

Performance Plan FY 2020

NATIONAL SCIENCE FOUNDATION
OFFICE OF INSPECTOR GENERAL



INTRODUCTION

This Performance Plan is presented in two sections: the Office of Inspector General (OIG) Strategic Plan for 2018-2023, and the OIG Annual Plan, which covers the 12-month period from October 1, 2019, through September 30, 2020.

The OIG Strategic Plan (p. 2) identifies the OIG's vision, mission, basic values, five-year strategic focus, and management challenges for the National Science Foundation (NSF), and core functions. It also includes the OIG Workforce Plan (p. 10) which describes the human capital needed to meet the office's strategic goals over the next three years.

The OIG Annual Plan (p. 15) describes the goals and strategies we will use to focus our operations over the next year to achieve our strategic objectives, as well as the measures we will use to determine our progress. Our goals include: (1) promoting NSF effectiveness and efficiency, (2) safeguarding the integrity of NSF programs and resources, and (3) using OIG resources effectively and efficiently.

The purpose of our Performance Plan is to present 1) OIG's broad priorities and objectives for the period FY 2018 through FY 2023, 2) an estimate of resources needed to achieve these objectives, and 3) specific strategies and measures for the current year that will advance us toward accomplishing those objectives. We are committed to integrating this plan into our ongoing management system, assessing its progress on a regular basis, adjusting as needed, and achieving our goals.

OIG STRATEGIC PLAN

VISION

We will use our diverse and talented staff to assist NSF in improving its programs and meeting the needs of the communities it supports. We will help prevent problems, address existing issues in a timely and proportionate manner, keep abreast of emerging challenges and opportunities, and facilitate positive change.

MISSION

Under the authority of the Inspector General Act of 1978, as amended, the OIG conducts independent and objective audits, investigations, and other reviews to provide effective oversight of NSF activities. Our specific aims are to promote the effectiveness and efficiency of NSF programs and operations and to safeguard their integrity. We strive to address the concerns of our stakeholders: the National Science Board (NSB), the Congress, NSF, the research communities, the executive branch of government, and the American public.

BASIC VALUES

Professionalism. We follow accepted technical and ethical standards of our disciplines; do our work fairly and thoroughly; represent our results accurately, objectively, and with a sense of proportion; and complete our work within a reasonable time so that it is available for relevant decisions.

Accountability. We take responsibility for the quality of the work we perform and promote integrity, objectivity, and consistency in all our efforts.

Flexibility. We make every effort to anticipate changing information, environmental conditions, and potential opportunities and obstacles; adjust our priorities and work methods as needed; and employ effective communications to increase the positive impact of change.

Innovation. We think creatively, adopt new ways of addressing issues tailored to unique circumstances, take reasonable risks in resolving problems, and build on successful processes to make them better.

Teamwork. We are respectful of others; seek common ground when differences occur; are honest, trustworthy, and straightforward; and are cooperative without compromising our independence. We engage employees at all levels to develop and continually improve our work methods and products.

5-YEAR STRATEGIC FOCUS

The OIG's strategy focuses primarily on providing independent oversight to ensure the effectiveness, efficiency, and integrity of NSF's business activities. Inspectors General are not responsible for managing agency programs; nor do we attempt to assess the scientific merit of research funded by NSF. Our oversight mission requires that we concentrate our resources on performing audits of the agency's financial statements and award funds, monitoring and evaluating management functions that may pose significant financial or administrative risk, investigating allegations of criminal behavior or other misconduct, and recommending proactive solutions to NSF management. In determining our priorities, we consider the results of prior audits and investigations and consult closely with the NSB and the Congress, NSF managers and staff, the Office of Management and Budget (OMB), and members of the research communities supported by NSF. Over the five-year period covered by this strategic plan, OIG has identified the following NSF issue areas for priority attention:

- Accountability over major multi-use facilities
- Oversight of NSF awardees
- Investments in Antarctic infrastructure
- Mitigating the threats posed by foreign government talent recruitment programs
- NSF's business operations
- Encouraging the ethical conduct of research.

Internal Audits of NSF. Internal audits and reviews enable OIG to assess priority areas listed above. OIG auditors will continue to oversee an Independent Public Accounting (IPA) firm, which performs annual audits of NSF's financial statements and of IT security reviews. Auditors will also assess NSF's compliance with the Improper Payments Elimination and Recovery Act of 2010, which requires Federal agencies to periodically review and identify programs and activities that may be susceptible to significant improper payments; and the Digital Accountability and Transparency Act of 2014 (DATA Act), which requires agencies to report financial and payment data on a public website

External Audits. Audits of NSF awards generally focus on the risks that the auditee is: 1) using NSF funds for unallowable, unallocable or unreasonable costs; 2) lacking adequate systems to record, track, or report funding received for NSF; or not complying with applicable Federal and agency requirements. Consequently, OIG will continue to allocate a significant portion of its resources to audits of selected high-risk awardees to evaluate their financial accountability, underlying internal controls, and compliance with Federal requirements and the terms and conditions of their NSF awards. OIG will continue to use its own staff, and IPA firms under contract with OIG to conduct audits of high-risk programs and institutions.

External Testing on Internal Audits. Some audit projects have both an internal and external focus. For example, an internal audit focusing on NSF's oversight of its awardees may require auditors to visit awardees to determine the effectiveness of NSF's oversight. As a result, these projects may result in more than one audit report. The external report(s) will focus on issues

found at the awardees during the visit and may question costs. The audit report will focus on NSF's policies and procedures and any recommendations for improving them.

Single Audits. Awardees who spend \$750,000 or more of Federal funds in a year are required to obtain a Single Audit, which is a valuable tool for Federal agencies in their oversight of grantees. Single Audits for grantee fiscal years ending in 2018 covered approximately \$6.2 billion of NSF's funds. We will continue to review the quality of the presentation of the reporting package for Single Audits of NSF awardees for which NSF has audit cognizance or oversight — defined generally as those institutions that receive the majority of their Federal funding from NSF — as well as non-NSF cognizant or oversight awardees when we have concerns regarding the NSF-related information contained in the reports to determine whether the audits comply with Federal requirements and professional audit standards.

