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Major Management Challenges and Program Risks

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The President of the Senate
The Speaker of the House of Representatives

This report addresses the major performance and management challenges confronting the Department of Commerce. These challenges are (1) ensuring a successful 2000 Decennial Census, (2) completing the National Weather Service (NWS) technology modernization and associated restructuring, (3) pursuing more cost-effective alternatives to the National Oceanic and Atmospheric Administration's in-house fleet of research and survey ships, and (4) improving financial management systems and processes. The report summarizes GAO's and the Commerce Inspector General's findings on these challenges, the progress Commerce has made in addressing these issues, and what needs to be done to resolve or mitigate them.

The Department of Commerce acknowledges these challenges, has taken steps to address them, and said that it has actions under way or planned to successfully resolve them. However, all of these challenges are long-standing material weaknesses in the Department's Federal Managers' Financial Integrity Act reports. Two of them—the 2000 Decennial Census and NWS modernization—remain on GAO's governmentwide high-risk list. In this regard, the Government Performance and Results Act of 1993 provides an opportunity for the Department to improve its performance and effectiveness

and to enhance congressional and executive branch oversight and decisionmaking for these four challenges and in other program and mission-support areas. As GAO has reported, however, using the Results Act to improve performance and decisionmaking will continue to be especially challenging for the Department of Commerce because of the dispersed and varied nature of its programs.

This report is part of a special series entitled the Performance and Accountability Series: Major Management Challenges and Program Risks. The series contains separate reports on 20 agencies—one on each of the cabinet departments and on most major independent agencies as well as the U. S. Postal Service. The series also includes a governmentwide report that draws from the agency-specific reports to identify the performance and management challenges requiring attention across the federal government. As a companion volume to this series, GAO is issuing an update to those government operations and programs that its work has identified as "high risk" because of their greater vulnerabilities to waste, fraud, abuse, and mismanagement. High-risk government operations are also identified and discussed in detail in the appropriate performance and accountability series agency reports.

The performance and accountability series was done at the request of the Majority Leader of the House of Representatives, Dick Armey; the Chairman of the House Government Reform Committee, Dan Burton; the

Chairman of the House Budget Committee, John Kasich; the Chairman of the Senate Committee on Governmental Affairs, Fred Thompson; the Chairman of the Senate Budget Committee, Pete Domenici; and Senator Larry Craig. The series was subsequently cosponsored by the Ranking Minority Member of the House Government Reform Committee, Henry A. Waxman; the Ranking Minority Member, Subcommittee on Government Management, Information and Technology, House Government Reform Committee, Dennis J. Kucinich; Senator Joseph I. Lieberman; and Senator Carl Levin.

Copies of this report series are being sent to the President, the congressional leadership, all other Members of the Congress, the Director of the Office of Management and Budget, the Secretary of Commerce, and the heads of other major departments and agencies.

David M. Walker
Comptroller General of
the United States

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Overview

Although the Department of Commerce is the smallest federal cabinet department in terms of dollars, with outlays of about $4 billion annually, its missions are numerous and among the most diverse. The Department's wide-ranging efforts in economic development, science and technology, the census, and weather forecasting have far-reaching national implications. Commerce's diverse missions and activities also have several long-standing performance and management issues. The Department's major performance and management challenges are (1) ensuring a successful 2000 Decennial Census, (2) completing the National Weather Service (NWS) technology modernization and associated restructuring, (3) pursuing more cost-effective alternatives to the National Oceanic and Atmospheric Administration's (NOAA) in-house fleet of research and survey ships, and (4) improving financial management systems and processes.

The Challenges

Ensuring a Successful 2000 Decennial Census

The Bureau of the Census faces a number of challenges and uncertainties in its endeavor to conduct an accurate and cost-effective

Decennial Census in 2000. Taken together, these challenges and uncertainties have led us to conclude that the nation faces a high risk of an unsuccessful census in 2000—one that is less accurate and more costly than the 1990 Census. For example, the Congress and the administration have yet to agree on the final design of the census because of congressional concerns over the legal and methodological issues surrounding the Bureau's planned use of sampling and statistical estimation. The Supreme Court is considering the sampling question and is expected to rule on the case by mid-1999. Irrespective of how the controversy over the use of sampling and statistical estimation is resolved later this year, the Bureau will have little time remaining to make final census design changes and implement those changes in time for the census in 2000. In that regard, our work has shown that the Bureau faces a number of formidable challenges to a cost-effective, accurate, and complete census no matter which basic design option is chosen. These challenges include developing an accurate address list; securing an acceptable level of public cooperation through outreach and promotion initiatives; and completing field operations effectively and efficiently, including hiring a capable temporary workforce. These questions about key

census-taking activities have contributed to congressional concern over the likelihood of an unsuccessful census.

