

**Annual Office of Audit  
Work Plan**

**FY 2012**



**National Science Foundation  
Office of Inspector General  
December 12, 2011**

## Message from the Assistant Inspector General for Audit

I am pleased to provide the National Science Foundation (NSF) Office of Inspector General (OIG) Annual Audit Work Plan for fiscal year (FY) 2012. This Plan describes the two major areas for audits and reviews in FY 2012: 1) NSF and its awardees' management of funds NSF received under The American Recovery and Reinvestment Act, (Recovery Act) and 2) Financial and/or Program Accountability. For the Work Plan we solicited input from a variety of sources, including Congress, the National Science Board, NSF, the Recovery Accountability and Transparency Board, OIG Management Challenges for NSF, and OIG staff.

To identify high risk awardees, we performed risk assessments and data analytics on NSF databases. After we selected awardees to audit, we again used data analytics to identify areas at high risk of misuse of NSF funds. Data analytics increases the effectiveness and efficiency of audits, because it enables examination of 100 percent of transactions and reveals anomalies that indicate possible unallowable or unreasonable expenditures, or funds spent for awards other than those for which they were provided.

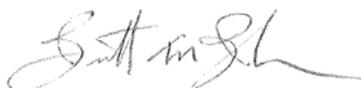
Recovery Act projects in the Plan include financial and compliance audits at selected awardees to determine their compliance with the Act, other applicable federal administrative and cost principles, and the terms and conditions of their NSF awards. In addition, we plan to audit NSF's oversight of the Academic Research Infrastructure Program, which provided \$200 million of Recovery Act funds to 136 awardees. We also plan to audit the construction of the Alaska Region Research Vessel, the *R/V Sikuliaq*, which received \$148 million of Recovery Act funds.

To assess Financial and/or Program Accountability, we will perform a statutorily-required audit of the National Science Board's compliance with the Government in the Sunshine Act. We also will audit NSF's oversight of conference spending and its Individual Research and Development Program. In addition, we will conduct a follow-up audit on the agency's corrective actions for a prior audit on project reporting on NSF awards. Further, we will continue to monitor NSF's processes for obtaining a contractor to manage its U.S. Antarctic Program. In addition, we will audit various universities, non-profit and for-profit entities to determine if claimed costs are allowable, reasonable, and spent on the correct award. We will also continue an audit of awardee use of contingency funds on a major research construction project and NSF's oversight of contingencies.

In the next fiscal year, we will monitor the completion of NSF's FY 2011 financial statements audit and an independent evaluation of NSF's information security program, as well as the FY 2012 audit and evaluation. These audits and evaluations are performed by an independent public accounting firm whose services OIG has procured. Further, we will report on NSF's compliance with the Improper Payments Elimination and Recovery Act (IPERA) of 2010, and continue to review Single Annual Audit reports of NSF awardees and conduct quality control reviews of the work performed on these reports.

Although this Work Plan provides a framework for the audits and reviews we intend to undertake in FY 2012, it is subject to change should unanticipated higher risk issues develop in the course of the year. We need to be flexible in order to address such events.

We look forward to continuing to work with NSF and Congress in meeting our Work Plan goals.



Dr. Brett M. Baker,  
Assistant Inspector General for Audit

## TABLE OF CONTENTS

<b>AUTHORIZATION</b>	1
<b>OIG MISSION AND FUNCTION</b>	1
<b>ORGANIZATION AND FUNCTION OF THE OFFICE OF AUDIT</b>	1
<b>TYPES OF AUDIT PRODUCTS</b>	1
<b>FY 2012 AUDITS AND REVIEWS</b>	2
<b>The American Recovery and Reinvestment Act</b>	2
<b>Financial and/or Program Accountability</b>	3
<b>Mandatory Audits and Reviews</b>	4
<b>National Science Board Compliance with the Government</b> <b>in the Sunshine Act</b>	4
<b>Financial Statement Audit and FISMA Evaluation</b>	4
<b>NSF's Compliance with the Improper Payments Elimination</b> <b>and Recovery Act</b>	5
<b>Discretionary Audits</b>	5
<b>NSF Programs and Operations</b>	5
<b>Financial/Program Audits of NSF Awardees and/or NSF Oversight</b>	6
<b>Non-Federal Audits</b>	7
<b>THE AUDIT PROCESS</b>	8

