OFFICE OF THE SECRETARY

Top Management Challenges Facing the Department of Commerce

FINAL REPORT NO. OIG-14-002

NOVEMBER 25, 2013

U.S. Department of Commerce
Office of Inspector General
Office of Audit and Evaluation

FOR PUBLIC RELEASE

UNITED STATES DEPARTMENT OF COMMERCE
The Inspector General
Washington, D.C. 20230

November 25, 2013

INFORMATION MEMORANDUM FOR THE SECRETARY

FROM: Todd J. Zinser

SUBJECT: Top Management Challenges Facing the Department of Commerce in Fiscal Year 2014

Enclosed is our report on the Department of Commerce's top management challenges for fiscal year (FY) 2014. Departmental programs were substantially affected by continued fiscal tightening and sequestration. The five top management challenges we reported last year remain the most critical issues facing the Department; however, we have realigned our discussion:

- ***Strengthen Commerce Infrastructure to Support the Nation's Economic Growth.*** Several bureaus, which hold pivotal roles in providing the infrastructure for economic growth, face a variety of challenges. The International Trade Administration plays a leading role as one of 16 executive departments and federal agencies charged, along with the nation, with supporting the National Export Initiative's goal to double 2009 U.S. export levels by the end of 2014. The Bureau of Industry and Security (BIS) has the task of administering and enforcing controls of dual-use exports, which are expected to increase significantly as a result of the current Export Control Reform Initiative. Beginning in October 2013, new rules will transfer many items from the U.S. Munitions List to the Commerce Control List and BIS jurisdiction. The U.S. Patent and Trademark Office must implement remaining provisions of the 2011 America Invents Act—and faces several difficulties in reducing backlogs of applications, requests, and appeals. Due to limited remaining spectrum capacity, the National Telecommunications and Information Administration (NTIA) must open up more commercial wireless broadband spectrum and oversee development of a broadband network for public safety.

- ***Strengthen Oversight of National Oceanic and Atmospheric Administration (NOAA) Programs to Mitigate Potential Satellite Coverage Gaps, Address Control Weaknesses in Accounting for Satellites, and Enhance Fisheries Management.*** Environmental satellites are essential to providing weather forecasting data used to track severe storms and predict climate. However, cost overruns and schedule slippage may delay the replacement of two of NOAA's most vital satellite systems—which, at more than 20 percent of the Department's 2014 budget request, are its largest investments. Separately, during FY 2012, an independent accounting firm noted several control weaknesses in NOAA's accounting for satellites, which must be addressed to ensure integrity, accountability, and transparency. In addition, NOAA must respond to challenges to its fisheries oversight. Commercial and recreational fishing have a value of more than $5 billion and support more than 1 million jobs. However, NOAA must balance the interests of the fishing community with conservation concerns.

- ***Continue Enhancing Cybersecurity and Management of Information Technology Investments.*** Our review of events surrounding the Economic Development Administration's (EDA's) cyber incident, which stemmed from a perceived December 2011 massive malware infection, found that critical incident response decisions were based on inaccurate information—and that deficiencies in the Department's incident response program impeded EDA's incident response. The Department has several enterprise cybersecurity initiatives underway to address mandates from the Office of Management and Budget (OMB). Timely implementation of these initiatives is crucial to the Department's cybersecurity program. While OMB increased the authority of federal CIOs to manage major IT investments,[1] the Department CIO's responsibility to oversee certain satellite IT investments has been diminished. Overall, cost growth and schedule delays of the Department's investment activity exceed the federal government average. More than one-fifth of the Department's high-risk IT investments are 30 percent or more behind schedule.

- ***Exercise Strong Project Management Controls Over 2020 Census Planning to Contain Costs.*** By mid-decade, the Census Bureau must analyze 2020 decennial design alternatives and make timely design decisions based on the results of its research and testing phase. After conducting

[1] *See* OMB, December 9, 2010. *25 Point Implementation Plan to Reform Federal Information Technology Management*. Washington, DC: OMB, 28. *See also* OMB, August 8, 2011. *Chief Information Officer Authorities*, M-11-29. Washington, DC: OMB.

several reviews of the Bureau's approach and progress toward the planning and development of the 2020 decennial design, we noted significant schedule slippage in key research and testing programs. If continued, missed deadlines might result in a design similar to last decade's design, which included a massive, costly end-of-decade field operation. In addition, the Bureau must resolve human capital issues related to maintaining a workforce with requisite skills and capabilities. Further, it must complete timely research for making evidence-based design decisions, as well as implement a stable, agile field-testing strategy.

- ***Continue to Foster a Culture of Management Accountability to Ensure Responsible Spending.*** As the government experiences an extended period of tightened budgets, it is imperative to foster a culture of management accountability. OIG operates a complaint hotline for employees and the public to submit information about alleged wrongdoing, misconduct, or mismanagement. OIG's determination to audit, investigate, or provide the complaint information to Departmental or bureau management for appropriate action helps to instill a culture of ethical conduct and ensure that spending is appropriate, complies with laws and regulations, and promotes investments with long-term benefits. The Department must continue to adequately address complaints of mismanagement of federal resources. In addition, the lack of centralized financial reporting capability impedes the Department's ability to oversee and manage Department-wide financial activities. While the Department has developed plans to replace legacy systems, significant financial reporting challenges remain. Other priorities include stricter oversight of the Department's annual acquisition of approximately $2.4 billion in goods and services and the need for appropriately qualified staff to oversee these acquisitions. Finally, an additional challenge is to strengthen bureaus' oversight of Departmental programs that award grants or cooperative agreements due to the potential for misuse of federal funds by award recipients and to maintain professionally certified grant managers.

We remain committed to keeping the Department's decision-makers informed of problems identified through our audits and investigations, so that timely corrective actions can be taken. A copy of this report and the Department's response to it (which appears as an appendix) will be included in the Department's *Performance and Accountability Report*, as required by law.[2]

[2] 31 U.S.C. § 3516(d).

We appreciate the cooperation received from the Department, and we look forward to working with you and the Secretarial Officers in the coming months. If you have any questions concerning this report, please contact me at (202) 482-4661.

cc: Patrick D. Gallagher, Acting Deputy Secretary of Commerce
Justin Antonipillai, Acting General Counsel
Simon Szykman, Chief Information Officer
Ellen Herbst, Chief Financial Officer and Assistant Secretary for Administration
Bruce Andrews, Chief of Staff to the Secretary
Operating Unit Heads
Operating Unit Audit Liaisons

Contents

Challenge 1: Strengthen Commerce Infrastructure to Support the Nation's Economic Growth 1

Promoting U.S. Exports While Protecting National Security Interests 1

Enhancing Economic Growth Through Intellectual Property and Wireless Initiatives 4

Challenge 2: Strengthen Oversight of National Oceanic and Atmospheric Administration (NOAA) Programs to Mitigate Potential Satellite Coverage Gaps, Address Control Weaknesses in Accounting for Satellites, and Enhance Fisheries Management 7

Enhancing Weather Satellite Development and Mitigating Potential Coverage Gaps 8

Addressing Material Weakness over Satellite Accounting 11

Enhancing Fisheries Management 12

Challenge 3: Continue Enhancing Cybersecurity and Management of Information Technology Investments 15

Establishing a Robust Capability to Respond to Cyber Incidents 16

Continuing Sustainable Implementation of Enterprise Cybersecurity Initiatives 17

Preserving the CIO's Oversight Responsibility of Satellite-Related IT Investments 19

Continuing Vigilant Oversight of IT Investments 20

Maintaining Momentum in Consolidating Commodity IT to Cut Costs 21

Challenge 4: Exercise Strong Project Management Controls over 2020 Census Planning to Contain Costs 23

Ensuring Timely Design Decision Making 24

Focusing on Human Capital Management, Timely Research, and Testing Implementation 25

Challenge 5: Continue to Foster a Culture of Management Accountability to Ensure Responsible Spending 30

Responding to Concerns of Mismanagement and Ethical Violations 31

Implementing Stricter Controls over Funds 33

Modernizing the Enterprise Financial Management System to Strengthen Financial Oversight 34

Strengthening Controls over High-Risk Contract Actions and Developing the Acquisition Workforce 35

Addressing Grant Management Issues 37

Acronym List 40

Appendix A: Related OIG Publications 42

Appendix B: Comparison Between FY 2013 and FY 2014 Challenges 44

Appendix C: Management Response to OIG Draft Report 45

Challenge 1:

Strengthen Commerce Infrastructure to Support the Nation's Economic Growth

As reflected in the President's FY 2014 proposed budget, the Department is a key player in the federal government's efforts to stimulate economic growth and job creation. Several bureaus, which hold pivotal roles in providing the infrastructure for economic growth, face a variety of challenges.

The International Trade Administration (ITA)—along with 15 other federal government departments and agencies, as well as the nation—is not on track to meet the National Export Initiative's goal of doubling U.S. export levels within 5 years, while the Bureau of Industry and Security (BIS) is planning for the increased licensing and enforcement workload resulting from the Export Control Reform Initiative. The U.S. Patent and Trademark Office (USPTO), in its mission to foster innovation through high-quality patent and trademark examination, must implement several remaining provisions of the 2011 America Invents Act and faces several difficulties in reducing backlogs associated with initial patent applications, requests for continued examination, and appeals. Due to the increase in spectrum demand and the limitations of available spectrum capacity, the National Telecommunications and Information Administration (NTIA) must increase spectrum access for commercial wireless broadband use—via sharing between federal and commercial users or sale of spectrum for commercial use—while protecting federal missions and overseeing development of a broadband network for public safety. In addition to these major initiatives, the Department's National Institute of Standards and Technology (NIST) will face the challenge of implementing the National Network for Manufacturing Innovation,[1] if Congress authorizes this program to innovate and expand advanced manufacturing technologies and processes to bring manufacturing jobs back to the United States.

We have identified two key areas for management attention:

- Promoting U.S. exports while protecting national security interests
- Enhancing economic growth through intellectual property and wireless initiatives

Promoting U.S. Exports While Protecting National Security Interests

Promotion and regulation of U.S. exports are two critical missions of the Department. For FY 2014, the Department has requested $632 million to support agencies that provide export promotion and regulation. ITA's U.S. and Foreign Commercial Service provides a broad range of services and counseling to U.S. exporters while other ITA business units—such as Market Access and Compliance, Import Administration, and Manufacturing and Services—enforce trade agreements and protect domestic industries such as manufacturing and textiles. BIS provides export licensing and enforcement programs to ensure that trade in dual-use exports[2] is

[1] This $1 billion Presidential proposal brings together industry, colleges and universities, and all levels of government to support small- and medium-sized enterprises and start-ups in advanced manufacturing, workforce development, and the transfer of promising new processes and technologies to the marketplace.

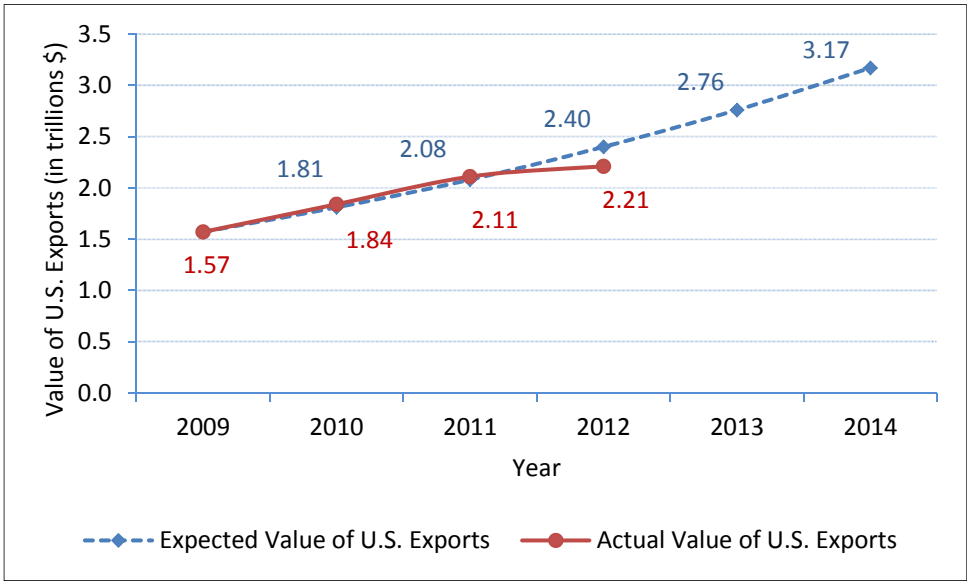
[2] *Dual-use* refers to exports that have both civilian and military applications.

consistent with national security interests. In FY 2014, ITA and BIS will undertake major activities that have potential long-term impact on the U.S. economy.

Implementing the National Export Initiative Under a New Organizational Structure

ITA plays a leading role as one of 16 executive departments and federal agencies that support the National Export Initiative (NEI), which was formalized by executive order in March 2010. The NEI aims to double 2009 U.S. export levels by the end of 2014—from $1.57 trillion to $3.14 trillion[3]—and, in turn, help grow the nation's $16.6 trillion economy.[4] In 2012, the value of U.S. exports grew to a high of $2.2 trillion, representing 13.9 percent of gross domestic product. In the second quarter of 2013, U.S. exports equaled $564 billion, a quarterly record (see figure 1). However, as shown in figure 1, actual export growth has recently fallen below the expected rate of export growth needed to double U.S. exports by the end of 2014. This will require ITA, along with other federal agencies, to intensify their efforts to promote U.S. exports to meet the NEI's goal.

Figure 1. Export Growth—Expected Versus Actual (in Current Dollars)



Source: OIG analysis of Census Bureau export data

To support many of its priorities,[5] the NEI called for enhanced collaboration among federal trade agencies and strategic partnerships with state, local, and other trade organizations. In our

[3] *See* Export Promotion Cabinet, September 2010. *Report to the President on the National Export Initiative: The Export Promotion Cabinet's Plan for Doubling Exports in Five Years*. Washington, DC: Trade Promotion Coordinating Committee, 1.

