



*U.S. DEPARTMENT OF COMMERCE
Office of Inspector General*



Office of the Secretary

Top Management Challenges Facing the Department of Commerce

Final Report OIG-19884

January 2010

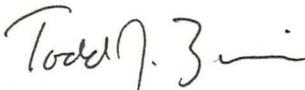
Office of Audit and Evaluation





January 12, 2010

MEMORANDUM FOR THE SECRETARY


FROM: Todd J. Zinser

SUBJECT: Top Management Challenges Facing the Department

The Office of Inspector General (OIG) is required by statute to annually report the top management challenges facing the Department of Commerce.¹ We regularly discuss the Department's progress in meeting these challenges in our *Semiannual Report to Congress* and in the Department's *Performance and Accountability Report*.

Our report identifies five management challenges as follows:

1. **Decennial Census:** Mitigate issues with the 2010 decennial while addressing future census challenges.
2. **IT Security:** Continue enhancing the Department's ability to defend its systems and data against increasing cyber security threats.
3. **National Oceanic and Atmospheric Administration (NOAA) Environmental Satellites:** Effectively manage technical, budgetary, and governance issues surrounding the acquisition of NOAA's two environmental satellite programs.
4. **American Recovery and Reinvestment Act:**² Meet the challenges of accountability and transparency with effective oversight of program performance, compliance, spending, and reporting.
5. **United States Patent and Trademark Office:** Address the Patent Office's resource and process issues.

In addition, our report identifies several organizational priorities facing the Department in the coming year. These include strengthening major systems acquisitions, the grant and contract workforce, and centralized Departmental

¹ 31 U.S.C. § 3516(d) (2000).

² American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5.



management; implementing the proposed NOAA headquarters leadership structure; and ensuring that the multi-year nearly \$1 billion Commerce headquarters renovation receives strong Departmental oversight from the beginning.

Since we released our 2008 *Top Management Challenges Report*, we have updated three long-standing major challenges: the decennial census, the Department's ability to cope with cyber threats, and NOAA's environmental satellites. The challenge to meet Recovery Act requirements is a new addition to the list, and the issues with the United States Patent and Trademark Office's resource and quality control have been re-evaluated as a major challenge. The organizational challenges, too, have been updated and expanded in scope to reflect the need for increased Departmental oversight.

We also removed two major challenges that appeared in the 2008 report:

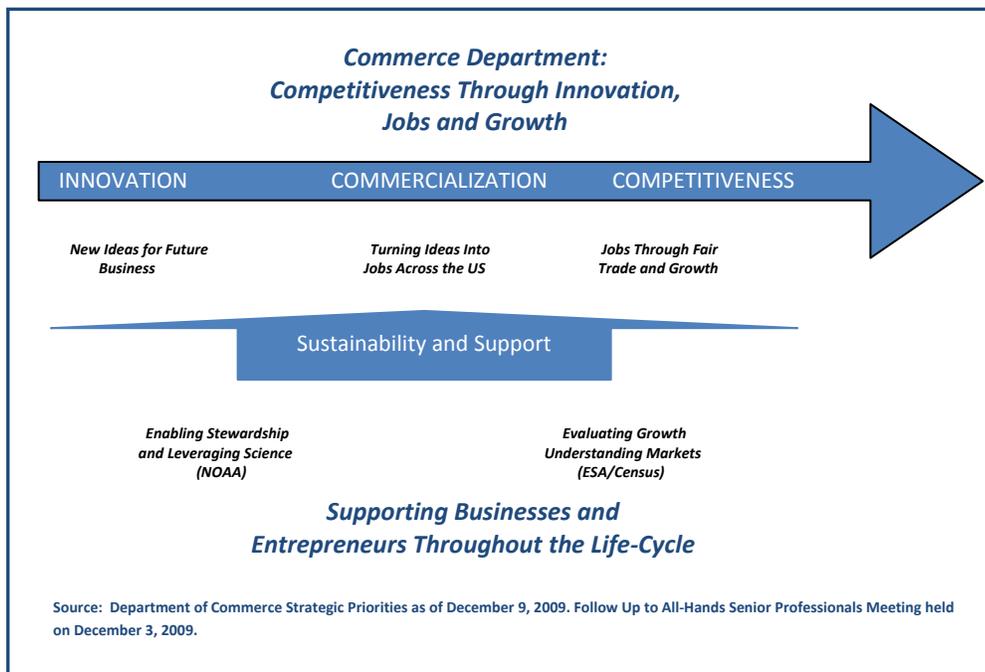
- After a June 2008 plutonium spill at the National Institute of Standards and Technology's (NIST's) Boulder campus revealed serious deficiencies in management oversight, employee training, and response procedures, NIST has worked to meet to the numerous safety and training recommendations made by outside reviewers and inspectors from regulatory authorities. NIST's actions culminated in approval from the U.S. Nuclear Regulatory Commission to reopen the lab in July 2009. NIST management is committed to making safety a priority, and in the coming year we plan to assess the agency's progress in establishing an effective safety culture.
- The National Telecommunications and Information Administration (NTIA) has largely fulfilled its responsibilities under the Digital Television Transition and Public Safety Act and is conducting the public safety interoperable communications (PSIC) program without significant issues. The switch to digital television signals took place on June 12, 2009, and the last day to apply for a coupon was July 31. We reported on the time constraints imposed upon PSIC grantees; subsequently, the President signed legislation in November 2009 extending the statutory deadline to September 30, 2011.³ The extension will enable PSIC grantees to complete their projects on time while meeting the requirements for transparency, compliance, and reporting.

³ An Act, Pub. L. No. 111-96, § 1(b) (2009).

While our report focuses on management challenges and risk areas specific to the Department of Commerce, the Department also plays a pivotal role in the President’s national priority of economic growth and job creation. We note your recent meeting with the career leadership of the Department, during which you outlined your strategic priorities and management expectations for the year ahead in promoting “Competitiveness through Innovation, Jobs and Growth.”

Secretary’s Strategic Priorities	
I. Innovation and Intellectual Property	II. Green and Blue Business and Jobs
III. Trade Promotion and Commercial Diplomacy	IV. Effective, Efficient Service Provider
Source: Department of Commerce Strategic Priorities as of December 9, 2009. Follow Up to All-Hands Senior Professionals Meeting held on December 3, 2009.	

These strategic priorities were also presented as part of a model that is intended to move away from the view of the Commerce Department as a “holding company of disparate bureaus,” to a more integrated Department that leverages the strengths of its various bureaus to achieve the goals you have outlined. Our management challenges report underscores this vision and the emphasis placed by you and the Deputy Secretary on the need for strong and integrated Departmental management.