## AUTHORIZATION

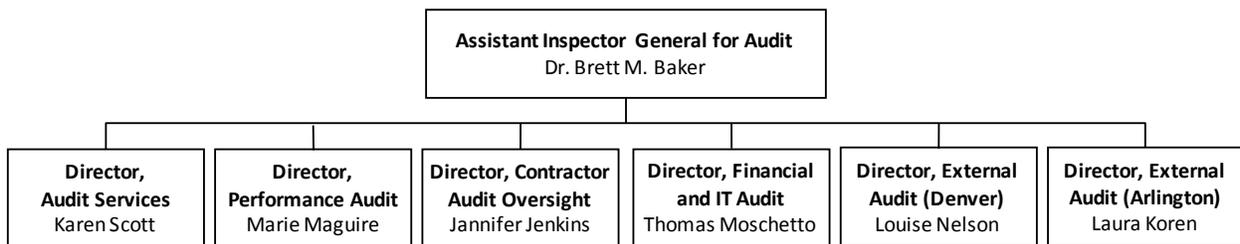
The Inspector General Act, as amended in 1988, authorizes an Office of Inspector General (OIG) for the National Science Foundation (NSF). The OIG is independent and reports directly to Congress and the National Science Board (NSB). By statute, the OIG conducts and supervises independent audits and investigations relating to agency programs and operations and recommends policies that promote effectiveness and efficiency and prevent and detect fraud and abuse in such programs and operations.

## OIG MISSION AND FUNCTION

Consistent with its statutory mandate and operational mission, the OIG performs an oversight role and does not engage in management activities or program operations. Its work is divided into two functional areas: audits, which assess the adequacy of business systems and processes, determine compliance with Federal requirements, and identify ways to improve the effectiveness and efficiency of operations; and investigations, which address allegations of serious wrongdoing, such as unauthorized use or theft of Federal funds and property. In each area, the OIG strives to focus on substantive matters and work objectively and cooperatively, without compromising its independence. The organizational units within the OIG also collaborate to carry out their separate responsibilities.

## ORGANIZATION AND FUNCTION OF THE OFFICE OF AUDIT

The Office of Audit (OA) has an experienced audit and administrative staff led by the Assistant Inspector General for Audit, and six Audit Directors, as shown in the chart below:



Although the audit teams have primary areas of responsibilities, each may lead or participate in work outside of its functional area to provide greater flexibility within the Office.

## TYPES OF AUDIT PRODUCTS

The OA is responsible for the required annual audits of NSF's financial statements, which include reviewing the agency's controls over financial reporting and the required annual review of information system security. The office also conducts internal performance audits of agency operations and programs, and financial, compliance, and performance audits of grants, contracts, and cooperative agreements funded by NSF. Many of these audits are performed with internal OA auditors, but the Office also contracts with independent public accounting firms, statisticians, and other expert contractors to supplement its resources. These contractors also

provide additional expertise necessary to accomplish the Office's varied and complex audit projects.

OIG audits, whether conducted in-house, by independent public accounting firms, or by government auditors under contract with OIG, are performed in accordance with the Comptroller General's *Government Auditing Standards*.<sup>1</sup> These standards are designed to ensure the integrity and competency of the audit process and the quality of the audit report. In addition, OA may also conduct inspections in accordance with the Council of Inspectors General for Integrity and Efficiency's *Quality Standards for Inspections*. Inspections do not require testing sufficient to opine on internal controls or compliance with laws and regulations. Finally, in rare circumstances, OA conducts non-audit services, such as position papers on NSF issues that do not compromise its independence.

## **FY 2012 AUDITS AND REVIEWS**

OA has identified two themes for projects that it currently plans to perform in this fiscal year: 1) NSF's and its awardees' management of the American Recovery and Reinvestment Act (Recovery Act) funds that NSF received; and 2) financial and/or program accountability. Planned work is based on a risk-based selection process and statutory requirements. By addressing these topics in FY 2012 audits, OA is responding to concerns of the Administration and Congress and assisting NSF in realizing the vision and goals in its FY 2011-FY 2016 strategic plan, *Empowering the Nation Through Discovery and Innovation*. Although these are themes that we have currently identified, the plan is subject to change to address higher priority matters that may arise during the course of the year.

