<u><u>\$ 6,387,868</u></u>
<b>Change in Obligated Balances</b>		
Obligated Balance, Net		
Unpaid Obligations - Brought Forward, October 1	8,180,395	7,747,341
Less: Uncollected Customer Payments From Federal Sources - Brought Forward, October 1	(72,662)	(126,930)
Total Unpaid Obligated Balance, Net	<u>8,107,733</u>	<u>7,620,411</u>
Obligations Incurred (Note 13)	6,361,927	6,169,191
Less: Gross Outlays	(5,995,134)	(5,691,662)
Less: Recoveries of Prior Year Unpaid Obligations, Actual	(59,168)	(44,474)
Change in Uncollected Customer Payments From Federal Sources	44,154	54,267
Subtotal	<u>\$ 8,459,512</u>	<u>\$ 8,107,733</u>
Obligated Balance, Net - End of Period		
Unpaid Obligations	8,488,021	8,180,395
Less: Uncollected Customer Payments From Federal Sources	(28,509)	(72,662)
Total Unpaid Obligated Balance, Net - End of Period (Note 2)	<u>\$ 8,459,512</u>	<u>\$ 8,107,733</u>
<b>Net Outlays</b>		
Gross Outlays	5,995,134	5,691,662
Less: Offsetting Collections	(146,476)	(161,269)
Less: Distributed Offsetting Receipts	(1,038)	(1,535)
<b>Net Outlays</b>	<u><u>\$ 5,847,620</u></u>	<u><u>\$ 5,528,858</u></u>

*The accompanying notes are an integral part of these 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. By award, NSF enters into relationships to fund the research operations conducted by grantees.

NSF is headed by Director who is appointed by the President and confirmed by the Senate. The National Science Board (NSB), also appointed by the President with the consent of the Senate, meets about six times a year to establish the overall policies of the Foundation. The NSB, composed of 24 members, represents a cross section of American leaders in science and engineering research and education; members are appointed for six-year terms. The NSF Director is a member *ex officio* 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 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.

### **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 facilitate compliance with legal constraints and controls over the use of federal funds.

### **D. Revenues and Other Financing Sources**

NSF receives the majority of its funding through appropriations contained in the Science, State, Justice, Commerce, 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 special earmarked receipt account 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 donation account. Also, NSF receives interest earned on overdue receivables and excess cash advances to grantees. The interest earned on overdue receivables and excess cash advances to grantees is returned to the Treasury at the end of each fiscal year.

The Consolidated Appropriations Act of fiscal year 2008 under Public Law 110-161 provides funding for each of NSF's appropriations and rescinds a portion of carryover funding from prior years. Additionally, on June 30, 2008 Congress passed a Supplemental Appropriations Act under Public Law 110-252 that

provides annual funding to the Research and Related Activities and Education and Human Resources appropriations.

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 into the NSF Donations Account and use both U.S. and foreign funds. In accordance to 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 the 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. 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 grantees, contractors, and federal agencies. Advance payments are made to grant recipients so that recipients may incur expenditures related to the approved grant. Payments are only made within the amount of the recorded grant obligation and are intended to cover immediate cash needs. Advances to contractors are payments made in advance of incurring expenditures. Advances to federal agencies are only issued when agencies are operating under working capital funds and 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 (PP&E)**

NSF capitalizes PP&E with costs exceeding \$25 and useful lives of two or more years; those 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 at the cost recorded by the transferring entity for the asset net of accumulated depreciation or amortization.

The PP&E balance consists of Equipment, 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% 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 and depreciated over the respective useful life of the asset.

Depreciation expense is calculated using the straight line half year convention. The economic useful life classifications for capitalized assets are as follows:

Equipment

5 years	computers and peripheral equipment, fuel storage tanks, laboratory equipment, and vehicles
7 years	communications equipment
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
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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

Leasehold Improvements

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 fiscal year 2008, leasehold improvements completed during the year were amortized over 5 years, the remaining years on NSF's lease with GSA.

*Office Space:* The NSF Headquarter buildings are leased through the GSA under an occupancy agreement. 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.

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 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 5 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. Balances at the end of the year are adjusted by an allocated amount from the fourth quarter grantee expenditure estimate described under Note 1K, Accrued Liabilities - Grants. The amount to be allocated by Trading Partner is based on a percentage of reimbursable grant expenditures to total grant expenditures.

#### **J. Accounts Payable**

Accounts Payable consist 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 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 consist of disbursements in transit recorded by NSF but not paid by Treasury.

#### **K. Accrued Liabilities – Grants**

The total grant liabilities for the year are determined based on an estimate of prior quarter expenditures incurred and cash on hand held by the grantees. The majority of NSF's grantees are reimbursed for incurred costs, but due to the timing of the receipt of expenditure reports, grantees draw down funds prior to the recognition of the reimbursement for incurred costs. This timing constraint causes funding to grantees to be recorded as advances. The grant accrual calculation is based on historical trend analyses prepared by NSF. NSF uses a methodology to track the spending patterns by fiscal year and quarter for each of its fund groups. NSF determined that each appropriation and the year of the appropriation have a noted spending pattern. Based on historical information, NSF applies an average percentage rate to the current year grant related obligations for each individual appropriation within a fund group. The calculation provides NSF with the accrued expenditure.



NSF estimates the ending cash on hand balance in total for its grantees after the accrued grant expenditures have been determined. Based on an average of six years of historical cash on hand data, NSF applies the negative cash on hand rate to the estimated ending cash on hand to determine the amount to record as a liability. The difference between the total expenditure amount accrued and the liability recorded is used to reduce the advance.

**L. Accrued Liabilities - Contracts, Payroll, and Other**

Accrued Liabilities - Contracts, Payroll, and Other consist of contract accruals, accrued payroll, and benefits. The total contracts liabilities for the year are determined based on an estimate of prior quarter expenditures incurred by the three 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 the advance account. If the estimated accrual amount exceeds total advances, an accrued liability is recorded for the excess. NSF's payroll services are provided by the National Business Center under the Department of the Interior. Accrued payroll and benefits relate to services rendered by NSF employees but not yet paid. At year-end, NSF accrues the amount of wages and benefits earned, but not yet paid.

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 Agency Operations and Award Management appropriations. Sick leave and other types of non-vested leave are expensed as taken.

**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 appropriations will be used for DOL's estimated reimbursement.

**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 is the net result of NSF's operations since inception.

**O. Retirement Plan**

In fiscal year 2008, approximately 19 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/asd/pdf/2008/08-304.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 have also been 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 it is 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 rather than probable.

*Termination Claims:* NSF engages organizations 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.

*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."

**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 consisted of the following components as of September 30, 2008 and 2007:

(Amounts in Thousands)	2008			
	Appropriated Funds	Donated Funds	Earmarked Funds	Total
Obligated	\$ 8,104,439	\$ 37,853	\$ 317,220	\$ 8,459,512
Unobligated Available	66,934	44,028	46,964	157,926
Unobligated Unavailable	81,779	-	3,865	85,644
Less: Budgetary Non-FBWT	-	(30,410)	-	(30,410)
<b>Total FBWT</b>	<b>\$ 8,253,152</b>	<b>\$ 51,471</b>	<b>\$ 368,049</b>	<b>\$ 8,672,672</b>

(Amounts in Thousands)	2007			
	Appropriated Funds	Donated Funds	Earmarked Funds	Total
Obligated	\$ 7,809,538	\$ 24,271	\$ 273,924	\$ 8,107,733
Unobligated Available	50,894	31,369	59,446	141,709
Unobligated Unavailable	73,034	10	3,924	76,968
Less: Budgetary Non-FBWT	-	(16,228)	-	(16,228)
<b>Total FBWT</b>	<b>\$ 7,933,466</b>	<b>\$ 39,422</b>	<b>\$ 337,294</b>	<b>\$ 8,310,182</b>

The Donations Account includes amounts donated to NSF from all sources. Funds in the Donations Account may be used in furtherance of one or more of the general purposes of the Foundation. The donated funds are held as Fund Balance With Treasury (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 \$33,200 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 fiscal year 1999, in accordance with P.L. 105-277, a special fund named H-1B Nonimmigrant Petitioner Fees Account was established in the general fund of the U.S. Treasury. These funds are considered Earmarked Funds and are not included in Appropriated Funds. The funds represent fees collected for each petition for nonimmigrant status. Under the law, NSF was prescribed a percentage of these fees for specific programs.

### Note 3. Advances

*Intragovernmental*

As of September 30, 2008 and 2007, Intragovernmental Advances were \$15,284 and \$35,255 respectively.

*Public*

(Amounts in Thousands)	2008	2007
Advances to Grantees	\$ 54,549	\$ 68,578
Advances to Contractors	-	10,748
Total Advances to the Public	\$ 54,549	\$ 79,326

### Note 4. General Property, Plant and Equipment, Net

The components of General Property, Plant and Equipment as of September 30, 2008 and 2007 were:

(Amounts in Thousands)	2008		
	Acquisition Cost	Accumulated Depreciation	Net Book Value
Equipment	\$ 117,839	\$ (94,592)	\$ 23,247
Aircraft and Satellites	138,487	(135,287)	3,200
Buildings and Structures	274,776	(76,848)	197,928
Leasehold Improvements	6,490	(2,580)	3,910
Construction in Progress	26,167	-	26,167
Internal Use Software	7,091	(6,447)	644
Software in Development	14,698	-	14,698
Total PP&E	\$ 585,548	\$ (315,754)	\$ 269,794

(Amounts in Thousands)	2007		
	Acquisition Cost	Accumulated Depreciation	Net Book Value
Equipment	\$ 108,239	\$ (90,329)	\$ 17,910
Aircraft and Satellites	138,487	(128,886)	9,601
Buildings and Structures	240,165	(67,208)	172,957
Leasehold Improvements	4,688	(1,591)	3,097
Construction in Progress	52,043	-	52,043
Internal Use Software	7,879	(6,344)	1,535
Software in Development	3,064	-	3,064
Total PP&E	\$ 554,565	\$ (294,358)	\$ 260,207

### Note 5. Property, Plant and Equipment in the Custody of Other Entities

As explained in Note 1H, in the *Assets Owned by NSF in the Custody of Other Entities* section, NSF received a ruling from FASAB on accounting for PP&E owned by NSF but in the custody of and used by

others. 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, 2008 there were 33 colleges or universities, and 32 commercial entities that held property titled to NSF. None of the colleges or universities reported NSF titled property separately; however, one commercial entity, UNAVCO Inc., reported NSF titled property with a net book value of \$18,786.