We also recognize the broad scope of the policy issues facing the Department. The partial list below, communicated to the senior leadership in your recent meeting, illustrates the complexity and far-reaching effects of these issues and emphasizes Commerce’s need to address the top management challenges directly and appropriately.

Breadth of Commerce-Related Policy	
US-China Economic Relationship	Smart Grid
International Trade Policy	Broadband Deployment/Mapping
Export Promotion	Access to capital
Alternative Energy Technologies	Infrastructure grants
Commercial Diplomacy	Regional cluster initiatives
Effective Census Management	Corporate tax reform
US Auto Restructuring	ICANN – Internet issues
Innovation	Spectrum Management
Health Care	Biotech leadership
Climate Change Leadership	DOC Service Reform –“one-stop”
Technology/Innovation	Weather Satellites
Export Control Reform	Promotion of Service Economy
Worker Training/Re-Training	US-Russia Commercial Relationship
Patent Reform	Cybersecurity
Visa Reform	Improvement of Economic Analysis
Salmon Recovery	Trade Advocacy

Source: Department of Commerce Strategic Priorities as of December 9, 2009. Follow Up to All Hands Senior Professionals Meeting held on December 3, 2009.

We appreciate the support you and the Deputy Secretary have demonstrated for strong oversight of Department programs and operations. We look forward to working with you, the Deputy Secretary, and Secretarial Officers in the coming year on the management challenges facing the Department.

If you have any questions concerning this report, please contact me at (202) 482-4661.

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Decennial Census

Mitigate Issues with 2010 Decennial While Addressing Future Census Challenges

Described by the Census Bureau as the nation's largest non-military mobilization, the decennial census is a carryover from our last year's top management challenges report and continues to be on the Government Accountability Office's (GAO's) high-risk list.

Over the past year, OIG reports and Congressional testimony have detailed the challenges faced by the Census Bureau as it executes the 2010 decennial count of U.S. residents. The mission of the 2010 decennial census—to count each of the over 300 million people in more than 130 million households in the United States once, only once, and in the right place—is a daunting task. Conducting a successful count of U.S. residents involves (1) identifying all structures where people might reside and accurately depicting them on Census maps, (2) determining and employing the best method of enumerating people living in those structures, and (3) accurately reporting the findings within statistical and political boundaries.

We have spent the last several years monitoring the bureau's progress and reporting on setbacks Census has experienced. Significantly, the serious problems in developing the Field Data Collection Automation (FDCA) system prompted Census's April 2008 decision to abandon use of the handheld computers for nonresponse follow-up while focusing resources on ensuring that the handhelds could support address canvassing.

Development of an Automated System to Control Paper-based Field Operations Is a Top Priority for the Bureau

With a life-cycle cost estimate now projected to total \$14.7 billion, the 2010 Census is a massive undertaking. The bureau completed address canvassing, its first major 2010 decennial census field operation, on July 10, 2009. Costing \$444 million, address canvassing involved hiring and deploying more than 140,000 temporary workers, called listers, to use handheld computers to verify and update the address lists and maps. Address canvassing is a crucial operation because an accurate address list is vital to a successful census. Address canvassing completed faster than anticipated, although concerns we have raised about the list's quality suggest additional actions must be taken to ensure a complete and accurate census—such as comparing the current address list against administrative records data to help identify errors and possibly add missing addresses in certain instances.

Nonresponse follow-up (NRFU), estimated to cost \$2.7 billion, is the most costly decennial operation, requiring census takers to visit every household that does not

return a census form and record answers to the form's questions. The bureau must lease and equip 494 local offices and hire management staff to recruit over 600,000 temporary workers. The success of NRFU hinges on how effectively Census manages the massive NRFU workload and workforce. This depends, in turn, upon a well-functioning operations control system.

Described by the bureau as the "nerve center" of its field offices, the operations control system is used to assign and monitor enumerator workload and productivity. Originally a component of the FDCA contract, the operations control system was going to be developed to support use of the handheld computers for NRFU as well as several smaller paper-based operations, such as enumeration in rural areas where forms are hand delivered for mail return or where doorstep enumeration occurs. However, the decision to use a paper-based process, rather than handheld computers, for NRFU required modification of the operations control system to handle paper NRFU data collection forms. Census also decided to take over development of the paper-based operations control system (PBOCS) from the FDCA contractor.

Because Census revised its initial strategy, it is on a very tight schedule to complete PBOCS. Further, the system must work compatibly with other 2010 Census systems and the existing infrastructure provided by the FDCA contractor, adding significant integration and deployment challenges.

As a result of the highly compressed schedule, the system will undergo less testing than desirable. And once deployed, there is no margin for error. Hundreds of thousands of NRFU enumerators must be able to receive and submit completed assignments, and the bureau must be able to monitor progress. Documented contingency plans currently do not exist, and in the event PBOCS experiences serious operational problems or failures, the decennial schedule would be seriously jeopardized and costs would surely increase. Successful PBOCS development, testing, and implementation represent one of the most significant decennial challenges facing the Department.

The Bureau Faces Several Additional Challenges

The decennial census provides important information that will guide the apportioning of Congressional representation and redistricting, as well as the distribution of more than \$400 billion of government funding annually. Because these population data are so crucial, the bureau must address the following matters in order to conduct a successful census:

- *Nonresponse Follow-up Budget.* According to the Census Bureau, a 1-percent increase in the mail-back response rate can save an estimated \$80 to \$90 million. Census's efforts to increase the response rate and the public's willingness to mail back its questionnaires can significantly impact NRFU costs. The bureau is making efforts to increase the response rate through

media and partnership activities, but its ability to influence public response is unpredictable. It can, however, take measures to more accurately estimate and contain NRFU costs compared to address canvassing, which finished 25 percent (\$88 million) over budget.

According to Census officials, the overrun was primarily due to higher-than-estimated workload and incorrect cost assumptions. Following the canvassing operation, Census initiated a review to reassess NRFU budget assumptions and estimates. Because of NRFU's massive scale, small errors in estimation could result in an even larger overrun. It is critical that the bureau provide estimates that are as accurate as possible and ensure cost-effective management decisions for this operation.

- *Hard-to-Enumerate.* Multiple efforts are made to identify and count hard-to-enumerate populations. With the help of Recovery Act funds, Census was able to increase its partnership allocation from 680 to 2,241 positions, and emphasized placing the positions in hard-to-enumerate areas. Census quickly filled these positions; however, given the large increase in positions, ensuring the adequacy of supervisory and management controls should be a focus for Census management.

In addition, the housing foreclosure crisis has created a "new-to-homeless" group whose members may reside with other families, live in cars, or occupy newly created "tent" cities. A new partnership effort is being implemented to identify these new non-shelter homeless areas, but actually counting this population may prove difficult.