### **The American Recovery and Reinvestment Act**

The purpose of the Recovery Act, enacted February 17, 2009, was to preserve and create jobs; stimulate infrastructure investment, energy efficiency, and science; provide assistance to the unemployed; and stabilize state and local governments fiscally. The Act's overall goal was to lay the foundation for a strong, sustainable 21<sup>st</sup> century economy. To ensure the \$787 billion funded under the Act was used as intended, it required unprecedented levels of accountability, transparency, and oversight.

NSF received \$3 billion of Recovery Act funding, which increased the agency's and its awardees' risks, as both faced the challenges of managing, accounting for, and reporting on these highly visible funds with little or no additional staff or system resources. The Act also provided for layers of oversight from multiple entities, including the Recovery Accountability and Transparency Board (RATB) and individual Offices of Inspector General. The RATB received \$84 million of Recovery Act funds to carry out government-wide oversight of Recovery Act programs. NSF OIG received \$2 million of Recovery Act funds specifically to review how NSF

---

<sup>1</sup>*Government Auditing Standards* (2007). OIG Offices are required by statute to conduct audits in accordance with these standards. In August 2011 the Government Accountability Office issued the *2011 Internet Version of Government Auditing Standards*. These standards are effective for performance audits that begin on or after December 15, 2011. The effective date for financial audits and attestation engagements is for periods ending on or after December 15, 2012.

and its awardees used the Recovery Act funds.<sup>2</sup> By the end of FY 2011 NSF awardees had spent about \$1.4 billion of the \$3 billion of Recovery Act funds that NSF awarded. OA will continue to review NSF's and its awardees' compliance with the Act's requirements in FY 2012. Accordingly, we have identified the following three areas for audit:

#### *Academic Research Infrastructure Program*

NSF provided \$200 million of Recovery Act funds for 136 Academic Research Infrastructure awards for improvements to the nation's academic research facilities. The program included funds to purchase equipment or services to repair, renovate, or in exceptional cases, replace research facilities. To ensure proper stewardship of Recovery funds, we are planning an audit of NSF's oversight of this program, which includes ensuring that the recipients and their subawardees properly spend, account for, and report their Recovery Act funds and comply with the terms and conditions their awards.

#### *Alaska Region Research Vessel*

The Alaska Region Research Vessel is a Major Research Equipment and Facilities Construction project that received \$148 million of Recovery Act funding. From monitoring the project, we found that the resulting vessel, the *R/V Sikuliaq*, has significant risks, including how the awardee is spending budgeted contingency funds that were provided with Recovery Act monies. OA will conduct an audit of the high risk areas as well as the project's overall compliance with Recovery Act and other applicable Federal and NSF requirements.

#### *Recovery Act Financial and Compliance Audits*

Since most Recovery Act awards are now at least two years old, we are shifting our focus from "real-time" reviews of NSF's activities related to the Act and assessments of awardees' capabilities to manage Recovery Act funds, to audits of awardees' expenditures of Recovery Act funds and compliance with its requirements. We will identify high risk candidates for audit by applying data analytics and our risk-based process to award, compliance, and financial information. Once we have selected the institutions to be audited, we will review 100 percent of awardee transactions for a given time period, including transactions for Recovery Act awards, to determine anomalies and develop testing schedules. In addition, we plan to determine whether awardees have complied with Federal requirements, including Recovery Act requirements, and with the terms and conditions of their NSF awards. In addition, we plan to audit actual numbers of jobs retained or created with Recovery Act funds.

