This section describes OIG's accomplishments towards the three goals set forth in the *OIG Performance Plan for 2005-2006*:

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

Under each of these goals, we identified several strategies for achieving the goal. For each strategy, we listed specific actions that we planned to complete during the performance period, which ran from April 1, 2005, to March 31, 2006.

Goal 1:
Promote NSF Efficiency and Effectiveness

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

- Implement a tool to assess effectiveness of the story-conferencing process as a means to improve audit product quality and timeliness.
- Analyze the costs and benefits of moving to electronic workpapers; if feasible, conduct pilot testing with the performance audit team.
- Work with a consultant with Government Auditing Standards expertise to review and comment on the statement of work for contract auditors; establish a timeline to address the consultant's comments, and make revisions.
- Complete 75% of all OIG audits within one year of conducting the audit planning conference.
- Complete 65% of all CPA external audits within one year of conducting the audit planning conference.
- Assess results of the annual employee survey and retreat and develop appropriate steps to address the highest priority concerns of audit staff.
- Develop and issue an audit follow-up and resolution policy statement for OIG staff to facilitate the timely, consistent, and coordinated resolution of audit recommendations.

HIGHLIGHTS

OIG made substantial progress in improving audit timeliness and quality.

Team-based auditing is an approach that relies on formal meetings called story conferences between auditors and managers at key points in an audit. These meetings are intended to facilitate improved communications and result in more-timely, higher-quality audit reports. Since FY 2003, the OIG's Office of Audit (OA) has used the team based auditing approach on high-risk audits. In FY 2006, to determine whether the process is working as intended, we began distributing questionnaires to staff after each audit to obtain their thoughts on its effectiveness . Overall, audit staff and senior managers agree that team-based auditing is an effective way to improve audit product quality and timeliness. We initiated research on electronic workpaper alternatives, but did not reach the point where we were ready to pilot test a program.

OA retained a consultant with expertise in Government Auditing Standards to review and comment on our draft audit guide for use during audits performed by Independent Public Accounting (IPA) firms under contract with OIG. To increase the effectiveness of our grant audits and more closely align the results with the needs of our stakeholders, the consultant recommended the OIG adopt the use of performance audit standards to carry out its grant audits. These standards, in contrast to financial audit standards, enable the auditor to focus more on auditees' management controls rather than just the allowability of costs claimed, and identify root causes of audit findings. As such, these audits should be useful in obtaining more effective corrective actions. Therefore, we are currently developing a statement of work and audit program to provide detailed guidance to OIG staff and audit contractors on applying the performance audit standards.

We met the performance target for completing at least 65 percent of CPA performed audits within one year. While we did not meet the target for OIG performed audits, audit supervisors and staff have been asked to identify and commit to ongoing audit workload targets, which should allow us to meet the performance targets for the upcoming performance year.

OA made significant progress in developing an audit follow-up and resolution policy for OIG staff. The draft is currently under review by OIG senior management. In response to last year's employee survey and retreat, we began circulating the monthly work- in- progress reports to audit staff to ensure that issues of common concern and importance were regularly communicated to all audit staff. Together, these policies and procedures should ensure a more consistent approach to the conduct of audits.

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

• Assess the audit planning process.
• Develop appropriate steps to address ideas of audit staff as summarized by the audit planning team.
• Develop and execute the annual audit plan.
• Develop a catalog of publications, etc., for an audit planning library.
• Conduct annual risk assessment of NSF's award portfolio using specified risk factors.

OA successfully used team communication and brain-storming techniques to assess its process for developing and reporting the results of audit planning. We first convened the entire audit staff to discuss our historic processes and then used small group discussion to identify ways to streamline and improve the process. The meetings resulted in a number of substantive recommendations, including a new layout and content for the external audit plan based on the NSF award cycle. We then formed an audit planning sub-committee, consisting of members from each audit group, which successfully implemented the recommendations and completed the audit plan on schedule. The results were presented to the National Science Board at its September 2005 meeting.