- *Public Participation and Concurrent Data Collection Efforts.* Census must strive to increase public participation during the decennial count as well as educate the public and data users about the other surveys that it conducted throughout the decade. These surveys, measuring unemployment and socio-economic indicators, overlap with the decennial, resulting in a massive 2010 collection effort and the dissemination of multiple annual or multi-year estimates reflecting the same geographic areas. Analyzing and explaining the sometimes disparate results will be challenging.

The Groundwork for an Improved and Cost-effective 2020 Decennial Census Should be Set in 2010

The cost of the decennial census has doubled every decade since 1970 (not adjusted for inflation). On the current trajectory, the price of the 2020 census could total more than \$30 billion. Given today's economic climate, mounting federal deficits, and constrained federal budgets, Census must find ways to rein in costs while maintaining or enhancing accuracy. It is crucial for the bureau to lay the groundwork for the 2020 census in calendar year 2010. Even though its workforce is already stretched thin by 2010 operations, Census is beginning to develop its plans

for 2020. The bureau must work with the Department to apply lessons learned from the 2010 process and develop an innovative, flexible, cost-effective, and transparent approach to the 2020 census.

In our November 2008 *Top Management Challenges Report*, we described the Census Bureau, especially its headquarters, as an insular organization that eschews open dialogue with outside parties and even its own regional offices. For instance, when deciding to use handhelds for decennial field automation—viewed by the bureau as a huge operational transformation—the bureau showed little appreciation for the time and effort involved in gaining buy-in for significant business process changes from Census staff. In addition, the bureau was not transparent; it was not forthcoming with the Department, Congress, OIG, or other oversight agencies about the problems it was experiencing in developing handheld computers.

Bureau culture tends to regard the decennial as so unique that external parties cannot add value to Census's internal practices. This outlook hampers the bureau's ability to keep pace with private sector advances in business process improvement and gain insight into how these advances can benefit census operations. The bureau should leverage the research and development efforts conducted by other national statistical agencies, private industry, its own advisory committees, and independent researchers to develop new approaches to the creation of national population statistics. Serious consideration should be given to the use of such alternatives as administrative records, the Internet, and targeted address canvassing for various aspects of the decennial.

To accomplish a successful redesign, the bureau must be more flexible and responsive to Commerce and external feedback and collaboration, as well as transparent and performance driven. The significant changes that must take place will need years of innovative thinking and actions, as well as Departmental support.

For more information, view the reports and testimony listed below at www.oig.doc.gov:

- 2010 Census: Quarterly Report to Congress (OIG-19791-2, December 2009)
- FY 2009 Financial Statement Audits (FSD-19651, December 2009)
- The 2010 Census: Update of Key Decennial Operations, IG's testimony before the Senate Committee on Homeland Security and Governmental Affairs, Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security (October 2009)
- The 2010 Census and Integrated Communications Campaign, Principal Assistant IG for Audit and Evaluation's testimony before the House

Committee on Oversight and Government Reform, Subcommittee on Information Policy, Census, and National Archives, (September 2009)

- Memorandum to Director, Bureau of the Census, with Recommendations from 2010 Census: First Quarterly Report to Congress (OIG-19791-1, August 2009)
- 2010 Census: First Quarterly Report to Congress (OIG-19791-1, August 2009)
- Problems Encountered in the Large Block Operation Underscore the Need for Better Contingency Plans (OIG-19171-02, August 2009)
- Observations and Address Listers' Reports Provide Serious Indications That Important Address Canvassing Procedures Are Not Being Followed (OIG-19636-01, May 2009)
- Census 2010: Revised Field Data Collection Automation Contract Incorporated OIG Recommendations, But Concerns Remain Over Fee Awarded During Negotiations (CAR 18702, March 2009)
- Census 2010: Delays in Address Canvassing Software Development and Testing, Help Desk Planning, and Field Office Deployment Have Increased Operational Risk (OIG-19171, February 2009)
- 2010 Decennial Census: Dress Rehearsal of Address Canvassing Revealed Persistent Deficiencies in Approach to Updating the Master Address File (OSE-18599, October 2008)
- 2010 Decennial Census: Census Should Further Refine Its Cost Estimate for Fingerprinting Temporary Staff (OIG-19058-1, August 2008)
- 2010 Decennial Census: OIG Reviews Through the Decade Identify Significant Problems in Key Operations (OIG-19217, June 2008)
- 2010 Census: Key Challenges to Enumerating American Indian Reservations Unresolved by 2006 Census Test (OSE-18027, September 2007)
- Enumerating Group Quarters Continues to Pose Challenges (IPE-18046, September 2006)
- Valuable Learning Opportunities Were Missed in the 2006 Test of Address Canvassing (OIG-17524, March 2006)

The following reviews are in progress:

- Reviews of 2010 Address Canvassing Operations, Including Activities Related to the American Recovery and Reinvestment Act
- Address Canvassing Payroll
- Analysis of FDCA Problems

- Distribution of Communications Campaign Promotional Materials to Census Partners
- FISMA Evaluation of Census Certification and Accreditation
- Review of Address Canvassing Lister Travel Claims
- Review of Communications Campaign Contract
- Decennial Response Integration System
- 2010 Census: Quarterly Report to Congress
- Review of the Proposals and Purchases Related to the direct Partner Support and Special Initiatives Components of the Partner Support Program
- 2010 Group Quarters Validation Operation's Impact on Producing a High-quality Address List
- Review of the 2010 Partnership Program and American Recovery and Reinvestment Act Spending

IT Security

Continue Enhancing the Department's Ability to Defend Its Systems and Data Against Increasing Cyber Security Threats

Cyber attacks and security threats are on the rise, and the Department must improve its ability to cope with them. We have been monitoring Commerce's progress toward implementing effective IT security for years, and while the Department has put forth extra effort toward reinforcing its defenses, there is still more to be done.

Preventing, detecting, and responding to IT security incidents are complex endeavors. A key aspect of the IT security challenge is maintaining and enforcing effective IT security policies across the Department. Commerce operating units have separate management structures that preclude direct accountability to the Department's Chief Information Officer (CIO). This decentralization gives its CIO only limited authority over the daily management of IT security at Commerce's operating units and adds complexity to Department-wide information security initiatives.

Commerce Should Take Steps to Strengthen Its IT Security Workforce

In a recently completed audit, we found that the Department needs to devote more attention to the development and guidance of its IT security personnel who protect the Department's sensitive computer systems and information. For example, few of the operating units we reviewed were taking the necessary steps to meet training requirements or keep accurate training records. Moreover, professional development plans were not generally used. We also found that IT security certifications are not required and are not consistently held by staff members.

On the whole, performance management and accountability need to improve. We found several instances in which IT security responsibilities were not included in the formal performance plans of employees with significant security responsibilities.