Completing the NWS Modernization and Associated Restructuring

In the weather forecasting area, after substantial delays and cost overruns, three of the four planned technology modernization programs are now operational. However, the final piece of the modernization —the Advanced Weather Interactive Processing System (AWIPS)—is not scheduled to be deployed until June 1999 and then only with less than full functionality. Until AWIPS is fully deployed and functioning properly, NWS will not be able to take full advantage of the $4.5 billion investment it has made in the modernization to date. Continuing management oversight of AWIPS is needed to ensure that this final piece of the modernization is delivered effectively and efficiently and that NWS successfully completes the associated downsizing and restructuring of its field offices as planned.

Pursuing More Cost-Effective Alternatives to NOAA's Research Fleet

NOAA continues to own, operate, and plan investments of millions of dollars in its aging in-house fleet of research and survey ships that are used for acquiring marine data. For more than a decade, we, the Commerce Inspector General (IG), the National

Performance Review (NPR), and others have urged NOAA to aggressively pursue more cost-effective alternatives to its in-house fleet of ships. Although NOAA has increased its outsourcing with the private sector, universities, and other public entities for these services, it continues to rely heavily on its old, inefficient fleet, which lacks the latest available technology; and it plans to replace at least some of these ships. Greater long-term reliance on outsourcing raises questions about the continuing viability of the NOAA Corps of 240 uniformed service commissioned officers who manage and operate NOAA's ships. Continuing congressional oversight of the NOAA fleet, as well as the NOAA Corps, is needed to ensure that NOAA is aggressively pursuing cost-effective alternatives for acquiring marine data.

Improving Financial Management Systems and Processes

In the financial management area, Commerce faces several challenges. Audits and the Department's own internal reviews continue to show that (1) there are numerous areas where Commerce must improve its financial procedures to comply with federal accounting standards and to effectively reconcile and close its books at year-end and (2) most Commerce bureaus

lack effective automated systems to support sound financial management. The Department still lacks a single integrated financial system, adequate internal controls, and accounting and financial systems that comply with federal laws and regulations. As a result, the Department received a disclaimer of audit opinion on its fiscal years 1996 and 1997 consolidated financial statements. Also, the Department continues to face significant challenges in implementing new computer systems to meet federal requirements and make all of its systems Year 2000 compliant. Most Commerce bureaus also lack the basic financial and performance information they need to manage their programs, make sound businesslike decisions, and improve their performance.

Progress and Next Steps

We, Commerce's IG, and, in some cases, the National Performance Review have reported on these issues and urged the Department to resolve them. All of these issues are long-standing material weaknesses in the Department's Federal Managers' Financial Integrity Act reports. Two of them—the 2000 Decennial Census and NWS modernization—remain on our governmentwide high-risk list. The

Department has had some success in addressing these issues and said that it has actions under way or planned to successfully resolve them.

The Government Performance and Results Act of 1993 (the Results Act) provides an opportunity for the Department of Commerce to improve its performance and effectiveness and to enhance congressional and executive branch oversight and decisionmaking for these issues and in other program and mission-support areas. As we have reported, however, effectively implementing the Results Act to improve performance and decisionmaking is especially challenging for the Department because its efforts are complicated by its numerous and diverse missions and bureaus, "holding company" nature, and historically decentralized management approach. Consequently, the Department faces an especially formidable challenge in developing and presenting effective and useful Departmentwide strategic and performance plans that both cover all of its disparate activities and meet other criteria in the Results Act and related guidance.