Investigations. OIG will continue to react promptly and effectively to allegations of fraudulent practices and research misconduct, while maintaining a focus on proactive measures such as prevention and detection of grant fraud and contribution to the development of effective training throughout the research community on the responsible conduct of research. This will include, in accord with budgetary constraints, outreach activities to ensure that NSF staff and awardees understand the rules and regulations that apply to them. It also includes efforts to determine if violations identified during individual investigations are more widespread, identify any that may undermine the integrity of the data upon which NSF relies, and evaluate indicators of grant fraud found during audits and other reviews.

Within the Federal IG community, our Office of Investigations (OI) investigators will continue to play a leadership role in the establishment of more effective coordination in the area of grant fraud prevention. These efforts include continued emphasis on investigations relating to the threat of foreign government talent plans. Through these plans, foreign states exploit the openness of American universities and the U.S. research enterprise. OI has confronted this national security threat through close collaboration with the FBI and other investigative partners and is engaged in many efforts to determine the degree and scope to which actions by participants in such talent plans violated Federal laws, rules, or regulations. Talent plan investigations now account for approximately 25% of our investigations.

Similarly, OI will continue our leadership in the fight against fraud relating to Small Business Innovation Research Program/Small Business Technology Transfer Program (SBIR/STTR) grants. Over the past seven years OI has led a working group of OIGs to improve Federal law enforcement efforts addressing fraud in this area. During that period, we have opened over 160 SBIR/STTR cases - many of them joint investigations with other federal agencies - and expect our caseload in this area to continue to grow. We will also continue our leadership role in the detection and promotion of best practices in the investigation of research misconduct and will continue our involvement in national and international discussions about the global impact of such misconduct.

We have joined with other Federal investigative agencies with Statutory Law Enforcement Authority to ensure maintenance of the highest professional investigative standards through an

effective peer review process. Finally, we will continue to lead IG community efforts to promote the use of government-wide suspension and debarment to protect taxpayer funds.

Management Challenges. To a significant extent, OIG's priorities are reflected by its annual list of the most serious management and performance challenges facing NSF. In many cases, these difficult challenges will extend over at least the next several years, and they are largely the product of our past work, the priorities enunciated for the Federal government by the Congress and the Administration, and our staff's knowledge of agency operations. Management challenges for FY 2020 include:

- Managing Major Multi-User Research Facilities;
- Meeting Digital Accountability and Transparency Act of 2014 (DATA Act) reporting requirements;
- Managing the Intergovernmental Personnel Act (IPA) Program;
- Managing the Antarctic Infrastructure Modernization for Science (AIMS) Project;
- Encouraging the Responsible and Ethical Conduct of Research; and
- Mitigating Threats Posed by Foreign Government Talent Recruitment Programs.

CORE FUNCTIONS

The work of NSF OIG may be divided into four functional areas: (1) *audits and reviews*, which provide information about how well systems function, determine whether activities comply with financial and compliance standards, and identify how systems can be improved; (2) *investigations*, which address allegations of serious civil, criminal, administrative or research misconduct; (3) *education and outreach*, which establish and maintain effective communication between OIG and its oversight officials and stakeholders such as NSB, Congress, OMB, NSF, the research community, and other OIGs and federal agencies. Such outreach is essential in facilitating our mission of promoting the effectiveness and efficiency of NSF programs and operations and safeguarding their integrity; and (4) *overarching management of OIG*, which refers to all who are engage in leading or supporting the above-mentioned core functions including the Immediate Office (of the IG), Office of Management, and Office of Counsel. In each area, we strive to focus on substantive matters, and are committed to perform our duties fairly and to work cooperatively without compromising our independence.

Audits and Reviews

Audits and reviews focus on NSF's programs and operations (internal focus), on awardees' compliance with Federal and NSF requirements (external focus), or on both (internal and external focus). For internally focused projects, we assess effectiveness and efficiency. For externally focused project, we assess areas such as awardees' systems for managing NSF funds, costs claimed on NSF awards, and compliance with Federal and NSF requirements. For projects focusing both internally and externally, we assess NSF's oversight internally and its application externally. In all cases, we are concerned with detecting and preventing fraud, waste, and abuse of Federal resources.

The internal focus includes statutorily required audits of NSF's financial statements, including an evaluation of agency financial internal controls; and reviews of information security. In addition, internal issues include NSF's management of: 1) improper payments; 2) reports of financial payment data on a public website; 3) the award processes from inception to close-out; 4) major programs; and 5) business operations.

The external focus includes audits that determine whether awardees' internal control systems are adequate for monitoring their NSF awards, and whether their costs claimed are allowable, reasonable, and properly allocated. Auditors use data analytics to identify institutions to audit and what to audit at the selected institutions.

The combined internal and external audits may start with a singular emphasis but evolve to focus on both aspects of an issue to provide a more complete picture. Effectiveness and efficiency of NSF's processes and policies designed to oversee programs and operations are tested at the awardee level, to determine if they are being implemented and whether they are working.

We focus our audits and reviews on issues of substantial concern and prospective importance to NSF and its goals. We select and design projects based on assessments of the risk involved in the activity to be reviewed and the likelihood that an audit or review would lead to improvements.

Focusing on Substantive Matters

- We consider program, management, and financial risks.
- We conduct our audits and reviews in accordance with government standards and in ways that assist NSF in pursuing its mission.
- We develop and explain our recommendations in terms of how they will improve NSF effectiveness and efficiency.
- We establish priorities for our work by selecting reviews that promise the greatest substantive benefit for NSF.

Conducting Audits Fairly

- After we collect and analyze our data, we solicit feedback from the affected parties and give full consideration to their views.
- To ensure that our reports are thorough, fair, and accurate, we follow accepted quality control practices in the IG community and comply with all relevant Federal and professional standards.

Working Cooperatively without Compromising our Independence

- We keep affected parties informed, invite them to identify issues of special concern, and endeavor to address the issues they identify.
- We seek to develop analyses and recommendations that enable NSF management and awardees to make improvements.
- We work with NSF managers and awardees to familiarize them with Federal requirements and explore ways they can comply without undue burden.