We recommended Commerce implement a Department-wide plan to address the deficiencies identified in the audit. The Department concurred with our findings and is taking steps to address our recommendations, including developing an enterprise-wide IT security workforce improvement plan.

OIG/Department Plan to Resolve Material Weakness in IT Security Is Progressing, but More Efforts Will Be Necessary

Over the years, we have concentrated on the certification and accreditation (C&A) processes, including continuous monitoring, for the approximately 300 systems at

the Department. The Federal Information Security Management Act of 2002¹ (FISMA) requires agencies to certify that their systems and data are protected with adequate, functional security controls before systems are authorized (accredited) to operate, but consistent processes that ensure security controls are implemented correctly, operating as intended, and producing the desired result are still an issue for many operating units.

In a continuing effort to resolve Commerce's long-standing IT security material weakness,² in April 2008, OIG and the Department produced a joint plan to enhance the quality of system C&A. The plan, intended for completion at the end of 2009, called for the development of standard test cases for assessment of security controls, an emphasis on continuous monitoring, an automated tool to standardize C&A processes, and quarterly briefing to the Department's Senior Management and CIO councils. While most of the milestones in the plan have been met, the implementation of the Department's automated Cyber Security Assessment and Management (CSAM) tool has been delayed. CSAM is a software application that is expected to provide greater consistency, transparency, and tracking to the C&A process across all Commerce operating units.

Commerce took additional steps in FY 2008 and FY 2009 to improve IT security. The Department has updated its IT security program policy and implemented a review process, based on lessons learned from prior OIG evaluations, to help ensure that C&A packages conform to the policy and the applicable National Institute of Standards and Technology (NIST) standards and guidelines upon which Commerce's security policies are based. It also has established a security operations center for the Herbert C. Hoover building in Washington, D.C., and strengthened security controls protecting Commerce's headquarters network. Commerce has partnered with several U.S. government intelligence agencies to mitigate cyber security threats and address some of its most serious cyber security concerns.

The Department deployed CSAM and conducted a pilot project, using it to certify and accredit three systems. It found that CSAM will need some additional development before it can effectively support the C&A process. Commerce is working with the developer (the Department of Justice) to include needed enhancements in future releases.

In FY 2009, we evaluated six systems from different (non-USPTO) operating units for compliance with FISMA requirements, including on-site technical testing on five of the systems. We found that four systems did not meet FISMA requirements. In addition, we identified vulnerabilities in technical security controls that leave critical Department systems and data at risk for external and internal malicious

¹ Pub. L. No. 107-347, Title III, §§ 301-302, 44 U.S.C. §§ 3541-3549, 40 U.S.C. § 11331 (2000).

² A material weakness is a management control deficiency that the agency head determines to be significant enough to be reported outside the agency (i.e., included in the annual Integrity Act report to the President and Congress, Federal Managers' Financial Integrity Act of 1982, Pub. L. No. 97-255 (codified as amended in scattered sections of 31 U.S.C.)).

attacks including denial of service, data alteration, data theft, and installation of malicious software capable of launching cyber attacks against other Commerce systems.

Despite continued progress in resolving the overall material weakness, we recommended and the Department agreed that the material weakness should stand until more improvements are made.

USPTO Systems Evaluated in FY 2009 Met FISMA Requirements but the Agency Still Needs to Demonstrate a Consistent, Effective C&A Process

The two USPTO systems we evaluated in FY 2009 both met FISMA requirements. These were the first systems to do so since we recommended that USPTO report IT security as a material weakness in 2005. USPTO does appear to have enhanced its C&A process: it now has C&As independently verified and validated before making accreditation decisions, and has also improved documentation of its control assessments and results.

Despite improvements in USPTO's security program, we did not have sufficient evidence to recommend removal of the material weakness. In our view, USPTO has not demonstrated a consistent, effective process for C&A, including defining secure configurations for underlying virtual technologies or assessing controls on such components. These are issues we have pointed out previously. Nevertheless, USPTO management determined that the IT security issues have been adequately resolved and did not report IT security as a material weakness in its FY 2009 Performance and Accountability Report.

USPTO has made significant changes in defining its systems' boundaries and plans to recertify and accredit at least 20 of 31 operational systems, and certify and accredit five new systems in FY 2010; this will significantly test the bureau's ability to manage IT security in accordance with FISMA requirements.

Oversight of Contractors Is an Important Part of IT Security

The Department relies on contractors for all aspects of administration and maintenance of IT systems, development of IT security policies and procedures, and C&A of IT systems. This, too, presents a challenge because contractors sometimes do not have the desired degree of technical knowledge or an appropriate understanding of Commerce's IT security policies.

As a result, the Department needs to make certain that contractors who are involved with any aspect of IT security have proper expertise and training, and the Department must provide clear direction and close oversight. This is another area where the decentralized structure of the Department has led to inconsistency—we have noted that operating units use different approaches to managing IT security contractors and systems, with varying results.

For more information, view the reports listed below at www.oig.doc.gov:

- FISMA Evaluation of NOAA Environmental Satellite Processing Center (OAE-19730, January 2010)
- FISMA Evaluation of the Census Bureau's Field Data Collection Automation System (OAE-19728, November 2009)
- FISMA Evaluation of USPTO's Enterprise UNIX Services System (OAE-19729, November 2009)
- FISMA Evaluation of USPTO's Patent Cooperation Treaty Search Recordation System (OAE-19731, November 2009)
- Commerce Should Take Steps to Strengthen Its IT Security Workforce (CAR 19569-1, September 2009)
- FY 2009 FISMA Assessment of BIS IT Infrastructure (OSE-19574, September 2009)
- FY 2009 FISMA Assessment of Bureau Export Control Cyber Infrastructure, Version 2 (OSE-19575, September 2009)
- FY 2009 FISMA Assessment of Application Systems and Databases (OSE-19512, August 2009)
- FY 2009 FISMA Assessment of Manufacturing Engineering Laboratory Managed Infrastructure (OSE-19511, August 2009)

NOAA Environmental Satellite Programs

Effectively Manage Technical, Budgetary, and Governance Issues Surrounding the Acquisition of NOAA's Two Environmental Satellite Programs

NOAA is modernizing its environmental monitoring capabilities, in part by spending billions of dollars on two critical satellite systems, the National Polar-orbiting Operational Environmental Satellite System (NPOESS) and the Geostationary Operational Environmental Satellite-R Series (GOES-R). Space acquisitions like NPOESS and GOES-R are highly technical and complex. Such projects have a history of cost overruns, schedule delays, and reduced performance capabilities. The NPOESS and GOES-R projects have already suffered significant cost increases and delays; they require close oversight to minimize further disruption to the programs and prevent any gaps in satellite coverage. Such gaps could compromise the United States' ability to forecast weather and monitor climate, which would have serious consequences for the safety and security of the nation.