The quality of our audit planning efforts depends largely on the accuracy and value of the information that is brought into the process. Therefore, we continued our efforts to develop a catalog of publications for our audit planning library, which will carry into the coming year. In order to further inform our selection of grants for audit, we also analyzed NSF's electronic award data using specified risk factors, such as the type of award instrument and funded institution, and prior audit findings. Over the next 12 months, we will expand our efforts to access additional information sources and develop techniques to improve the risk assessment process.

Goal 2:
Safeguard the Integrity of NSF Programs and Resources

1. Identify ways to improve case product quality and timeliness.

• Ensure investigations are consistent with OIG procedures and the PCIE/ECIE quality standards for investigations.
• Implement modified case milestones and assess their effectiveness on case processing and monitoring.
• Ensure referral of audit issues arising from investigations.
• Improve the quality of forensic audit services in support of investigations.
• Assess whether investigative statistics reported in semiannual and annual reports are appropriate performance measures.

- Assess methods for reducing the duration of Research Misconduct investigations.
- Assess whether tracking NSF Management's response time to our Reports of Investigations helps to ensure timely completion of cases.
- Review grant-funding agencies' OIG semiannual reports to Congress to develop a list of best practices and lessons learned to facilitate internal process improvement discussions.
- Increase the number of cases in which investigators conduct on-site visits.

The OIG's Office of Investigations (OI) continues to employ the strategies listed above, as well as those articulated in previous plans, to meet the objective of improving case quality and timeliness. We maintained our leadership role in the ECIE community for investigative peer review and quality standards by coordinating the timing and completion of ECIE reviews and responding to requests for assistance. We satisfactorily completed our annual internal peer review and modified our processes and Investigative Manual according to the recommendations of the review team. Our process was enhanced by our review of other OIGs' Semiannual Reports to the Congress, including their reported statistics.

In addition to continuing a rigorous quality control and assurance program on all case files, we completed a thorough analysis of our case milestones. As a result, we reduced the duration of several milestones and eliminated one that we determined to be unnecessary. We also began a project to track milestone completion by individual staff member. We have focused aggressively on tracking our cases and their results with OIG's Knowledge Management System (KMS). Working closely with OIG's software engineers, we have been able to make improvements to the system that reduce manual tracking and increase the accuracy of our data. By routinely sharing our list of referred reports with NSF management, we have increased the effectiveness of our communications, better ensured that appropriate actions are taken against wrongdoers, and reduced the time to obtain management responses.

Our focus on ensuring adequate outcomes to our investigative efforts afforded us the opportunity to refer a number of matters to either the Office of Audit or NSF management for resolution. We have expanded our use of a forensic auditing firm to support investigations and have continued to emphasize the value of on-site visits as compared to telephonic or written inquiries. Our efforts have resulted in significant improvements in our information analysis. These efforts are being rewarded with increased recoveries, more agreement by NSF management on our recommendations for improvement, and improved capability to process a significantly increased case load with the same number of investigators.

2. Strengthen proactive activities

- Ensure that the relevant OIG information presented to NSF and the public is current.
- Emphasize OIG liaison activity with NSF and outreach to the research community.
- Convene one Grant Fraud Investigation's Training Program.
- Monitor and assess the effect of proactive activities on case processing time, priorities, and allegation assessment.
- Ensure all FOIA/PA requests are responded to in a timely manner.
- Analyze the effectiveness of our plagiarism software as a proactive tool.
- Meet all needs for dissemination of outreach materials, including outreach posters.
- Emphasize regular and on-going interaction with the OIG and Department of Justice/ U.S. Attorney Office communities.

The objective of this strategy is to improve our abilities to detect wrongdoing and communicate the results of our investigative efforts. We continued to emphasize the detection of fraud, waste and abuse through our proactive review program. We initiated and completed several studies that led to management implication reports with significant agency responses and fund recoveries from awardees. One study, focused on the effectiveness of plagiarism detection software, generated a number of significant research misconduct cases.