[4] DOC Bureau of Economic Analysis. *National Income and Product Accounts Tables: Table 1.1.5 Gross Domestic Product* [Online]. http://www.bea.gov/iTable/iTable.cfm?ReqID=9&step=1#reqid=9&step=1&isuri=1 (revised July 31, 2013). Dollar amounts in this section are in current dollars.

[5] The eight NEI priorities are (1) exports by small and medium-sized enterprises, (2) federal export assistance, (3) trade missions, (4) commercial advocacy, (5) increasing export credit, (6) macroeconomic rebalancing, (7) reducing barriers to trade, and (8) export promotion of services.

2012 review of the U.S. Export Assistance Centers we noted that, while protections of client data inhibited information sharing and guidance on collaboration was limited, fostering partnerships with other federal agencies such as the Small Business Administration and the Export–Import Bank can enhance service to exporters.[6] In FY 2014, ITA will be challenged to improve and build on the coordination and partnership efforts developed to date.

ITA's challenge is to sustain the momentum to increase exports to try to meet the goal of the NEI—and it must do so while, at the same time, managing an internal reorganization. Effective October 1, 2013, the Department consolidated ITA's four existing business units into three to eliminate overlapping functions and streamline operations. ITA states that the functional realignment will consolidate regional expertise, strengthen industry expertise and strategic partnerships, and consolidate trade agreement compliance and trade law enforcement.

Addressing Export Control Reform Changes Through Enhanced Licensing and Enforcement Activities

The task of administering and enforcing dual-use export controls falls on the Bureau of Industry and Security. In FY 2012, BIS processed more than 23,000 license applications for exports valued at more than $200 billion.[7] Future trade in controlled dual-use exports is expected to increase significantly as a result of the current Export Control Reform Initiative. Launched by the Administration in 2010, the initiative aims to streamline the country's export control system and facilitate U.S. export of high-tech goods while protecting U.S. national security interests. In the initiative's first phase, BIS worked with federal partners to reconcile and revise export control policies and regulations. Currently, the bureau is also collaborating with its federal partners to revise the lists of controlled dual-use items (Commerce Control List) and munitions (U.S. Munitions List), which will result in increased trade for less-sensitive munitions. These less-sensitive munitions will transfer from the U.S. Munitions List to the Commerce Control List and BIS jurisdiction, while the Department of State maintains jurisdiction over more sensitive munitions.

Beginning October 15, 2013, new rules will transfer the first of many items from the U.S. Munitions List to the Commerce Control List in a process expected to continue throughout FY 2014.[8] To address the increase of licensable items under its jurisdiction, BIS has requested additional resources in its FY 2014 budget for its licensing and enforcement units. To complete its mission, BIS' challenge is to coordinate with its federal partners, such as the Departments of Defense and State, to revise federal export control regulations to effectively implement export control reform. Such external collaboration can be difficult and time consuming. While BIS is planning and managing its new munitions licensing responsibilities, its current export regulations must continue to be administered and enforced. Finally, BIS will be challenged to enhance its existing outreach and enforcement activities delivered through exporter counseling,

---

[6] U.S. Department of Commerce Office of Inspector General, November 30, 2012. *U.S. Export Assistance Centers (USEACs) Could Improve Their Delivery of Client Services and Cost Recovery Efforts*, OIG-13-010-I. Washington, DC: DOC OIG.

[7] Fergusson, I.F., and Kerr, P.K. April 19, 2013. *The U.S. Export Control System and the President's Reform Initiative*, R41916. Washington, DC: Congressional Research Service, 3.

[8] Bureau of Industry and Security, April 16, 2013, Revisions to the Export Administration Regulations: Initial Implementation of Export Control Reform, *Federal Register* 78, no. 73: 22660.

teleconferences, and seminars to educate its stakeholders (primarily first-time dual-use exporters) about the detailed changes to the export regulations. Outreach and preventive enforcement will be critical to ensuring that all dual-use exporters understand and follow the revised regulations and avoid unintentional violations.

Enhancing Economic Growth Through Intellectual Property and Wireless Initiatives

Reducing Patent Application Backlogs and Improving Processing Times While Maintaining Quality

USPTO, as the authority for reviewing and adjudicating all patent and trademark applications, must continue to focus on the challenge of reducing the time applicants wait before their patent applications or appeals are reviewed. The agency has stated that the passage and implementation of the America Invents Act (AIA), enacted on September 16, 2011, would allow the agency to process applications faster, reduce the patent backlog, increase patent quality through expedited patent challenges, and improve examiner recruitment and retention.

The AIA included fundamental revisions to patent laws and USPTO practices, such as moving to a "first inventor to file" patent process to align the U.S. system with others worldwide, granting the agency authority to set and retain fees to ensure it has sufficient resources for its operations, and establishing satellite offices. As of August 20, 2013—in the nearly 2 years since the AIA's enactment—USPTO has successfully implemented on time 28 of the 35 provisions they were responsible for; 5 are not yet due, and 2 are overdue.

As USPTO completes its implementation of the remaining AIA provisions, the agency's recent efforts to address its application and appeal backlogs and related pendency issues have yielded mixed results. Both the backlog and pendency for patent applications decreased in FY 2013 (see figure 2a). Between October 2009 and September 2013, the patent backlog decreased from approximately 720,000 unexamined new applications to approximately 585,000. The patent appeals backlog—which we reported on in our 2012 audit[9]—has stabilized and, as of May 2013, stood at approximately 26,000, still more than twice the size of the backlog in October 2010. However, USPTO's backlog for requests for continued examination (RCE) has grown from 17,700 applications in October 2009 to approximately 78,000 in September 2013 (see figure 2b), an increase of more than 340 percent. As a consequence, during the same period, the average waiting time between filing an RCE and receiving an initial decision has grown from 2.2 to 7.8 months (see figure 2b).

[9] U.S. Department of Commerce Office of Inspector General, August 10, 2012. *USPTO's Other Backlog: Past Problems and Risks Ahead for the Board of Patent Appeals and Interferences*, OIG-12-032-A. Washington, DC: DOC OIG.

Figures 2a and 2b. Patent Backlog and Pendency Decreases (2a) and RCE Backlog and Pendency Increases (2b), FYs 2010–2013[a]

Figure 2a

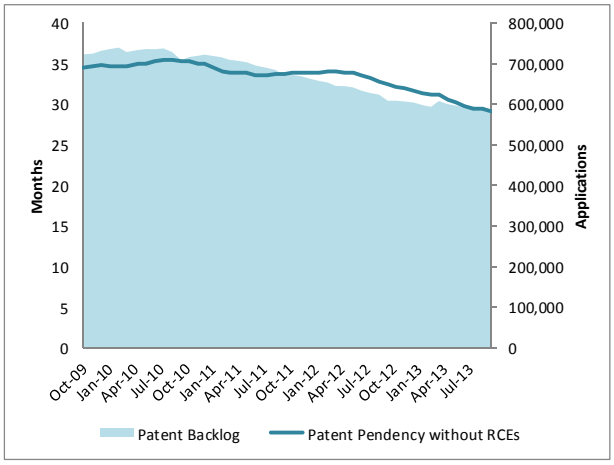
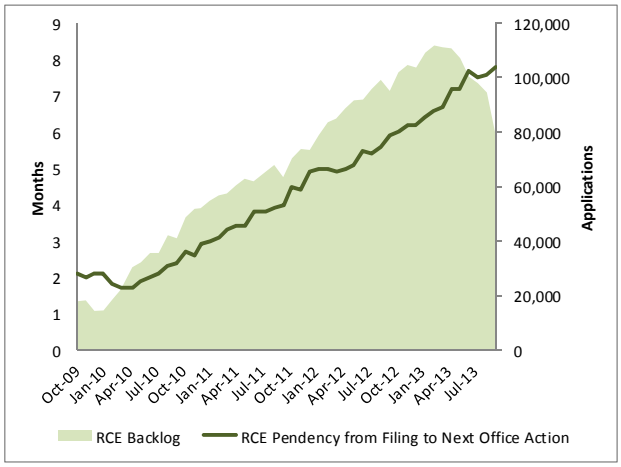


Figure 2b



Source: USPTO data
[a] Graphs present full FY data from October 2010 to September2013.

To address the substantial increases in the RCE backlog and average waiting time, one action USPTO initiated was a series of outreach efforts to identify why applicants file RCEs. In June 2013, OIG initiated an audit to evaluate the reason for the increase in the RCE backlog and review USPTO's efforts to address the issue.

As it works to reduce its patent backlog and pendency (see figure 2a), USPTO's challenge is to ensure that the quality of its patent examination process is not adversely affected and to avoid requiring applicants and the public to file unnecessary and costly challenges to examiners' decisions.

Increasing Spectrum Usage Efficiency

Radio frequency spectrum provides an array of wireless communications services critical to the U.S. economy and supports a variety of government functions.[10] Spectrum capacity is needed to deliver the wireless broadband that stimulates economic growth, spurs job creation, and boosts the nation's capabilities in education, healthcare, homeland security, and other areas.[11] In June 2010, the President requested that 500 megahertz (MHz) of federal or nonfederal spectrum be freed up for commercial wireless broadband. In response, NTIA announced in March 2012 that the federal government intends to repurpose 95 MHz of prime spectrum for commercial use.

[10] U.S. Government Accountability Office, April 2011. *Spectrum Management: Preliminary Findings on Federal Reallocation Costs and Auction Revenues,* GAO-13-563T. Washington, DC: GAO, 1.

[11] President's Council of Advisors on Science and Technology, July 2012. *Realizing the Full Potential of Government-Held Spectrum to Spur Economic Growth.* Washington, DC: President's Council of Advisors on Science and Technology, 11.

However, the $18 billion that NTIA estimates it will cost to relocate existing federal users to other parts of the spectrum[12] could make this cost prohibitive.

Representing a continuation and expansion of the President's June 2010 directive, a July 2012 report by the President's Council of Advisors on Science and Technology recommended that up to 1,000 MHz of federal spectrum be made available for a "shared use spectrum superhighway" between federal agencies and commercial providers.[13] Recent technology advances will make such shared-use architecture feasible in the near future. NTIA collaborated with industry and government representatives, forming working groups of the Commerce Spectrum Management Advisory Committee. These working groups, along with the Federal Communications Commission and the White House, have made some progress toward finding ways to share spectrum with commercial users. However, many challenges—such as lack of incentive for commercial providers to bid for shared spectrum (that is, the cooperative use of common spectrum by accessing the same frequencies in different geographical areas or at different times), revenue generation, and rights-of-use issues—must be addressed to make this effort a possibility. Another challenge NTIA faces in its handling of federal spectrum involves the accuracy of data submitted by federal agencies on their requirements for and their usage of spectrum. NTIA's efforts to address its challenges through the implementation of the Federal Spectrum Management System, a new data management system that uses IT applications to make the spectrum more effective and efficient, has encountered schedule delays and cost increases.

Overseeing the First Responder Network Authority and the Implementation of the Public Safety Broadband Network

On February 22, 2012, the President signed the Middle Class Tax Relief and Job Creation Act. This reallocated the "D-Block" spectrum and authorized $7 billion in funding for the establishment of an interoperable nationwide Public Safety Broadband Network (PSBN). The law requires NTIA to establish an independent authority called First Responder Network Authority (FirstNet) to oversee the existing public-safety spectrum and the establishment and deployment of the PSBN. FirstNet, which held its first meeting in September 2012, has started to implement and establish an organizational structure, hire staff to handle its day-to-day operations, and establish controls (for example, to develop its rules and regulations). FirstNet faces several challenges in establishing the PSBN, including (1) fostering cooperation among various state and local public-safety agencies, (2) integration of seven Broadband Technology Opportunities Program (BTOP) grants funded by the American Recovery and Reinvestment Act of 2009 into the PSBN, and (3) the physical construction of a nationwide long-term evolution network.

[12] Ibid, iv, vi.

[13] U.S. Government Accountability Office, *Spectrum Management,* 1.

Challenge 2:

Strengthen Oversight of National Oceanic and Atmospheric Administration (NOAA) Programs to Mitigate Potential Satellite Coverage Gaps, Address Control Weaknesses in Accounting for Satellites, and Enhance Fisheries Management

NOAA plays a critical role in protecting life and property, as well as supporting national economic vitality. To achieve these missions, NOAA must overcome the challenges associated with the acquisition, accounting, and operation of weather satellites and has to balance the competing interests concerning marine fisheries.

Environmental satellites are essential components in weather forecasting. They provide data used to track severe storms and predict climate. However, long-standing cost overruns and schedule delays—as well as the aging of the current constellation of satellites—are threatening adequate coverage of these critical functions. Cost increases and budget shortfalls may delay the development and launch of two of NOAA's most vital satellite systems, the Joint Polar Satellite System (JPSS) and the Geostationary Operational Environmental Satellite-R Series (GOES-R). These two programs are the Department's largest investments, accounting for more than 20 percent of its 2014 budget request. In response to last year's *Top Management Challenges*, NOAA improved its communication with stakeholders, as well as the efficacy of satellite program leadership and staffing, and developed a comprehensive polar satellite data gap mitigation plan. In addition, NOAA warned that the GOES-R program is at a stage in its development where launch delays cannot be avoided if its budget is reduced.

The satellites program also faces accounting challenges. During FY 2012, an independent accounting firm noted several control weaknesses at NOAA related to accounting for satellites. The transactions in question originate in a NOAA line office where personnel do not have sufficient financial accounting experience and training, and the bureau's Finance Office does not have sufficient oversight of the accounting for satellites. Further, satellite accounting involves significant contracts and arrangements with contractors and government agencies.

Finally, NOAA must respond to challenges to its fisheries oversight. Vital to our ocean economy, commercial and recreational fishing have a value of more than $155 billion and support more than 28 million jobs. But coastal development, pollution, overfishing, and destruction by invasive species are contributing to the decline in the health of our oceans and coastal ecosystems. NOAA must balance the interests of the fishing community with conservation concerns regarding long-term sustainability.