NPOESS Background

NPOESS will provide continuous weather and environmental data for longer term weather forecasting and climate monitoring through the coming 2 decades. The project has been managed jointly by NOAA, the National Aeronautics and Space Administration (NASA), and the Department of Defense. NOAA and Defense equally shared the cost of the NPOESS program until FY 2010, when Congress removed the 50/50 funding requirement in order to allow for more creative funding decisions to avert critical gaps in climate monitoring and weather forecasting. The initial project plan called for the purchase of six satellites at a cost of \$6.5 billion, with a first launch in 2008. But problems with a key sensor raised costs and delayed the date of the first launch to 2013, even as the number of satellites in the system was reduced to four. By December 2008, the NPOESS total life-cycle cost was revised to \$14 billion. NOAA announced in March 2009 that it would delay the first launch to 2014 because of continuing problems with the sensor. It also slipped the planned NPOESS Preparatory Project³ launch date from 2010 to 2011.

In June 2009, findings from an independent review team, coupled with congressional oversight, prompted a restructuring effort that involves the White House Office of Science and Technology Policy (OSTP) and the Office of Management and Budget (OMB).

³ The NPOESS Preparatory Project was planned as a risk reduction effort to test out NPOESS' new instruments in flight. NASA is the lead in this effort.

Also in 2009, NPOESS received \$74 million of American Recovery and Reinvestment Act funds to mitigate cost and schedule risks under the current contract, and to acquire additional instruments.

Restructuring of the NPOESS Program Is Critical to Its Success

In the spring of 2009, the committee of senior NOAA, NASA, and Defense officials responsible for overseeing the effort appointed an independent team to examine the program's status. The team, comprised of satellite experts from industry, academia, and government, found that the NPOESS program in its current state has a low probability of success. The team concluded that the current estimate of \$14 billion is too low, the oversight committee is ineffective, and White House support is needed to restructure this important program. Because the satellites currently in orbit cannot be expected to operate past 2014, a delay in the NPOESS program could result in substantial long-term environmental data gaps.

NOAA, NASA, and Defense are working with OSTP and OMB to restructure the program, including the governance provided by the three agencies. Developing and implementing a restructuring plan that enables the NPOESS program to meet the Nation's future weather forecasting and climate monitoring needs, mitigate further delays, and avoid data gaps will be both extremely critical and extraordinarily challenging.

GOES-R Background

The GOES-R⁴ system is intended to offer an uninterrupted flow of high-quality data for short-range weather forecasting and warning, as well as provide climate research data through 2028. NOAA is responsible for managing the entire program and for acquiring the ground segment. NOAA awarded the ground segment contract in May 2009, which has a total estimated value of \$736 million if all options are exercised.

NASA's Goddard Space Flight Center is responsible for acquiring the spacecraft and instruments for the project. In December 2008, NASA's award of the GOES-R spacecraft contract, total estimated value of \$1.1 billion for two spacecraft including the options for two additional spacecrafts, was protested by the losing bidder. Work stopped until the protest was withdrawn in August 2009. The protest resulted in a significant delay to the implementation of the program, with launch readiness for the two satellites deferred by 6 months.⁵

⁴ Since 1975, the GOES series of satellites have provided the United States with critical meteorological data for weather observation, research, and forecasting. Satellites in production are given letter designations, which are changed to numbers after the satellites reach orbit.

⁵ Launch readiness date changes: the first satellite's launch date has slipped from April 2015 to October 2015; the second from August 2016 to February 2017.

In January 2007, an independent review team found that the costs for GOES-R had been underestimated and that planned satellite capabilities were too ambitious. As a result, the projected cost of GOES-R increased from \$6.2 billion to \$7.7 billion, a major sensor was removed, and the number of satellites to be purchased decreased from four to two.⁶

NOAA and the Department Need to Follow Accepted Oversight Procedures for the GOES-R Acquisition

NASA had the lead management role in the acquisition of previous generations of GOES satellites, although they are wholly funded by Commerce. With GOES-R, both NOAA and the Department have taken on new roles—NOAA has the lead management role over the entire GOES-R program (ground and space segments),⁷ giving the Department direct oversight responsibility.

Our 2007 evaluation found that significant weaknesses in oversight during earlier phases of the program led to cost increases and schedule delays. Because GOES-R was not using an accepted life-cycle process, oversight officials had insufficient decision-making information. We recommended the Department overhaul its policy for acquiring major systems. We also advised NOAA to standardize its procedures. Since that review, NOAA finalized a GOES-R management control plan to address our recommendation. The Department has been working on a new policy, but it has not yet been finalized. NOAA and the Department still need to develop effective interim oversight procedures to manage costs and prevent further setbacks.

NOAA Needs to Work with Congressional Committees on GOES-R Reporting

The Mikulski Amendment to the 2008 Consolidated Appropriations Act⁸ requires NOAA to notify Congress⁹ should GOES-R costs increase by 20 percent or more over the established baseline. However, the baseline used in the amendment is the original cost estimate reported in NOAA's fiscal year 2008 presidential budget request (\$6.9 billion). Subsequently, the program was revamped and the cost estimate revised.

As we noted in last year's Top Management Challenges report, the program's acquisition approach has been changed, performance capabilities redefined, and design refined. These modifications resulted in the current \$7.7 billion estimate. This projection is a more realistic and reliable baseline: it was developed in close collaboration with NASA, with guidance from a highly qualified independent review team, and with the benefit of an independent cost estimate. Although the current

⁶ An option for two additional satellites is included in the contract.

⁷ In prior NOAA-NASA satellite programs, NASA managed the space segment.

⁸ Pub. L. No. 110-161, Div. B., Title I, § 112.

⁹ NOAA must notify the Senate Committees on Appropriations and Commerce, Science, and Transportation; and the House Committees on Appropriations and Science and Technology.

estimate does not breach the act's 20 percent threshold, we continue to encourage NOAA to work with Congress to reestablish the baseline at the new, more realistic level.

For more information, view the reports listed below at www.oig.doc.gov:

- Successful Oversight of GOES-R Requires Adherence to Accepted Satellite Acquisition Practices (OSE-18291, November 2007)
- Poor Management Oversight and Ineffective Incentives Leave NPOESS Program Well Over Budget and Behind Schedule (OIG-17794, May 2006)

American Recovery and Reinvestment Act

Meet the Challenges of Accountability and Transparency with Effective Oversight of Program Performance, Compliance, Spending, and Reporting

On February 17, 2009, the President signed the American Recovery and Reinvestment Act of 2009 into law.¹⁰ The Recovery Act requires an unprecedented degree of transparency and accountability and sets out specific responsibilities for agency staff in managing Recovery Act funds and program operations. Five operating units of the Department of Commerce—the Economic Development Administration, Census Bureau, NTIA, NIST, and NOAA, plus OIG—received \$7.946 billion from the Recovery Act, almost double the FY 2009 appropriation.