We updated the information on the OIG web site and reinvigorated our outreach program to NSF and the communities it serves through our liaison program. OIG staff participated in numerous outreach events, including presentations at universities, professional associations, NSF Program Management Seminars, Regional Grants Seminars, conflict of interest briefings, and other NSF and research community activities. Additionally, we convened a highly successful, well attended in-service training for the IG community on grant fraud, and our staff continued to participate in interagency task forces. We maintain an agile FOIA response team to ensure that all inquiries are completed on time. Our increasing work activities resulted in prioritizing performance goals, and we intend to complete, early in the coming performance year, the review of the NSF Bulletin that describes how to handle allegations of research misconduct.

NSF OIG's grant fraud workshop attracted law enforcement professionals from many federal agencies.

This past year saw an increase in the number of professional interactions with civil and criminal prosecutors at the Department of Justice and with a number of United States Attorney's Offices, including numerous training events and meetings. Of particular note, the United States Attorney for the Eastern District

of Virginia (EDVA) made time in his busy schedule to address the NSF OIG Grant Fraud Training Workshop. Additionally, the Head of the EDVA Affirmative Civil Enforcement Unit (responsible for recoveries of over $200,000,000 from federal contractors and grantees between 2003 and 2005) participated with OIG staff members in a presentation to the NSF Regional Grants Conference in Boulder, Colorado. Our proactive activities in this area have paid huge dividends and have contributed to the establishment of excellent working relationships between our offices.

We maintained an active summer intern program through which we brought a number of law students and others interested in investigative careers into our office. The intern program made significant contributions to our proactive efforts, which were essential to the detection of wrongdoing. Our interns conducted reviews under the supervision of OI staff, thereby allowing us to leverage resources and complete this essential component of a well-rounded investigative effort.

Goal 3:
Utilize OIG Resources Effectively and Efficiently

1. Utilize professional expertise and talents of all OIG staff.

• Conduct annual survey of OIG staff to obtain its views on the effectiveness of
 - OIG use of its resources in personnel, equipment, technology and con tracting,
   - Management planning, policies, and procedures,
   - Internal communications and coordination., and
   - OIG impact on NSF, and
   - KMS and other management tools.
• Analyze survey results and develop corrective actions for the problems identified.
• Continue the use of the team approach in brainstorming and resolving OIG internal
  management issues and in developing OIG activities.
• Complete development of an integrated Knowledge Management System (KMS)
  within the OIG.
• Develop in-house technical expertise for maintaining KMS.
• Complete a KMS user manual for OIG staff.
• Conduct KMS focus groups to identify what IT applications or tools are used by staff to support their primary work processes, and what problems they have using these tools; analyze results to determine need for training or alternative tools.
• Explore appropriate alternative IT tools that may offer work process improvements.
• Develop and conduct KMS training.

- Update KMS user manuals.
- Provide prompt, effective responses to requests for IT support.
- Update auditor and management analyst position descriptions.
- Develop a core audit training program and core audit competencies. Introduce appropriate opportunities for cross-training.
- Complete training identified in Individual Development Plans.

Over 60 percent of OIG staff responded to the annual employee survey conducted in February 2006. Respondents gave the highest ratings overall to the support they received from management in the form of office space, supplies, training, and computer resources. Our staff also report that they have a good understanding of the mission and goals of the office, that they and their co-workers follow appropriate standards, and that they believe OIG makes an important contribution to NSF. As in past years, we focused attention during our 2005 retreat on areas that were identified by that year's survey as opportunities for improvement. Two issues received significantly higher ratings in 2006: satisfaction with our KMS system, and intra-office cooperation and coordination. With regard to the lowest rated issues overall, we noted that these issues mostly continued to trend higher than in past years and that none received ratings below 3.2.