Investigations

We are responsible for investigating possible wrongdoing involving organizations or individuals who submit proposals to, receive awards from, conduct business with, or work for NSF. We seek to perform focused, well-documented investigations addressing evidence of serious wrongdoing. When appropriate, the results of these investigations are referred to the Department of Justice or other prosecutorial authorities for criminal prosecution or civil litigation, or to NSF for administrative resolution. In addition, systemic issues identified in the course of investigations or investigative proactive reviews are brought to the attention of NSF management in order to increase the economy and efficiency of NSF programs and operations.

Our civil, criminal, and administrative investigative activities have consistently resulted in millions of dollars in actual recoveries and funds put to better use. Further, they have protected the Federal government from unscrupulous individuals and entities, have served as a deterrent against similar wrongdoing, and have led to positive systemic changes in NSF programs and operations. Investigating allegations of research misconduct, specifically falsification of data, fabrication of data, and plagiarism, is a similarly high-impact investigative activity and is among our most important responsibilities. Often leading to suspension and/or debarment of unscrupulous researchers and entities, research misconduct strikes at the core of NSF's mission and compromises the research enterprise, which operates increasingly on a global scale. It is therefore a special concern for our office.

Focusing on Substantive Matters

- We concentrate our investigative resources on the most serious cases, as measured by such factors as the amount of money involved, the seriousness of the alleged offenses or ethical violations, and the strength of the evidence.
- We give highest priority to cases that have national security implications; that will directly affect future NSF activities, including cases that involve protecting the integrity of Federal funding and decision-making processes; that involve allegations of wrongdoing by NSF staff; and allegations that concern ongoing awards where funds are currently at risk.
- We give priority to cases that will create significant issues for NSF management if they remain unresolved.
- Our research misconduct cases focus on serious violations of the ethical standards that are important to the scientific community.

Handling Cases Fairly

- Our investigative process includes internal review by staff who have not yet formed an opinion in the case and who bring different disciplinary perspectives to bear on it. Our reviews ensure that matters are kept in proportion and that similar matters are treated consistently.
- We make every effort to collect relevant information in a manner that minimizes the burden on the providers while also allowing a thorough analysis of the facts.

- We protect the privacy of investigative subjects by seeking information directly from them when appropriate. To the greatest extent practicable, we conduct our investigations discreetly to avoid inadvertent damage to reputations.
- We value timeliness and recognize that delay can undermine fairness. We give priority to resolving cases in which we have already contacted the subject of the investigation.
- We review past cases as a frame of reference for how to handle new cases, in order to foster consistency without sacrificing flexibility.

Working cooperatively without compromising our independence

- When handling allegations of research misconduct, we seek to accommodate variations in the investigative procedures at awardee institutions. We require that awardees follow fair and reasonable procedures consistent with NSF regulations.
- We work with awardee institutions to ensure that our investigations meet the expectations of all parties (NSF, OIG, and awardee) by articulating our concerns at the outset and offering assistance throughout.
- We explain our practices and procedures to all affected parties, and when we cannot share substantive information, we explain why.
- We coordinate our work closely with Department of Justice attorneys, law enforcement officers, research university administrators, and officials at other agencies and institutions.
- Based on our experience with research misconduct, we play a leadership role among Federal agencies.

Education and Outreach

An effective education and outreach program is essential to the successful performance of our mission of preventing and detecting problems. Our outreach program also plays a key role in reinforcing NSF's support for the integrity of and compliance with its rules, policies, and procedures.

Outreach activities within NSF make us more accessible to managers and staff and increase the likelihood that we will hear about important issues within the agency. These activities also help educate NSF employees about their obligations to report alleged research misconduct and other issues of fraud, waste, and abuse. Through external outreach to the communities NSF supports, we help NSF foster the responsible use of government funds and promote integrity in government-supported research programs. We also communicate that our work focuses on matters of substantial concern to NSF and is done with sensitivity to the perspectives and practices of the research community.

Outreach activities are also a valuable learning tool for OIG staff, as they help familiarize us with NSF and its people, further our understanding of agency operations and the communities it serves and keep us abreast of changing conditions. They also build trust among NSF staff in our ability to handle sensitive matters with tact, fairness, thoroughness, and a sense of proportion. Such trust is essential for our office to sustain high quality audits, reviews, and investigations.

OIG Management

This centralized office is responsible for strategic planning/budgeting, procurement, human resources, IT services and administrative support for the entire office. It was created in April 2018 in order to consolidate most financial, administrative and support functions throughout the office under the direction of the new AIG for Management.

We pay special attention to developing our staff, rationalizing our operations and administrative processes, and striving to maintain a positive, productive workplace. To perform outstanding audits and investigations and otherwise promote economy and efficiency, we need a capable staff, sound policies and procedures, in-depth knowledge of NSF and the communities it serves, and a coordinated education and outreach effort.

We are committed to developing the skills of our staff through formal training, challenging work assignments, and a work environment that encourages teamwork, diversity, open communication, and learning. Through collaboration among staff members in the various disciplines represented in OIG, we help our staff develop a broader appreciation of the different aspects of effective performance in NSF-funded activities.

We continue to improve our management information systems and technologies to create a more productive and satisfying work environment, in which work is planned better and executed in accordance with office-wide priorities. We work with NSF to continue to improve human resource support and manage our training resources effectively. Our individual performance plans are tied closely to the OIG annual plans.

OIG WORKFORCE PLAN

Overview. The NSF Office of Inspector General workforce plan serves as a guide for identifying human capital needs, developing and implementing solutions, and evaluating progress toward achieving OIG's strategic goals over the next three years. The plan projects how our current workforce will be adjusted in response to future challenges, assuming that OIG's appropriation continues on its current trajectory. OIG will update this plan each year in conjunction with its annual performance plan. In an era of tighter government budgets, we are committed to continual improvement of our operations and using our people in the most efficient way possible.