In this regard, we identified a number of needed improvements in the Department's

strategic and performance plans to date under the Results Act. For example, Commerce's plans have not adequately addressed the major management challenges discussed in this report. The Department's September 1997 strategic plan recognized major management challenges in the Census, NWS technology modernization, and financial management areas but did not relate them to its strategic goals and objectives or indicate specifically how and when the Department expects to overcome these challenges. Similarly, the Department's first annual performance plan for fiscal year 1999 identified and discussed major unresolved management challenges in the Census, NWS modernization, NOAA fleet, and financial management areas. However, the plan did not (1) relate these challenges to specific strategic or performance goals, (2) fully acknowledge their significance and performance implications, or (3) include performance goals for corrective actions for those challenges whose resolution is critical to the Department's mission or could materially impede the achievement of program goals. Commerce agrees that its earlier Results Act plans were lacking in several respects and told us that its annual performance plan for fiscal year 2000 will contain improvements in several areas,

including the treatment of the four major management challenges discussed in this report.

Major Performance and Management Issues

Basically, the Department of Commerce is a large "holding company" composed of 12 operating bureaus, each pursuing disparate programs and activities that cut across several federal budget functions. The Department employs about 40,000 people in numerous offices here and overseas but has a relatively small annual budget, with outlays of $4 billion in fiscal year 1998. Its five basic missions are (1) promoting the development of American business and increasing foreign trade; (2) improving the nation's technological competitiveness; (3) fostering environmental stewardship and assessment; (4) encouraging economic development; and (5) compiling, analyzing, and disseminating a broad range of economic, demographic, and social data. Commerce shares responsibilities for these functions with a number of other federal departments and agencies. However, Commerce does not have exclusive or even lead responsibility for any of these functions. With the increased focus on results and accountability accompanying the Results Act, Commerce has come to symbolize dispersed responsibility for federal programs, and legislation was proposed and considered in both the 104th and 105th Congresses to dismantle the Department.

Our work, Commerce IG reports, and the Department's own Results Act plans and internal documents have identified four major performance and management issues facing the Department. These issues are (1) ensuring a successful 2000 Decennial Census, (2) completing the NWS technology modernization and associated restructuring, (3) pursuing more cost-effective alternatives to NOAA's in-house fleet of research/survey ships, and (4) improving financial management systems and processes. This report summarizes our and the Commerce IG's findings on these issues, the progress the Department of Commerce has made in addressing these issues, and our assessment of what else needs to be done to resolve or mitigate them. Where applicable, the report also indicates how Commerce has responded to National Performance Review recommendations in these areas and addressed these performance and management issues in its Results Act strategic and annual performance plans. Finally, the report discusses the Department's ability to use the Results Act to improve its performance and effectiveness and to enhance congressional and executive branch oversight and decisionmaking for these issues and in other program and mission-support areas.

Ensuring a Successful 2000 Decennial Census

The decennial census is the nation's most comprehensive and expensive statistical data-gathering program. Accurate results are critical because, as required by the Constitution, decennial census data are used to reapportion seats in the House of Representatives and thus the allocation of political power in our democracy. Countless decisions affecting governments, businesses, and private citizens also depend on census data. However, major questions surround the Census Bureau's ability to conduct a successful census; and, as a result, the decennial census continues to be a high-risk area.

The 1990 Census was the most costly in history, yet it produced data that were less accurate than those from the previous census. According to the Bureau, there were about 4.4 million erroneous enumerations in 1990 (duplications and those otherwise improperly included), and 8.4 million people were missed. Moreover, the Bureau reported that these errors were not evenly distributed across population groups and that minorities, renters, and rural residents were more likely to be undercounted. In addition, broad demographic, socioeconomic, and attitudinal factors that adversely affected the cost and accuracy of the 1990 Census may

present an even greater challenge for the Bureau in 2000. For example, a tightening labor market may make it difficult for the Bureau to recruit an adequate workforce, while increasing numbers of nontraditional household and family arrangements, concerns about privacy, and the number of non-English-speaking immigrants and undocumented aliens, could make it more difficult for the Bureau to achieve its mail response rate goals in 2000.