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

(Amounts in Thousands)

<u>Federally Funded Research and Development Centers</u>	<u>Amount</u>	<u>Fiscal Year Ending</u>
National Astronomy & Ionosphere Center (Cornell) - NAIC	\$ N/A	6/30
University Corporation for Atmospheric Research - UCAR	168,550	9/30
Association of Universities for Research in Astronomy, Inc. - AURA	465,584	9/30
National Radio Astronomy Observatory - AUI	N/A	9/30

## **Note 6. Estimated Clean-Up Cost Liability**

### Antarctic

NSF is not legally liable for environmental clean-up costs in the Antarctic. Article 16 to the Protocol on Environmental Protection to the Antarctic Treaty (1991) requires that the Treaty Parties "undertake to elaborate rules and procedures relating to liability for damage arising from activities taking place in the Antarctic Treaty area. . ." Negotiations relating to the terms of the Liability Annex were concluded and the terms of the Annex finalized in 2005. The liability contemplated by the Annex is narrow: it is only prospective in its focus and generally imposes liability only when an operator fails to take response action to an environmental emergency. Regardless, as the Annex cannot enter into force until all 28 Antarctic Treaty Consultative Parties have ratified its provisions (which typically requires the enactment of national laws by each Consultative Party), no legal liability for environmental clean up costs will arise for NSF for many years to come.

There are occasions when the NSF Office of Polar Programs (OPP) chooses to accept responsibility and commit funds toward clean-up efforts of various sites as resources permit. Those decisions 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. For those projects/incidents that OPP decides it may fund and that cannot be accomplished within allocated operations and maintenance funding, the support contractor is directed to develop a preliminary estimate. Final estimates, and approval to proceed, will depend on an assessment of risk to the environment, availability of personnel, and accessibility to a site in any given year.

Environmental clean-up projects started and completed during the year are reflected in NSF's financial statements as expenses for the current fiscal year. However, for approved projects that are anticipated to be performed after the fiscal year-end or will take more than one fiscal year to complete, an estimated cost is accrued in NSF's financial statements. At September 30, 2008 and 2007, no funds have been accrued for multi-year environmental clean-up projects in the Antarctic.

*Other*

NSF is continuing its actions to assess the condition of the Columbia Scientific Balloon Facility (CSBF) site before completing a no-cost transfer through the GSA to the National Aeronautics and Space Administration (NASA). NASA engineers reported ten wells on the CSBF site and are aware of one contaminated well from battery disposal. Future outflow is probable, however predicting the cost for remediation of unknown contaminants is uncertain. NSF has paid and transferred funds to NASA for completion of Phase I and II of the Environmental Due Diligence Audit (EDDA) for the CSBF environmental assessment. A final Affected Property Assessment Report (APAR) was delivered in February 2008 to the Texas Commission on Environmental Quality (TCEQ). The TCEQ has requested additional testing of a new monitoring well for sampling over a six month period.

NSF estimates, in consultation with the Office of General Counsel, that the clean-up costs will range between \$50 and \$200, the lower of which is reflected on the balance sheet as Other Intragovernmental Liabilities. This estimate is based upon the potential need for additional activities associated with the Phase II Sampling and Analysis and testing of an additional monitoring well.

**Note 7. Leases**

NSF leases its Headquarter buildings under an operating lease with the GSA. The following is a schedule of future minimum rental payments for the Headquarter buildings.

(Amounts in Thousands)

Fiscal Year	Operating Lease Amount
2009	\$ 20,604
2010	20,302
2011	20,591
2012	20,911
2013	19,882
2014	4,581
Total Minimum Lease Payments	\$ 106,871

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 utilizes 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 and office space in Denver, Colorado. The agreement to occupy space in Denver, Colorado is an annual MOU with the Department of Commerce and the lease to occupy residential space in Tokyo is a cancellable agreement between the United States Government and the lessor. All NSF leases are cancellable and/or for a period not more than a year.

### **Note 8. Commitments and Contingencies**

*Cost Incurred Audits:* A large NSF contractor provides maintenance and operations services to the United States Antarctic Program. Cost incurred audits have been completed on the contractor for fiscal years 2000 to 2004. Of the amount originally questioned, \$29,000 remains unresolved. A corresponding receivable is not reflected in the balance sheet due to the uncertainty of NSF recovering any of these questioned costs.

*Claims:* Contractor claims for additional compensation under a contract awarded by the United States Air Force (USAF) for the reconfiguration of three NSF owned LC130 aircrafts, were paid by the Treasury Judgment Fund for \$3,000 and are reflected on the Other Intragovernmental Liabilities line of the balance sheet. In a good faith effort to make the Treasury Judgment Fund whole, NSF submitted a request for funds in its fiscal year 2007 budget submission in order to reimburse the Treasury Judgment Fund. However, neither the year-long continuing resolution of fiscal year 2007, nor the appropriations bill of fiscal year 2008 provided those funds. NSF continues to maintain that USAF should be the responsible party, and is seeking a decision from the Department of Justice Office of Legal Counsel to that effect.

*FFRDC Termination Claims:* NSF provides financial assistance for the operation and maintenance of four FFRDCs by cooperative agreement. These agreements include a clause that commits NSF to seek appropriations for termination expenses, if necessary, in the event an agreement is not renewed or is terminated.

NSF is obligated to pay termination expenses 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. Although one FFRDC operator has identified these payments as a current obligation of NSF, the termination clause of the agreement clearly states that any obligation for these expenses exists only upon termination of the agreement and is limited to the lesser of available appropriations or \$25,000.

NSF considers non-renewal or termination of these cooperative agreements only remotely possible. Termination costs that may be payable to an FFRDC operator cannot be estimated until such time as the cooperative agreement is terminated.

### **Note 9. Earmarked Funds**

In fiscal year 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 earmarked funds are accounted for in its own Treasury Account Fund Symbol (TAFS) and the budgetary resources for the earmarked fund are recorded as Appropriated Earmarked Receipts Transferred In, and reported according to the guidance for earmarked funds in SFFAS No. 27, "Identifying and Reporting Earmarked Funds."

*Notes to the Principal Financial Statements*  
*September 30, 2008 and 2007 (Dollar Amounts in Thousands)*

(Amounts in Thousands)	2008 Earmarked Funds	2007 Earmarked Funds
<b>Balance Sheet as of September 30, 2008 and 2007</b>		
Fund Balance with Treasury	\$ 368,049	\$ 337,294
Advances	631	596
Total Assets	<u>368,680</u>	<u>337,890</u>
Other Liabilities	4,040	3,226
Total Liabilities	<u>4,040</u>	<u>3,226</u>
Cumulative Results of Operations	364,640	334,664
Total Liabilities and Net Position	<u>\$ 368,680</u>	<u>\$ 337,890</u>
<b>Statement of Net Cost for the Years Ended September 30, 2008 and 2007</b>		
Program Costs	\$ 74,454	\$ 51,977
Less: Earned Revenues	-	-
Net Cost of Operations	<u>\$ 74,454</u>	<u>\$ 51,977</u>
<b>Statement of Changes in Net Position For the Years Ended September 30, 2008 and 2007</b>		
Net Position Beginning of Period	\$ 334,664	\$ 279,282
Appropriated Earmarked Receipts Transferred In	104,430	107,359
Net Cost of Operation	(74,454)	(51,977)
Change in Net Position	<u>29,976</u>	<u>55,382</u>
Net Position End of Period	<u>\$ 364,640</u>	<u>\$ 334,664</u>

**Note 10. Statement of Net Cost**

*Major Program Descriptions*

The Statement of Net Cost presents the NSF-wide expenses incurred by the Foundation. The presentation of the NSF's net cost by strategic goal is included in this note. The Statement of Net Cost reflects the Foundation's strategic framework set forth in NSF's strategic plan, "Investing in America's Future: Strategic Plan FY 2006-2011."

The strategic goals outlined are: Discovery, Learning, and Research Infrastructure. NSF's fourth strategic goal, Stewardship, focuses on NSF's administrative and management activities. In pursuit of its mission, NSF makes investments in Discovery, Learning, and Research Infrastructure. These goals reflect outcomes at the heart of the research enterprise: fostering research that will advance the frontiers of knowledge (Discovery); cultivating a world-class, broadly inclusive science and engineering workforce and expanding the scientific literacy of all citizens (Learning); and building the nation's research capability through critical investments in advanced instrumentation, facilities, cyberinfrastructure, and experimental tools (Research Infrastructure).



Net costs are presented for the three primary appropriations that fund NSF's programmatic activities (Research and Related Activities, Education and Human Resources, and Major Research Equipment and Facilities Construction) and for donations and earmarked funds that are classified in the Statement of Net Cost and its related footnote as "Costs Not Assigned To Other Programs". Stewardship costs are prorated among them. Stewardship costs include expenditures incurred from the Agency Operations and Award Management (AOAM), National Science Board (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 information systems technology; staff training, audit, and OIG activities; and Office of Personnel Management (OPM) and Department of Labor (DOL) benefits costs paid on behalf of NSF.

At September 30, 2008 and 2007, approximately 95 percent of NSF's expenses were directly related to the Discovery, Learning, and Research Infrastructure strategic outcome goals. Net costs for each strategic goal is determined by allocating total costs by the percentage for which obligations for each strategic outcome goal accounted for total obligations in the current year. All NSF earmarked funds are allocated to the Learning strategic goal. The remaining portion of NSF's expenses relate to the Stewardship strategic goal.

At September 30, 2008 and 2007, costs related to the Stewardship activities totaled \$283,245 and \$275,993, respectively. All Stewardship costs are prorated to the other three strategic goals based on the percentage that each Strategic Goal's expenditures account for the total expenditures of appropriated, trust, and earmarked funds.