To strengthen oversight of NOAA programs, we have identified three areas for management attention:

- Enhancing weather satellite development and mitigating potential coverage gaps
- Addressing material weakness over satellite accounting
- Enhancing fisheries management

Enhancing Weather Satellite Development and Mitigating Potential Coverage Gaps

Managing risks in the acquisition and development of the next generation of environmental satellites is a continuing challenge for the Department. In February 2013, GAO added "Mitigating Gaps in Weather Satellite Data" to its high-risk list.[14] The two most prominent programs,[15] the Joint Polar Satellite System (JPSS) and the Geostationary Operational Environmental Satellite-R series (GOES-R), together account for one-third of NOAA's FY 2014 budget request. They are also the largest investments in the Department, accounting for more than 20 percent of the Department's $8.6 billion budget proposal.

JPSS evolved from a predecessor program fraught with cost overruns and schedule delays. NOAA's JPSS program uses the National Aeronautics and Space Administration (NASA) as its acquisition agent, leveraging that agency's procurement and systems engineering expertise—an arrangement based on previous partnerships between the two agencies. In its FY 2014 budget submission, NOAA requested $824 million and reported that the JPSS program, running through 2025, would cost $11.3 billion. The first JPSS-developed satellite (JPSS-1) is scheduled for launch no later than the second quarter of FY 2017. GOES-R, with scope and importance comparable to JPSS, is experiencing development and budgetary challenges that could delay the launch of its first satellite from the first to the second quarter of FY 2016. NOAA requested $955 million for FY 2014 for the GOES-R series of satellites that will provide uninterrupted short-range severe weather warning and "now-casting" capabilities through 2036. With four satellites (the GOES-R, -S, -T, and -U), the program is estimated to cost $10.9 billion over the course of its life cycle.

The satellites will provide data and imagery for weather forecasting—including severe-storm tracking and alerting—and the study of climate change. NOAA's environmental satellite operations and weather forecasting are designated as primary, mission-essential functions of the Department because they help lead and sustain the nation during severe weather events. However, because of cost overruns, schedule delays, and the aging of NOAA's current constellation of satellites, NOAA has had to take steps to mitigate potential coverage gaps for these critical assets.

[14] U.S. General Accountability Office, February 2013. *High-Risk Series: An Update*, GAO-13-283. Washington, DC: GAO, 155-160.

[15] Other satellite acquisitions include Jason-3, which will measure sea surface height, and Deep Space Climate Observatory, which will provide advance warnings of solar storms affecting Earth.

Reducing Program Risks Associated with JPSS-1 Development

Strong program management and close oversight of these programs are needed to reduce risks associated with their development. For JPSS, this requires that the program successfully execute to cost, schedule, and performance baselines established August 1, 2013. The program must also ensure that its flight and ground segments' schedules are fully integrated. JPSS must also effectively coordinate with the newly established NOAA Polar Free Flyer program, the planned NASA climate instrument project,[16] and NOAA's data distribution and archive systems.

NOAA needs to mitigate any degradation to weather forecasting capabilities during polar-orbit data coverage gaps through efficient use of supplemental funding it received as part of the Disaster Relief Appropriations Act, 2013. The bureau has developed a mitigation plan for polar satellite coverage gaps, but obtaining support from other reliable sources—one of its options—could be time-consuming. [17] NOAA should ensure that the mitigation plan is executed before the November 2016 design-life end of Suomi National Polar-orbiting Partnership (NPP), a risk-reduction satellite launched in October 2011 that is flying the first versions of JPSS sensors.

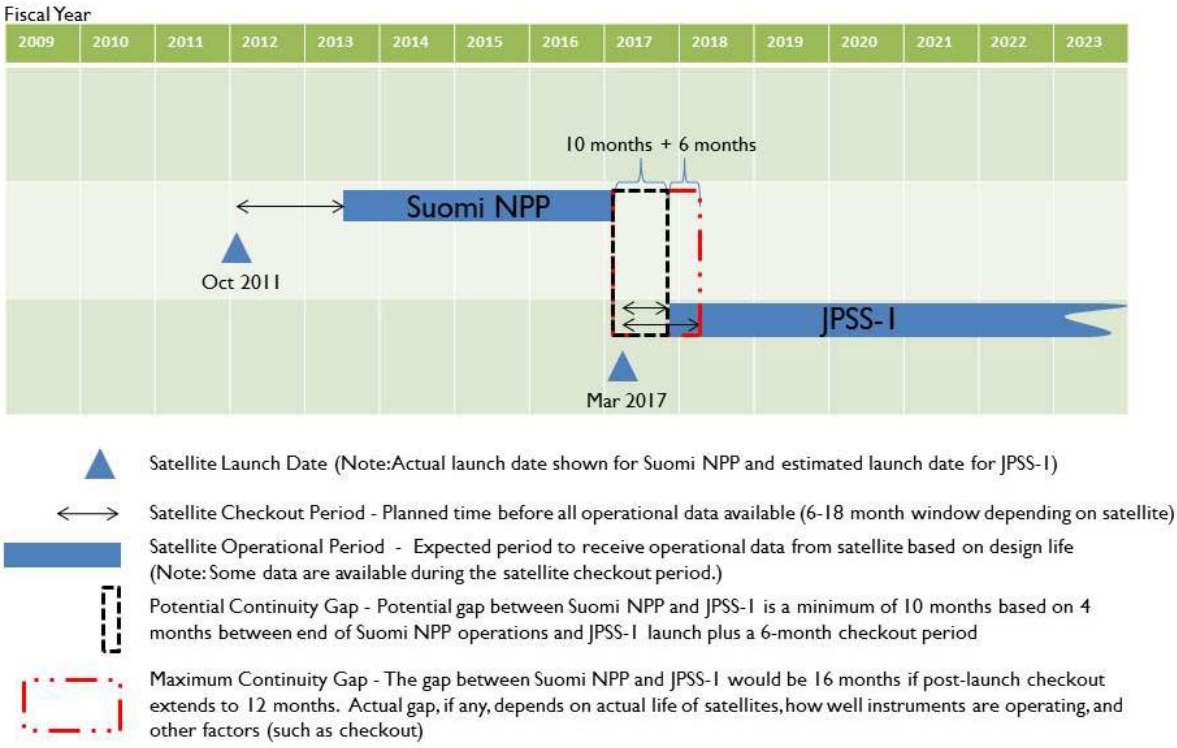
Over the course of the JPSS program, we have analyzed Suomi NPP and JPSS schedules to assess potential gaps in weather forecast data. Consistent with our September 2012 JPSS audit report,[18] we continue to project a 10–16-month gap between Suomi NPP's end of design life and when JPSS-1 satellite data become available for operational use (see figure 3). NOAA's medium-range weather forecasting (3–7 days) could be significantly degraded during the period of time JPSS data are unavailable.

[16] With the FY 2014 President's Budget, NOAA removed five instruments from the JPSS budget and created a separate program, Polar Free Flyer, to develop and launch three of the instruments. It transferred to National Aeronautics and Space Administration (NASA) responsibility for two climate instruments. The JPSS ground system will still support the Polar Free Flyer satellite, and the two NASA climate instruments will be accommodated on the JPSS-2 satellite if their development schedules align with the satellite's development.

[17] For example, using new or different data from the European Organization for the Exploitation of Meteorological Satellites or Japan Aerospace Exploration Agency requires establishing agreements, implementing communication links, updating data processing systems, and assimilating the data.

[18] U.S. Department of Commerce Office of Inspector General, September 27, 2012. *Audit of the Joint Polar Satellite System: Continuing Progress in Establishing Capabilities, Schedules, and Costs Is Needed*, OIG-12-038-A. Washington, DC: Department of Commerce OIG.

Figure 3. Potential Continuity Gaps for Polar-Satellite Operational Forecast Data



Source: OIG analysis of NOAA data

Reducing Program Risks Associated with GOES-R Development

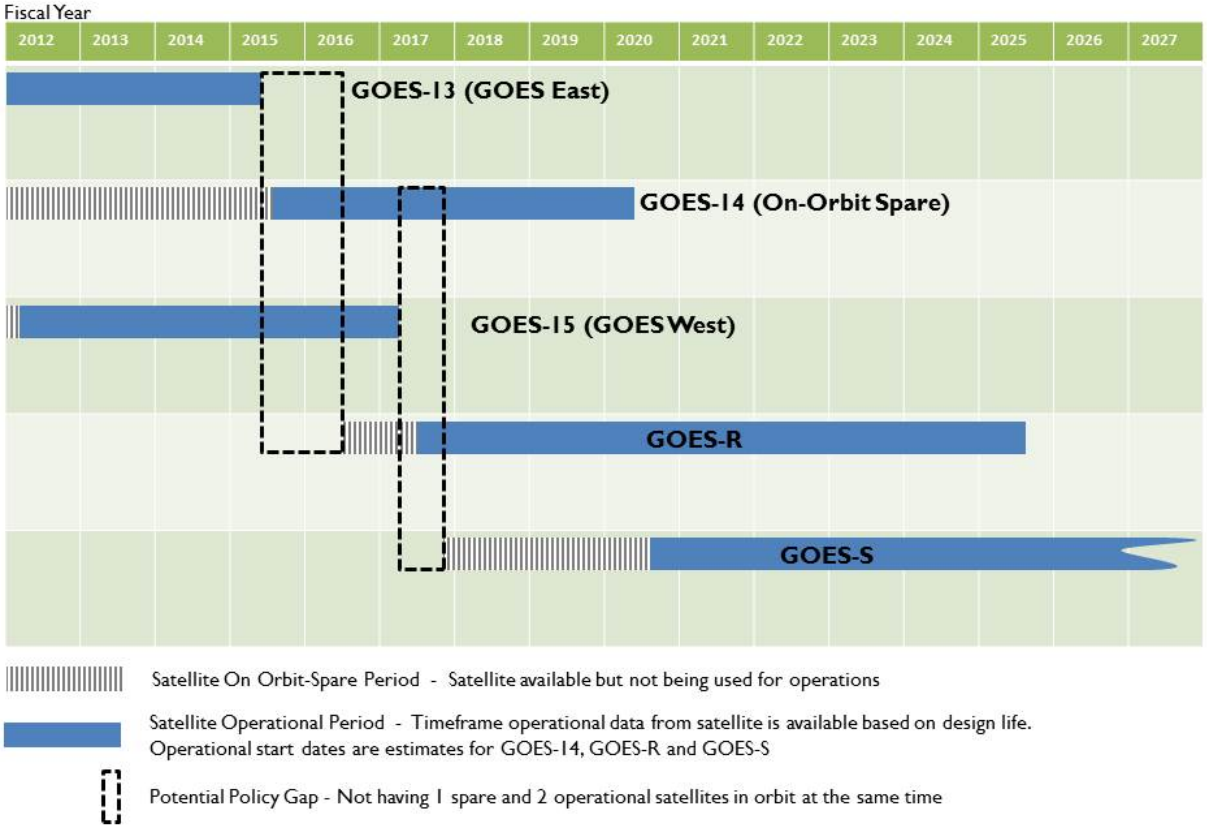
The GOES-R program must continue to manage its development to meet requirements within its long-standing baselines. The program also needs to ensure sufficient ground system, instrument, and spacecraft development maturity to enter and successfully complete the integration and test phase. In addition, the program must effectively manage activities between flight and ground projects in a compressed development schedule and constrained budget environment.

In our 2013 GOES-R audit report,[19] we found that schedule slips and a potential reduction in testing activities have raised concerns about the satellite's readiness to launch. Funding stability is the program's top risk; an appropriation amount below the FY 2014 requested level may delay launch. Scope reductions are diminishing the satellite's operational capabilities. For these reasons, NOAA needs to implement a comprehensive plan to mitigate the risk of potential launch delays and communicate to users (e.g., in the National Weather Service and Department of Defense) and other stakeholders (e.g., the Administration, Congress) the changes that may be necessary to maintain GOES-R's launch readiness date.

[19] U.S. Department of Commerce Office of Inspector General, April 25, 2013. *Audit of Geostationary Operational Environmental Satellite-R Series: Comprehensive Mitigation Approaches, Strong Systems Engineering, and Cost Controls Are Needed to Reduce Risks of Coverage Gaps*, OIG-13-024-A. Washington, DC: Department of Commerce OIG.

NOAA's policy for its geostationary satellites is to have three satellites in orbit—two operational satellites with overlapping coverage and one spare for backup. Currently, GOES-13, GOES-14, and GOES-15 are in orbit (see figure 4). However, GOES-13 is due to be retired in FY 2015, at which time GOES-14 is projected to become operational. GOES-15 is due to be retired in FY 2017. GOES-R is scheduled to be launched in October 2015, but there is a risk of launch delay. NOAA may not be able to meet its policy of having an on-orbit spare, even without a GOES-R launch delay, based on current GOES satellites' projected retirement dates. Furthermore, a launch delay for GOES-R beyond October 2015 increases the risk that only one geostationary imager will be in orbit—which would severely limit NOAA's capability to visualize and track severe weather events.