The OIG has taken a number of steps to implement an appropriate oversight framework to track the stimulus activities undertaken by Commerce. These steps included the assignment of dedicated Recovery Act staff, advisory participation in Department steering committees and working groups, development of training programs to include fraud awareness, administration of grants and contracts, and development and execution of a risk-based audit plan. Some of the larger challenges that Commerce faces, as identified by this OIG oversight, are summarized below.

Balance Expediency of Spending While Meeting Accountability Requirements

In the past, Commerce agencies have attempted to balance expediency with accountability. However, the sheer amount of Recovery Act money Commerce agencies received, coupled with the unique requirements of the Act, will make ensuring appropriate spending even more of a challenge. Commerce agencies must spend funds appropriately with little time to prepare for the many new and expanded programs, grants, and contracts established under the Act. This pressure to distribute funds quickly to communities and businesses significantly increases the risks for fraud, waste, and abuse in both Recovery Act-funded activities and Commerce's traditionally funded operations.

Meet Recovery Act Contract and Grant Compliance Requirements

The need for a highly capable acquisition and grants workforce emerges at a difficult time. Commerce (like many federal agencies) lacks a sufficient amount of skilled contracting, grants, and project management expertise. Hiring and retaining a skilled acquisition and grants workforce has proven difficult; nevertheless, Commerce needs to develop and hire skilled contracting, grants, and project

¹⁰ Pub. L. No. 111-5.

management personnel to define requirements and manage contracts and grants that will meet the Recovery Act's requirements.

Incorporating changes required by the Recovery Act and detailed by OMB into agency contracting business practices will present another challenge. The Recovery Act establishes a preference for fixed-priced contracting, while permitting cost-type contracts where appropriate. Fixed-price contracts are most effective when government requirements are well defined. To define government requirements, program offices and skilled contracting officers must invest extra time to understand program needs and objectives, find potential solutions in the marketplace, overcome potential miscommunications, and create solicitations that foster competition. Awarding and administering Recovery Act contracts (and those funded by regular appropriations) will greatly increase Commerce's acquisition workload even as it incorporates the new business practices called for by the Recovery Act and OMB.

The Recovery Act substantially increases the Department's contracting and grant activities, particularly at NIST and NOAA. Such increases place added pressure on these agencies to find qualified personnel. The added funding also includes a mandate for prompt contract and grant awards, leaving contracting and grant offices scant time to adequately accommodate Recovery Act work and other operations. The Recovery Act has provided a relatively significant funding increase for NIST and NOAA construction projects. To complete them successfully, these agencies will need to overcome the inherent risks associated with construction and dedicate construction managers across Recovery Act grant- and regular appropriation-funded projects. The construction work also needs to satisfy the Recovery Act's Buy American provisions.

Finally, Commerce's acquisition and grants workforce will need to comply not only with the myriad laws, regulations, and practices that existed prior to the Recovery Act but also must quickly understand and effectively implement a host of new requirements—all while government contracting is under intense scrutiny by the press, OMB, Congress, and Inspectors General. For instance, OMB has issued guidance, directed at agencies, that affects grant and contract operations, including:

- *Updated Implementing Guidance for the American Recovery and Reinvestment Act* (M-09-15), which provided government-wide guidance for carrying out programs and activities under ARRA
- *Implementing Guidance for the Reports on Use of Funds Pursuant to the American Recovery and Reinvestment Act of 2009* (M-09-21), which provided government-wide guidance for carrying out the quarterly recipient reporting and related agency review requirements as outlined in Section 1512 of the Act to Department grant and contracting officials to complete a review of quarterly recipient reporting
- *Improving Government Acquisition* (M-09-25), which directed agencies to develop plans to save 7 percent of baseline contract spending by the end of FY

2011 and to reduce by 10 percent the share of dollars obligated in FY 2010 for new high-risk contracts

The Department will need to bring together decentralized contracting operations and change how the government contracts for goods and services.

Meet Agency and Recipient Reporting Requirements

The Recovery Act establishes specific reporting requirements for both agencies and fund recipients. Federal agencies must report key information such as awards, obligations, outlays, and major activities on a weekly basis. Fund recipients need to report on the projects and activities created and their completion status, as well as job creation and retention. Available to the American public, these data reports are necessary to reflect the true and accurate use and impact of Recovery Act funds. An effectively designed internal control structure that detects and prevents errors and omissions is vital to data integrity.

Ensuring accurate and timely data poses other challenges, such as the manual nature of select Recovery Act reporting processes and ensuring integrity on data requirements, such as identifying where recipients perform grant and contract work, as well as creating jobs. Also, organizations that receive Recovery Act funds will vary in size and sophistication and will send reports in multiple primary data formats, resulting in inconsistent or incomplete reporting. Agency review of recipient data is critical to identifying and mitigating fraud, waste, and abuse of government funds, but the brief time allotted for agency review of recipient reporting adds to the difficulty of ensuring completeness and consistency.

Effectively Set Up and Manage the New Broadband Technology Opportunities Program

A major Recovery Act initiative, NTIA's Broadband Technology Opportunities Program (BTOP), faces significant application and pre-award review challenges to achieving its goals. The program aims to award some \$4.55 billion in grants in less than 18 months, a level of grant activity no Commerce operating unit has ever before undertaken. The Recovery Act funding will fuel an entirely new program that expects to permit first-time grant recipients, both for-profit and nonprofit, to encourage innovative programs and broadband grants in areas unserved or underserved by traditional commercial broadband providers. This endeavor requires close coordination among four federal agencies: Department of Agriculture (on-line grant application process), Federal Communications Commission (broadband mapping), Department of Commerce (grants management), and Department of Interior (grant application intake and program management functions).

In the last several months, NTIA has created a program office and obtained program and grants management support with the help of other federal agencies. In August, NTIA reported to Congress that they had hired about 80 percent of the federal staff planned for BTOP. In addition, NTIA entered into six memoranda of understanding to obtain significant Recovery Act program and grants management support. There still remain three ways that NTIA can ensure sound management and timely execution of BTOP.

First, NTIA should seek to extend program office funding beyond FY 2010 to ensure proper oversight. The Recovery Act does not authorize the NTIA BTOP office beyond September 30, 2010. Without sufficient funding, the program office will no longer be able to manage, monitor, or close out grants still underway after September 30, 2010. However, NTIA can award the 3-year BTOP grants until the last day that the program office is in operation. Seeking an extension would enable the agency to continue managing and properly closing out all active grants, ensuring that grantees meet financial and program reporting requirements.