### **Financial and/or Program Accountability**

NSF is accountable for the quality, integrity and performance of its research programs and stewardship of its annual appropriations. This accountability is mandated by NSF's chartering legislation and numerous other laws including the Budget and Accounting Procedures Act, the Federal Managers Financial Integrity Act, the Chief Financial Officers Act, the Federal Financial

---

<sup>2</sup> OA's prior reviews of NSF's and awardees' Recovery Act plans, policies, and projects are posted on OIG's website. See <http://www.nsf.gov/oig/recovery.jsp>

Management Improvement Act, and various Office of Management and Budget Circulars. Conducting audits to evaluate whether NSF is fulfilling its responsibilities for financial and/or program accountability is central to the OIG mission of preventing and detecting fraud, waste, and abuse and promoting effectiveness, efficiency, and economy.

### ***Mandatory Audits and Reviews***

The OIG is required by law to conduct certain audits. These include periodic audits of the NSB's compliance with the Government in the Sunshine Act, annual audits of NSF's financial statements, and annual independent evaluations of NSF's information security operations. Also, beginning in 2012, we are required to review annually NSF's improper payment reporting in its Annual Financial Report.

#### National Science Board Compliance with the Government in the Sunshine Act

The Government in the Sunshine Act requires that National Science Board meetings be open to the public, with limited exceptions; and the OIG is statutorily required to conduct periodic audits of the Board's compliance with the Act. We issued our last Sunshine Act audit in February 2010.<sup>3</sup> The audit we perform in 2012 will cover Board meetings for three calendar years, starting with the September 2009 meeting. The objectives are to determine whether the Board and its subdivisions complied with the Act's procedural requirements and whether the Board's closure of meetings was consistent with the Act's exemptions.

#### Financial Statement Audit and FISMA Evaluation

##### *Audit of NSF's FY 2012 Financial Statements*

The Government Management and Reform Act of 1994, Public Law 103-356 (GMRA) requires that 24 major Federal agencies, including NSF, annually prepare financial statements disclosing the results of agency-wide operations. As required by the Chief Financial Officers Act of 1990 Public Law 101-576 (CFO Act), the Inspector General (IG) or at the IG's discretion, an independent external auditor selected by the IG, is responsible for performing the agency-wide audit. The OIG has entered into a contract with Clifton Gunderson LLP to conduct the FY 2012 financial statement audit. The audit will express an opinion on NSF's financial statements and report on NSF's internal controls over financial reporting and compliance with applicable laws and regulations that could have a direct and material effect on the financial statements.

##### *FY 2012 FISMA Evaluation*

The Federal Information Security Management Act of 2002 (FISMA) requires the OIG to perform an independent evaluation of NSF's information security program and practices to determine their effectiveness and to report the results to the Office of Management and Budget. The OIG has contracted with Clifton Gunderson LLP to conduct the FY 2012 evaluation.

---

<sup>3</sup> *Audit of the National Science Board Compliance with the Government in the Sunshine Act for 2007-2009*, OIG Report No. 10-2-008, February 12, 2010.

## NSF Compliance with the Improper Payments Elimination and Recovery Act

The Improper Payments Elimination and Recovery Act (IPERA), Public Law 111-204, was enacted on July 22, 2010, and the Office of Management and Budget (OMB) issued implementing guidance, OMB Memorandum M-11-16, on April 14, 2011. The OMB guidance requires us to review annually NSF's improper payment reporting in its Annual Financial Report and to evaluate NSF's efforts to prevent and reduce improper payments. The Memorandum also requires us to review NSF's compliance with additional requirements, such as publication of annual reduction targets and the status of target completion for all programs for which improper payment risk has been identified and measured.

The first annual IPERA report, which would be prepared by OIG staff, is due March 15, 2012. However, for FY 2011, OMB granted NSF a waiver from the reporting requirements related to improper payments. This may significantly impact the extent to which we can conduct the review required by OMB's guidance. Therefore, we will consult with OMB regarding whether we will conduct a review in accordance with the guidance, or whether we will conduct a review of the information NSF provided to OMB as justification for its waiver. If it is determined that we will report on NSF's waiver support, we will plan to issue a report prior to June 30, 2012.