Our current strategic plan describes issue areas on which we expect to focus attention over the next three years. They include:

- The planned modernization of United States Antarctic Program facilities;
- The appropriate divestment of NSF major research facilities;
- Mid-scale research infrastructure projects;
- The Established program to Stimulate Competitive Research (EPSCoR);
- Management of the Intergovernmental Personnel Act (IPA) program (including participants' conflicts of interest);
- Business operations (e.g. compliance with the Improper Payments Elimination and Recovery Act of 2010 and the DATA Act of 2014);
- Grant administration;
- Mitigating threats posed by foreign government talent recruitment programs; and
- Investigation of fraud and research misconduct.

OIG uses multiple tools to maximize the productivity of our staff. For example:

- The Office of Audits (OA) uses software that extracts financial data from NSF and external sources, including general ledger data from awardees, to evaluate audit risk and identify anomalies among transactions for further research and analysis.
- OA uses *General Evaluation of Narratives with Intelligent Extraction* (GENIE), text recognition software recently developed in house. GENIE performs text searches at the average rate of 1,000 documents/hour and in its first year alone has saved up to \$70,000 in procurement costs and about \$60,000 in salary costs.
- OA employs commercial software to create electronic workpapers, track the utilization of staff and financial resources, and issue reports on the status of audit recommendations. OA also uses this software to prepare the statistical tables in Semiannual Reports to Congress.
- The Office of Investigation (OI) uses an electronic case management system to increase its efficiency and reduce the use of paper. The system has enhanced reporting capabilities, improved collaboration amongst investigative team members and completely replaced the use of paper case files. A complete User and Technical Guide is being developed and enhancements to the system continue to be identified and completed.
- OIG audit and investigative staffs utilize technology to better target high-risk situations.
- The Office of Management (OM), Office of Counsel, and Immediate Office continue to support the operational divisions through a variety of means, including data analytics,

Business Intelligence, the use of SharePoint and software tools such as Tableau to increase effectiveness and integrity of tracking, monitoring and reporting in all areas they support.

At the start of FY 2020, OIG has 68 staff in addition to the IG: 28 work in OA, 25 in OI, 10 in OM, and 5 in the Office of Counsel and Immediate Office. Due to rising costs and the austere budget environment of recent years OIG's workforce has declined from a high of 78 FTEs in 2012 to 71 FTEs in 2019.

Over the last 5 years, OIG has sustained an increase in its average cost per FTE of 20 percent, as personnel costs and benefits have increased more than expected, and professionals such as lawyers, investigators and CPAs have replaced some administrative personnel. The rise in personnel costs exceeds the increase in OIG's appropriation since 2013. The office strives to maintain a workforce of at least 70 FTEs to carry out its most critical responsibilities, and continually reviews its staffing levels in light of budgetary constraints. At times OIG will temporarily carry more FTEs than it aims for to smooth workload or skillset imbalances. As our current workforce ages, new hires are critical to revitalizing our workforce and are carefully vetted for technical skills along with their potential to assume more senior management responsibilities as they progress. Currently, approximately 21 percent of our staff are eligible to retire.

In terms of operating a lean, efficient organization, the NSF Office of Inspector General practices the principles it espouses in its reports. For example, investments in equipment and technology upgrades (e.g., expansion of our data analytics capability for Audits and Investigations) are pursued only if a persuasive business case can be made.

The recently formed Office of Management (OM) continues to refine procedures for providing mission support to all of OIG in the most efficient and effective manner. In FY 2020, OM will continue to consolidate support programs in one unit that provides oversight of contracts, human resources, budget, policies, and other administrative functions. Staff have been cross-trained so that they can quickly be redirected to address temporary workload imbalances and perform administrative tasks, so the other groups can focus on their respective core responsibilities.

The Office of Audits (OA) and Office of Investigations (OI) are continually refining their structures and practices to improve efficiency while also improving quality. For example, OA is implementing a Compliance Analytics Desk Audit (CADA) process to automate the traditional audit process using templates and other automated processes to increase audit coverage, while reducing burden on both recipients and the auditors. OI streamlined the intake and handling of Hotline calls to respond more rapidly to information from whistleblowers and others. Both offices have invested in new systems that automate many of the steps involved in the production and recordkeeping of their reviews and cases. This has significantly reduced the number of support staff and storage space (for paper records) needed in each office. They have also revised their respective operations manuals to implement work processes that improve efficiency and reduce errors in OIG final products.

Audits. OA has strengthened its in-house information technology audit capability significantly, resulting in better quality and more timely audits at a lower cost. The Office contracts with IPA

firms to perform some audits of NSF awardees. These outside auditors provide additional expertise and resources necessary to accomplish OA's varied and complex audit projects. However, the office is also training staff members to perform awardee audits in-house. This process entails additional training costs initially but is expected to result in long-term benefits to the office in terms of developing staff with increased audit expertise and depth.

In addition, OA has instituted a new program, Compliance Analytics Desk Audits (CADA), to audit smaller award recipients with a lower number and value of NSF awards. CADAs audit fewer awards and transactions and use audit process automation, which automates data cleansing, executes analytics testing procedures, and generates workpapers. CADAs also streamline the reporting process; unlike traditional audits, which develop audit reports from scratch, CADAs use a report template with standard language. Thus, CADAs increase the scope of OA's coverage of NSF's award portfolio with maximum efficiency.

Internal performance audits and reviews will continue to address Federal and OIG priorities as they pertain to NSF programs and operations, such as NSF's management of its:

- Information security program;
- Major facility projects from inception to termination;
- Modernization of the United States Antarctic Program facilities;
- Government-owned equipment purchased on NSF awards;
- Established Program to Stimulate Competitive Research (EPSCoR); and
- Mid-scale projects that cost between \$6 million and \$70 million.

Investigations. Foreign threats to American research and development, as well as growth in Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) cases, continue to increase the size and complexity of OI's workload, requiring increased interaction with NSF, institutional administrators, other Federal agencies, international organizations, and the Department of Justice and other prosecutorial authorities in order to bring about effective resolutions. We have institutionalized the impact on our workload resulting from the Attorney General's grant of Statutory Law Enforcement Authority but our caseload per special agent still remains high by community standards at approximately 14 cases per agent.