OIG staff professionals volunteer to form teams to plan office programs and resolve issues. The team approach was used to analyze and comment on the results of the employee survey, organize and frame the discussions for the 2005 retreat, and review changes to existing policies and recommend new ones. Based on the 2005 survey and retreat discussions, a staff committee drafted recommended action items for management consideration and incorporated new issues in the 2006 employee survey. Teams of two to four staff each act as liaisons to the various NSF directorates to foster better communication between OIG and the agency.

We conducted focus groups to assess various issues and identify improvements for the office KMS system, which provides automated management and tracking capabilities to support audit, investigative, and administrative functions. We also held eight training sessions (four each for the Audit and Investigation groups), updated the KMS User Manual, and made numerous system enhancements during the year. The enhancements included new modules for tracking staff individual development plans and for handling forensic accounting requests, refinements to many existing KMS modules, and various new and redesigned reports for presenting KMS information in formats that met users' needs. We upgraded the OIG server to provide faster processing and acquired new software tools to assist in managing and performing audits and investigations.

In fulfilling its charge to update auditor and management analyst position descriptions, the Position Description Team extensively researched values and competencies in the OIG community, as well as work done on core competencies by a consultant under NSF contract. The team recommended 8 Core Values and 18 Core Competencies to be included in all audit staff position descriptions.

After discussions on rankings with senior audit managers and obtaining feedback from all audit staff, the team substantially revised the audit staff position descriptions. We believe these changes will provide staff and supervisors with a better understanding of the expectations for their performance, a clearer link with the OIG Performance Plan, and improved ability to identify training needs for future career development.

Approximately 75 percent of the training proposed on the individual development plans of OIG staff was completed during the past year. While we hope to increase this percentage in future years, we also recognize that not all proposed training is likely to be accomplished within the 12 month period.

2. Improve communication and collaboration within OIG.

- Provide timely information exchange and referrals among the audit, investigation, and administrative units.
- Share information about audit, investigative, and administrative activities at all-staff meetings.
- Strengthen Investigations/Audit/Administrative teams performing OIG/NSF liaison duties.
- Survey staff for suggestions on how to improve internal communications and collaboration.
- Continue periodic meetings between audit and investigation managers to discuss cross-cutting issues, mutual concerns, and cooperative efforts.

At the 2005 OIG retreat, management solicited suggestions for how to improve internal communications and collaboration from staff. The responses included 93 comments and suggestions on a variety of topics, including making meetings more productive, training, multi-disciplinary projects, internal communications, and supervision. Several of the suggestions, such as conducting more-frequent orientation for new staff, were implemented immediately, while others are still being considered. The results of the 2006 employee survey indicate that our efforts in improving coordination were largely successful, as the statement "there is a spirit of cooperation among our different OIG units" received a significant increase in its score over the previous year.

Improvements to the KMS Referral module facilitated the timely exchange of information among the audit, investigative, and administrative units within OIG. The office continues to emphasize active and meaningful exchanges among staff of the various units. The offices of audit and investigation convened a number of increasingly productive meetings to exchange ideas and discuss progress on referrals. The completion this year of the KMS module for reporting and tracking referrals between the two units greatly facilitated this process. All staff participate in OIG's monthly meetings to share information, ensure broad understanding of how their respective units operate, and present the results of recent reports and cases.

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

- Produce timely external reports on OIG results and issues.
- Provide testimony and other requested information to congressional committees.
- Provide briefings to the NSB, Congress, OMB, NSF, and others regarding OIG plans, priorities, and progress.
- Issue two OIG Newsletters by email.
- Update NSF leadership regularly on OIG activities and concern.
- Collaborate with federal and international agencies to advance common audit, investigative, and management goals.
- Provide leadership and active participation in the IG community.
- Improve presentation and content of OIG website.