### *Discretionary Audits*

OA also performs discretionary audits of NSF programs and operations. In addition, it performs financial and program audits of NSF awardees, as well as NSF's oversight of the awardees. Further, OA reviews non-Federal financial and compliance audits of NSF awardees required by the Single Audit Act. The specific areas on which OA will focus its work during FY 2012 include the following:

#### NSF Programs and Operations

##### *Antarctic Support Contract for the U.S. Antarctic Program Competitive Solicitation - Continuing Monitoring*

NSF is nearing completion of its competition for a contract to manage its U.S. Antarctic Program. Based on lessons learned about the present contract from prior OIG audits, OA will continue to provide oversight over NSF's selection process and the transition to the new contract.

##### *Independent Research & Development Program - Continuing Audit*

NSF's Independent Research/Development (IR/D) program permits permanent employees and individuals performing temporary service with NSF to continue their research projects while still working at NSF. In calendar year 2010, more than 300 NSF staff participated in IR/D. We are continuing audit work to evaluate the effectiveness of NSF's oversight of this program.

### *Workload: NSF's Office of Budget, Finance, and Award Management - Continuing Audit*

As reported in prior OIG Semiannual reports to Congress, NSF has significant workload challenges.<sup>4</sup> Processing and overseeing larger numbers of proposals and awards, including the \$3 billion of Recovery Act awards for which NSF received no additional staffing, increases NSF's workload throughout the award lifecycle. The on-going audit is analyzing the impact of increased workload on NSF's Office of Budget, Finance, and Award Management staff.

### *Conference Spending*

In 2011, the Department of Justice OIG identified excessive costs for conferences incurred by the Department.<sup>5</sup> Accordingly, OA will audit NSF's conference spending for FYs 2010-11 to evaluate the effectiveness of NSF's controls over conferences and to identify any excessive or unreasonable conference costs. Additionally, the Conference Report for the FY 2012 Appropriations for Commerce, Justice, Science and Related Agencies requires NSF to report to the OIG on a quarterly basis any conference spending greater than \$20,000. During FY 2012, OA will provide oversight as information from the agency is received.

### *Project Reporting Follow-up*

OA plans to follow-up on a prior audit on project reporting on NSF awards. The objective of the audit is to determine if NSF has implemented effective controls over grantee project reporting. The prior audit found that of 151,000 required final and annual project reports, approximately 47 percent, were submitted late or not at all; of 108,000 *annual* reports, 42 percent were not submitted as of the time of the audit.<sup>6</sup> The follow-up audit will examine whether NSF's corrective actions in response to the prior audit recommendations improved the submission rates and timeliness of project reporting.

### Financial/Program Audits of NSF Awardees and/or NSF Oversight

#### *Contingencies - Continuing Audits*

Recent assessments by the Defense Contract Audit Agency (DCAA) have found \$226 million of unsupported contingencies in three major NSF construction proposals.<sup>7</sup> To further review the issue of contingencies, OA initiated an audit of NSF's oversight of a grantee's expenditures of contingency funds for a closed award. The audit is also determining if the awarded contingency

---

<sup>4</sup> NSF OIG *Semiannual Report to Congress*, September 2009, pp. 51-52; September 2008, pp. 59-60; *Semiannual Report to Congress*, September 2007, pp. 54-55; *Semiannual Report to Congress*, September 2006, pp. 52-54; *Semiannual Report to Congress*, September 2005, pp. 52-54; *Semiannual Report to Congress*, September 2004, pp. 50-51.

<sup>5</sup> *Audit of Department of Justice Conference Planning and Food and Beverage Costs*, U.S. Department of Justice, Office of Inspector General, Audit Division, Report No. 11-43, September 2011.

<sup>6</sup> *Audit of Project Reporting for NSF Awards*, OIG Report No. 05-2-006, December 13, 2004.

<sup>7</sup> *Audit of Proposed Budget for the Ocean Observatories Initiative*, OIG Audit Report No. 10-1-012, September 30, 2010; *Revised NSF OIG Audit Report No. OIG-11-1-001, Revised DCAA Inadequacy Memo on Audit of Association of Universities for Research in Astronomy, Inc.'s (AURA) Cost Book Proposal for the Advanced Technology Solar Telescope (ATST)*, April 19, 2011; *Evaluation of National Ecological Observatory Network's (NEON) Construction Proposal*, OIG Audit Report No. 11-1-021, September 30, 2011.

amount was spent in accordance with the award. OA plans to issue two reports – one on NSF’s oversight of contingencies and the other on the grantee’s use of the funds.