Figure 4. Potential Policy Gaps for Geostationary Operational Satellites



Source: OIG analysis of NOAA data

Addressing Material Weakness over Satellite Accounting

During FY 2012, the accounting firm KPMG noted several material control weaknesses at NOAA related to accounting for satellites. NOAA has a large investment in satellites and, as of the end of FY 2012, satellite construction work-in-progress amounted to $6.1 billion, with completed satellites and ground systems costing another $0.6 billion, totaling approximately more than one-fifth of the Department's assets. In addition, NOAA's accounting for satellites is highly complex. Such transactions originate in a NOAA line office where personnel do not have sufficient financial accounting experience and training, and NOAA's Finance Office does not

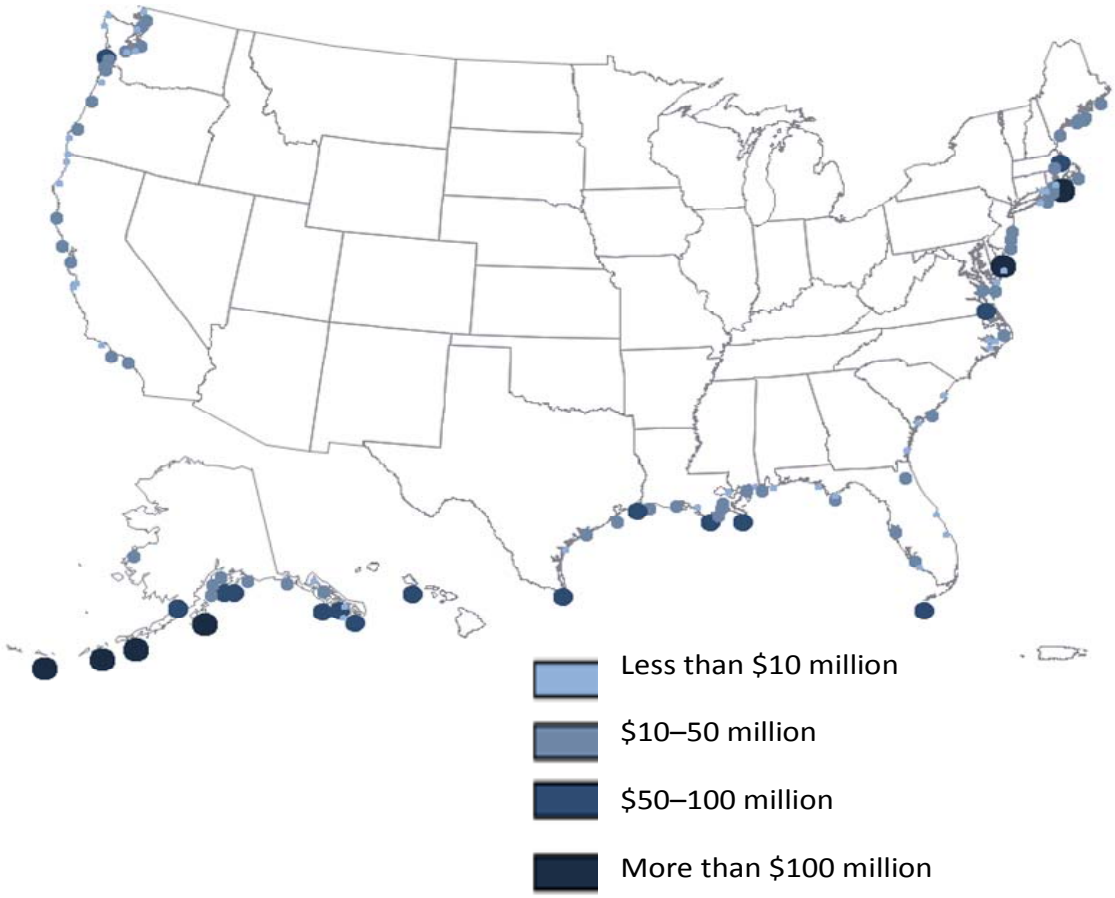
have sufficient oversight of the accounting for satellites. Further, satellite accounting involves significant contracts and arrangements with contractors and other government agencies.

These challenges have resulted in material deficiencies in NOAA's satellite accounting during FY 2012. Specifically, KPMG identified the incorrect classification of a satellite ground system, unrecorded transfer of a satellite from another federal agency, and corrections to the satellite impairment amount. These errors resulted in approximately $900 million in adjustments to correct the amount of satellites included in NOAA's accounting records. In addition, KPMG identified uncapitalizable costs included in construction work-in-progress, as well as a lack of documentation evidencing review and approval of intragovernmental payments related to satellites. Although NOAA has developed a corrective action plan to address these conditions during FY 2013, we believe that these deficiencies highlight more than accounting challenges. The operation and management of NOAA's satellite program needs strengthening to ensure integrity, accountability, and transparency. Public and Congressional confidence in the Department depends on these basic principles of stewardship. Therefore, program and finance officials must work together to ensure that satellite investments are accurately identified, recorded, and reported—a basic principle of asset management. We also identified additional challenges related to NOAA's accounting and budgetary controls of funds in challenge 5 (see *Continue to Foster a Culture of Management Accountability to Ensure Responsible Spending*).

Enhancing Fisheries Management

In 2011, there were 51 million jobs in U.S. coastal shoreline counties. Of those, the commercial fishing industry accounted for approximately 1 million jobs and the recreational fishing industry accounted for 327,000 jobs. U.S. fishermen at ports in the 50 states brought in 9.9 billion pounds of fish valued at $5.3 billion in 2011—an increase of 1.63 billion pounds (up 19.7 percent) and $769 million (up 17 percent) compared to 2010. Fishing is an important industry in our nation's economy as a whole and in the many coastal communities and port towns, as shown in figure 5.

Figure 5. Dollar Value of Fish Landings at U.S. Ports



Source: NOAA Office of Science and Technology, National Marine Fisheries Service

However, NOAA must also consider the health of our oceans and coastal ecosystems, which are impacted by coastal development, pollution, overfishing, and the destructive impact of invasive species. In U.S. waters, there are 74 listed endangered species and 62 marine mammals under the Marine Mammal Protection Act. There are 219 species under review or of concern to the National Marine Fisheries Service's (NMFS's) Office of Protected Resources.

For several years, we have reported on NOAA's challenges in balancing two competing interests: promoting commercial and recreational fishing as vital elements of our national economy and preserving populations of fish and other marine life. In recent years, members of the fishing industry and elected officials from the New England region have repeatedly questioned certain fishery regulations and whether NOAA has abandoned a core mission to develop the commercial fishing industry and increase industry participation.

In January 2013, we reported on NOAA's controls and processes surrounding fisheries rulemaking as the first phase of our assessment of transparency and the role of fishery

management councils (FMCs[20]) in rulemaking. An effective regulatory environment requires a fair and transparent rulemaking process. We learned that FMC members' financial disclosures do little to increase transparency of the process—and NOAA performs minimal reviews of the information on the financial disclosure forms. NMFS has not implemented many of the regulatory changes designed to streamline its rulemaking, and rules packages and administrative records are inconsistently maintained among its regional offices. In response to last year's challenge pertaining to fisheries management, NOAA reported that it continues to make progress in streamlining the rulemaking process and improving the transparency and consistency of fisheries management by addressing the relevant OIG recommendations.

We also issued the results of our survey of fishery management council members and staff—who, in general, supplied positive responses to the survey. Most survey participants were satisfied with their interactions with NMFS, as well as with the fishing industry and nongovernment organizations. Suggestions to improve collaboration between NMFS and FMCs mainly involved occurrence and methods of communication, participation from NOAA's Office of the General Counsel, and outreach and transparency to stakeholders.

We are currently reviewing several of NOAA's catch share programs to determine whether there are (1) adequate controls in place to prevent excessive ownership of limited shares and (2) adequate tools and processes in place to collect information needed to make decisions and to ensure adequate competition.

Considering the importance of fisheries to the U.S. economy, it is critical that NOAA and the FMCs balance the interests of the fishing community with conservation concerns. Regardless of long-term sustainability and conservation concerns, many stakeholders claim that measures such as limiting catch in fisheries and enforcing limited access privilege programs have had a negative impact on some local fishing communities. NOAA's challenge is to effectively balance those interests—and effectively communicate to stakeholders how the agency's efforts serve the long-term economic interests of the fishing industry.

[20] *FMCs* allow for regional, participatory governance by knowledgeable stakeholders. NMFS partners with FMCs—along with state agencies and other federal bureaus—to develop fishery management strategies and rules for the commercial and recreational fishing industries. There are currently 46 fishery management plans, developed by the eight regional FMCs or the Office of the Secretary under certain circumstances, to manage fishery resources.

Challenge 3:

Continue Enhancing Cybersecurity and Management of Information Technology Investments

Pervasive and sustained cyber attacks against the United States could have a devastating effect on federal and nonfederal systems, disrupt the operations of governments and businesses, and impact the lives of the American people. The President's FY 2014 budget requires that agencies eliminate duplicative or low-value IT investments while expanding efforts to counter current and evolving cyber threats. The administration has identified cybersecurity as among the most serious economic and national security challenges we face. To bolster the national cybersecurity program, federal agencies have been asked to implement cross-agency cybersecurity priorities—including strong authentication, Trusted Internet Connections (TIC), and continuous monitoring. In addition, the President has directed the National Institute of Standards and Technology (NIST) to develop a voluntary framework for reducing cyber risks to our nation's critical infrastructure.

We reported our concerns about the Department's fragmented IT governance in previous years. In response to OMB direction, the Acting Secretary issued a June 2012 memorandum that described a strategy to strengthen the Department's Chief Information Officer's (CIO's) ability to oversee the bureaus' annual $2.5 billion IT investments.[21] The CIO has leveraged this increased authority to lead the effort to consolidate commodity IT Department-wide—and continues to strengthen IT oversight through the Commerce IT Review Board. However, the CIO's responsibility to oversee satellite IT investments has been diminished, and IT investments still need to close the gap between planned and actual schedule and cost performance.

To help the Department counter current and evolving cybersecurity threats, as well as maximize the consolidation and oversight of its IT investments, we have identified five areas for management attention:

- Establishing a robust capability to respond to cyber incidents
- Continuing sustainable implementation of enterprise cybersecurity initiatives
- Preserving the CIO's oversight responsibility of satellite-related IT investments
- Continuing vigilant oversight of IT investments
- Maintaining momentum in consolidating commodity IT[22] to cut costs

[21] U.S. Department of Commerce, Office of Secretary, June 21, 2012. *Department IT Portfolio Management Strategy*. Washington, DC: DOC OS.

[22] According to OMB, *commodity IT* includes "IT infrastructure (data centers, networks, desktop computers and mobile devices); enterprise IT systems (e-mail, collaboration tools, identity and access management, security, and web infrastructure); and business systems (finance, human resources, and other administrative functions)." *See* Office of Management and Budget, August 8, 2011. *Chief Information Officer Authorities,* Memorandum M-11-29. Washington, DC: OMB, 2.

Establishing a Robust Capability to Respond to Cyber Incidents

In our FY 2013 *Top Management Challenges* report,[23] we noted that, in January 2012, as a result of a perceived massive malware infection, the Economic Development Administration (EDA) disconnected its systems from the Internet, significantly affecting its ability to maintain normal business operations. Since issuing that report, we completed our review[24] of the events surrounding EDA's cyber incident and found that critical incident response decisions were based on inaccurate information—and that deficiencies in the Department's incident response program impeded EDA's incident response. Because of a series of missteps in responding to this incident, a common malware infection originally found on two EDA computers was portrayed as a widespread cyber attack on EDA's IT infrastructure. This resulted in a prolonged disruption of normal business operations and the unnecessary expense of more than $2.7 million for recovery activities.

Our review also highlighted challenges for the Department when responding to a cyber incident. We made recommendations to improve the Department's Computer Incident Response Team (DOC CIRT), which provides response services to the seven bureaus located in the Department's headquarters at the Herbert C. Hoover Building (HCHB). To begin addressing deficiencies in DOC CIRT incident response capabilities, the Department's CIO conducted an internal review of DOC CIRT's practices and processes. The review identified areas for improvement and focused on strengthening DOC CIRT's organizational structure; its roles and responsibilities; and operating unit procedures for incident identification, analysis, response, and reporting. The Department's CIO has also taken steps to ensure that DOC CIRT staff members receive appropriate training, update DOC CIRT's incident response procedures, develop agreements with external agencies to gain incident response expertise, and hire experienced incident response staff.

The President has identified the cybersecurity threat as one of the most serious national security, public safety, and economic challenges we face. To deal successfully with the cyber threat, the Department needs to establish a robust incident response capability at DOC CIRT. Furthermore—because DOC CIRT primarily provides incident response services to bureaus located at HCHB—ensuring productive collaboration among all bureaus is critical for the Department to effectively respond to a cyber event. This includes bureaus that have their own CIRT capabilities, such as the Census Bureau, the International Trade Administration (ITA), NIST, the National Oceanic and Atmospheric Administration (NOAA), and the U.S. Patent and Trademark Office (USPTO). OIG is currently conducting an audit of the incident detection and response capabilities of several bureaus within the Department. Our audit should complement work already done by the Department and help to further improve its incident response program.

---

[23] DOC Office of Inspector General, November 9, 2012. *Top Management Challenges Facing the Department of Commerce,* OIG-13-003. Washington, DC: OIG, 15.

[24] DOC OIG, June 26, 2013. *Malware Infections on EDA's Systems Were Overstated and the Disruption of IT Operations Was Unwarranted,* OIG-13-027-A. Washington, DC: DOC OIG.

Continuing Sustainable Implementation of Enterprise Cybersecurity Initiatives

The Department has three enterprise cybersecurity initiatives underway to address mandates from the Office of Management and Budget (OMB). The Enterprise Cybersecurity Monitoring and Operations (ECMO) and Enterprise Security Oversight Center (ESOC) initiatives support OMB's mandate[25] to continuously monitor security-related information from across the enterprise. The TIC initiative supports the mandate[26] that federal agencies optimize and standardize their individual external network connections, including connections to the Internet. Collectively, these undertakings should significantly improve the Department's cybersecurity posture. Table 1, below, provides the goal, implementation status, and issues for each:

[25] Executive Office of the President Office of Management and Budget, April 21, 2010. *FY 2010 Reporting Instructions for the Federal Information Security Management Act and Agency Privacy Management*, Memorandum M-10-15. Washington, DC: OMB, 1.

[26] OMB, November 20, 2007. *Implementation of Trusted Internet Connections (TIC)*, Memorandum M-08-05. Washington, DC: OMB, page 1. Also, *see* OMB, September 17, 2009. *Update on the Trusted Internet Connections Initiative*, Memorandum M-09-32. Washington, DC: OMB, 1.