Of particular note, OI has taken a lead role in the federal IG community in addressing the multitude of threats presented by foreign talent programs. The ramifications of foreign talent programs on NSF operations are deeper and more multi-faceted than originally thought. Our outreach to NSF has identified the improper influence over the NSF research enterprise through actions taken by NSF-funded PIs, after failing to disclose Current & Pending Support and foreign affiliations (the external threat) and the improper influence over the NSF award-making process through actions taken by POs and Panel Reviewers (the internal threat). OI has collaborated with FBI, DOJ, CIA, and a host of agency OIGs to bring this national security threat to the attention of our investigative partners and to ensure the threat is addressed.

OI responded to unforeseen, substantial, and unsustainable expense of translation of Chinese documents relating to foreign talent investigations by leveraging relationships at universities to identify recent graduates who were fluent in Chinese. OI hired an award-winning Chinese

speaker on a term appointment to identify those critical documents that needed to be certified for investigations and trials. In the first month of completed work, the money saved on translations more than paid for the employee's entire annual salary. In addition to cost savings, talent plan investigations were greatly expedited due to real-time translation and identification of additional leads. We hope to make this a permanent position in FY 2020.

OI remains a leader in the effort to increase the use of suspension and debarment authority as an important tool to protect federal grant funds. These efforts are essential to ensuring the protection of federal funds but require significant staff hours to complete. OI will need to continue to recruit staff with exceptional legal, investigative and communications skills to conduct these critical functions.

The Office of Investigations serves as the focal point within the agency for investigating allegations of research misconduct and making recommendations for appropriate actions when such allegations are substantiated. Our investigations continue to substantiate allegations of fabrication, falsification, and plagiarism in NSF-funded research. We also continue to receive substantiated allegations related to violations of NSF peer review confidentiality, false representations in résumés, false representations of publications in annual/final reports, and fraudulent or otherwise improper use of grant funds. The number and variety of ethical issues reviewed by our investigative scientists continues to tax our resources; the caseload per investigative scientist is approximately 12.

Prevention activities also include outreach to ensure that NSF staff and awardees understand the rules and regulations that apply to them. As NSF programs have increased in funding, complexity, and number, OIG has seen a commensurate increase in requests from universities, research institutions, and individual researchers for presentations and information. Due to budgetary constraints, however, we have not had the funds or personnel to adequately respond to this demand in the research community. We have had to reduce the number of outreach events and largely limited them to the local area unless remote participation through webinars, etc. was possible.

Over the next few years we will continue to conduct proactive reviews to the extent that personnel strength and investigator workload permits. These reviews serve to detect grant fraud and to deter fraudulent behavior in the research community; through our improved targeting of high-risk institutions and activities, they have been remarkably successful in detecting fraud and mismanagement. Our efforts in this regard have been substantially reduced as a direct result of the nature and complexity of investigative lines of work that have emerged in this era of budgetary constraint. Despite significant, and to some degree successful, efforts to reduce investigative caseloads, many more of our investigations are leading to prosecutions, requiring longer and more substantive active involvement on the part of our investigative staff in trial preparation and participation. Because our cases are tried in jurisdictions across the country, our investigative staff are required to travel and dedicate great efforts to supporting ongoing litigation.

Responding to these increasing demands will require additional investigative personnel. We would like to hire another investigative attorney and special agent to handle this increased

workload in the areas of civil/criminal cases. We also hope to recruit another investigative scientist to combat the consistently high number of research misconduct cases and to address the growing number of Whistleblower Reprisal investigations being conducted.

Office of Management. This centralized office is responsible for strategic planning, budgeting, procurement, human resources, IT services and administrative support for the entire office. Specific functional areas in OM include:

- Budget and administration - responsible for all budgetary, financial and most administrative business conducted by the office, as well as coordination with NSF to provide human resources and procurement support. Using powerful data management tools, we are refining our budget planning and execution processes to improve reporting and provide management with more timely, accurate and complete information.
- Intake operation – all complaints regarding fraud, waste, and abuse are handled by an Intake coordinator, who processes more than 250 allegations annually.
- Forensic accounting and data analytics – Increasingly within the OIG community, data analytics is being utilized to identify anomalies that are indicative of fraud, waste, or abuse. OM utilizes a forensic accountant skilled in data analytics to help investigators manage the large amounts of information they receive through subpoenas and other means. The forensic accountant now supports the entire office, including the Office of Management in the areas of procurement tracking and budget formulation.
- IT services – IT support including website maintenance and posting of reports, digital forensics, and data security. The digital forensics activity has become increasingly critical in investigations, as most of the evidence being captured is electronic.
- Audit Quality Control – includes independent reviews of completed audit products, monitoring of required staff meeting Government Auditing Standards continuing education requirements, and issuance of the annual quality assurance report.

Within the next 3 years, OM plans to bring on an additional Forensic Accountant to handle the increasing volume of financial analysis required in investigations, and a Management Analyst to provide additional coverage in administrative support.

Office of Counsel/Front Office. The Office of Counsel consists of the Counsel to the IG and two assistant counsels. It provides comprehensive legal advice and critical analysis to the IG and all OIG divisions, including legal review of externally issued OIG work products and certain correspondence. OC also undertakes proactive measures – like training and office-wide publication of Legal Updates – to help prevent potentially time-consuming and costly legal issues from arising. OC handles myriad subject areas, including audit-related support, ethics, appropriations law, acquisitions, information disclosure, privacy, personnel, and IG Act authorities. OC also provides written legal and legislative updates to staff to keep them abreast of matters that may affect OIG operations, and supports the larger IG community through active participation CIGIE projects and committees.

The Inspector General’s immediate office is a lean unit of two – the Chief of Staff and Executive Assistant. The Chief of Staff handles all matters relating to external affairs, primarily congressional relations, and public/media contacts.

Summary. Due to the challenging budget environment that has prevailed in recent years, OIG has been forced to reduce staffing levels by 10-15 percent since FY 2012. OIG will always seek to leverage technology and to “work smarter” to maintain and potentially increase office production. We expect that staffing will remain level at around 70 - 71 FTEs over the next three years. However, the need to equip staff with additional skillsets due to budget constraints, retirements, and the increased use of technology in our audits means that training will be a funding priority.

OIG Annual Plan

October 1, 2019–September 30, 2020

OIG GOALS

We have three goals that provide the framework for our performance plan:

1. Promote NSF effectiveness and efficiency.
2. Safeguard the integrity of NSF programs and resources.
3. Utilize OIG resources effectively and efficiently.