#### *Audits of Various Universities, Non-Profits, and For-Profit Entities*

Ongoing and planned audits in FY 2012 will focus on whether costs charged to NSF awards are allowable, allocable, and reasonable and the adequacy of awardees’ internal controls over the administration of NSF funds in compliance with Federal and NSF requirements. The new continuous award monitoring capability we are employing will allow us to better isolate questionable and anomalous financial payment and accounting transactions as they occur. The monitoring capability will also help us identify high risk award recipients for more in-depth audit work that will include an automated comparison of NSF and recipient financial information. We will be able to surface potential duplicate and improper payments from the universe of transactions that our audit staff can research through a closer examination of the supporting award and payment documentation.

#### Non-Federal Audits

##### *Oversight of A-133 Audits*

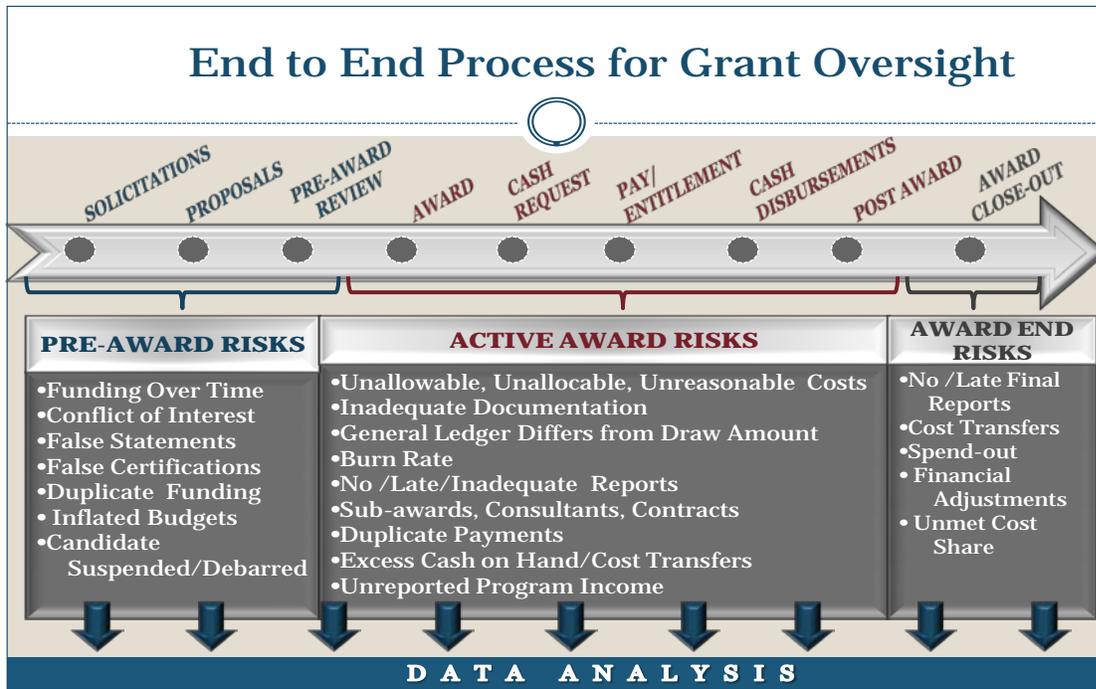
OA will continue to review annual audit reports of NSF grantees. These audits are conducted in compliance with the Single Audit Act and OMB Circular A-133, which requires non-Federal entities expending \$500,000 or more in Federal funds in a year to obtain an audit of their financial statements and compliance with Federal award requirements. The Office reviews these resulting audit reports for findings and questioned costs related to NSF awards and to ensure the reports comply with OMB Circular A-133 requirements. OA will also continue to conduct quality control reviews of the work performed on these A-133 audits.