Table 1. Department's Enterprise Cybersecurity Initiatives

Enterprise Initiatives	Initiative Goal	Implementation Status	Issues
ECMO	Provide nearly real-time security status, support for patch management, and remediation of software configuration issues for Department-wide system components	• Initial capability has been implemented on more than 8,500 system components across HCHB operating units. • Upon full deployment in September 2014, ECMO will support more than 100,000 system components throughout the Department.	Delays in obtaining funding and participation commitments from USPTO and the Census Bureau in FY 2013 may result in missing the September 2014 deadline.
ESOC	Provide Department-wide security situational awareness to senior Departmental and operating unit managers	Currently in the planning stage, the Department is: • Doing a detailed assessment of incident handling capabilities in HCHB and NOAA, and a high-level assessment across the Department. • Conducting a technical capabilities study.	The initiative faces challenges acquiring project resources.
TIC	Consolidate Department external network connections and provide better monitoring of cyber threats from the Internet	• All bureaus—except the Bureau of Industry and Security (BIS), the Census Bureau, and NOAA—have acquired a TIC service. • BIS will acquire TIC services by March 2014. • The Census Bureau has not implemented TIC because of concerns about third-party access to sensitive Title 13[27] data. • NOAA has made progress becoming its own TIC access provider and will do so by March 2015.	BIS is working with its selected service provider to resolve technical issues. Census is working with the Department of Homeland Security to develop a memorandum of understanding that would ensure that the confidentiality of Title 13 data is protected.

Source: Department of Commerce

Timely implementation of these initiatives is crucial to the Department's cybersecurity program, particularly in light of the ever-increasing cyber threats facing government systems. The ECMO and ESOC initiatives are critical to maintaining cybersecurity best practices to protect network components, implementing continuous monitoring, and providing timely cyber situational awareness across the Department. Thus, the Department needs to ensure that current efforts

[27] Title 13 guarantees the confidentiality of information obtained by the Census Bureau and establishes penalties for disclosing this information.

for these initiatives move forward as planned and that operating units cooperate and participate to the fullest extent.

Since last year, NOAA has made progress toward becoming its own TIC provider by implementing about 72 percent of the required TIC capabilities. However, the Census Bureau and BIS have yet to acquire TIC services. The TIC initiative should significantly reduce the risks associated with external network and Internet connections. Accordingly, the Department needs to encourage NOAA to complete its TIC implementation quickly and should make every effort to enable the Census Bureau and BIS to expeditiously resolve their TIC issues.

Preserving the CIO's Oversight Responsibility of Satellite-Related IT Investments

Under the OMB IT reform plan[28] and subsequent OMB guidance,[29] agencies have been directed to expand federal CIO responsibility from a traditional role of policymaking and infrastructure maintenance to managing the agency's *entire* major IT investment portfolio. The Department of Commerce CIO oversees major IT investment in three ways: (1) reviewing the capital asset plan (Exhibit 300) for the initiation or re-planning of each investment; (2) comparing the investment's status against the asset plan monthly and submitting the assessment to the OMB IT Dashboard for public exposure; and (3) holding Commerce IT Review Board sessions periodically for an in-depth look at the investment and gauging when an investment is in trouble because it has significantly deviated from its plan.

However, the CIO oversaw about a quarter fewer IT investments in FY 2013 than in FY 2012. In particular, in an effort to streamline oversight, the Department has waived the requirement to follow CIO oversight practices for six satellite-related investments totaling $642 million in FY 2013 spending.[30] Two of these investments, the development of the Geostationary Operational Environmental Satellite–R Series and Joint Polar Satellite System ground systems, are part of the acquisition of two new satellite series that undergo substantial oversight as part of the satellite acquisition process, including comprehensive milestone reviews by independent satellite experts. The other four satellite-related investments— the maintenance and enhancement of two satellite ground systems and two satellite data processing and distribution systems—do not receive such extensive oversight. Although the Department has established quarterly reviews for executives to discuss high-level investment issues, the reviews do not replace the CIO's in-depth tracking and evaluation of these satellite investments.[31] The four satellite-related maintenance and enhancement investments are similar to other major IT investments overseen

[28] OMB, December 9, 2010. *25 Point Implementation Plan to Reform Federal Information Technology Management.* Washington, DC: OMB, 28.

[29] OMB, August 8, 2011. *Chief Information Officer Authorities*, M-11-29. Washington, DC: OMB.

[30] The satellite-related IT investments include (1) two satellite ground system development projects (Geostationary Operational Environmental Satellite–R series and Joint Polar Satellite System), (2) two ground system maintenance projects (Geostationary Operational Environmental Satellite and Polar Operational Environmental Satellite), and (3) maintenance of two systems that process and distribute satellite data products (NPOESS Data Exploitation Ground System and Environmental Satellite processing center).

[31] The Department has also established a Milestone Review Board for high-profile programs; however, it will only review the two new satellite series acquisitions, not the four satellite-related maintenance and enhancement investments.

by the CIO. The Department should reinstate the CIO oversight process for these four investments.

Continuing Vigilant Oversight of IT Investments

We reported in our FY 2013 *Top Management Challenges* that the IT Review Board has improved its reviews of IT investments, leading to a greater likelihood that investments will progress more satisfactorily.[32] The number of IT investments assessed as high-risk has substantially decreased, falling from six last year to only one investment this year: the National Weather Service (NWS) Telecommunication Gateway. Table 2 presents the current risk evaluation of investments that were at high risk in FY 2012:

Table 2: Disposition of the Department's FY 2012 High-Risk Investments

Investment	Current Risk Disposition
Census Bureau American Community Survey	Medium risk
Census Bureau 2010 Decennial system design, integration, and evaluation	Completed
Census Bureau IT infrastructure	Low risk
NOAA National Weather Service Telecommunication Gateway	High risk
NOAA Joint Polar Satellite System Ground System	Risk not evaluated by CIO due to oversight streamlining
NOAA Weather Radio Improvement Project	Risk not evaluated by CIO due to restructuring and the merging of this project with other investments

Source: OIG, *Top Management Challenges Facing the Department of Commerce*, October 24, 2011, and OMB IT Dashboard, August 2013

We remain concerned, as we reported last year, about IT investments with a history of being high-risk. For example, in December 2010, the Department's CIO assessed the NWS Telecommunication Gateway and designated it a high-risk project. In that same year, OMB designated the Bureau of Industry and Security's Commerce USXPORTS Exporter Support System as a high-risk Departmental project. Although both investments have made some progress since 2010, the Telecommunication Gateway is still assessed as a high-risk investment and USXPORTS recently ran into significant development roadblocks and was again evaluated high-risk for a short period in FY 2013 (see table 3). Both investments now require re-planning to move forward.

[32] DOC OIG, November 9, 2012. *Top Management Challenges Facing the Department of Commerce,* OIG-13-003. Washington, DC: OIG, 18.

Table 3: Department FY 2013 Investments with a High-Risk History

Investments	FY 2013 Spend Plan ($ Millions)	FY 2014 to Completion ($ Millions)	Total Life-Cycle Costs ($ Millions)
NOAA NWS Telecommunication Gateway	21	165	403
BIS Commerce USXPORTS Exporter Support System	6	5	17

Source: Exhibit 300s for FY 2013

The number of investment work activities that are behind schedule is somewhat reduced but more than one-fifth of them are still 30 percent or more behind schedule (see table 4). Overall, cost growth and schedule delays of the Department's investment activities exceed the federal government average.

Table 4: Investment Activity Cost and Schedule Variance

	Department of Commerce	Federal Government
Percentage of activities with cost growth greater than 30 percent	19	12
Percentage of activities with schedule delays greater than 30 percent	22	15

Source: OMB IT Dashboard (August 2013)

The challenge for Departmental IT investment oversight (CIO, IT Review board, and Milestone Review board) is to identify the fundamental reasons that high-risk projects continue not to make adequate progress; implement necessary changes to their acquisition approach, management structure, and development plans; and, if necessary, bring in outside expertise to identify weaknesses and recommend mitigation actions.

Maintaining Momentum in Consolidating Commodity IT to Cut Costs

The Department CIO is leading the effort to reduce commodity IT costs per full-time equivalent by about 25 percent annually[33] to be more in line with costs at comparable agencies. Departmental and bureau CIOs are employing three basic approaches to break down costly and inefficient IT:

1. *Consolidating infrastructure*, including data centers and services (e.g., the Census Bureau is operating centralized Bureau-wide collaboration and content management services)

2. *Sharing procurement vehicles* to leverage economies of scale (e.g., the use of Department-wide Microsoft Office and McAfee SafeBoot contracts)

[33] In FY 2011, the Department spent $8,884 per full-time equivalent, about $2,300 more than comparable agencies.

3. *Hosting services* for other Department bureaus (e.g., the Office of Secretary and NOAA are hosting all IT services for the Economic Development Administration)

Department and bureau heads must ensure that their respective CIOs continue to have full cooperation in overcoming bureaucratic impediments to consolidating and sharing IT commodity resources.

Challenge 4:

Exercise Strong Project Management Controls over 2020 Census Planning to Contain Costs

The decennial census is a highly visible, decade-long program that requires extensive planning and testing. The 2020 Census process has already started building on 2010 Census lessons learned about late-stage design changes and higher-than-expected contractor expenses. Both contributed to pushing the final cost of the 2010 Census to more than $12 billion—nearly twice that of the 2000 Census (in nominal dollars). The Census Bureau has promised bold design changes for the 2020 Census, seeking to reduce per household costs (on an inflation-adjusted basis) to an amount lower than the 2010 Census. To reach this goal, the Bureau must complete research and testing early enough in the decade to plan and build the necessary infrastructure for the projected workload and workforce. The Bureau will be making key 2020 Census design decisions during FYs 2015–16 that drive the program's methodology, quality, and cost for producing congressional apportionment data by December 31, 2020, and redistricting data by March 31, 2021.[34]

As a result of our 2010 Census oversight, we noted challenges the Census Bureau faces to innovate its 2020 Census design.[35] Overcoming these challenges calls for fundamental improvements in decennial planning, management, testing, and transparency to help ensure that the missed opportunities of previous decades are not repeated in 2020. We identified 19 recommendations categorized into 7 areas of improvement:

1. Revamp cost estimation and budget processes to increase accuracy, flexibility, and transparency.
2. Use the Internet and administrative records to contain costs and improve accuracy.
3. Implement a more effective decennial test program using the American Community Survey as a test environment.
4. Effectively automate field data collection.
5. Avoid a massive end-of-decade field operation through continuous updating of address lists and maps.
6. Implement improved project planning and management techniques early in the decade.
7. Establish a Census Bureau director position that spans presidential administrations.

The Census Bureau has made improvements since its 2010 decennial operation, including early monitoring of 2020 decennial risks, more open communication about progress and problems with stakeholders, and efforts to implement an Internet response option to its American Community Survey (ACS) that can serve as a model for 2020 decennial responses. In addition,

[34] These delivery dates are mandated by law; *see* 13 U.S.C. § 141.

[35] U.S. Department of Commerce Office of Inspector General, June 27, 2011. *Census 2010: Final Report to Congress*, OIG-11-030-I. Washington, DC: DOC OIG.

Congress authorized a term-appointed Census Bureau director to oversee timely, critical decennial design decisions. A new director was appointed to this term position in July 2013. The Bureau has partially addressed some of our recommendations; however, more work remains. As the Bureau innovates a 2020 decennial design, we have identified two areas for management attention:

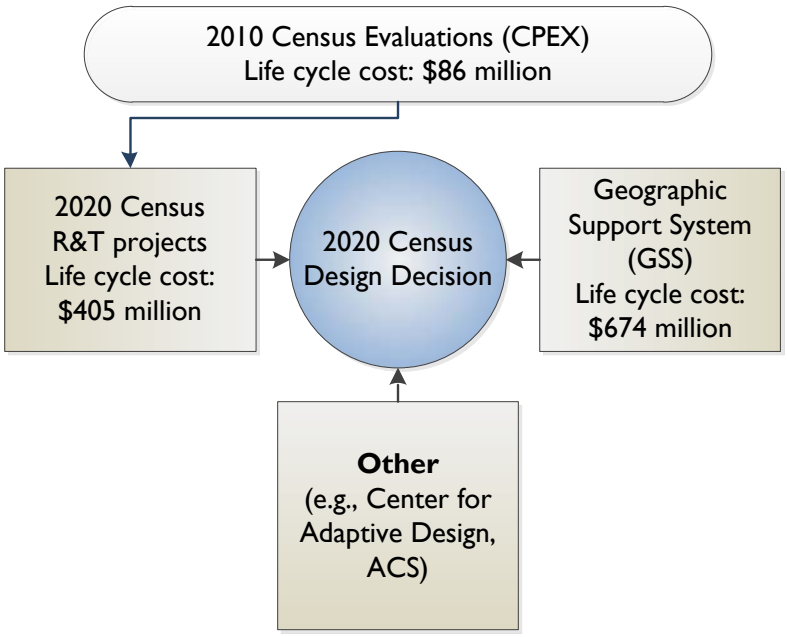
- Ensuring timely design decision making
- Focusing on human capital management, timely research, and testing implementation

Ensuring Timely Design Decision Making

The Census Bureau is approaching critical 2020 Census design decision points that require planning and developing a decennial census in a significantly more constrained budget environment than experienced during the 2010 Census. Soon, the Bureau must rapidly analyze 2020 decennial design alternatives and make key design decisions based on the results of its research and testing phase. Components of this more than $1 billion effort (see figure 6) include:

- *2010 Census evaluations*, referred to as the Census Program Evaluation and Experiments (CPEX)
- *The Geographic Support System (GSS),* which provides the maps, address lists, geographic reference files, and associated processing systems to meet the geographic requirements of all Census Bureau programs. GSS priorities related to the decennial census include maintaining and updating the integrated database that contains the Master Address File (MAF)—an inventory of the nation's addresses—as well as the Topologically Integrated Geographic Encoding and Referencing (TIGER), a national inventory of streets and map features. The GSS also includes an initiative intended to inform the Bureau on the viability of conducting a targeted rather than a full address canvassing operation in 2019 in support of the 2020 Census.
- *2020 Census research and testing (R&T) projects* that test new enumeration methods, new processes to support field operations, more cost-effective IT systems, and address and map improvements needed for the 2020 Census to supplement GSS efforts
- *Other Census Bureau-wide efforts*, including development and processing infrastructure that supports Bureau surveys and leveraging work conducted on the ACS (e.g., adapting an online response option)

Figure 6. 2020 Census Design Decision Process



Source: OIG analysis of Census Bureau documents available May 2013

Our office has conducted several reviews of the Census Bureau's approach and progress toward the planning and development of a new cost-effective 2020 decennial design (e.g, the CPEX,[36] GSS,[37] and R&T[38] programs). We found that, as research and testing continues, the Bureau must contend with and plan for several challenges that could adversely impact the next decennial census. Like the rest of the federal government, the Bureau is operating in a constrained budget environment. It must therefore be strategic in how it spends available funding and provide the Secretary and Congress reliable and transparent budget requests. The Bureau must devote careful attention to its FYs 2015 and 2016 budget submissions, which will fund testing of new decennial design options that ultimately drive the cost trajectory for the 2020 Census.