In an effort to improve the census in 2000, the Bureau redesigned key census-taking activities, including new procedures for (1) developing a complete and accurate address list, (2) increasing the mail response rate through outreach and promotion, (3) staffing field operations with a capable workforce, and (4) reducing costs and improving accuracy through sampling and statistical estimation. The Bureau tested these and other census operations during the 1998 dress rehearsal for the 2000 Census that was held at three sites: Sacramento, CA; 11 counties in the Columbia, SC, area; and Menominee County in Wisconsin, including the Menominee American Indian Reservation. The Bureau has developed a program to evaluate the results of the dress

rehearsal and plans on issuing a report in early 1999.

The Bureau has made progress in addressing some of the problems that occurred during the 1990 Census and has shown an ability to adapt to changing requirements. For example, in June 1997, the Bureau initiated an effort to redesign its existing procedures for building its master address file. The Bureau believes that the new procedures will allow it to reach its goal of producing an address list that is 99-percent complete and accurate. Additionally, during the dress rehearsal, the Bureau raised pay rates at the South Carolina test site to ensure that it had a large enough pool of qualified applicants to fill its needs for nonresponse follow-up and later census operations.

Nevertheless, uncertainties surround the Bureau's ability to implement an accurate and cost-effective census in 2000 because the nature and extent to which sampling will be used in the 2000 Census still have not been decided. The Congress, citing legal and methodological concerns, has not agreed to the Bureau's planned use of sampling and statistical estimation. In August and September 1998, federal courts ruled in two separate cases that the use of sampling in

the decennial census is prohibited by the Census Act.[1] The administration appealed the rulings to the Supreme Court, and oral arguments were held on November 30, 1998. A decision is expected by mid-1999.

In March 1998, the Congress directed Commerce to prepare plans for a nonsampling census, in addition to efforts it has under way to plan a sampling-based census. In response, in April 1998, Commerce issued a status report on the Bureau's plans. This report reflected the "best-guess judgments," based on prior census experience, of the costs of potential components of a nonsampling plan.

In addition, the results to date of the dress rehearsal underscore the fact that questions surround key census-taking activities. For example, mail response rates remain problematic, scanning equipment used to electronically record responses from census questionnaires experienced system crashes due to software flaws, and local partnerships—a key component of the Bureau's outreach and promotion strategy—had limited success. Moreover, the Bureau's redesigned procedure for building

[1]U.S. House of Representatives v. U.S. Department of Commerce, 11 F.Supp. 2d 76 (D.D.C. 1998); Glavin v. Clinton, 19 F.Supp. 2d 543 (E.D. Va. 1998).

its master address list has the potential to improve accuracy. Although elements of the revised approach have been used and tested in earlier censuses, the Bureau has neither used nor tested the elements together, nor in the sequences planned for 2000. These and other uncertainties have led to congressional concern over key census-taking operations.

The Decennial Census Is Still at Risk

The Bureau's readiness for 2000 remains an open question. On the one hand, to the extent that the dress rehearsal settings allowed, the Bureau has thus far demonstrated its ability to execute a pilot census according to its operational timetable and plan. Further, as demonstrated by its redesign of the procedures for building its address list and the apparently timely response to recruiting difficulties in South Carolina, the Bureau has also demonstrated an ability to respond to changing requirements. On the other hand, the Congress and the administration have yet to agree on the final design of the 2000 Census. Although the Bureau is developing plans for a nonsampling census, little time will remain for the Congress and other stakeholders to review—and the Bureau to implement—this approach, if such a design is ultimately selected. This has generated uncertainty

over the Bureau's ability to conduct a cost-effective census. Moreover, the initial dress rehearsal results show that the Bureau is still facing ongoing and newly emerging operational challenges at a disturbingly late stage in the census cycle. For example, mail response rates remain problematic, and questions exist about the Bureau's use of technology. These challenges have contributed to congressional concern over key operational aspects of the Bureau's plans.

Although it may be too late in the census cycle to substantively redesign key census-taking operations, our work suggests that at least two actions could help mitigate the risk of an unsuccessful census. First, to help ensure that key census-taking activities are operationally feasible, the Bureau should ensure that its evaluation of the dress rehearsal is based on rigorous analysis and is issued promptly. Moreover, the Bureau should ensure that the evaluation results are used to refine operations, help set priorities, and allocate resources as the Bureau enters the final preparations for the 2000 Census. Second, consistent with our past recommendation, to alleviate congressional concerns over the design of the census, particularly its planned use of statistical

sampling and estimation, the Bureau should provide the Congress and other stakeholders detailed data on the expected effects of the Bureau's planned sampling and nonsampling initiatives on costs, accuracy, and other variables.