OIG is responsible for keeping key stakeholders and oversight officials informed in a timely way about its activities and findings concerning NSF programs and operations. OIG's Semiannual Reports to the Congress, budget submissions to the Office of Management and Budget and to the Congress, NSF's Financial Statement Audit Report, Performance Report, and Management Challenges Letter were all delivered within the timeframe specified by law or by the prescribed target date. The IG testified before the House of Representatives Committee on Science Subcommittee on Research in March 2005 about the two most important management challenges facing NSF: strategic management of NSF resources and improved financial performance. In February 2005, Dr. Boesz submitted a statement for the record before the U.S. Senate Committee on Appropriations that discussed in more detail NSF's challenge in managing large infrastructure projects. In both instances the IG provided all information requested by congressional members and staff.

Our staff presented regular briefings to the Audit and Oversight Committee of the National Science Board on a variety of topics, such as the audit of NSF's financial statement, the OIG annual audit plan, the findings of several performance audits, the OIG budget request, and the Sarbanes-Oxley Act. We released two electronic newsletters to provide an interim update on our activities, between Semiannual Reports, to interested parties in the government and research communities. The IG and Deputy IG conducted eight briefings for the NSF Director and Deputy Director on recent, ongoing, and planned OIG activities, as well as other matters concerning the management and operations of the agency.

Our office actively participates in many committees and initiatives organized by the IG community, and we have played a leadership role in two key areas: establishing a dialogue among international organizations responsible for science research funding; and increasing awareness within the federal government about research misconduct. In June 2005, the IG and the Head of Scientific Affairs for DFG Germany co-hosted a workshop entitled Accountability in Science Research Funding – Meeting the Challenge, to discuss strategies for addressing

OIG open houses foster better communication between NSF and OIG staff. Darrell Drake, Lee Stokes, and Jill Schamberger stand ready to explain OIG's mission.

accountability challenges. Representatives of 13 countries attended the meetings that were held in Bonn. We also sent an auditor on a temporary detail to England to share auditing techniques, and one of our auditors provided advisory assistance to the Science Foundation of Ireland. OIG continues to lead the PCIE/ECIE Misconduct in Research Working Group, which is chaired by NSF's Inspector General. This group monitors the status of agencies' efforts to establish policies addressing research misconduct and organizes educational programs highlighting the issue.

OIG staff contribute in many ways toward advancing the common goals of our community. We organized and hosted a successful one-day Grant Fraud Workshop that was attended by 125 professionals from most grant-making agencies. Case studies on successful grant fraud investigations and prosecutions were presented and discussed at length. The IG serves as an elected member of the Executive Council of Inspectors General, a steering committee for PCIE/ECIE policies and activities. OIG staff continued to actively participate in the PCIE/ECIE Investigations Committee, the PCIE/ECIE Inspections and Evaluation Committee, the PCIE/ECIE IT Roundtable, the IG Steering Committee for E-Learning, and the PCIE GPRA Roundtable, which is a forum for discussion of the integration of GPRA requirements into the audit function. Staff members also assisted in organizing and coordinating the PCIE/GAO Roundtable on Financial Statement Audits, in which 200 auditors from GAO and the IG community addressed critical issues in auditing federal agencies' annual financial statements.

Our staff participated in the Comptroller General's Domestic Grant Working Group with auditors from federal, state, and local agencies to develop a guide for improving accountability for grant funds. Audit staff were also actively involved with the PCIE/ECIE Federal Audit Executive Council, which coordinates the implementation of federal initiatives that affect the policy and operations of IG audit organizations. Our auditors worked with the Financial Statement Audit Network, a committee of the Federal Audit Executive Council, which conducts a forum to discuss key issues concerning the preparation and audit of federal financial statements. Finally, OIG staff served as members of the Working Group on Stewardship and Accountability sponsored by the National Science and Technology Council Research Business Models Subcommittee. This working group is addressing ways to streamline sub-recipient monitoring and improve financial performance.

We continued to make a number of improvements to the OIG website to facilitate communications with our stakeholders.