Focusing on Human Capital Management, Timely Research, and Testing Implementation

During our current 2020 Census redesign evaluation, we noted significant schedule slippage in the Census Bureau's key research and testing programs. If continued, missed deadlines will translate into an untenable continuation of an already expensive design. The cost (in constant dollars) of counting each housing unit could reach $151, compared with $97 for 2010. Through

[36] DOC OIG, April 5, 2012. *2020 Census Planning: Delays with 2010 Census Research Studies May Adversely Impact the 2020 Decennial Census*, OIG-12-023-1. Washington, DC: OIG.

[37] DOC OIG, May 10, 2012. *High-Quality Maps and Accurate Addresses Are Needed to Achieve Census 2020 Cost-Saving Goals*, OIG-12-024-I. Washington, DC: OIG.

[38] DOC OIG, September 17, 2013. *2020 Census Planning: Research Delays and Program Management Challenges Threaten Design Innovation* (draft report). Washington, DC: OIG.

our ongoing work on the Bureau's approach to and progress on planning for 2020 decennial census we have identified three time-sensitive Bureau management priorities:

- Managing human capital to align with the Bureau's mission and programmatic goals
- Completing timely research for making evidence-based design decisions
- Implementing a stable, agile field-testing strategy

Managing Human Capital to Align with Bureau Mission and Programmatic Goals

As part of the decennial census planning effort, the Census Bureau is striving to improve the management and culture of the decennial directorate. The Bureau's two-pronged effort entails collaboration between its 2020 Census directorate and Human Resources division to (1) review required skills and competencies and (2) conduct a formal analysis to compare those requisite skills to the skills and capabilities of their current workforce.

An objective and informative assessment of the Census Bureau's current workforce is critical to containing 2020 Census costs. Like many federal agencies facing mandatory budget reductions, the Bureau must balance meeting critical mission requirements against ensuring the maintenance of its existing human capital. To implement the FY 2013 budget reductions, the Bureau (1) sought to "minimize the impact on our employees, seeking to avoid furloughs, while sustaining our core mission and preserving our most important programs within the limited flexibility provided,"[39] (2) canceled or reduced the scope of, or decided not to award, more than $30 million in contracts for the second half of FY 2013, (3) froze hiring on all but the most mission-critical positions, and (4) did not fill more than 100 "critical vacancies." With more budget reductions projected, the Bureau's workforce assessment should help inform its long-term strategy to implement a decennial census that costs less than the 2010 Census.

Completing Timely Research for Making Evidence-Based Design Decisions

The Bureau's research agenda includes capturing lessons learned from the last decennial census and conducting research and testing projects that emphasize containing costs without diminishing information quality (see table 5.)

[39] Census Director's blog on June 19, 2013; *available at:* http://directorsblog.blogs.census.gov/2013/06/19/census-bureau-budget-update-2/.

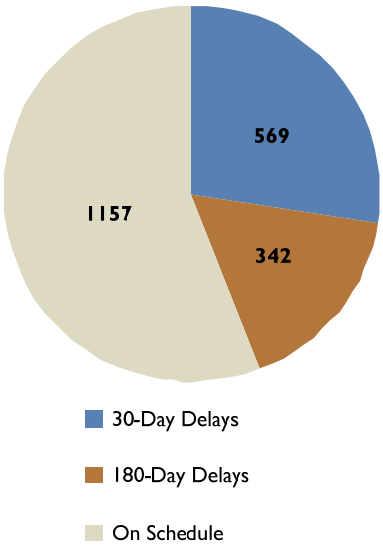
Table 5. Costly 2010 Census Operations and 2020 Research Efforts to Address Them

2010 Census Cost and Operation		2020 Research Aimed to Reduce Costs
$2 billion	Enumerating nonresponding households	*Can the number of household visits be reduced by finding an alternative, less costly response option?* *Can existing government records fill in missing information?*
$790 million	Building a one-time-use field data collection automation system	*Can reusable enterprise-wide solutions be built and expanded to meet decennial needs?*
$473 million	Ensuring that labor, systems, and development are in place to process and capture the data for more than 164 million paper questionnaires at three data centers	*Can the number of paper questionnaires be reduced through an Internet response option?* *Can an automated field data collection reduce the paper workload?* *Can the reduced paper workload result in fewer data capture centers?*
$444 million	Having an end-of-decade address and geography updating operation	*Can Census maps and addresses be efficiently updated throughout the decade, with areas experiencing change accurately targeted to reduce the amount of end-of-decade canvassing?*
$330 million	Leasing 494 local and 12 regional Census offices	*Can distance management, training, and automated processes allow the Census Bureau to reduce the number of temporary Census offices?*

Source: OIG analysis of Census Bureau documents

In addition to the cancellation of 20 of the original 109 studies aimed to measure the Bureau's performance in the 2010 decennial, we found that the CPEX program results were often not implemented as designed to inform the 2020 R&T program. We also found the Census Bureau is experiencing schedule slippage and project delays in its R&T program that affect subsequent research phases and design decision points (see figure 7). The multifaceted and interrelated nature of the research program underscores the necessity of adhering to a schedule to make timely, evidence-based design decisions.

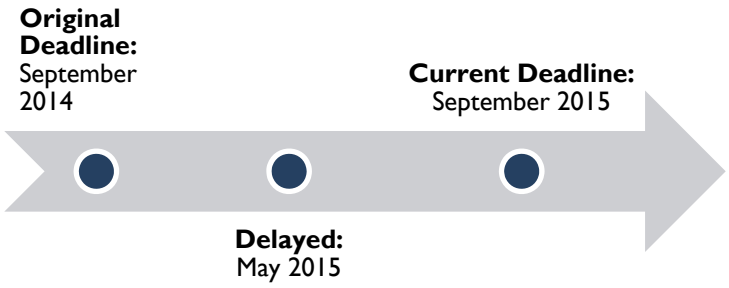
Figure 7. Research and Testing Activity Delays



Source: OIG from Census Bureau data

Another challenge identified in our recent report is to develop a schedule that provides managers and oversight stakeholders with valid, timely, accurate, and auditable performance information on which to base critical decisions. The Census Bureau alters baselines (i.e., re-baselines), which can conceal delays and give the appearance that schedules are met. For example, major decision points for the 2020 Census have been re-baselined three times, with original deadlines pushed back from September 2014 to September 2015 (see figure 8).

Figure 8. Shifting Deadlines: The 2020 Census Design Decision



Source: OIG analysis of Census Bureau documents

Implementing a Stable, Agile Field-Testing Strategy

Testing operations in real-life situations is critical to ensuring that research results yield improvements in the decennial census. However, field test plans are in flux: their schedule has been pushed back three times, with an FY 2016 completion date reflecting a year-and-a-half delay. Further, the Census Bureau canceled 13 of 25 scheduled field tests. Frequent schedule changes, testing delays, and cancellations threaten the Bureau's ability to incorporate test results into subsequent research and design decisions. The Bureau cites the major impacts of the Congressional budget cut and sequestration as a cause for the changes in content and timing of its research and testing efforts. Nevertheless, budget reductions, continuing resolutions, and the sequestration (signed into law in August 2011) should have been planned for.

To increase opportunities for testing, both the National Academy of Sciences and OIG have recommended using the ACS as a test environment for smaller trials of new processes, procedures, and systems for the decennial. The Census Bureau recently developed a small test that uses a modified ACS infrastructure—including ACS's systems, questionnaire, and training materials. Previously, using the ACS as a test environment had been delayed to January 2015. In addition, several legislative proposals to eliminate or alter the quality of the data collected by the ACS threaten its use for decennial testing. The Bureau faces the challenge of implementing the ACS while conducting cost-effective, small-scale tests—or implementing separate large-scale, more costly 2020 Census field tests—to evaluate new design features. With the 2020 Census design still under development, it is unknown how legislatively-mandated changes to the ACS will impact the Bureau's goal of containing the cost of the decennial census while preserving data quality.

Challenge 5:

Continue to Foster a Culture of Management Accountability to Ensure Responsible Spending

As the government experiences an extended period of tightened budgets, it is imperative to foster a culture of management accountability. OIG operates a complaint hotline for employees and the public to submit information about alleged wrongdoing, misconduct, or mismanagement. OIG's determination to audit, investigate, or provide the complaint information to Departmental or bureau management for appropriate action helps to instill a culture of ethical conduct and ensure that spending is appropriate, complies with laws and regulations, and promotes investments with long-term benefits.

While the Department has improved its ability to deal with hotline complaints, there has been an increasing number of complaints to OIG. In FY 2013, NOAA-related complaints represented the largest increase; those complaints comprise almost 40 percent of total complaints. OIG's hotline also receives complaints related to the use of appropriated funds by other bureaus. These issues highlight the Department's need to implement stricter control over funds Department-wide. The Department and most of its bureaus use outdated financial management systems. Limited system functionality and high support costs impede the Department's ability to oversee and manage Department-wide financial activities. Plans to replace the legacy systems by FY 2018 face significant challenges.

The Department's annual acquisitions total approximately $2.4 billion and range from satellites, public safety networks and broadband technology opportunities to the construction of facilities. Last year the Department reported it exceeded its goals in reducing the dollar amount of high-risk contracts, per 2009 Office of Management and Budget guidance. However, our audits indicate that reducing the use of several types of high risk contracts remains a critical challenge. Oversight of these goods and services requires a qualified staff of appropriate numbers. However, budget constraints and uncertainties present significant roadblocks to recruiting competent staff, retaining mid-level staff, and adjusting to attrition.

Finally, the potential misuse of federal funds by award recipients requires stronger oversight of Departmental programs that award grants or cooperative agreements. These awards amounted to $6.5 billion in the 3-year period ending June 30, 2013. In addition, American Recovery and Reinvestment Act of 2009 (Recovery Act)-funded Broadband Technology Opportunities Program (BTOP) awards, a $3.8 billion program, require oversight as they are closed out.

We have identified five key areas for management attention:

- Responding to concerns of mismanagement and ethical violations
- Implementing stricter controls over funds
- Modernizing the enterprise financial management system to strengthen financial oversight
- Strengthening controls over high-risk contract actions and developing the acquisition workforce
- Addressing grant management issues

Responding to Concerns of Mismanagement and Ethical Violations

According to the Office of Management and Budget (OMB) Circular A-123, *Management's Responsibility for Internal Control*, federal departments' managements are responsible for establishing, maintaining, implementing, and continuously monitoring and improving internal control systems. Each year, in the Department's financial statement audit, the Secretary and other management officials certify their responsibility for the design and implementation of programs and controls to prevent, deter, and detect fraud. OIG's compliance and ethics hotline has helped the Department make progress toward this responsibility.

Addressing Hotline Complaints

OIG operates a hotline for employees and members of the public to report information about alleged wrongdoing, misconduct, waste, or mismanagement. Many hotline complaints become the basis of OIG audits and investigations. Complaints that detail management issues are provided promptly to Departmental and bureau leadership for inquiry and action. These referrals provide Departmental leadership with information regarding possible issues with their programs and operations and an opportunity to confront discrete issues before they develop into larger problems.

Over the past year, bureaus have worked closely with OIG to look into and resolve many management issues raised through OIG's hotline. Timely and thorough action to resolve these issues helps to create a culture of compliance and accountability in the Department. Examples of successful efforts to resolve such problems during FY 2013 include:

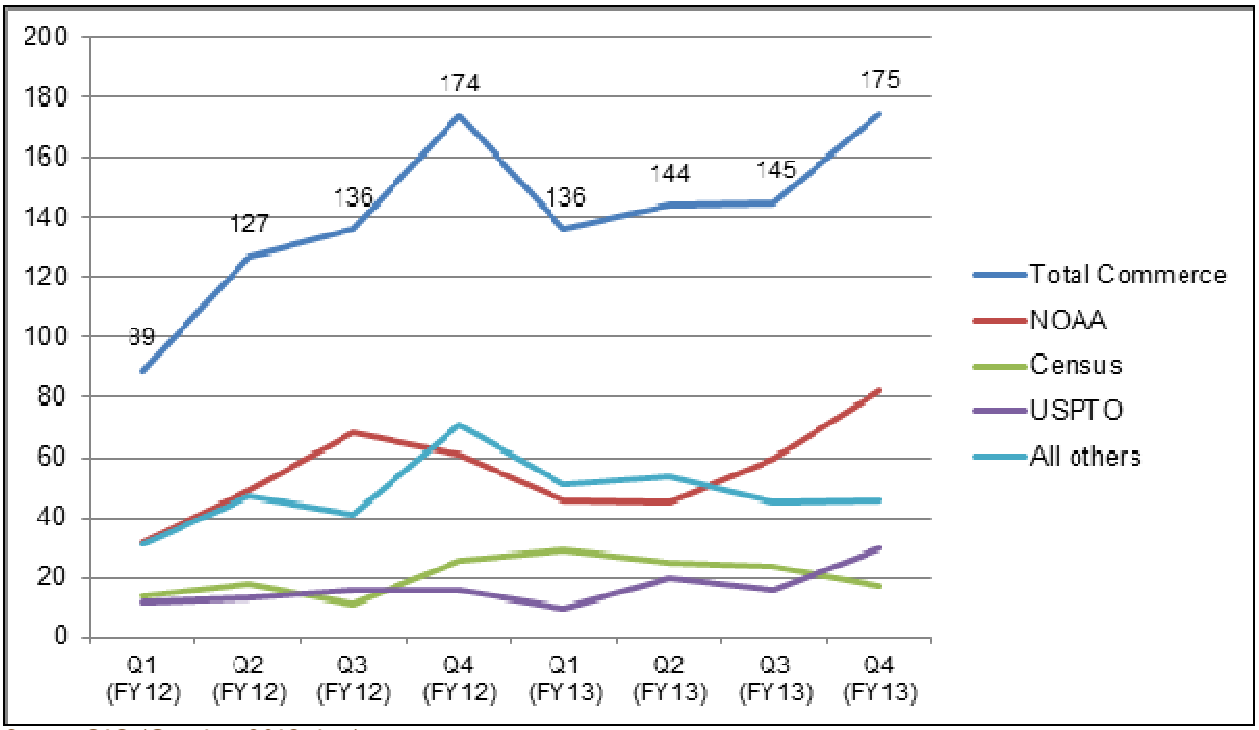
- In March 2013, the National Oceanic and Atmospheric Administration (NOAA) confirmed information provided by OIG indicating that a team of university researchers had been improperly occupying space in a federal facility, subjecting NOAA to potential security and appropriations law issues. NOAA informed OIG that it discovered eight university employees improperly occupying space in a research facility since 2009 and, because an official agreement could not be reached with the university, the team vacated that space.
- In November 2012, the Department, working through OIG's complaint process, looked into and confirmed that an employee, using the identity of a former employee, applied for and received a Department of Commerce ID badge. The individual, granted access to a federal facility under a false identity, proceeded to access the facility using the

assumed identity repeatedly after normal business hours. The individual, when confronted by Department officials, lied about this activity and later resigned.