In accordance with *OMB Circular A-136*, costs incurred for services provided by other federal entities are reported in the full costs of NSF programs and are identified 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.

*Notes to the Principal Financial Statements*  
*September 30, 2008 and 2007 (Dollar Amounts in Thousands)*

*Intragovernmental and Public Costs and Earned Revenue by Strategic Goal*

(Amounts in Thousands)	2008		
	Federal	Public	Total
<b>Research and Related Activities</b>			
Discovery	\$ 155,978	2,621,404	2,777,382
Learning	40,162	674,975	715,137
Research Infrastructure	75,410	1,267,347	1,342,757
<b>Total Research and Related Activities</b>	<b>271,550</b>	<b>4,563,726</b>	<b>4,835,276</b>
Less: Earned Revenue	(99,471)	-	(99,471)
<b>Net Research and Related Activities</b>	<b>172,079</b>	<b>4,563,726</b>	<b>4,735,805</b>
<b>Education and Human Resources</b>			
Discovery	\$ 2,942	496,850	499,792
Learning	758	127,932	128,690
Research Infrastructure	1,422	240,207	241,629
<b>Total Education and Human Resources</b>	<b>5,122</b>	<b>864,989</b>	<b>870,111</b>
Less: Earned Revenue	(8,914)	-	(8,914)
<b>Net Education and Human Resources</b>	<b>(3,792)</b>	<b>864,989</b>	<b>861,197</b>
<b>Major Research Equipment and Facilities Construction</b>			
Discovery	\$ 4,350	129,002	133,352
Learning	1,120	33,216	34,336
Research Infrastructure	2,103	62,367	64,470
<b>Total Major Research Equipment and Facilities Construction</b>	<b>7,573</b>	<b>224,585</b>	<b>232,158</b>
Less: Earned Revenue	-	-	-
<b>Net Major Research Equipment and Facilities Construction</b>	<b>7,573</b>	<b>224,585</b>	<b>232,158</b>
<b>Costs Not Assigned To Other Programs</b>			
Learning	\$ 542	76,863	77,405
Research Infrastructure	-	38,242	38,242
<b>Total Costs Not Assigned To Other Programs</b>	<b>542</b>	<b>115,105</b>	<b>115,647</b>
Less: Earned Revenue	-	-	-
<b>Net Costs Not Assigned To Other Programs</b>	<b>542</b>	<b>115,105</b>	<b>115,647</b>
<b>Net Cost of Operations</b>	<b>\$ 176,402</b>	<b>5,768,405</b>	<b>5,944,807</b>

*Notes to the Principal Financial Statements*  
*September 30, 2008 and 2007 (Dollar Amounts in Thousands)*

(Amounts in Thousands)	2007		
	Federal	Public	Total
<b>Research and Related Activities</b>			
Discovery	\$ 115,522	2,478,343	2,593,865
Learning	28,328	607,741	636,069
Research Infrastructure	56,918	1,221,081	1,277,999
<b>Total Research and Related Activities</b>	<b>200,768</b>	<b>4,307,165</b>	<b>4,507,933</b>
Less: Earned Revenue	(68,500)	-	(68,500)
<b>Net Research and Related Activities</b>	<b>132,268</b>	<b>4,307,165</b>	<b>4,439,433</b>
<b>Education and Human Resources</b>			
Discovery	\$ 2,828	517,611	520,439
Learning	694	126,929	127,623
Research Infrastructure	1,393	255,027	256,420
<b>Total Education and Human Resources</b>	<b>4,915</b>	<b>899,567</b>	<b>904,482</b>
Less: Earned Revenue	(8,270)	-	(8,270)
<b>Net Education and Human Resources</b>	<b>(3,355)</b>	<b>899,567</b>	<b>896,212</b>
<b>Major Research Equipment and Facilities Construction</b>			
Discovery	\$ 8,775	119,496	128,271
Learning	2,152	29,303	31,455
Research Infrastructure	4,324	58,876	63,200
<b>Total Major Research Equipment and Facilities Construction</b>	<b>15,251</b>	<b>207,675</b>	<b>222,926</b>
Less: Earned Revenue	-	-	-
<b>Net Major Research Equipment and Facilities Construction</b>	<b>15,251</b>	<b>207,675</b>	<b>222,926</b>
<b>Costs Not Assigned To Other Programs</b>			
Learning	\$ -	54,120	54,120
Research Infrastructure	516	22,922	23,438
<b>Total Costs Not Assigned To Other Programs</b>	<b>516</b>	<b>77,042</b>	<b>77,558</b>
Less: Earned Revenue	-	-	-
<b>Net Costs Not Assigned To Other Programs</b>	<b>516</b>	<b>77,042</b>	<b>77,558</b>
<b>Net Cost of Operations</b>	<b>\$ 144,680</b>	<b>5,491,449</b>	<b>5,636,129</b>

**Note 11. Permanent Indefinite Appropriations**

NSF maintains permanent indefinite appropriations for Research and Related Activities (R&RA) and Major Research Equipment and Facilities Construction (MREFC).

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 United States Antarctic program. In fiscal years 2008 and 2007, the permanent indefinite appropriations for R&RA were \$444,010 and \$439,550, respectively, and are reported as current year transfers from the annual R&RA appropriation.

The MREFC appropriation supports the construction and procurement of unique national research platforms and major research equipment. In fiscal years 2008 and 2007, the permanent indefinite appropriations for MREFC were \$220,740 and \$190,881, respectively.

**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 fiscal years 2008 and 2007, NSF's SF-132, "Apportionment and Reapportionment Schedule," apportions all obligations incurred under Category B which is by activity, project, or object. In fiscal years 2008 and 2007, direct obligations amounted to \$6,259,622 and \$6,063,147, respectively, and reimbursable obligations amounted to \$102,305 and \$106,044, 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 fiscal year 2008 actual budgetary execution information has not yet been published. The President's Budget is scheduled for publication in the spring of fiscal year 2009 and can be found on the OMB web site: <http://www.whitehouse.gov/omb>.

Balances reported in the fiscal year 2007 SBR and the related President's Budget are shown in a table below for Budgetary Resources, Obligations Incurred, Unobligated Balance - Unavailable, 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.

(Amounts in Thousands)	2007		
	Budgetary Resources	Obligations Incurred	Unobligated Balance - Unavailable
Combined Statement of Budgetary Resources	\$ 6,387,868	\$ 6,169,191	\$ 76,968
Budget of the U.S. Government	\$ 6,312,053	\$ 6,164,368	\$ 5,976
Difference	\$ 75,815	\$ 4,823	\$ 70,992

**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 resources obligated for undelivered orders for the periods ended September 30, 2008 and 2007, amounted to \$8,120,099 and \$7,870,354, respectively.

**Note 15. Reconciliation of Net Cost of Operations to Budget**

(Amounts in Thousands)	2008	2007
Resources Used To Finance Activities		
Budgetary Resources Obligated		
Obligations Incurred	\$ 6,361,927	\$ 6,169,191
Less: Spending Authority from Offsetting Collections and Recoveries	(161,491)	(151,475)
Obligations Net of Offsetting Collections and Recoveries	6,200,436	6,017,716
Less: Offsetting Receipts	(1,038)	(1,535)
Net Obligations	6,199,398	6,016,181
Other Resources		
Imputed Financing	9,048	9,336
Other Resources	(166)	(1,375)
Net Other Resources Used to Finance Activities	8,882	7,961
Total Resources Used to Finance Activities	6,208,280	6,024,142
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	(256,022)	(390,902)
Resources that Fund Expenses Recognized in Prior Periods	(144)	(280)
Budgetary Offsetting Collections and Receipts that Do Not Affect Net Cost of Operations	1,038	1,535
Resources that Finance the Acquisition of Assets	(34,945)	(21,539)
Total Resources Used to Finance Items Not Part of the Net Cost of Operations	(290,073)	(411,186)
Total Resources Used to Finance Net Cost of Operations	5,918,207	5,612,956
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	1,243	383
Total Components of Net Cost of Operations that will Require or Generate Resources in Future Periods	1,243	383
Components Not Requiring or Generating Resources		
Depreciation and Amortization	25,248	21,478
Other	109	1,312
Total Components of Net Cost of Operations that will not Require or Generate Resources	25,357	22,790
Total Components of Net Cost of Operations that Will Not Require or Generate Resources in the Current Period	26,600	23,173
Net Cost of Operations	\$ 5,944,807	\$ 5,636,129

**Required Supplementary Stewardship Information**  
Stewardship Investments  
For the Years Ended September 30, 2008 and 2007

**Stewardship Investments  
Research and Human Capital**

(Dollar Amounts in Thousands)

**Research and Human Capital Activities**

	<u>2008</u>	<u>2007</u>	<u>2006</u>	<u>2005</u>	<u>2004</u>
Basic Research	4,449,062	4,195,444	3,682,266	3,564,093	3,494,302
Applied Research	409,516	432,820	339,757	291,169	209,225
Education and Training	911,369	808,642	1,378,472	1,386,952	1,224,058
Non-Investing Activities	283,245	275,993	321,085	292,426	268,298
<b>Total Research &amp; Human Capital Activities</b>	<u>\$ 6,053,192</u>	<u>\$ 5,712,899</u>	<u>\$ 5,721,580</u>	<u>\$ 5,534,640</u>	<u>\$ 5,195,883</u>

**Inputs, Outputs and/or Outcomes**

**Research and Human Capital Activities**

Investments In:

Universities	4,189,050	4,016,101	3,994,682	3,970,851	3,705,751
Industry	251,695	208,696	199,523	223,563	196,260
Federal Agencies	256,186	203,759	221,002	143,316	107,212
Small Business	224,793	220,602	218,334	193,199	200,995
Federally Funded R&D Centers	229,259	335,731	299,802	278,542	269,968
Non-Profit Organizations	444,236	421,775	428,648	418,209	374,838
Other	457,973	306,235	359,589	306,960	340,859
	<u>\$ 6,053,192</u>	<u>\$ 5,712,899</u>	<u>\$ 5,721,580</u>	<u>\$ 5,534,640</u>	<u>\$ 5,195,883</u>