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Completing the NWS Modernization and Associated Restructuring

The National Weather Service (NWS) began a nationwide modernization program in the 1980s to upgrade observing systems, such as satellites and radars, and to design and develop advanced forecaster computer workstations. The goals of the modernization are to achieve more uniform weather services across the nation, improve forecasts, provide better detection and prediction of severe weather and flooding,

permit more cost-effective operations through staff and office reductions, and achieve higher productivity. For example, NWS plans to reorganize its field office structure from 256 offices (52 Weather Service Forecast Offices and 204 Weather Service Offices) to 121 Weather Forecast Offices (WFO). As of November 30, 1998, NWS officials told us that 132 offices had already been closed.

We designated the NWS modernization program as a high-risk area in 1995. NWS' system modernization includes four major programs: the Next Generation Weather Radar (NEXRAD), the Next Generation Geostationary Operational Environmental Satellite (GOES-Next), the Automated Surface Observing System (ASOS), and the Advanced Weather Interactive Processing System (AWIPS). These four programs collectively have cost about $4.5 billion. Although modernization of NWS is nearing completion, it will remain on our high-risk list because NWS lacks an overall systems architecture and the final piece of the modernization—AWIPS, the forecaster workstations that will integrate weather data from NEXRAD, GOES-Next, and ASOS—has not been deployed.

In 1995, when we first designated NWS' modernization program as a high-risk area, NWS reported that the new radars and satellites had enabled it to generate better data and greatly improved forecasts and warnings. In our 1997 high-risk series, we reported that although the development and deployment of the observing systems associated with the modernization were nearing completion, unresolved issues still remained. These issues concerned the systems' operational effectiveness and efficient maintenance. To illustrate, we reported that the new radars were not always up and running when severe weather was threatening; and the ground-based sensors fell short of performance and user expectations, particularly when the weather was active. We recommended that NWS correct shortfalls in radar performance and define and prioritize all ground-based sensor corrections needed to meet user needs. NWS addressed some of our radar and ground-based sensor performance concerns, but other issues remain. We recently reported that a NEXRAD located in Southern California was not consistently meeting NWS' NEXRAD availability requirement and recommended that NWS correct the problems so that this radar is available as required. NWS concurred with this recommendation

and mentioned several planned activities to improve radar availability.

National Weather Service Lacks an Overall Systems Architecture

As we reported in both our 1995 and 1997 high-risk series, the technology modernization and evolution of this major systems initiative have long begged for a comprehensive systems architecture to guide the effort. NWS has acknowledged that a technical blueprint is needed; however, it has made little progress in developing the architecture. NWS will continue to incur higher systems development and maintenance costs and experience reduced performance until the systems architecture is developed and enforced.

Delivery of AWIPS Remains a Concern

The centerpiece of the modernization—AWIPS, the forecaster workstations that are to integrate observing systems' data and support forecaster decisionmaking—is far from providing all the promised capabilities and has been delayed and become more expensive because of design problems and management shortcomings. AWIPS, which is being built in six increments, or builds, is now scheduled to be deployed in June 1999, but with less than full functionality. Until

AWIPS is deployed and functioning properly, NWS will not be able to take full advantage of the $4.5 billion investment it has made in AWIPS and the other components of the modernization. For the past several years, we have reported that serious risks continue to be associated with AWIPS' costs, schedule, development, and maintenance.

For example, in March 1998, we testified that AWIPS' cost has been in flux. The cost to develop AWIPS was estimated at $350 million in 1985. A decade later, the figure had risen to $525 million. However, in testimony and a report issued in 1996, we pointed out the inaccuracy of this estimate due to the omission of several cost factors, including known contract increases. The Department of Commerce later committed to a $550 million funding cap. We testified in April 1997 that it would be extremely difficult for NOAA to develop and deploy AWIPS within the $550 million cap if it encountered any major problems. Given the size and complexity of the development—and recognizing that even managed risks can turn into real problems—such problems are likely to occur. In accordance with a recommendation we made in 1996, the department contracted for an independent cost estimate of AWIPS because there was

uncertainty about whether it could be delivered within the $550 million cap because of increased software development expenses. According to the contractor's February 2, 1998, assessment, the likely costs to complete builds 4 through 6 will jump by $68 million, to a total cost of $618 million. The contractor also noted a likely 9 month schedule delay.