- In January 2013, NOAA looked into, and substantiated, an OIG hotline allegation that employees in NOAA's Office of Marine and Aviation Operations (OMAO) sold scrap metal and expired pharmaceutical drugs and used the money to fund an employee social group. In November 2012, OMAO issued new policy and procedures to address the issues discovered during this inquiry to prevent future recurrence. NOAA is in the process of recovering almost $43,000 for return to the Treasury.

While the Department's management has increased its capacity and ability to deal with hotline complaints, employees and members of the public have provided an increasing volume of complaints to OIG. During FY 2013, OIG received 600 Department-related complaints, a 14 percent increase over the previous year (526 complaints). Figure 9 shows the total volume of Department-related complaints over FYs 2012–2013; in FY 2013, 39 percent of total complaints related to NOAA.

Figure 9. Department-Related Complaints Received by OIG (First Quarter, FY 2012–Fourth Quarter, FY 2013)



Source: OIG (October 2013 data)

In order to continue managing potential issues and resolving problems, Departmental management must remain vigilant in its efforts to seriously look into and address hotline complaints.

Results from OIG Investigations

In addition to awarding funds to contractors and grantees, Departmental management is responsible for providing oversight and ensuring that these funds are properly spent. The following examples from OIG investigations underscore the need for stronger controls and more vigilant oversight to prevent fraud, waste, and abuse within the Department and among its grant recipients and contractors:

- Two former executive directors of the Alaska Eskimo Whaling Commission were sentenced to 41 months and 6 months in prison, respectively, for their roles in defrauding the commission, a NOAA grantee, by money laundering and embezzlement. One of the former executive directors was convicted of misapplying almost $400,000 in funds from the Commission.
- An engineering consultant on a National Telecommunications and Information Administration (NTIA) grant pled guilty to a felony count of theft of grant funds, which the consultant used for personal purposes. The consultant—who pled guilty and was sentenced to serve almost 4 months in jail—agreed to repay the Department of Commerce and the Indian Health Service more than $240,000 in restitution.
- Former employees of the Upper Cumberland Development District in Tennessee, an Economic Development Administration (EDA) grantee, were indicted and await trial for substantial theft of government property, bank fraud, and an unlawful monetary transaction, as well as making false statements.

Implementing Stricter Controls over Funds

In response to hotline complaints about mismanagement of appropriated funds within National Oceanic and Atmospheric Administration's (NOAA's) National Weather Service (NWS) in 2010 and 2011, the Department conducted a review that highlighted mismanagement of budgetary resources throughout NWS, including specific instances where accounting records were manipulated and the Antideficiency Act (ADA) was violated. The Department's review, *Internal Inquiry into Alleged Mismanagement of Funds at National Weather Service* (May 11, 2012), found significant management, leadership, budget, and financial control problems at NWS. Further, the Department's independent auditor reported a material weakness in internal controls over financial reporting in FY 2012, in part because NWS circumvented budgetary controls by inappropriately moving expenses between accounts to prevent budget authority from being exceeded.

Addressing Issues Related to the Unauthorized Reprogramming of Funds

Following the release of the May 11, 2012 report, then-Deputy Secretary Rebecca Blank and then-Under Secretary of Commerce for Oceans and Atmosphere Jane Lubchenco issued separate decision memorandums on May 24, 2012. Their memorandums required a total of 20 specific actions for correcting the conditions that led to the report's findings, including audits, organizational reporting adjustments, and budget formulation and execution process changes. In a recent review of these actions, we found that the Department and NOAA have taken steps to address the findings identified in the Department's internal inquiry and completed many

action items, but additional work is needed to complete several key action plan items and ensure proper stewardship of funds and compliance with laws and regulations. Continued Departmental leadership attention is essential to ensuring a culture of transparency, accountability, and effective oversight.

Modernizing the Enterprise Financial Management System to Strengthen Financial Oversight

The financial control problems at NWS highlight the Department's need to implement stricter control over funds Department-wide. A lack of centralized data systems poses reporting and oversight challenges to the Department, such as effectively reporting financial data and monitoring financial activity across its bureaus.

The Department and most of its bureaus use a financial system developed with aging technology and augmented with in-house software that is increasingly difficult to maintain. This system currently addresses core financial accounting, financial management, grants management, acquisition management, and property management. However, limitations such as high support costs and a lack of system integration and lack of centralized reporting capability impede the Department's ability to oversee and manage Department-wide financial activities.

The Department plans to replace these legacy systems—collectively known as the Commerce Business System (CBS)—with Business Application Solutions (BAS), a commercially available system, by FY 2018. While the Department has provided OIG with regular updates on the status of this modernization project, significant challenges remain:

- *The implementation timetable is aggressive.* The Department plans to implement the BAS component that handles the bulk of financial statement reporting at NOAA, the Census Bureau, and NIST—the only 3 bureaus that use CBS—in stages. Its aim is to complete NOAA by the end of FY 2015, the Census Bureau by the end of FY 2016, and NIST by the end of FY 2017. This modernization affects multiple bureaus and will involve defining new system requirements and identifying potential changes to business operations and processes across the Department.

- *The Census Bureau's successful conversion is critical to its 2020 decennial readiness.* The Census Bureau plans to implement BAS by the end of FY 2016. Any delays to this time frame could necessitate pushing back the implementation dramatically. Having a functional financial system in place prior to the 2020 decennial will be critical, as the decennial will likely monopolize available resources.

- *The Department plans to host the system with a shared-service provider instead of hosting it internally.* The existing system is currently hosted and managed internally at each of the three bureaus that utilize CBS. Following OMB's strategy for federal financial management systems, the Department plans to use the Department of Transportation Enterprise Service Center, which has been designated a "Center of Excellence" provider. As the Department moves to using this external shared-service provider, it faces the challenge of adapting to a new accounting environment within its bureaus and a modified role in responding to necessary system changes.

- *CBS modernization will result in BAS, but there will continue to be separate component systems that will require interfacing with BAS.* For example, CBS modernization will not integrate the U.S. Patent and Trademark Office and National Technical Information Service financial systems into BAS. Also, NOAA's grants management system, which will serve all bureaus, will remain a separate system—although the plan is to interface the grants management system with BAS. The current acquisition system will be replaced with a system that will be integrated into BAS.

- *The modernization requires adequate funding.* Inadequately funding the modernization project could result in implementation delays—and in the Department being forced to continue using its legacy systems for longer than anticipated. This would lead to a much longer delay at the Census Bureau—which, constrained by decennial responsibilities, would take longer to begin focusing on its migration to BAS. As a result, the Bureau would need to maintain both the new and old systems concurrently.

Strengthening Controls over High-Risk Contract Actions and Developing the Acquisition Workforce

In FY 2012, the Department obligated about $2.4 billion for goods and services that include satellite acquisitions, intellectual property protection, broadband technology opportunities, management of coastal and ocean resources, information technology, and construction and facilities management. Although the Department's requirements have not diminished, available funding resources likely will. Continuing to address high-risk contracts and maintaining a qualified acquisition workforce will enable better management of the Department's day-to-day spending.

Incurring Risk from the Use of High-Risk Contracts

In July 2009, the Office of Management and Budget's (OMB's) Office of Federal Procurement Policy issued contracting guidance to chief acquisition officers and senior procurement executives. The guidance—stating that time and materials/labor hour (T&M/LH) contracts, cost-reimbursement contracts, and noncompetitive contracting pose special risks of overspending (see table 6)—directed agencies to reduce by at least 10 percent the use of high-risk contracting authorities for new contract actions. For FY 2012, the Department reported that it exceeded its goals in reducing the dollar amount of high-risk contracts, and it continues to track its goal based on OMB's 2009 guidance. However, our audit results indicate that a critical challenge remains in the use of high-risk contracts such as T&M/LH contracts.

Table 6. High-Risk Contracts

Type of Contract	Definition	High-Risk Factor
T&M/LH	These contracts require contractors to provide their best effort to accomplish contract objectives up to the maximum number of hours authorized. Each hour of work authorizes a contractor to charge the government an established labor rate, which includes profit, along with reimbursement for the actual cost of materials used.	The contractor's profit is tied to the number of hours worked. As a result, these contracts pose a risk of overspending.
Cost Reimbursement	This type of contract provides for payment of allowable incurred costs, to the extent prescribed in the contract.	Under this contract type, the contractor has minimal responsibility for the performance costs. There is no incentive for the contractor to control costs.
Noncompetitive Contracts	These procurements are awarded to a single contractor without requiring any competition.	The government enters (or proposes to enter) into purchases of supplies or services after soliciting and negotiating with only one source. There is no direct market mechanism for setting the contract price.

Source: OIG

In a report issued in November 2013,[40] we reported weaknesses in the awarding and administering of T&M/LH contracts. We found that Departmental contracting officers did not award T&M/LH contract actions in accordance with the requirements of the Federal Acquisition Regulation and the Commerce Acquisition Manual. T&M/LH contracts are considered high risk because the contractor's profit is tied to the number of hours worked. We also noted that contract actions in our sample were incorrectly coded in the Federal Procurement Data System (FPDS).

The Department's challenge is to better monitor and evaluate its T&M/LH contracts through the acquisition review board and investment review board processes, which are used to manage the Department's major acquisitions of goods and services. A further challenge it faces is to improve the processes for entering accurate and complete data in FPDS. Effective implementation of the Department's measures will be crucial to ensuring that the Department properly awards, administers, and reports high-risk T&M/LH contracts.

[40] DOC OIG, November 8, 2013. *The Department's Awarding and Administering of Time-and-Materials and Labor-Hours Contracts Needs Improvements*, OIG-14-001-A. Washington, DC: OIG.

Needing a Sufficiently Staffed and Qualified Acquisition Workforce

In a March 2009 memorandum,[41] the President acknowledged that the federal government must maintain the workforce needed to carry out robust and thorough oversight of contracts to help program management achieve goals, avoid significant overcharges, and curb wasteful spending. However, the Department's acquisition workforce faces major challenges to its capacity and capability to oversee and manage contracts because of budget constraints and uncertainties affecting recruitment. Although the Department has 215 contracting officers and specialists, 15 more than projected, it could face an attrition of 70 retiring members by the end of 2014. Many of the bureau procurement officer corps consider the potential loss of approximately one-third of the workforce through attrition a catastrophic risk to their ability to support the Department's mission. To develop mid-level staff under current budget conditions, the Department needs to continue recruitment at the entry levels and seek to retain that staff at higher certification levels.

Addressing Grant Management Issues

OIG also provides oversight of the Department's management of more than 70 programs authorized to award grants or cooperative agreements. Each program has its own rules, regulations, and eligibility requirements. For the period July 1, 2010–June 30, 2013, these programs issued approximately 4,353 awards amounting to $6.5 billion. We review an average of 340 finding reports a year; of those, about 7–8 percent will have significant procedural or internal control findings.

Tightening Controls over Use of Federal Funds by Award Recipients

Grant oversight requires that recipients of awards meeting certain dollar thresholds submit either a Circular A-133 single audit report or a program-specific audit report. These types of awards pose particular oversight challenges for the Department. OIG continues to review these audit reports to identify trends in findings across bureau programs, as well as to monitor whether findings are resolved in a timely manner.

Table 7 presents averages of the single audit and program-specific audit reports that OIG reviewed during the period July 1, 2010–June 30, 2013, the number of material findings, and amounts of questioned costs and funds to be put to better use reported. We have noted a problematic indicator in the Economic Development Administration's (EDA's) revolving loan fund program, NTIA's BTOP, and the National Institute of Standards and Technology's (NIST's) Advanced Technology/Technology Innovation Program. The most common types of findings across all Departmental programs involved violations of reporting requirements (e.g., deficient, late, or unfiled reports); noncompliance with cost principles pertaining to allowable costs; inadequate preparation of financial statements; the lack of, inadequate, or deficient internal control policies concerning segregation of duties; and not following, lacking, or having deficient policies and procedures on cash management. It is important that all Departmental program and grants management offices review these findings and implement internal controls to address

[41] The White House, Office of the Press Secretary, March 4, 2009, "Memorandum for the Heads of Executive Departments and Agencies: Government Contracting."

the root causes of the findings, which may require program or grant operations changes in order to improve grant recipients' compliance with laws and regulations.