## THE AUDIT PROCESS

The audit process begins with the identification of potential areas and subjects. The OIG is required to perform certain audit by statutes; others can be requested by Congress. For discretionary audits, the Office uses a risk-based approach to select work to be performed. Annually, OA solicits audit ideas about areas of risk from NSF and the National Science Board. It also receives information about risk areas from Congress, the Office of Management and Budget, the Recovery Accountability and Transparency Board (RATB), investigative referrals, and OA staff. Prior audits are another key source of information about areas of risk. OA reviews audits by the U.S. Government Accountability Office (GAO), NSF OIG and other OIGs, and required annual audits of institutions conducted in accordance with OMB Circular A-133. Further, OA assesses the annual NSF management challenges that OIG provides to Congress. In addition, OA has specific methods for determining risk occurring externally at NSF awardees, and internally within NSF.

### *Risk Analysis: Audits of NSF Awardees*

OA identifies risk at NSF awardees by analyzing information in NSF's awards database, searching for selected factors known to indicate high risk, such as a new NSF awardee, or a particularly high-dollar or complex award. OA also identifies risk by analyzing multiple NSF databases using data analytics, which increases the probability of identifying risk because it enables the examination of 100 percent of transactions. Data analytics is useful in identifying risk at all stages of grants. For example at the preaward stage, risks would include inflated budgets and conflicts of interest among proposal reviewers. At the active award stage risks would include unusual burn rates (e.g., expenditures for equipment at the end of an award), excess cash on hand, and no, late, or inadequate project reports. Red flags at the end of an award include multiple post-closeout financial adjustments. The use of data analytics to identify risks at all stages of the grant cycle is illustrated on the next page.



Once audit risk at specific NSF awardees has been identified, OA obtains awardees’ NSF-related accounting records. Using additional data analytics as well as more traditional audit methods, OA identifies awardee transactions that need further analysis to determine whether evidence indicates the misuse of Federal funds. The goal of this analysis is to identify, at the outset of the audit, the transactions most likely to be unallowable, unrelated to the award on which they were charged, or unreasonable.

*Risk Analysis: Audits and Reviews of NSF Operations and Programs*

OA identifies internal risks in NSF operations and programs by analyzing multiple NSF databases. These analyses identify anomalies, such as higher than expected success rates for particular award candidates, or awards to Principal Investigators who have not submitted required project reports for their prior NSF awards. Such anomalies require further analysis because they may indicate abuse of process. Once OA assesses the inherent risks in NSF operations or programs, OA determines whether NSF has developed sufficient controls to mitigate those risks; and if not, considers the programs or operations for internal performance audits. Data analytics is especially useful in determining risk in NSF operations and programs because the databases provide in-depth information about NSF’s actions and expenditures, and identifies where controls may not be working as intended. As such, in planning these audits OA again uses data analytics to examine 100 percent of the applicable data to pinpoint misuse of funds, non-compliance with applicable Federal requirements, and ineffective or inefficient processes.

### *Selection of Audit Work*

Once OA has selected potential audit candidates, it determines how many of these audits it can perform in a fiscal year, given limited resources. The major constraints are staff availability to perform audits or monitor audits performed by outside auditors, and funding, either for additional audit staff or for audit services contracts. OA chooses the most meritorious audits it can perform within these constraints.

### *Audit Planning, Performance, and Reporting*

OA has developed policies and procedures for planning, performing, and reporting on audits. Specifically, it uses conferences at key milestone points, such as for planning the audit, reviewing field work, and writing the report. All members of the audit team, contract auditors (if applicable), and representatives of OA management, including the Assistant Inspector General for Audit, when possible, attend these key meetings to keep the audit on track and to ensure adequate communication within OA on each job. Audit reports, as redacted by OIG Counsel, are posted on the OIG web site within three days of their being available for publication, as required by the IG Act. All audit reports, whether of NSF or of its awardees, are issued to NSF management.

### *Audit Resolution and Closeout: Internal Performance Audits*

To address recommendations from audits of NSF programs and operations, NSF develops a corrective action plan, which it provides to OA. Once OA and NSF agree that the corrective action plan adequately addresses the recommendation(s), the recommendation(s) is considered resolved. OA also follows-up to determine if NSF has implemented its approved corrective action plan. After making this determination, OA closes out the applicable recommendation(s).