Support To:

Scientists	512,147	496,431	473,457	454,053	477,970
Postdoctoral Programs	164,519	163,896	158,528	162,132	175,680
Graduate Students	615,621	585,308	544,513	538,233	546,084
	<u>\$ 1,292,287</u>	<u>\$ 1,245,635</u>	<u>\$ 1,176,498</u>	<u>\$ 1,154,418</u>	<u>\$ 1,199,734</u>

**Outputs & Outcomes:**

Number of:

	<u>2008</u>	<u>2007</u>	<u>2006</u>	<u>2005</u>	<u>2004</u>
Awards Actions	23,000	23,000	22,000	22,000	23,000
Senior Researchers	43,000	41,000	32,000	32,000	31,000
Other Professionals	12,000	13,000	11,000	12,000	15,000
Postdoctoral Associates	6,000	6,000	5,000	6,000	6,000
Graduate Students	37,000	35,000	26,000	27,000	29,000
Undergraduate Students	24,000	23,000	27,000	33,000	35,000
K-12 Students	13,000	11,000	8,000	11,000	14,000
K-12 Teachers	62,000	61,000	59,000	74,000	86,000

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. Basic and applied research expenses

are determined by prorating the program costs of NSF's strategic goals on Research Infrastructure and Discovery reported on the Statement of Net Cost. The proration uses the basic and applied research percentages of total estimated research and development obligations reported in the current year Budget Request to OMB. The actual numbers are not available until later in the following fiscal year. Education and Training costs equate to NSF's third strategic goal, Learning, and the costs related to Non-Investing activities reflect the fourth strategic goal, Stewardship.

The data provided for Scientists, Postdoctoral Associates, and Graduate Students are obtained from NSF's proposal system and is information reported by each Principal Investigator. The number of award actions is from NSF's Enterprise Information System (EIS). The remaining outputs and outcomes are estimates of the total fiscal year 2008 amounts obtained annually from the NSF Directorates.

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.



**Required Supplementary Information**  
Deferred Maintenance  
For the Years Ended September 30, 2008 and 2007

**Deferred Maintenance**  
**(Dollar Amounts in Thousands)**

NSF performs condition assessment surveys in accordance with FASAB Standards No. 6 and No. 14 for capitalized property, plant and equipment to determine if any maintenance is needed to keep an asset in an acceptable condition or restore an asset to a specific level of performance. NSF considers deferred maintenance to be any maintenance that is 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 also includes any other type of maintenance 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.

NSF considered whether any scheduled maintenance necessary to keep fixed assets of the agency in an acceptable condition was deferred at the end of the period for fiscal years 2008 and 2007. 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 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 on assets in poor condition is considered critical in order to maintain operational status.

At September 30, 2008, NSF determined that scheduled maintenance on 14 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 \$24. The items include light and heavy mobile and power distribution equipment. All items are considered critical to NSF operations and are estimated to require \$98 in maintenance.

At September 30, 2007, NSF determined that scheduled maintenance on 17 items of Antarctic capital equipment in poor condition were not completed and were deferred or delayed for a future period. The largest dollar amount of deferred maintenance for any single item in poor condition approximated \$34. The items include light and heavy mobile equipment, all of which is considered critical to NSF operations and estimated to require \$106 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, 2008 and 2007, as presented in the Statement of Budgetary Resources, is disaggregated for each of NSF's major budget accounts.

**Combining Statement of Budgetary Resources (page 1 of 2)**

**2008**

(Amounts in Thousands)

	<u>Research and Related</u>	<u>Education</u>	<u>Major Research Equipment</u>	<u>OIG, S&amp;E, and NSB</u>	<u>Special and Donated</u>	<u>Total</u>
<b>Budgetary Resources</b>						
Unobligated Balance - Brought Forward, October 1	\$ 70,495	18,937	27,600	6,897	94,748	\$ 218,677
Recoveries of Prior Year Obligations	37,741	13,375	214	3,571	4,267	59,168
Budget Authority						
Appropriation	4,843,974	765,600	220,740	297,186	166,434	6,293,934
Spending Authority from Offsetting Collections						
Earned						
Collected	107,856	8,102	-	5,274	2	121,234
Change in Receivable from Federal Sources	(12,568)	448	-	(514)	-	(12,634)
Change in Unfilled Customer Orders						
Advance Received	20,017	5,176	-	50	-	25,243
Without Advance from Federal Sources	(27,024)	(4,528)	-	32	-	(31,520)
Subtotal - Budget Authority	<u>4,932,255</u>	<u>774,798</u>	<u>220,740</u>	<u>302,028</u>	<u>166,436</u>	<u>6,396,257</u>
Nonexpenditure Transfers, Net -						
Anticipated and Actual	(2,240)	-	-	-	-	(2,240)
Permanantly Not Available	(36,665)	(11,578)	(15,275)	(2,847)	-	(66,365)
<b>Total Budgetary Resources</b>	<b><u>\$ 5,001,586</u></b>	<b><u>795,532</u></b>	<b><u>233,279</u></b>	<b><u>309,649</u></b>	<b><u>265,451</u></b>	<b><u>\$ 6,605,497</u></b>
<b>Status of Budgetary Resources</b>						
Obligations Incurred						
Direct	\$ 4,856,135	767,446	166,846	298,600	170,595	\$ 6,259,622
Reimbursable	88,367	9,231	-	4,707	-	102,305
Total Obligations Incurred	<u>4,944,502</u>	<u>776,677</u>	<u>166,846</u>	<u>303,307</u>	<u>170,595</u>	<u>6,361,927</u>
Unobligated Balance - Apportioned	133	6	66,398	398	90,991	157,926
Unobligated Balance - Not Available	56,951	18,849	35	5,944	3,865	85,644
<b>Total Status Of Budgetary Resources</b>	<b><u>\$ 5,001,586</u></b>	<b><u>795,532</u></b>	<b><u>233,279</u></b>	<b><u>309,649</u></b>	<b><u>265,451</u></b>	<b><u>\$ 6,605,497</u></b>

**Combining Statement of Budgetary Resources (page 2 of 2)**

**2008**

**(Amounts in Thousands)**

**Change in Obligated Balances**

Obligated Balance, Net							
Unpaid Obligations - Brought forward,							
October 1	6,204,685	1,398,516	222,241	56,757	298,196	8,180,395	
Less: Uncollected Customer Payments from							
Federal Sources Brought Forward, October 1	(62,564)	(9,346)	-	(752)	-	(72,662)	
Total Unpaid Obligated Balance, Net	<u>6,142,121</u>	<u>1,389,170</u>	<u>222,241</u>	<u>56,005</u>	<u>298,196</u>	<u>8,107,733</u>	
Obligations Incurred	4,944,505	776,677	166,845	303,305	170,595	6,361,927	
Less: Gross Outlays	(4,553,367)	(839,378)	(212,169)	(280,769)	(109,451)	(5,995,134)	
Less: Recoveries of Prior Year Unpaid							
Obligations, Actual	(37,741)	(13,375)	(214)	(3,571)	(4,267)	(59,168)	
Change in Uncollected Customer Payments							
from Federal Sources	39,592	4,080	-	482	-	44,154	
Subtotal	<u>\$ 6,535,110</u>	<u>1,317,174</u>	<u>176,703</u>	<u>75,452</u>	<u>355,073</u>	<u>\$ 8,459,512</u>	
Obligated Balance, Net - End of Period							
Unpaid Obligations	6,558,083	1,322,440	176,703	75,722	355,073	8,488,021	
Less: Uncollected Customer							
Payments from Federal Sources	(22,973)	(5,266)	-	(270)	-	(28,509)	
Total Unpaid Obligated Balance, Net - End of Period	<u>\$ 6,535,110</u>	<u>1,317,174</u>	<u>176,703</u>	<u>75,452</u>	<u>355,073</u>	<u>\$ 8,459,512</u>	
<b>Net Outlays</b>							
Gross Outlays	4,553,367	839,378	212,169	280,769	109,451	5,995,134	
Less: Offsetting Collections	(127,873)	(13,278)	-	(5,323)	(2)	(146,476)	
Less: Distributed Offsetting Receipts	-	-	-	-	(1,038)	(1,038)	
<b>Net Outlays</b>	<u>\$ 4,425,494</u>	<u>826,100</u>	<u>212,169</u>	<u>275,446</u>	<u>108,411</u>	<u>\$ 5,847,620</u>	

**Combining Statement of Budgetary Resources (page 1 of 2)**

**2007**  
**(Amounts in Thousands)**

	<u>Research and Related</u>	<u>Education</u>	<u>Major Research Equipment</u>	<u>OIG, S&amp;E, and NSB</u>	<u>Special and Donated</u>	<u>Total</u>
<b>Budgetary Resources</b>						
Unobligated Balance - Brought Forward, October 1	\$ 49,770	27,293	2,777	7,417	116,287	\$ 203,544
Recoveries of Prior Year Obligations	28,137	8,972	152	3,439	3,774	44,474
Budget Authority						
Appropriation	4,665,950	796,693	190,881	263,641	148,640	6,065,805
Spending Authority from Offsetting Collections:						
Earned						
Collected	78,821	7,814	-	4,206	3	90,844
Change in Receivable from Federal Sources	(13,583)	160	-	451	-	(12,972)
Change in Unfilled Customer Orders						
Advance Received	67,123	3,265	-	37	-	70,425
Without Advance from Federal Sources	(38,709)	(2,634)	-	47	-	(41,296)
Subtotal - Budget Authority	<u>4,759,602</u>	<u>805,298</u>	<u>190,881</u>	<u>268,382</u>	<u>148,643</u>	<u>6,172,806</u>
Nonexpenditure Transfers, Net -						
Anticipated and Actual	5,460	-	-	250	-	5,710
Permanently Not Available	(20,867)	(16,043)	-	(1,756)	-	(38,666)
<b>Total Budgetary Resources</b>	<b>\$ <u>4,822,102</u></b>	<b><u>825,520</u></b>	<b><u>193,810</u></b>	<b><u>277,732</u></b>	<b><u>268,704</u></b>	<b>\$ <u>6,387,868</u></b>
<b>Status of Budgetary Resources</b>						
Obligations Incurred						
Direct	\$ 4,658,673	798,151	166,210	266,157	173,956	\$ 6,063,147
Reimbursable	92,934	8,432	-	4,678	-	106,044
Total Obligations Incurred	<u>4,751,607</u>	<u>806,583</u>	<u>166,210</u>	<u>270,835</u>	<u>173,956</u>	<u>6,169,191</u>
Unobligated Balance - Apportioned	22,194	99	27,573	1,029	90,814	141,709
Unobligated Balance - Not Available	48,301	18,838	27	5,868	3,934	76,968
<b>Total Status of Budgetary Resources</b>	<b>\$ <u>4,822,102</u></b>	<b><u>825,520</u></b>	<b><u>193,810</u></b>	<b><u>277,732</u></b>	<b><u>268,704</u></b>	<b>\$ <u>6,387,868</u></b>