Our success is directly related to how well NSF accomplishes its programmatic responsibilities. Consequently, we will ensure that our work focuses on priority agency issues and that we provide useful, timely feedback to agency managers, the National Science Board (NSB), and the Congress. This plan covers the period from October 1, 2019-September 30, 2020.

Goal 1

Promote NSF Efficiency and Effectiveness

Goal 1 involves increasing OIG's impact on NSF's effectiveness and efficiency. In recent years, we have identified a wide range of issues concerning NSF management and operations, analyzed their causes, and made recommendations for improvements to the cognizant agency managers. Although NSF has taken many steps to improve operations, we continue to identify systemic issues, particularly with implementation of controls at the awardee level. Though we cannot make management decisions, we have seen that good recommendations from solid audit work can and will help NSF to achieve better results. The following performance measures and strategies describe the steps we will take to increase our impact on NSF effectiveness and efficiency.

How We Will Measure Progress

Specific strategies and performance targets (goals) associated with accomplishing this strategic goal are listed on the following pages, along with a set of performance measures, as necessary, to ensure that each action is fully implemented and that the efficiency and effectiveness of the agency will be improved as a result.

Performance targets are divided between those that are quantitative and qualitative. Quantitative targets reflect measurable results that should be achievable during the twelve-month period. Qualitative targets are those that are less concrete. They reflect activities that will enhance or benefit NSF or OIG operations, but which do not lend themselves to a predetermined baseline performance level.

STRATEGIES AND ASSOCIATED TARGETS

The following describes the strategies for achieving this overall goal, as well as associated quantitative and qualitative targets.

1. Identify and implement approaches to improve product quality and timeliness.

Quantitative

- Complete 50 percent of OIG internal audit products performed by OIG staff within 18 months of the engagement letter.
- Evaluate (consistent with Government Auditing Standards) grantee implementation of NSF policy in 25 percent of internal audits.
- Include steps to assess risk and test for potential fraud (when applicable) in 75 percent of audit plans, consistent with OA policies and procedures.
- Perform at least one independent quality control review of an audit product issued during the performance year in accordance with government auditing (GAGAS) requirements and Office of Audits policy.
- Resolve all internal quality control review (IQCR) findings and recommendations within three months of report issuance and in accord with OA policy, applicable CIGIE guidelines, and *Government Auditing Standards* (Yellow Book).
- Issue Annual Quality Assurance report to the AIGA in accordance with Office of Audits policy and government auditing (GAGAS) standards.
- Resolve all actions identified in the Annual Quality Assurance Report within three months of report issuance and in accord with OA policy.
- Make case opening determination on 75% of factually sufficient allegations within 14 days.
- Assign 75 percent of all investigative cases to appropriate staff teams within 14 days of being opened/received.
- Make 75 percent of investigative referrals to other offices or organizations within 30 days of the need for referral being identified and are conducted in a manner consistent with office policy.
- 75% of investigations receive quarterly case review by appropriate manager.
- 75% of investigations are closed within established timeframes.
- Provide legal reviews or opinions within agreed upon timeframes 60 percent of the time to ensure that the office's operations stay within the bounds of governing legal requirements and that courses of action are promptly taken to minimize legal risk.
- Ensure that 80 percent of all confidential financial disclosure filings are reviewed and certified in accordance with Office of Government Ethics standards and timeframes.
- By June 1, 2020, have fully functional electronic filing system for OIG's confidential financial disclosure forms, which automates all functions associated with the filing, review and certification processes in accordance with Office of Government Ethics requirements.
- Circulate at least one IT update which discusses topics relevant to OIG operations or activities to assist in mission support.

- Provide at least one forensic accounting update to investigative management ongoing case work.
- Ensure 75 percent of OIG publications are posted to external websites, such as Oversight.gov, consistent with relevant directives.

Other

- Ensure audit work remains on schedule through bi-weekly tracking and monitoring of the status of the teams' timeframes.
- Review records practices and develop approaches for enhancements needed for accuracy or completeness.
- Data necessary for tracking and monitoring status of investigations will be provided to appropriate managers on a weekly basis to ensure work remains on schedule.
- OI investigative case management system (eLOC) will be reviewed and refinements made as necessary.
- Improve and enhance processing of OIG FOIA requests.
- Ensure timely processing of human resources actions.
- Update the OIG's COOP plans in accordance with NSF and overarching DHS guidelines at least annually.
- Update the OIG's strategic plan and communicate verbally to all OIG staff to facilitate discussion and foster collaboration/coordination at least annually.

We will use the following measures to assess progress in implementing this strategy:

- Percent of OIG-performed internal audit products completed within 18 months of the engagement letter date as verified through internal audit review and documented in OA's automated workpaper system.
- Percent of internal audits that evaluate grantee implementation of NSF policy.
- Percent of audit plans that include steps to assess risk and test for potential fraud (when applicable).
- Issuance of internal quality control review reports for one audit team/division.
- Percent of IQCR findings resolved in accordance with *Government Auditing Standards* within three months of report issuance.
- Issuance of an annual internal Quality Assurance Report.
- Percent of the findings identified in the annual internal Quality Assurance Report resolved within three months of report issuance, as determined by OA response to the report, if required, and any corresponding response necessary to ensure compliance with OA policies.
- Number of bi-weekly reports on the status of audits issued.
- Weekly tracking and monitoring of the status of investigations.
- Percent of all investigative cases assigned to appropriate staff teams within 14 days of being opened/received.
- Percent of investigative referrals to other offices or organizations made within 30 days of the need for referral being identified.
- Percent of investigations receiving quarterly case review by appropriate manager.

- Percent of investigations closed within established timeframes.
- Number of eLOC reviews/refinements identified and addressed.
- Completion of MLE policy review.
- Percent of legal assignments completed within agreed upon timeframes.
- Percent of financial disclosures processed in accordance with OGE standards and timeframes.
- Written assessment of certain records practices with recommendations for improvement, as needed.
- Number of IT updates circulated to staff.
- Number of forensic accounting updates provided to OI managers.
- Percent of OIG publications posted to external websites.
- Review of records management practices.
- Number of improvements to FOIA process.
- Percent of HR actions processed timely.
- Update of strategic plan and dissemination to staff.