Table 7. Analysis, by Bureau, of OIG-Reviewed Single Audit Reports: Annual Average (from July 1, 2010, Through June 30, 2013)[a]

Bureau	Reports Reviewed	Reports with Material Findings[b]	Material Findings	Questioned Costs[c]	Funds Put to Better Use[d]
EDA	105	7	20	1,154	1,990
NOAA	43	4	13	2,269	0
NTIA	46	5	20	1,441	0
NIST	76	10	23	1,045	96
Other[e]	72	0	0	0	0
TOTAL	**342**	**26**	**76**	**5, 909**	**2,086**

Source: OIG

[a] The table does not include less significant procedural or internal control findings, the resolution of which OIG does not monitor; [b] *material findings* are those with questioned costs greater than or equal to $10,000 and/or significant nonfinancial findings; [c] *questioned costs*, shown here in thousands of dollars, are subject to change during the audit resolution/appeal process; [d] *funds to be put to better use*, shown here in thousands of dollars, are subject to change during the audit resolution/appeal processes; [e] *other* includes the International Trade Administration (ITA), the Minority Business Development Agency (MBDA), and *multiple*, which are single audit reviewed programs from more than one bureau.

To improve controls over award recipients' use of federal funds, bureaus need to review these single audit and program-specific audit reports and take action on the report findings.

Maintaining Focus on the Broadband Technology Opportunities Program (BTOP) Through Grant Closeouts

With approximately $3.8 billion in grant awards, BTOP—funded by the Recovery Act—represents the Department's largest grant program. As of August 31, 2013, about 20 percent of BTOP funds remain to be disbursed. As these projects near their completion dates (as of June14, 2013, only 7 of approximately 230 projects had been closed, with another 36 in the closeout process), the potential lingers for fraud, waste, and abuse associated with such large-dollar-amount awards (many of which are more than $25 million). Management must remain committed to monitoring BTOP recipient compliance with grant award terms and achievement of intended benefits. Awards for which the grantee has requested extensions to complete projects also merit close attention.

The audit closeout process—how the award recipient and the grants office ensure that project activity is complete and the award recipient has met all the requirements under applicable laws, regulations, OMB circulars, and award terms and conditions—calls for particular attention.

OIG's ongoing work indicates that the completion dates for many of the awards (112 as of September 13, 2013) have been extended and the BTOP award closeout process (a) is taking longer than expected, particularly with infrastructure projects and (b) could be improved by strengthening closeout policies and procedures and ensuring the consistent implementation of those policies and procedures in place.

Potential consequences of not strengthening the closeout process at NTIA and the grants offices (NOAA and NIST) supporting NTIA in the implementation of BTOP include an increased likelihood that grants are closed without (a) obtaining and reviewing all required closeout documentation and determining that all award activity was completed and laws and regulations were complied with or (b) ensuring that the federal government's interest in BTOP property was protected. In addition, the closeout process should help identify unused funds or funds not used in compliance with grant terms—both of which must be returned to the government. NTIA, NOAA, and NIST, in responding to our September 23, 2013, draft report, concurred with our findings and identified improvements they had taken or were in the process of taking to strengthen the closeout process.

Maintaining a Professionally Certified Grants Management Workforce

The quality and effectiveness of the grants management process depends on the development and maintenance of a qualified workforce. The Department's grants management office (GMO) and grants program office (GPO) personnel have a fiduciary responsibility to manage resources appropriately, with assurance that proposed work is feasible and has verifiable merit. However, unlike acquisitions personnel, the approximately 1,119 personnel who monitor grants and cooperative agreements do not maintain their professional education through a formal, standardized certification program.

In October 2008, the Office of Personnel Management initiated a government-wide study to identify critical competencies for grants management work. Based on this effort, the Grants Policy Committee[42] developed a set of competencies for grants personnel serving as officers, government technical representatives, and program office staff. The resulting competency model forms the foundation upon which the Department based its Grants Management Certification Program[43]—which, once implemented,[44] would establish policies and procedures for certification of GMO and GPO personnel.

[42] The Chief Financial Officers Council, which represents the 24 largest federal agencies, established a *Grants Policy Committee* to lead implementation of Public Law 106-107. With OMB providing oversight and technical assistance, the Committee's workgroups of agency staff work to accomplish the grants streamlining required by the legislation.

[43] The *GMCP* develops and maintains a Departmental grants workforce through a formal, standardized grants education and certification program. Through the program, the grants workforce learns federal and Departmental requirements and regulations, as well as grants management best practices.

[44] The implementation of this important initiative may be delayed if bureaus do not have adequate funds for training.

Acronym List

ACS	American Community Survey
AIA	America Invents Act
BAS	Business Application Solutions
BIS	Bureau of Industry and Security
BTOP	Broadband Technology Opportunities Program
CBS	Commerce Business System
CIO	Chief Information Officer
CPEX	Census Program Evaluation and Experiments
DOC CIRT	Department of Commerce Computer Incident Response Team
ECMO	Enterprise Cybersecurity and Monitoring Operations
EDA	Economic Development Administration
ESOC	Enterprise Security Oversight Center
FirstNet	First Responder Network Authority
FMC	fishery management council
FPDS	Federal Procurement Data System
FY	fiscal year
GMO	grants management office
GOES-R	Geostationary Operational Environmental Satellite–R series
GPO	grants program office
GSS	Geographic Support System
HCHB	Herbert C. Hoover Building
IT	information technology
ITA	International Trade Administration

JPSS	Joint Polar Satellite System
MAF	Master Address File
MHz	megahertz
NASA	National Aeronautics and Space Administration
NEI	National Export Initiative
NIST	National Institute of Standards and Technology
NMFS	National Marine Fishery Service
NOAA	National Oceanic and Atmospheric Administration
NPP	National Polar-orbiting Partnership
NTIA	National Telecommunications and Information Administration
NWS	National Weather Service
OIG	Office of Inspector General
OMB	Office of Management and Budget
PSBN	Public Safety Broadband Network
R&T	research and testing
RCE	request for continued examination
T&M/LH	time and materials/labor hour
TIC	Trusted Internet Connection
TIGER	Topologically Integrated Geographic Encoding and Referencing
USPTO	U.S. Patent and Trademark Office

Appendix A: Related OIG Publications

This list presents OIG's past and current work related to FY 2014's top management challenges. These products can be viewed at www.oig.doc.gov. If the product contains information that cannot be released publicly, a redacted version or an abstract will be available on the website.

Challenge 1: Strengthen Commerce Infrastructure to Support the Nation's Economic Growth

- *USPTO Successfully Implemented Most Provisions of the America Invents Act, but Several Challenges Remain* (OIG-13-032-A, September 30, 2013)
- *U.S. Export Assistance Centers Could Improve Their Delivery of Client Services and Cost Recovery Efforts* (OIG-13-010-I, November 30, 2012)

Challenge 2: Strengthen Oversight of National Oceanic and Atmospheric Administration (NOAA) Programs to Mitigate Potential Satellite Coverage Gaps, Address Control Weaknesses in Accounting for Satellites, and Enhance Fisheries Management

- *Audit of Geostationary Operational Environmental Satellite-R Series: Comprehensive Mitigation Approaches, Strong Systems Engineering, and Cost Controls Are Needed to Reduce Risks of Coverage Gaps* (OIG-13-024-A, April 25, 2013)
- IG's Testimony on Commerce Department's FY 2014 Budget Request: Senate Appropriations Committee (OIG-13-023-T, April 11, 2013)
- Results of Commerce OIG's Online Survey of Fishery Management Council Members and Staff (OIG-13-022-I, April 5, 2013)
- Deputy IG's Testimony on Top Challenges for Science Agencies: House Science, Space, and Technology Committee (OIG-13-018-T, February 28, 2013)
- *NOAA Needs to Continue Streamlining the Rulemaking Process and Improve Transparency and Consistency in Fisheries Management* (OIG-13-011-I, January 16, 2013)

Challenge 3: Continue Enhancing Cybersecurity and Management of Information Technology Investments

- *Malware Infections on EDA's Systems Were Overstated and the Disruption of IT Operations Was Unwarranted* (OIG-13-027-A, June 26, 2013)
- *USPTO Deployed Wireless Capability with Minimal Consideration for IT Security* (OIG-13-014-A, February 1, 2013)

Challenge 4: Exercise Strong Project Management Controls over 2020 Census Planning to Contain Costs

- IG's Testimony on Top Management Challenges Facing the Department of Commerce in FY 2013: House Appropriations Committee (OIG-13-019-T, March 5, 2013)
- Letter to Senator Coburn re: Improving the 2020 Census Through Administrative Records and Geospatial Information (OIG-13-002-M, October 25, 2012)

Challenge 5: Continue to Foster a Culture of Management Accountability to Ensure Responsible Spending

- *The Department's Awarding and Administering of Time-and-Materials and Labor-Hours Contracts Needs Improvements* (OIG-14-001-A, November 8, 2013)
- *Status of Departmental Actions to Correct NWS Mismanagement of Funds* (OIG-13-029-I, September 13, 2013)
- Nonfederal Audit Results for the 6-Month Period Ending June 30, 2013 (OIG-13-030-M, September 9, 2013)
- *Monitoring of Obligation Balances Needs Strengthening* (OIG-13-026-A, June 18, 2013)
- *Internal Controls for Purchase Card Transactions Need to Be Strengthened* (OIG-13-025-A, May 2, 2013)
- *FY 2012 Compliance with Improper Payment Requirements* (OIG-13-020-I, March 15, 2013)
- Principal Asst. IG's Testimony on Broadband Stimulus: House Energy and Commerce Committee (OIG-13-017-T, February 27, 2013)
- *Fourth Annual Assessment of the PSIC Grant Program* (OIG-13-016-A, February 22, 2013)
- Nonfederal Audit Results for the 6-Month Period Ending December 31, 2012 (OIG-13-015-M, February 11, 2013)
- *Proper Classification and Strengthened Monitoring of Subrecipients Are Needed for the Broadband Technology Opportunities Program* (OIG-13-013-A, January 31, 2013)
- Letter to Chairmen Walden and Shimkus in response to their request to review the National Telecommunications and Information Administration's (NTIA's) Broadband Technology Opportunities Program (BTOP) grant awarded to the Executive Office of the State of West Virginia (OIG-13-012-I, January 23, 2013)
- *Quarterly Conference Reporting Processes Need Improvement* (OIG-13-001-I, October 17, 2012)

Appendix B: Comparison Between FY 2013 and FY 2014 Challenges

FY 2014	FY 2013
Strengthen Commerce infrastructure to support the nation's economic growth: • *Promoting U.S. exports while protecting national security interests* • *Enhancing economic growth through intellectual property and wireless initiatives*	Stimulate economic growth in key industries, increase exports, and enhance stewardship of marine fisheries: • *Growth in manufacturing, intellectual property, and wireless industries* • *Export promotion and regulation* • *Protection and promotion of marine fisheries*
Strengthen oversight of National Oceanic and Atmospheric Administration (NOAA) programs to mitigate satellite coverage gaps, address control weaknesses in accounting for satellites, and enhance fisheries management: • *Enhancing weather satellite development and mitigating potential coverage gaps* • *Addressing material weakness over satellite accounting* • *Enhancing fisheries management*	Increase oversight of resources entrusted by the public and invest for long-term benefits: • *Internal controls and oversight* • *Investment for long-term benefits* • *Design changes to contain 2020 decennial costs*
Continue enhancing cybersecurity and management of information technology (IT) investments: • *Establishing a robust capability to respond to cyber incidents* • *Continuing sustainable implementation of enterprise cybersecurity initiatives* • *Preserving the CIO's oversight responsibility of satellite-related IT investments* • *Continuing vigilant oversight of IT investments* • *Maintaining momentum in consolidating commodity IT to cut costs*	Strengthen security and investments in IT: • *Addressing persistent IT security weaknesses* • *Incident response and recovery capabilities* • *IT governance for portfolio management* • *Oversight of IT investments*
Exercise strong project management controls over 2020 Census planning to contain costs: • *Ensuring timely design decision making* • *Focusing on human capital management, timely research, and testing implementation*	Implement framework for acquisition project management and improve contract oversight: • *Planned framework for acquisition management* • *Oversight of high-risk contracts* • *Acquisition workforce maintenance* • *Implementation of suspension and debarment program*
Continue to foster a culture of management accountability to ensure responsible spending: • *Responding to concerns of mismanagement and ethical violations* • *Implementing stricter controls over funds* • *Modernizing the enterprise financial management system to strengthen financial oversight* • *Strengthening controls over high-risk contract actions and developing the acquisition workforce* • *Addressing grant management issues*	Reduce risks of cost overruns, schedule delays, and coverage gaps for NOAA's satellite programs: • *JPSS capabilities, schedule, and costs* • *Leadership and governance structure over JPSS* • *Weather forecasting during JPSS coverage gaps* • *Risks associated with GOES-R development*

Appendix C: Management Response to OIG Draft Report

UNITED STATES DEPARTMENT OF COMMERCE
The Secretary of Commerce
Washington, D.C. 20230

MEMORANDUM FOR: Todd J. Zinser
Inspector General

FROM: Penny Pritzker
Secretary of Commerce

SUBJECT: Response to the OIG Report, "Top Management Challenges Facing the Department of Commerce" in FY 2014

Thank you for the opportunity to review the Office of the Inspector General's report, "Top Management Challenges Facing the Department of Commerce." Every day the Department's bureaus work with American businesses, communities, and private citizens to spur innovation, promote trade and investment, foster use of data, and ensure production of critical environmental products and services—and we want to do so in the most effective and efficient way possible.

We are aware that we have challenges in the areas discussed in your report, and we realize that these areas require continued oversight, planning, and work. To that end, I have directed Ellen Herbst, our CFO and ASA, to focus on improving our oversight processes and internal controls at both the bureau and Department levels. Such oversight is critical to the success of our mission.

We look forward to working with you to address the challenges identified in this year's OIG report, and we will document our progress in our Agency Financial Report for FY 2014.

011200000167