**Combining Statement of Budgetary Resources (page 2 of 2)**

**2007**

**(Amounts in Thousands)**

**Change in Obligated Balances**

Obligated Balance, Net							
Unpaid Obligations - Brought forward,							
October 1	5,768,192	1,469,459	264,130	56,422	189,138		7,747,341
Less: Uncollected Customer Payments from							
Federal Sources Brought Forward, October 1	(114,854)	(11,820)	-	(256)	-		(126,930)
Total Unpaid Obligated Balance, Net	<u>5,653,338</u>	<u>1,457,639</u>	<u>264,130</u>	<u>56,166</u>	<u>189,138</u>		<u>7,620,411</u>
Obligations Incurred	4,751,607	806,583	166,210	270,835	173,956		6,169,191
Less: Gross Outlays	(4,286,976)	(868,554)	(207,947)	(267,061)	(61,124)		(5,691,662)
Less: Recoveries of Prior Year Unpaid							
Obligations, Actual	(28,137)	(8,972)	(152)	(3,439)	(3,774)		(44,474)
Change in Uncollected Customer Payments							
from Federal Sources	52,289	2,474	-	(496)	-		54,267
Subtotal	<u>\$ 6,142,121</u>	<u>1,389,170</u>	<u>222,241</u>	<u>56,005</u>	<u>298,196</u>	<u>\$</u>	<u>8,107,733</u>
Obligated Balance, Net - End of Period							
Unpaid Obligations	6,204,685	1,398,516	222,241	56,757	298,196		8,180,395
Less: Uncollected Customer							
Payments from Federal Sources	(62,564)	(9,346)	-	(752)	-		(72,662)
Total Unpaid Obligated Balance, Net - End of Period	<u>\$ 6,142,121</u>	<u>1,389,170</u>	<u>222,241</u>	<u>56,005</u>	<u>298,196</u>	<u>\$</u>	<u>8,107,733</u>
<b>Net Outlays</b>							
Gross Outlays	4,286,976	868,554	207,947	267,061	61,124		5,691,662
Less: Offsetting Collections	(145,943)	(11,079)	-	(4,244)	(3)		(161,269)
Less: Distributed Offsetting Receipts	-	-	-	-	(1,535)		(1,535)
<b>Net Outlays</b>	<u>\$ 4,141,033</u>	<u>857,475</u>	<u>207,947</u>	<u>262,817</u>	<u>59,586</u>	<u>\$</u>	<u>5,528,858</u>

## **OTHER FINANCIAL REPORTING INFORMATION**

### **Debt Collection Improvement Act of 1996**

Net Accounts Receivable totaled \$12,319 thousand at September 30, 2008. Of that amount, \$11,928 thousand is due from other federal agencies. The remaining \$391 thousand 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. Based on this memo, NSF has now incorporated the policy of writing-off delinquent debt more than two years old. Additionally, NSF seeks Department of Justice concurrence for action on items over \$100,000.

### **Cash Management Improvement Act (CMIA)**

In FY 2008, NSF had no awards covered under CMIA Treasury-State Agreements. NSF's FastLane system with grantee draws of cash make the timeliness of payments issue under the Act essentially not applicable to the agency. No interest payments were made in FY 2008.



# CHAPTER III: APPENDIX

*Appendix 1*

## SUMMARY OF NSF FY 2008 FINANCIAL STATEMENT AUDIT AND MANAGEMENT ASSURANCES

**Table 1.**  
**Summary of Financial Statement Audit**

Audit Opinion	<b>Unqualified</b>				
Restatement	<b>No</b>				
Material Weakness	Beginning Balance	New	Resolved	Consolidated	Ending Balance
Total Material Weaknesses	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Table 2.**  
**Summary of Management Assurances**

<b>Effectiveness of Internal Control over Financial Reporting (FMFIA § 2)</b>					
Statement of Assurance	<b>Unqualified</b>				
	Beginning Balance	New	Resolved	Consolidated	Ending Balance
<i>Total Material Weaknesses</i>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<b>Effectiveness of Internal Control over Operations (FMFIA § 2)</b>					
Statement of Assurance	<b>Unqualified</b>				
	Beginning Balance	New	Resolved	Consolidated	Ending Balance
<i>Total Material Weaknesses</i>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<b>Conformance with Financial management system requirements (FMFIA § 4)</b>					
Statement of Assurance	<b>Systems conform to financial management system requirements</b>				
	Beginning Balance	New	Resolved	Consolidated	Ending Balance
<i>Total Non-Conformances</i>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<b>Compliance with Federal Financial Management Improvement Act (FFMIA)</b>		
	Agency	Auditor
Overall Substantial Compliance	<b>Yes</b>	<b>Yes</b>
1. System Requirements	<b>Yes</b>	
2. Accounting Standards	<b>Yes</b>	
3. USSGL at Transaction level	<b>Yes</b>	

## IMPROPER PAYMENTS INFORMATION ACT (IPIA) REPORTING

The Improper Payments Information Act (IPIA) of 2002 and *OMB Circular A-123, Appendix C* guidance require agencies to review all programs and activities, identify those that are susceptible to significant erroneous payments, and determine an annual estimated amount of erroneous payments made in those programs.

In 2005, in consultation with OMB, NSF revamped its IPIA approach and successfully executed it. NSF contracted for an annual statistical review of Federal Cash Transaction Report (FCTR) transactions received from grant recipients under the purview of the agency's IPIA program. NSF staff worked closely with the contractors to create a milestone chart, develop a sampling plan, and ensure ongoing grantee communication throughout the review.

NSF showed statistically low improper payment rates for our research and education awards. Consistent with OMB's guidance on improper payments, NSF requested, and OMB granted, relief from annual improper payments reporting because NSF improper payments were below the reporting threshold for two consecutive years. NSF will need to conduct a risk assessment or may be required to re-initiate measurement activities if there are any substantial changes to the program (e.g., legislation, funding, etc.) that may impact payment accuracy. NSF's next IPIA reporting is due in FY 2009.

In addition, NSF has established a robust, comprehensive grant pre-award and post-award monitoring program that builds risk reduction into its operational design. As part of this program, NSF expanded its FCTR transaction testing to cover low, medium and all high-risk awards. The current FCTR transaction testing is more comprehensive than the one used in NSF's 2005 IPIA initiative.

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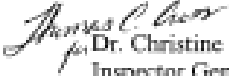


October 16, 2008

MEMORANDUM

To: Dr. Steven C. Beering  
Chair, National Science Board

Dr. Arden Bement  
Director, National Science Foundation

From:  Dr. Christine C. Boesz  
Inspector General, National Science Foundation

Subject: Management Challenges for NSF in FY 2009

In accordance with the Reports Consolidation Act of 2000, I am submitting our annual statement summarizing what the Office of Inspector General (OIG) 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 the evaluative reports of others, such as the Government Accountability Office and NSF’s various advisory committees, contractors, and staff.

This year’s management challenges are again organized under five broad issue areas: award administration; human capital; budget, cost and performance integration; U.S. Antarctic Program; and merit review. Twelve challenges appear on this year’s list, some of which reflect areas of fundamental program risk that are likely to require management’s attention for years to come. There are also two new management challenges: international awards and ethical conduct of research.

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

## **Award and Contract Administration**

**Post-award administration policies.** An effective post-award administration program for NSF grants should provide oversight for both financial and programmatic issues to ensure that awardees: 1) comply with terms, conditions, and regulations; 2) achieve expected progress toward accomplishing project goals; and 3) file accurate financial reports as required. Over the past six years, NSF has improved its monitoring of financial performance by implementing a risk-based system that directs more of the agency’s attention to high-risk awardees. In FY 2008, NSF reports that it assessed the performance of 29 percent of grantees managing 93 percent of NSF funds. The challenge for the agency continues to be in improving its monitoring of programmatic performance. Since the primary responsibility of NSF’s program officers is *selecting* new awards, active awards frequently do not receive adequate attention. The program officers need more time, guidance, and training to carry out this important job in order to detect problems with an award in time to intervene.

OIG has highlighted problems in administering cost sharing as a major management challenge for NSF for the past 10 years. The agency’s decision in 2004 to eliminate non-statutory cost sharing requirements effectively curtailed new cost sharing commitments but failed to address the issue of how to improve the poor documentation by grantees of cost sharing already in place. OIG estimates that despite the elimination of most new cost sharing, \$126 million in cost shared commitments remains active. This year the National Science Board, which was asked by Congress to review the impact of the agency’s elimination of most cost sharing, recommended that it be reinstated for specific programs. At the same time, the NSB noted the confusion among grantee institutions that surrounds cost sharing policies and their implementation, and emphasized the need for the agency to clearly communicate the requirements of tracking and reporting cost sharing to those institutions that undertake the commitment. The challenge for NSF is to put an effective outreach program in place that will assure that awardees understand and comply with the legal and auditing requirements that go along with cost sharing.