Second, BTOP needs a rigorous review process to make sure applicants clearly identify and rank gaps in broadband coverage, as well as submit proposals targeting areas of greatest need. NTIA must consider implementing peer reviews with the Federal Communications Commission and the Department of Agriculture to validate proposals. NTIA must also establish a review process that ensures it evaluates proposals in a timely manner and in advance of grant award.

Finally, NTIA must ensure and expedite a programmatic environmental assessment for broadband projects so that grantees are able to complete projects within the 3-year grant period. For example, the programmatic environmental assessment of NTIA's \$1 billion Public Safety Interoperable Communications grant program took 17 months to complete, and the site-specific environmental reviews took another 24 months. For Recovery Act projects with an emphasis on job creation and prompt spending, the time spent conducting environmental reviews will delay the broadband program's near-term economic benefit.

For more information, view the reports listed below at www.oig.doc.gov:

- More Automated Processing by Commerce Bureaus Would Improve Recovery Act Reporting (ARR-19779, December 2009)
- Commerce Has Implemented Operations to Promote Accurate Recipient Reporting, but Improvements Are Needed (ARR-19847, October 2009)
- NIST Construction Grants and NOAA Habitat Restoration Grants are Competitively Awarded but Improvements Are Recommended for NIST's Selection Documentation, NOAA's Management of Applicant Risk, and Commerce's Pre-Award Guidance on Background Checks (ARR-19841, October 2009)

- Commerce Experience with Past Relief and Recovery Initiatives Provides Best Practices and Lessons Learned on How to Balance Expediency with Accountability (ARR-19692, May 2009)
- NTIA Should Apply Lessons Learned from Public Safety Interoperable Communications Program to Ensure Sound Management and Timely Execution of \$4.7 Billion Broadband Technology Opportunities Program (ARR-19583, March 2009)

The following reviews are in progress:

- Review of the 2010 Partnership Program and American Reinvestment and Recovery Act Spending
- Evaluation of the 2010 Group Quarters Validation Operation's Impact on Producing a High-Quality Address List
- Review of NTIA's Processes for Broadband Technology Opportunities Program

United States Patent and Trademark Office

Address the Patent Office's Resource and Process Issues

A decade ago, Congress gave USPTO independent control of its management and administrative functions as a performance-based organization.¹¹ With these flexibilities came measurable goals, performance targets, and expectations that USPTO would be better positioned to administer the granting of patents and registering of trademarks.

Between FY 2000 and FY 2009, however, the number of patent applications received annually has increased from almost 312,000 to over 485,000, and the total length of time to process a patent has grown from around 25 months to over 34 months. During the same period, the backlog of applications waiting to be reviewed has grown from approximately 308,000 to more than 770,000. These long waiting periods for patent review and the large number of pending applications can negatively affect innovation and U.S. economic competitiveness within the global economy if new technologies are not invented, invested in, and disclosed in a timely fashion.

USPTO faces immense and varied challenges in addressing the persistent problems of long waiting periods and application backlogs while also ensuring that quality remains integral to the patent review process. Recent initiatives included hiring additional patent examiners to address the backlog; however, simply adding to the workforce without making improvements to processes and quality control may not be enough. USPTO must consider how to reform and reengineer the various components of the patent application process to ensure timely and high-quality application review. Further, USPTO's IT systems need to be updated to ensure that critical systems and data are able to process increasingly complex applications safely and securely, and provide greater management oversight.

Finally, USPTO must address challenges with its funding mechanisms and fee structure. USPTO is funded entirely by application and maintenance fees paid by patent and trademark applicants and owners. Congress is also involved in this process by setting many of the fees legislatively and establishing a ceiling, through the appropriations process, as to the maximum amount of fees USPTO may use in a given year.

In November 2008, OIG's *Top Management Challenges Report* suggested that USPTO's unique financing structure could become increasingly risky. The recent downturns in the U.S. and global economies quickly showed the structure's vulnerabilities. In spring 2009, USPTO projected a possible budget shortfall of

¹¹ American Inventors Protection Act of 1999, Pub. L. No. 106-113, Title IV, §§ 4001-4808 (codified as amended in scattered sections of 35 U.S.C.).

almost \$100 million due to a reduction in the number of patent applications filed and an associated decrease in the fees collected for these applications, along with a decline in the collection of maintenance fees for existing patents. To address the projected shortfall in collections, USPTO took steps to align its costs with the revised projections for fee collections. These steps included deferring the hiring of patent examiners as well as curtailing or suspending other expenses such as overtime pay and training.

These reductions increase the risk to USPTO's ability to operate effectively in current and future years, and its capacity to ensure the United States' intellectual property system encourages investment in innovation and contributes to a strong global economy. More immediately, USPTO may not be able to process as many patent applications, which will add to the backlog instead of working towards reducing it. In effect, fewer maintenance fees will be available to collect in the future because USPTO issued fewer patents today.

The new Under Secretary of Commerce for Intellectual Property and Director of USPTO has publicly acknowledged these and other struggles faced by USPTO in providing an efficient and timely patent system that supports American innovation and economic success. To meet the Secretary of Commerce's directive to reduce patent pendency on an aggressive schedule, reform efforts are being considered on many fronts. These include changes to the examination process itself, the system for giving examiners credit for their work, and the process for challenging patent decisions. Along with the possibility of increasing fees, USPTO is also considering new financing tools, such as fee-setting authority, operating reserves, and borrowing authority, that would permit USPTO to respond to changes in the economy or the demand for its products and services. USPTO must act decisively and undertake both short- and long-term administrative, regulatory, and legislative solutions to address these challenges.

The following reviews are in progress:

- Audit of USPTO's Quality Assurance Process
- Audit of USPTO's Budget Development Process

Other Challenges for the Department of Commerce

The historical mission of the Department is “to foster, promote, and develop the foreign and domestic commerce” of the United States. Over time this mission has expanded to include supporting the country’s economic and technological development, fostering its advancement in the global marketplace, and managing the 12 operating units that make up the Department. In addition to the five top management challenges, we have identified several organizational challenges facing the Department in the coming year. These challenges are based on the continuing need to establish effective, consistent internal practices and the need to maintain the highest standards for project and acquisition oversight Department-wide.

Centralized Management and Oversight

It will be a complex, but necessary, organizational challenge for the Department to establish consistent internal operations to support all of its operating units. However, by doing so it will be better positioned to provide efficient and reliable support to the Secretary’s priorities. The Department needs to continue its efforts to centralize management and oversight in order to make the whole organization more efficient, consistent, and productive. The Department’s operating units have long-standing and independent business models, cultures, and practices. This decentralized structure has created obstacles to Department efforts to integrate and administer internal processes like financial services, human resources, grant and contract management, and major acquisitions.