2. Strengthen our focus by refining approaches for selecting work and setting priorities.

Quantitative

- 75 percent of investigations are opened in accord with internal standards and priorities.
- 75 percent of discretionary audit products issued during the performance year address top management challenges or NSF's high-risk areas.
- 75 percent of external audits in the annual audit plan cover high-risk awardees, as evidenced by reference to OIG's published management challenges and annual risk assessment documentation.

Other

- Optimize hotline webpage and intake form at least annually.

We will use the following measures to assess progress in implementing this strategy:

- Percent of discretionary audit products issued during the performance year that address top management challenges or NSF's high-risk areas, as evidenced by reference to Management Challenges and the annual risk assessment documentation.
- Percent of external audits in the annual audit plan that cover high-risk awardees in accordance with OIG's annual risk assessment and OA policy.
- Percent of investigations opened in accord with identified standards and priorities.
- Number of enhancements to webpage and intake form.

Goal 2 Safeguard the Integrity of NSF Programs and Resources

To properly safeguard the integrity of NSF programs and resources, OIG must continually enhance its ability to detect and address improper, inappropriate, or illegal activities; and balance reactive and proactive approaches in order to achieve maximum preventive effect.

OIG engages with researchers and NSF staff to inform them about serious ethics issues to help reduce such abuses as falsification of data, plagiarism, fabrication of data, and misuse of government funds. The following performance measures and strategies describe the steps we will take to safeguard the integrity of NSF programs and resources.

Taxpayers should have confidence that NSF and the education and research communities will expend public funds and conduct funded research with the highest level of integrity. The public's trust in government and science is undermined each time that a researcher or educator misrepresents or plagiarizes their results. OIG aims to ensure that when problems of integrity occur, those responsible are held accountable in a fair and responsible manner.

How We Will Measure Progress

Specific strategies and performance targets (goals) associated with accomplishing this strategic goal are listed on the following page, along with performance measures, as necessary, to ensure that each action is fully implemented. The performance measures reflect how well we are safeguarding the integrity of programs and resources.

Performance targets are divided between those that are quantitative and qualitative. Quantitative targets, on their face, reflect measurable results that are capable of being met and exceeded during the twelve-month period. Qualitative targets are those that are less concrete. They reflect activities that will enhance or benefit OIG operations, but which do not lend themselves to a predetermined baseline performance level.

STRATEGIES AND ASSOCIATED TARGETS

To achieve this goal, we plan to accomplish the following specific strategies and actions:

1. Detect and address improper, inappropriate, or illegal activities.

Quantitative

- At least 80 percent of OIG- or IPA-performed external incurred cost audits use data analytics to identify risk areas and develop audit procedures.
- As appropriate, at least 30 percent of internal performance audits use data analytics to identify risk areas and develop audit procedures.
- 20 percent of investigations include forensic analysis.
- Draft at least one Management Advisory per year to inform agency leaders of matters requiring attention of senior agency personnel.
- At least 1 written legal, or legislative, update transmitted to staff, which discusses topics relevant to OIG operations or activities, and which is easily understood (without unnecessary jargon or legalese).

Other

- Evaluate use of suspension and debarment for all cases, as appropriate.
- Evaluate research misconduct and administrative investigations for possible civil or criminal issues.
- Evaluate appropriateness of administrative suspension or termination of grants during investigations.

We will use the following measures for assessing progress in implementing this strategy:

- Percent of OIG- or IPA-performed external incurred cost audits issued during the year that used computer-assisted data analytics.
- Percent of internal performance audits issued during the year that used computer-assisted data analytics.
- Percent of investigations that incorporate forensic analysis.
- Number of Management Advisories drafted.
- Administrative actions, including suspension or debarment, are considered.
- Research misconduct and administrative investigations consider possible civil and criminal issues.
- Suspension or termination of grants is considered during investigations.
- Number of legal and/or legislative updates published in “plain language”.

2. Strengthen OIG proactive oversight and outreach activities.

Quantitative

- Investigations and Audits staff present at 80% of New Employee Orientations.

Other

- Improve availability of whistleblower protection information through review of outreach presentations and website material.
- 50 percent of OI staff participate in outreach activities to NSF (including presentations at liaison briefings, new employee orientations, and program management seminars); or to external stakeholders and partners (such as the research community and the federal law enforcement community) in order to communicate OIG's message and to receive input that informs of OI operations.
- Improve visibility of NSF award data by utilizing business intelligence.

We will use the following measures for assessing progress in implementing this strategy:

- Percent of OI and OA staff presenting at New Employee Orientations.
- Number of OI outreach presentations reviewed; number of reviews of whistleblower information on website.
- Reference to internal documentation, meeting agendas, and email correspondence.

3. Refine financial investigative capabilities.

Other

- Leverage existing audit and investigative information.

We will use the following measures for assessing progress in implementing this strategy:

- Information such as past audits, Single Audits, and award history are reviewed, as appropriate, during investigations.

Goal 3

Utilize OIG Resources Effectively and Efficiently

The effective and efficient utilization of OIG resources requires us to: continue to strengthen our management and planning tools and techniques; fully develop, plan for, and utilize OIG personnel; ensure that managers and staff have tools and resources necessary to accomplish their duties and responsibilities; and promote effective internal and external communications.

Our success depends on our ability to pull together as an organizational unit, make effective use of our limited resources, overcome internal divisions, develop an effective infrastructure for management, draw on resources external to our own organization, and focus our efforts on issues important to NSF.

We have a diverse and talented workforce whose backgrounds and skills range beyond what one would find in a typical Office of Inspector General. To effectively capitalize on our internal diversity, we must ensure that all staff understand the organization's priorities, and that open communications both within our office and with our stakeholders is maintained.

How We Will Measure Progress

Specific strategies and performance targets (goals) associated with accomplishing this strategic goal are listed on the following pages, along with performance measures, as necessary, to ensure that each action is fully implemented, and that as a consequence, OIG resources are being managed effectively and efficiently.