**Contract Administration.** The administration and monitoring of contracts has been a management challenge for NSF in part because the agency has not had a comprehensive, risk-based system to facilitate its oversight of contracts and ensure that the requirements of each were being met. A timely and effective post-award monitoring program is necessary to assure the accuracy and integrity of the contractor’s financial reports, and that it is otherwise performing as agreed. Since contract monitoring was first cited as a deficiency by the agency’s financial statement auditors in FY 2004, the agency has improved its contracting policies and procedures each year. During FY 2008, the agency completed an update of its contracting manual, which strengthened its guidance regarding post-award monitoring, risk-assessment, and risk-mitigation procedures. Over the next year NSF will undertake another significant challenge as its \$1.3 billion contract to perform logistics, support, operations, and maintenance of NSF activities in Antarctica expires March 31, 2010. NSF is aiming to make an award by October 1, 2009. The challenge for NSF during the procurement will be to ensure that all offerors receive the same information and opportunities, and that NSF conducts a comprehensive analysis of the information contained in their proposals to arrive at the best contract for the USAP and the government.

**Management of large infrastructure projects.** NSF's investment in large infrastructure projects and instruments such as telescopes and earthquake simulators presents the agency with a number of administrative and financial challenges that have sometimes not received the same attention as the technical issues associated with building these large-scale scientific tools. Past OIG audits suggest that the agency’s oversight of infrastructure projects is in some cases more engaged in dealing with technical issues, where NSF’s scientific expertise can be applied, rather than financial and project management matters. The audits provide details about the difficulty of managing the design, construction, and financing of these cutting edge projects and completing the facilities on time and within budget.

During the past year, the agency has continued to make progress in addressing some of our longstanding concerns. In particular, NSF continues to train agency staff on project management and other issues related to large facilities, and has slightly increased staff assigned to the Large Facilities Office (LFO) from 4 to 5. However, some of the issues we have raised in the past persist. For example, NSF has still not fully completed the in-depth guidance necessary to carry out the broader policies described in its facilities manual. Meanwhile, annual operating costs for large facilities now exceed \$1 billion and represent a significant portion of NSF’s entire budget, as the number of active facilities in all phases of development continues to grow. While NSF has increased the personnel assigned to LFO, we remain concerned that it has not been assigned adequate authority or staff to handle the full responsibility for oversight of the entire life-cycle of these facilities. Therefore, the challenge for NSF is to continue to improve its management of and knowledge about the entire facility life cycle in order to assure their successful operation. To assist NSF in addressing this challenge, OIG is undertaking a series of reviews that focus on the cooperative agreements by which the agency provides for the management and operation of its large facilities.

**Audit resolution.** Audit resolution, closure and follow-up together comprise a key element of an agency’s internal control structure and help to identify and prevent waste, fraud and abuse. For all OIG audits and those of NSF awardees performed under OMB Circular A-133, NSF implements the requirements of revised OMB Circular A-50 on *Audit Follow-up*. The OIG works with NSF staff to resolve internal control, compliance, and questioned cost findings contained in these audits and to ensure that the auditees implement corrective action plans to address the audit findings. Since 57 percent of NSF audits focus on contract or grant funds, there are frequently *three* parties (agency, auditors, and awardees) rather than two participating in audit resolution, making the process more complicated and challenging. Therefore, OIG initiated a review this year to determine whether NSF has adequate policies and procedures to ensure that audit findings and recommendations are fully, effectively, and appropriately resolved. The report will be issued in 2009.

**International awards.** As funding for scientific research around the world increases and commerce becomes more global, collaborations between countries and their scientists to conduct research are also on the rise. It is estimated that NSF spends between \$300 and \$400 million annually on research awards that involve participants from overseas. In addition to managing its own international funding, because of its grant administration experience NSF is increasingly being sought after by agencies and non-profits to manage their international awards for a fee. This increase in its international portfolio amplifies the need to ensure the financial and

programmatic accountability of these projects in areas such as use of research funds, integrity in research, and project performance. The National Science Board noted in a recent report: “Accountability must be an integral part of planning successful collaborations to assure supporters that research integrity is a priority and that funds are used appropriately”.<sup>1</sup>

Past OIG audits of NSF’s international awards have found that international awardees are largely unfamiliar with the terms and conditions that are applied by U.S. funding organizations. In those situations where there is more than one funding organization with conflicting administrative priorities, it is unclear to awardees which to follow. Similarly, standards for the conduct of research that define plagiarism and data falsification and their penalties, often differ from country to country depending on the scientific field. NSF must address these financial and programmatic challenges by working with other international science organizations to harmonize their policies and create internationally recognized standards and practices that will protect the integrity of the research enterprise along with the funds that support them.

**Ethical conduct of research.** In increasing numbers, researchers and students from all over the world who are trained to different standards and expectations of responsible and ethical conduct of research are finding themselves in close collaborations. At the same time studies show that the current training programs in ethical research are ineffective. Advances in computer technology coupled with the increasing amount of information and data stored on the internet, have increased the opportunities for unethical researchers to commit research misconduct or engage in questionable research practices. OIG has long urged NSF to do more to foster integrity among researchers. Last year, the America COMPETES Act of 2007 (The Act) presented the agency with a new mandate. It states: “The Director shall require that each institution that applies for financial assistance from the Foundation for science and engineering research or education describe in its grant proposal a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduate students, graduate students, and postdoctoral researchers participating in the proposed research project.”

Since the passage of The Act, NSF has taken some initial steps toward compliance, such as conducting internal assessments and seeking advice from academe on developing such guidance, but to date has only responded to the requirements regarding postdoctoral researchers. In light of this growing challenge to the integrity of NSF’s funded programs NSF needs to immediately implement a more comprehensive, agency-wide program to instill ethics and integrity at all levels of the scientific, engineering and education enterprise it supports.

## **Human Capital**

**Workforce planning.** As a management challenge for NSF, workforce planning refers primarily to three issues: planning for future staffing, management succession, and the use of visiting scientists or “rotators”. Management and staff have attempted for most of the past decade to keep pace with an increasing workload, driven by a rising number of proposals from researchers seeking grant funds. Despite this increase in workload, few additional staff have been added to the agency over the past 10 years. Past staffing imbalances at NSF have prompted questions

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<sup>1</sup> National Science Board, *International Science and Engineering Partnership: A Priority for U.S. Foreign Policy and our Nation’s Innovation Enterprise*.

from Congress and others about how it conducts its planning and has driven agency efforts to develop a more formalized process over the past three years.

As part of its Human Capital Management Plan, the agency piloted a workforce analysis tool to assist it in determining the appropriate number of FTEs needed by each individual directorate. While the analytical tool gives NSF an objective basis for projecting its future staffing needs, the methodology is primarily based on the relationship between historical staffing levels and various measures of workload. To date, NSF has not conducted a comprehensive skills analysis to identify gaps between the abilities of the current and projected workforce. A skills analysis is recommended by the Office of Personnel Management to promote informed, forward-looking workforce planning. For this reason, NSF received a “red light” for its management of human capital on the President’s Management Agenda Scorecard from OMB this past year. Though NSF’s new Human Capital Strategic Plan issued in March 2008 promised “particular focus on addressing identified skill gaps”, the agency now believes that a formal skill gaps analysis would be inappropriate for NSF.

Meanwhile the number of NSF staff eligible for retirement is even greater than that of the rest of the federal government. The agency estimates that 34 percent of its workforce is over 55, as opposed to 24 percent for the government overall, and the average age of an NSF employee is 50. NSF has been fortunate that the retirement rate for the past four years has been lower than the rest of government at 13.5 percent. In preparation for the eventual rise in retirements, NSF has articulated three core strategies to guide its succession planning including an effective transition process, comprehensive leadership development, and sound knowledge management practices.

The temporary employment of “rotators” or visiting scientists, as a means of revitalizing the agency’s knowledge about specific cutting edge areas of research, also poses an administrative and management challenge for NSF. In FY 2007, there were about 219 rotators working at NSF comprising approximately 15 percent of NSF’s workforce and an even greater percentage of its program officers. NSF estimates that 15-20 percent of its executives and 14 percent of its science and engineering staff are subject to annual turnover. The continual replenishing of this critical but temporary workforce presents a challenge for the agency as they require more administrative support in the form of hiring, processing, training, and supervision, than a permanent employee. The presence of so many rotators also complicate efforts by the agency to conduct effective succession planning as there are certain positions for which their level of institutional knowledge or management skills are not appropriate. NSF recognizes the problem and has focused more attention on the unique issues surrounding rotators in developing their Human Capital Strategic Plan.

**Administrative infrastructure.** The ability of NSF directorates to hire new employees and to travel continues to be hindered by a lack of resources as well as poorly designed systems. As reflected in the most recent surveys of NSF staff, the agency’s understaffed human resource office continues to extend the time required to bring on board needed new employees. Basic human capital services such as staffing and recruitment, workforce planning, and organizational development received among the lowest ratings registered in NSF’s 2007 customer satisfaction survey.

In addition, the efforts of NSF program and financial staff to monitor awards through on-site inspections are impeded due to problems associated with funding and scheduling travel. Over the past 5 years, NSF’s travel funds have increased at an annual rate of only 4.7%, this during a period when the agency has strengthened its administrative post-award oversight in part by conducting more site visits. Our concern is that that the funding of more financial site visits will be performed at the expense of the program officers who must also be able to observe awardee operations first-hand and meet with grantees. The difficulty of using the Fed Traveler system to schedule and account for travel is reflected in its poor rating in the survey of agency staff. NSF should strengthen its commitment to effective post-award administration by increasing the availability of funds for travel, and streamlining the process for accomplishing it.

### **Budget, Cost and Performance Integration**

**Performance reporting.** The Government Performance and Results Act (GPRA) requires agencies to identify the outcomes that they were created to accomplish, and to establish and track their progress against performance measures that best reflect progress toward accomplishing those goals. However, as the Committee on Science, Engineering, and Public Policy observed: “evaluating federal research programs in response to GPRA is challenging because we do not know how to measure knowledge while it is being generated, and its practical use might not occur until many years after the research occurs...”<sup>2</sup> For this reason NSF has struggled over the years to define the outcomes that follow from its mission, and to set up appropriate performance measures.