For example, the administrative management structure of the Department gives its CIO little authority over the IT security operations of Commerce’s operating units, making the IT security challenge (see page 7) even more difficult to manage. In addition, prior to the Recovery Act the Department awarded an average of \$1.5 billion in grants to over 1,600 recipients annually and approximately \$2 billion in contracts to nearly 6,000 contractors annually. Yet the Department’s Office of Acquisition Management has similarly limited authority over the various agencies’ grants and procurement offices, resulting in inconsistent approaches to grant and contract management across the Department and adding to the difficulty in overseeing the effectiveness of these operations and programs.

Efforts to achieve greater consistency have been slow. To illustrate, grants are managed by three of the Department’s seven grant-making agencies, which cross-service the other grant agencies using three different IT systems. The Department has been working since 2003 to migrate all Department grants management operations to NOAA’s Grants Online system, but this effort is not projected to be completed until 2011.

Major System Acquisitions

In a related challenge, the Department and its operating units must develop effective processes for planning, managing, and overseeing major system acquisitions. In FY 2010, the Department plans to spend \$3 billion on IT investments (excluding grants). The lack of cohesive policies and procedures for program and project management and oversight has contributed to many of these acquisitions—such as the decennial handheld computers (see page 1), as well as the NPOESS and GOES-R environmental satellite programs (see page 11)—becoming mired in cost overruns and developmental delays. This weakness also leaves the Department without adequate visibility into progress and risks on major system acquisitions, which results in costly delays in identifying and correcting problems.

The Department has not been successful in updating its policies and oversight approach for major systems acquisition. The effort was begun in 2006 in response to OIG and GAO recommendations, and while some improvements in Departmental oversight have been made, formal policies and governance have yet to be established. The Deputy Secretary has recently convened a steering committee to develop a Department-wide major investment oversight policy. Developing formal, unified policies and procedures for complicated acquisitions will ultimately save time, money, and effort in all of the Department's operating units. The Department must exercise effective oversight to ensure system acquisitions are adequately planned and conducted according to best practices, and that they meet their cost, schedule and performance goals.

Grant and Contract Management Workforce

Sufficient staffing for the grant and contract management workforce has also been a long-standing issue for the Department. Now, primarily as a result of the Recovery Act, the Department and its operating units are issuing more grants and contracts than ever (see page 15). But the Department's ability to appropriately issue and oversee grants and contracts is hampered by a serious shortage of skilled, specially trained staff. To make sure grants and contracts are issued effectively and funds properly spent, the Department must build up the size and skills of its grant and contract workforce and improve its oversight processes.

NOAA Headquarters Leadership Structure

NOAA continues to face the challenge of carrying out its mission to conserve the nation's fragile oceans and living marine resources while ensuring a vital U.S. commercial fishing industry. This corresponds to a major component of the Secretary's Green and Blue Business and Jobs priority of securing economic opportunities and job creation while conserving ocean and coastal resources. NOAA recently announced plans to realign its headquarters' leadership structure in order to streamline decision making and provide greater policy-level attention to day-to-

day management and oversight of its programs. The realignment is intended to provide additional strategic guidance and leadership direction for NOAA's stewardship responsibilities, including fisheries. Nevertheless, balancing its competing mandates for maintaining and improving marine and coastal ecosystems while supporting marine commerce and transportation remains an acutely difficult challenge.

Commerce Headquarters Renovation

Finally, the Department's headquarters, the General Services Administration-owned Herbert C. Hoover Building in Washington, D.C., is undergoing an extensive renovation. The renovation will take about 13 years and is estimated to cost almost \$960 million to complete. The project is being funded mostly by the General Services Administration, but has the greatest potential to disrupt Commerce operations and affect its workforce. Accordingly, the Department has a primary interest in ensuring the renovation is completed on time, within budget, and free of fraud. To meet this goal, Commerce and General Services Administration need to provide comprehensive oversight throughout the project's life cycle.

For more information, view the reports and correspondence listed below at www.oig.doc.gov:

- The 2010 Census and Integrated Communications Campaign, Testimony before the before the Subcommittee on Information Policy, Census, and National Archives Committee, on Oversight and Government Reform, House of Representatives (September 2009)
- Recommendations from 2010 Census: First Quarterly Report to Congress (OIG-19791-1, August 2009)
- 2010 Census: First Quarterly Report to Congress (OIG-19791-1, August 2009)
- NTIA Should Apply Lessons Learned from Public Safety Interoperable Communications Program to Ensure Sound Management and Timely Execution of \$4.7 Billion Broadband Technology Opportunities Program (ARR-19583, March 2009)
- Letter to Senator Snowe Regarding the Northeast Fisheries Science Center (February 2009)
- Successful Oversight of GOES-R Requires Adherence to Accepted Satellite Acquisition Practices (OSE-18291, November 2007)
- Annual Follow-Up Report on Previous Export Control Recommendations, as Mandated by the National Defense Authorization Act for Fiscal Year 2000, as Amended (IPE-18546, March 2007)

- FDCA Program for 2010 Census Is Progressing, but Key Management and Acquisition Activities Need to Be Completed - Inspection (CENSUS-OSE-17368, August 2005)
- MAF/TIGER Redesign Project Needs Management Improvements to Meet Its Decennial Goals and Cost Objective - Evaluation (ESA-OSE-1572, September 2003)
- BXA Needs to Strengthen Its ECASS Modernization Efforts to Ensure Long-Term Success of the Project¹⁵ (IPE-14270, February 2002)

The following reviews are in progress:

- The Department's Grants Management Oversight Activities to Help Prevent and Detect Fraud
- Inquiry into NOAA Enforcement Practices
- Review of NOAA Habitat Restoration Center's Grants Competitive Processes and Practices
- Review of Pacific States Marine Fisheries Commission
- Analysis of FDCA Problems

¹⁵ In April 2002, the Bureau of Export Administration (BXA) changed its name to the Bureau of Industry and Security (BIS).

Acronyms and Abbreviations

BTOP	Broadband Technology Opportunities Program
C&A	certification and accreditation
CIO	Chief Information Officer
CSAM	Cyber Security Assessment and Management
FDCA	field data collection automation
FISMA	Federal Information Security Management Act
GAO	Government Accountability Office
GOES-R	Geostationary Operational Environmental Satellite-R Series
NASA	National Aeronautics and Space Administration
NIST	National Institute of Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
NPOESS	National Polar-orbiting Operational Environmental Satellite System
NRFU	nonresponse follow-up
NTIA	National Telecommunications and Information Administration
OIG	Office of Inspector General
OMB	Office of Management and Budget
OSTP	Office of Science and Technology Policy
PBOCS	paper-based operations control system
USPTO	United States Patent and Trademark Office