Performance targets are divided between those that are quantitative and qualitative. Quantitative targets, on their face, reflect measurable results that are capable of being met and exceeded during the twelve-month period. Qualitative targets are those that are less concrete. They reflect activities that will enhance or benefit OIG operations, but which do not lend themselves to a predetermined baseline performance level.

STRATEGIES AND ASSOCIATED TARGETS

To achieve this goal, we plan to accomplish the following specific strategies and actions:

1. Strengthen and utilize the professional expertise of all OIG staff.

Quantitative

- Analyze the 2019 Federal Employee Viewpoint Survey (FEVS) results and develop plan for addressing any issues identified within 3 months.
- Ninety percent of staff required to meet training requirements in *Government Auditing Standards* have met them.
- Perform independent biannual review of Office of Audits continuing education records to ensure compliance with GAO requirements.
- Have 40 percent of OA professional staff professionally certified in their areas of expertise as of September 30, 2020.
- Conduct all-hands Office of Audit meetings at least bi-monthly.
- 35 percent of OI professional staff possess advanced degrees.
- 30 percent of OI staff are CFE certified.
- 90 percent of 1811s meet all mandatory requirements for statutory law enforcement.
- 90 percent of OI staff meet FLETC and CIGIE mission-critical training requirements.
- OI staff meetings conducted at least quarterly.
- Investigative staff complete 75 percent of approved Individual Development Plan-related training, subject to budget constraints.
- 50 percent of OI staff attend professional meetings/symposia.
- All OIG Contracting Officer's Representatives (COR) obtain required training to maintain certification.
- Conduct Office of Management meetings at least quarterly.
- Conduct IT group meetings at least quarterly.
- Have two or more personnel able to perform 80% percent of major administrative functions.

Other

- Conduct IT training, as necessary.
- Provide prompt, effective responses to requests for IT support.
- Identify and replace outdated computers, servers, mobile phones, and related equipment as needed as budget allows.
- Develop and deploy an in-house digital forensics capability to support the acquisition, identification, and analysis of evidence relating to OIG investigations subject to budget availability.
- Enhance collaboration between Office of Management and units.

We will use the following measures for assessing progress in implementing this strategy:

- Analysis of FY 2019 FEVS results as they pertain to OIG.
- Delivery of training in the use of IT systems and software deemed appropriate.
- Full deployment of in-house investigative digital forensics capability or progress toward that end.
- Percent of staff required to meet training requirement in Government Auditing Standards have met them, as verified through independent biannual review of Office of Audits continuing education records.
- Percent of OA staff with applicable professional certifications as of September 30, 2020.
- Number of all-hands audit staff meetings.
- Number of OI professional staff possessing advanced degrees.
- Number of OI professional staff with CFE certifications.
- Percent of OI 1811s meeting all mandatory requirements for statutory law enforcement.
- Percent of OI professional staff meeting FLETC and CIGIE mission-critical training requirements.
- Number of OI staff meetings.
- Percent of OI staff attending professional meetings/symposia.
- Percent of OI approved Individual Development Plan-related training completed, subject to budget constraints.
- Percent of CORs maintaining certification.
- OM briefing at all-hands meeting as needed
- Percent of major administrative responsibilities that two or more employees are cross-trained.
- Number, timing of OM meetings.
- Number, timing of IT group meetings.

2. Improve communication and collaboration within OIG.

Other

- Ensure information exchange and referrals between the audit, investigation, and support units.
- Use office-wide committees for completion of various OIG projects and activities.
- Provide updates on significant cases/issues at OI meetings.
- Review all OIG policies and update as needed.
- Utilize collaborative software to improve communication and efficiency within OIG operations.

We will use the following measures for assessing progress in implementing this strategy:

- Frequency of meetings between the AIGA and AIGI.
- Number of referrals among operating units of OIG, as appropriate, as documented by internal records.

- Number of cross-organizational committees, as needed, and their effectiveness.
- Percentage of OI meetings that offer updates on significant cases/issues.
- Number of office-wide policies reviewed and updated.

3. Ensure effective external communications and consultation with our stakeholders.

Quantitative

- Complete and accurate responses to requests for information within established timeliness guidelines and FOIA/PA provisions 60 percent of the time.
- Complete and accurate responses to media and congressional inquiries within 15 business days of receipt or by other agreed upon date 50 percent of the time in order to advance public transparency and meet congressional stakeholder needs.
- Audit reports are redacted in accordance with Freedom of Information Act and other legal authority pertaining to information disclosure and posted on OIG's website within 3 working days of issuance 80 percent of the time.
- Provide testimony and other requested information to congressional committees timely.
- Provide briefings to the National Science Board (NSB), Congress, Office of Management and Budget (OMB) NSF, and others regarding OIG plans, priorities, and progress.
- Participate with other Federal and international agencies in joint training, collaborative projects, and the development of policies and procedures to advance common audit, investigative, and management goals.
- Provide leadership and active participation in activities within the IG community.

Other

- Prepare timely OIG budget requests.
- Update NSF leadership regularly on OIG activities and concerns.
- Review OIG website for necessary modifications and enhancements.

We will use the following measures for assessing progress in implementing this strategy:

- Number of complete and accurate responses for information within established timelines, guidelines and FOIA/PA provisions.
- Number of testimonies, responses to questions, and other information submissions provided at the request of congressional committees.
- Number of briefings provided to NSB members/committees, congressional staff or members, OMB staff, NSF staff, and others.
- Number of events with other Federal and international agencies in joint training, collaborative projects, and the development of policies and procedures to advance common audit, investigative, and management goals.
- Number and nature of participation in activities within the IG community, particularly the number of committees and task forces on which OIG staff were leaders or otherwise served.
- Provision of response to media inquiries within timeframes agreed upon.
- Completion of budget requests in compliance with established deadlines.

- Number of update meetings with the NSF Director and Deputy Director.
- Percent of audit reports (with any necessary redactions) posted to OIG website within required timeframe after legal review and any necessary redactions in place.
- Percent of timely FOIA/PA responses.
- Completion of OIG website review and improvements made, as needed.
- Percent of congressional and media requests that have been responded to within applicable time frames.