In its 2006-2011 strategic plan, NSF revised its 4 strategic outcome goals, in part to clarify them for reporting purposes. However, the outcomes described are very general and tend to complicate independent efforts to conduct a meaningful evaluation of the agency’s performance. George Mason University’s Mercatus Center ranked the quality of NSF’s performance reporting as 18<sup>th</sup> out of 24 federal agencies reviewed in its most recent *Annual Performance Scorecard*.<sup>3</sup> In addition, NSF’s Advisory Committee on GPRA counseled NSF to consider ways to demonstrate the long-term impacts of NSF support to make their reporting more comprehensive. NSF would be wise to follow the Advisory Committee’s recommendation.

**Cost information.** The demand for increased disclosure and transparency by government agencies about their finances continues to grow each year. A recent survey commissioned by the Association of Government Accountants indicates that 1) federal financial reporting is important to taxpayers, 2) it affects their level of trust in government, and 3) government is failing to meet expectations regarding its obligation to explain how it spends its money. In response to this problem, Congress enacted the Federal Funding Accountability and Transparency Act of 2006 (The Act), requiring federal agencies to publicize for the first time detailed information about all grants and contracts over \$25,000 in a searchable, on-line format. Since grants and contracts comprise approximately 95 percent of NSF’s appropriation, The Act has effectively opened the agency’s accounting books to the public for the bulk of its expenditures, a positive development.

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<sup>2</sup> *Implementing the Government Performance and Results Act for Research*, p.1

<sup>3</sup> *9<sup>th</sup> Annual Performance Report Scorecard*, p. 67



However, while information about NSF’s awards is now readily available, details about its own operating costs are much harder to find. In its annual financial report and performance highlights, NSF’s operating costs are aggregated and presented according to its three strategic goals which are too general to enable any meaningful evaluation of how well the agency is managing its own resources. An annual report that omitted information about how much a business spends on salaries, office space, or other basic expenses would be of limited use to shareholders or regulators. Detailed cost information is not just necessary to determine an organization’s cost-effectiveness and efficiency, but is also crucial to fostering *accountability*. For that reason, NSF should strive to improve and increase its disclosure of operating costs.

### **United States Antarctic Program (USAP)**

**USAP long-term planning.** One of NSF’s most important responsibilities is the operation of the USAP which is overseen by the Office of Polar Planning (OPP). Through a 10-year \$1.3 billion contract, OPP provides all necessary services and support to three U.S. research stations: McMurdo, South Pole, and Palmer. As part of its mandate, NSF is also responsible for the research infrastructure in Antarctica’s harsh polar environment. The agency spent approximately \$233 million for USAP infrastructure and logistics in FY 2007. The periodic replenishment of the infrastructure is a key element of USAP’s long-term planning efforts, as well as a management challenge, because of its impact on the health and safety of program participants as well as the performance of scientific research.

In a note to its FY 2007 financial statements, NSF reports that scheduled maintenance on 17 items of Antarctic capital equipment in poor condition was deferred, explaining that deferred maintenance on assets in poor condition is considered “critical to maintaining operational status” due to the environment and remote location. OPP commonly defers maintenance when the Program lacks either parts or money. In FY 2008 and 2009, USAP budgets have also been affected by rising fuel costs and a weak dollar, further impeding NSF’s ability to make long-planned investments in renewing and upgrading its infrastructure. Several years ago, OIG auditors recommended that NSF develop a life-cycle oriented capital asset management program along with a consistent budgeting mechanism to ensure that USAP’s infrastructure needs are adequately addressed and do not pose a risk to the safety and health of USAP participants. NSF disagreed with this proposal.<sup>4</sup> Since thorough planning is particularly critical when managing within limited budgets, NSF should reconsider this suggestion.

As noted in prior Federal Information Security Management Act (FISMA) reports, OPP also needs to improve its disaster recovery planning to be better prepared in the event a disruption in IT services affects its Antarctic operations. In FY 2008, OPP management initiated strategic planning to mitigate the potential risk of interruption to USAP program operations. OPP plans to continue an initiative to create alternate network connectivity for Antarctica operations and estimates that implementation should be completed by the end of FY 2009, contingent on funding. OPP is also in the process of replacing its operating platform with a more current and robust system by the end of FY 2010.

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<sup>4</sup> Audit of Occupational and Health & Safety and Medical Programs in the United States Antarctic Program, OIG 03-2-003, March 2003

## Merit Review

**Broadening participation in the merit review process.** Increasing the numbers of women and minorities who receive NSF support for their research and participate as reviewers in the merit review process has been a longstanding but elusive goal of the agency. The primary challenge for NSF is to assure that underrepresented groups have the same opportunities, access to funds for research, and information about the process as those that have been successful in receiving funding. In FY 2007 NSF continued to make incremental progress toward achieving many of their goals. In the case of reviewers, a necessary first step toward increasing diversity is to persuade individual reviewers to voluntarily submit demographic information. The number of reviewers who complied with this request increased by 3 percentage points in 2007 to 28 percent. Meanwhile 37 percent of those who responded indicated that they were members of an underrepresented group, a 1 percent increase. As the funding rate for all PIs grew from 25 to 26 percent, the rate at which women and minority PIs are funded also increased by 1 percent to 27 and 25 percent respectively. However In FY 2007, NSF failed to achieve 4 out of 8 performance goals for Broadening Participation included in its Program Assessment Rating Tool (PART) review by OMB.

In its FY 2006 strategic plan, NSF had promised to expand efforts to broaden participation. More detail about those efforts is contained in *Broadening Participation at the National Science Foundation: A Framework for Action*, a draft plan issued in August 2008. It lists seven recommended action items for NSF to undertake to integrate the broadening participation initiative into NSF’s core processes. One of the action items promises that it will increase the diversity of the reviewer population by 1) initiating the development of a searchable reviewer system with accurate demographic data, 2) encouraging reviewers to provide demographic data, 3) cultivating additional reviewer sources, and 4) encouraging NSF staff to use a more diverse reviewer pool. Just as important, another action item provides a commitment to develop a detailed implementation schedule for accomplishing all of its recommended actions. The proposed development of a timetable accompanied by periodic evaluations of the progress being made by the agency toward meeting this challenge would increase both the agency’s accountability and its chances of success.

**NATIONAL SCIENCE FOUNDATION**  
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**NOV 14 2008**



**OFFICE OF THE  
DIRECTOR**

**MEMORANDUM**

**To:** Dr. Christine C. Boesz  
Inspector General, NSF

**From:** Dr. Arden L. Bement, Jr.  
Director, NSF

**Subject:** Response to the Inspector General’s Memorandum  
Management Challenges for NSF in FY 2009

Thank you for your memorandum of October 16, 2008 regarding potential management challenges the National Science Foundation (NSF) faces during the remainder of Fiscal Year (FY) 2009, and for noting that some of these management challenges are fundamental issues that the Foundation is dealing with on a continuing basis. As in the past, your memorandum has been shared and discussed with NSF senior management in the Senior Management Round Table (SMaRT).

The attached summary highlights the steps we have taken, and the accomplishments we have achieved on the management challenges in FY 2008. The Foundation remains committed to serving our community effectively and responsibly, and to continually improving NSF’s stewardship across the agency while supporting the NSF mission and maintaining its high standing in the Federal government.

A handwritten signature in black ink, appearing to read 'Arden L. Bement, Jr.'.

Arden L. Bement, Jr.  
Director

Attachment

**NATIONAL SCIENCE FOUNDATION (NSF)  
Progress During Fiscal Year (FY) 2008  
On the OIG’s FY 2008 Management Challenges**

<b>OIG’s FY 2008 Management Challenge</b>	<b>NSF’s Significant Actions Taken in FY 2008</b>	<b>NSF’s Anticipated Next Steps</b>
<b>Award and Contract Administration</b>		
<b>a. Post-Award Administration Policies</b>	<ul style="list-style-type: none"> <li>• Assessed administrative performance of 29 percent of awardees managing 93 percent of NSF funds through advanced monitoring (30 site visits; 138 desk reviews) under the Award Monitoring and Business Assistance Program (AMBAP)</li> <li>• Updated policies and procedures, including NSF’s suite of grant administrative manuals, and BFA’s Standing Operating Guidance that outlines AMBAP procedures for ensuring grantee compliance in administering NSF funds</li> <li>• Fully implemented Portfolio Facilitation Model providing comprehensive support for NSF grant administration</li> <li>• Initiated implementation of “Division Director (DD)-concur” for awards in eJacket as the last step in establishing a paperless awards process</li> <li>• Established an Office of Budget, Finance, and Award Management (BFA) Policy Council to standardize policies and policy development, clearance procedures, and issuance processes</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to develop new administrative tools to strengthen post award oversight</li> <li>• Incorporate additional business rules into NSF corporate business systems to further strengthen accountability</li> <li>• Implement policies and procedures to address new programmatic requirements legislated under the America COMPETES Act (ACA)</li> <li>• Develop strategies and resources for training NSF staff on federal and Agency policies, regulations, and procedures</li> </ul>
<b>b. Contract Monitoring</b>	<ul style="list-style-type: none"> <li>• Expanded the contract oversight program to include comprehensive post-award monitoring policies and procedures and training</li> </ul>	<ul style="list-style-type: none"> <li>• Continue administration of the contract post-award monitoring program</li> </ul>