### *Audit Resolution and Closeout: External Audits*

For external audits of NSF awardees, NSF provides the audit reports to the auditees and obtains corrective action plans directly from them. Once OIG and NSF mutually agree that the awardees' corrective action plans adequately address report recommendations, the recommendations are considered resolved. If the OIG and NSF cannot resolve an issue, it is forwarded for resolution to increasingly senior staff within OIG and NSF management, and ultimately, if necessary, to the NSF Deputy Director, who is NSF's designated Audit Follow-up Official. After the audit recommendations are resolved, NSF determines whether the awardees' corrective action plans have been implemented. Once NSF determines that the corrective actions have been implemented, the recommendations are closed. If OA does not concur with NSF's decision to close the recommendations, OA considers the areas of disagreement as new risks, which become inputs for the next audit planning cycle.

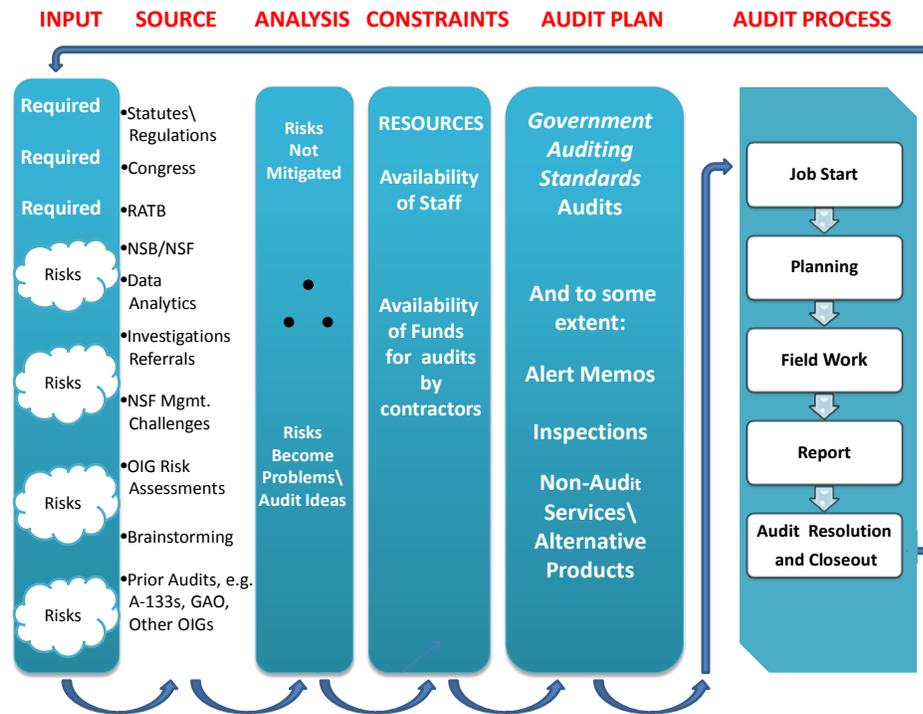
### *Circular Process*

Thus, the audit process is circular. The circle begins with inputs about risks from a variety of sources and analysis of whether these risks are mitigated and if not, a determination that

auditable issues may exist. The circle continues with the incorporation of a selected number of candidates into an audit plan by matching the highest-risk candidates with available resources. The next part of the circle includes designation of the type of work to be completed, whether audits, inspections, or time sensitive memos issued either during ongoing audits or as an end product of non-audit services. The circle then continues with the completion of work through the job start, planning, field work and report phases; and finally resolution and closeout of audit recommendations. After audit resolution and closeout, the circle feeds back into the beginning of the audit process.<sup>8</sup> This cycle is depicted in the illustration below. It shows the steps from inputs, sources, and constraints, to the audit plan and the audit process and the flow of inadequately resolved and closed recommendations into inputs for the next audit cycle.

### The Audit Cycle:

#### From Audit Planning to Audit Resolution and Closeout to Audit Planning



<sup>8</sup> The audit loop describes the process for audits that are performed in accordance with *Government Auditing Standards*. Not all steps in the audit process are followed for other types of work.