OIG’s FY 2008 Management Challenge	NSF’s Significant Actions Taken in FY 2008	NSF’s Anticipated Next Steps
<b>Award and Contract Administration - continued</b>		
<b><i>c. Management of Large Infrastructure Projects</i></b>	<ul style="list-style-type: none"> <li>• Increased the number of Large Facilities Office (LFO) staff to strengthen NSF’s operational oversight of large facilities</li> <li>• Issued a report, <i>Oversight of NSF Funded Large Facilities Survey, Observations and Recommendations</i>, to OMB in response to a Performance Assessment Rating Tool (PART) goal</li> <li>• Conducted 14 Annual Reviews of operational facilities and 4 Business Systems Reviews (BSR)</li> <li>• Conducted a Large Facilities Workshop to facilitate sharing of Best Practices for awardees and NSF staff</li> </ul>	<ul style="list-style-type: none"> <li>• Increase staffing in FY 2009</li> <li>• Revise BSR Guide consistent with direction of the BSR Subcommittee of the Business and Operations Advisory Committee</li> <li>• Revise supplementary materials to Large Facilities Manual and release for public access</li> <li>• Conduct second annual Large Facilities Workshop on Best Practices for awardees and NSF staff in Spring 2009</li> </ul>
<b><i>d. Audit Resolution</i></b>	<ul style="list-style-type: none"> <li>• Resolved 195 audits (as of July 2008), 96 percent within six-months of their receipt from the NSF OIG</li> </ul>	<ul style="list-style-type: none"> <li>• Revise Standing Operating Guidance (2001-4), <i>Policies and Procedures for Audit Report Issuance and Resolution of Audit Findings Contained in Audits of NSF Awardees</i></li> </ul>

OIG’s FY 2008 Management Challenge	NSF’s Significant Actions Taken in FY 2008	NSF’s Anticipated Next Steps
<b>Human Capital (HC)</b>		
<b>a. Workforce Planning</b>	<ul style="list-style-type: none"> <li>• Developed plans addressing multi-year recruitment needs and workforce planning</li> <li>• Tested a new management structure for support positions</li> <li>• Explored opportunities to reduce the amount of time required to hire Program Officers</li> <li>• Enhanced employee orientation</li> <li>• Drafted a proposal to create a New Executive Transition Program (NExT)</li> <li>• Developed and introduced new NSF Human Capital Strategic Plan</li> <li>• Continued to streamline recruiting processes and reduce overall “time-to-hire” for NSF positions</li> </ul>	<ul style="list-style-type: none"> <li>• Finalize FY 2009-2010 staffing plans for each Directorate</li> <li>• Expand NSF’s new employee welcome program</li> <li>• Begin implementation of the NExT program after it has been approved</li> <li>• Work toward full implementation of key agency human capital goals outlined in the NSF Strategic Plan and the NSF Human Capital Strategic Plan</li> </ul>
<b>b. Administrative Infrastructure</b>	<ul style="list-style-type: none"> <li>• Continued to actively address both short and long-term space requirements</li> <li>• Achieved more efficient utilization of space through various office moves</li> <li>• Improved FedTravel resulting in a more intuitive and user-friendly travel system</li> <li>• Interfaced FedTravel with the finance system, enhancing internal controls</li> </ul>	<ul style="list-style-type: none"> <li>• Explore opportunities to achieve more efficient space utilization</li> <li>• Explore opportunities to enhance space utilization and facilitate inter-disciplinary interaction across NSF through “cluster” moves which result in Directorate staff being co-located with other Directorate staff</li> </ul>

OIG’s FY 2008 Management Challenge	NSF’s Significant Actions Taken in FY 2008	NSF’s Anticipated Next Steps
<b>Budget, Cost and Performance Integration</b>		
<p><i>a. Performance Reporting</i></p> <p><i>Reporting Results of Scientific Research</i></p>	<ul style="list-style-type: none"> <li>Developed specific program categories and evaluation criteria under each strategic outcome goal for use by the Advisory Committee for GPRA Performance Assessment (AC/GPA)</li> <li>Implemented data migration for Project Reporting System enhancements</li> <li>Finalized Agency recommendations on final project reporting requirements mandated by the ACA</li> </ul>	<ul style="list-style-type: none"> <li>Continue to refine and improve the program categories for highlights and the evaluation criteria used by the AC/GPA</li> <li>Develop additional flexibility to report on special award categories</li> </ul>
<p><i>b. Cost Information</i></p>	<ul style="list-style-type: none"> <li>Realigned NSF’s FY 2009 Budget Request to tie internal investments in information technology more directly to NSF’s programs</li> </ul>	<ul style="list-style-type: none"> <li>Continue to explore mechanisms that improve the transparency and accessibility of cost information without placing an additional recordkeeping burden on staff</li> </ul>

OIG’s FY 2008 Management Challenge	NSF’s Significant Actions Taken in FY 2008	NSF’s Anticipated Next Steps
<b>Information Technology (IT)</b>		
<p><i>Implementing Enterprise Architecture (EA)</i></p>	<ul style="list-style-type: none"> <li>Completed most of NSF’s outstanding critical success attributes related to the 2006 GAO EA Report</li> <li>Developed an IT Security and Privacy Architecture</li> <li>Completed verification and validation of NSF’s EA processes and products</li> <li>Verified that new and ongoing IT investments for FY 2009 complied with our EA standards</li> <li>Recognized by OMB as having an EA that is “Best in Class (small agencies)”</li> </ul>	<ul style="list-style-type: none"> <li>Define NSF’s data architecture in greater detail per recommendations in the 2006 GAO EA report</li> <li>Continue to execute EA processes for maintaining NSF’s architecture and ensuring compliance of IT investments</li> </ul>

OIG’s FY 2008 Management Challenge	NSF’s Significant Actions Taken in FY 2008	NSF’s Anticipated Next Steps
<b>United States Antarctic Program (USAP)</b>		
<i>a. Long-Term Planning</i>	<ul style="list-style-type: none"> <li>Tasked an external group of experts to advise on logistics and infrastructure needed to sustain a high priority research program</li> </ul>	<ul style="list-style-type: none"> <li>Continuing work on these efforts dependent upon FY 2009 funding</li> </ul>
<i>b. Property, Plant, and Equipment (PP&amp;E)</i>	<ul style="list-style-type: none"> <li>Commenced verification and validation of PP&amp;E activities</li> <li>Implemented new methodology for freight cost estimation</li> </ul>	<ul style="list-style-type: none"> <li>Complete assessment of cost documentation for Construction in Progress and Real Property assets</li> <li>Determine how best to expand scope of financial management modernization effort</li> </ul>

OIG’s FY 2008 Management Challenge	NSF’s Significant Actions Taken in FY 2008	NSF’s Anticipated Next Steps
<b>Merit Review</b>		
<i>Broadening Participation in the Merit Review Process</i>	<ul style="list-style-type: none"> <li>Approved a draft plan, <i>Broadening Participation at the National Science Foundation: A Framework for Action</i>, and sent it to NSF Advisory Committees for review</li> <li>Conducted outreach workshops for minority serving institutions</li> <li>Developed Merit Review Web site on NSF’s homepage to enhance the transparency of the grants review process</li> <li>Began development of Reviewer Management Services as part of Research.gov, an NSF-led partnership of federal research grant-making agencies engaged in streamlining and standardizing business processes</li> </ul>	<ul style="list-style-type: none"> <li>Conduct a workshop for tribal colleges and universities in Fall 2008, providing a comprehensive overview of NSF</li> <li>Receive and respond to Advisory Committee comments on the <i>Framework for Action</i> plan; finalize the plan and develop an implementation schedule</li> <li>Continue to develop the Reviewer Management Services and other associated Research.gov services</li> </ul>



## **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 1,620 NSF invention disclosures reported to the Foundation either directly or through NIH's iEdison database during FY 2008. 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

AC	Advisory Committee	GAAP	Generally Accepted Accounting Principles
ACA	America Competes Act	GAO	Government Accountability Office
AC/GPA	Advisory Committee for GPRA Performance Assessment	GPA	GPRA Performance Assessment
AFR	Annual Financial Report	GPRA	Government Performance and Results Act
AMBAP	Award Monitoring and Business Assistance Program	GSA	Government Services Administration
AOAM	Agency	ICASS	International Congress of Arctic Social Sciences
APIC	Accountability and Performance Integration Council	ICWG	Ice Core Working Group
APR	Annual Performance Report	IPIA	Improper Payments Information Act of 2002
BFA	Office of Budget, Finance, and Award Management	IT	Information Technology
BSR	Business Systems Review	LFO	Large Facilities Office
CFO	Chief Financial Officer	LIGO	Laser Interferometer Gravitational Wave Observatory
CIO	Chief Information Officer	MOU	Memorandum of Understanding
CMIA	Cash Management Improvement Act	MREFC	Major Research Equipment and Facilities Construction
COSEPUP	Committee on Science, Engineering, and Public Policy	MTS	Federal Measurement Tracking System
COV	Committee of Visitors	NASA	National Aeronautics and Space Administration
CSBF	Columbia Scientific Balloon Facility	NSB	National Science Board
CSEMS	Computer Science, Engineering and Mathematics Scholarship Program	NSF	National Science Foundation
CSRS	Civil Service Retirement System	OIG	Office of Inspector General
DD	Division Director	OMB	Office of Management and Budget
EA	Environmental Assessment	OPM	United States Office of Personnel Management
EIS	Enterprise Information System	OPP	Office of Polar Programs
FAS	Financial Accounting System	PAR	Performance and Accountability Report
FASAB	Federal Accounting Standards Advisory Board	PARS	Proposal and Reviewer System
FBWT	Fund Balance with Treasury	PART	Program Assessment Rating Tool
FCTR	Federal Cash Transaction Report	PP&E	Property, Plant and Equipment
FECA	Federal Employees' Compensation Act	PMA	President's Management Agenda
FERS	Federal Employees Retirement System	PTR	Potentially Transformative Research
FFATA	Federal Funding Accountability and Transparency Act	SFFAS	Statements of Federal Financial Accounting Standards
FFMIA	Federal Financial Management Improvement Act of 1996	SGL	Standard General Ledger
FFR	Federal Financial Report	TCEQ	Texas Commission on Environmental Quality
FMFIA	Federal Managers' Financial Integrity Act of 1982	UNAVCO	University NAVSTAR Consortium
FFRDC	Federally Funded Research and Development Center	USAF	U.S. Air Force
FISMA	Federal Information Security Management Act	USAP	U.S. Antarctic Program
FMFIA	Federal Financial Management Improvement Act of 1996	USSGL	U.S. Government Standard General Ledger
FMLoB	Financial Management Line of Business	VA	Veterans Affairs
FMSM	Financial Management Service Metrics		
FTE	Full-time Equivalency		
FY	Fiscal Year		