Furthermore, we reported in our March 1998 testimony that although AWIPS was planned for full deployment through build 6 in 1999—at 152 locations nationwide—that schedule is now in doubt. The latest schedule calls for build 4—actually build 4.2—to be completed in June 1999, within the $550 million cap. We testified that the completion dates for builds 5 and 6 were uncertain because NWS wanted to ensure that requirements for those modules are not extraneous to mission needs, in order to minimize future cost increases. This reflects a recommendation we made in 1996 for all AWIPS builds. An independent review team completed its analysis of builds 5 and 6. The team reported in August 1998 that build 5 requirements are essential to NWS' core mission and that the costs to complete build 5 should range from $20 to $25 million. The independent team concluded that build 6

requirements should not be pursued because they "resemble capabilities desired, rather than requirements." Schedules for builds beyond 4.2 have not been developed.

We also testified that the most critical risk factors underlying questions about AWIPS' future relate to software development. Software quality is governed largely by the quality of the processes used to develop it; however, NWS' efforts to develop AWIPS software have lacked defined software development processes. Such processes are all the more essential because of NWS' increased use of a software code developed internally at NOAA's Forecast Systems Laboratory (FSL) in Boulder, Colorado—a research and development facility that primarily develops prototype systems. This software code has not been developed according to the rigorous processes commonly used to develop production quality code. Failure to adhere to these processes may result in unstable software that will continue to cause cost increases and schedule delays. The cost assessment delivered in February 1998 also found risk inherent in the development of builds 4 through 6 because of the transitioning of FSL-developed software to AWIPS and the uncertainty surrounding requirements for

these builds. NWS officials told us that they continue to strengthen their software development processes for all government-developed software.

We testified in March 1998 that another risk area concerns the network control facility, which provides the ability to monitor and maintain AWIPS sites across the country from a single location. Through build 3, AWIPS was still experiencing difficulty with the network control facility's ability to detect and respond to problems. These problems concerned only a limited number of sites; as more sites come on line, problems can be expected to increase. NWS officials have acknowledged that the poor performance of the network control facility to date is a prime concern and that neither NWS nor its contractor has experience in developing the capability for central maintenance. As a result, they told us that they obtained contractors to assist them in this area.

Finally, we testified that another risk area is whether the AWIPS builds—and, indeed, all modernization components—will be Year

2000 compliant.[2] AWIPS to date is not Year 2000 compliant. Build 4.2—set for completion in June 1999—is supposed to make all AWIPS applications Year 2000 compliant. Yet even if Year 2000 compliance ceases to be an issue with build 4.2, NWS' companion modernization systems—GOES-Next and NEXRAD—will need to be compliant as well because of the amount of data they interchange. NWS officials told us that the major systems interfacing with AWIPS (GOES-Next and NEXRAD) are already Year 2000 compliant and that in early 1999, they plan to perform Year 2000 tests on how these systems work together.

Despite these concerns, NWS reports that it is making considerable progress on the development and operational testing of the forecaster workstations, has made system improvements as a result of the operational tests, and will continue to improve its test processes. Although we are encouraged by NWS' efforts to improve testing and its development progress, the cost, schedule,

[2]Computer systems have long used two digits to represent the year, such as simply "98" for 1998, to conserve electronic data storage and reduce operating costs. In this format, however, 2000 is indistinguishable from 1900 because both are represented as "00." As a result, if not modified, systems or applications that use dates or perform date- or time-sensitive calculations may generate incorrect results beyond 1999.

and technical risks associated with the workstations need further attention.

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Pursuing More Cost-Effective Alternatives to NOAA's Research Fleet

The National Oceanic and Atmospheric Administration (NOAA) continues to own, operate, and plan investments of millions of dollars in its aging in-house fleet of ships that support NOAA's programs in fisheries research, oceanographic research, and hydrographic charting and mapping. For more than a decade, congressional committees, public and private sector advisory groups, the National Performance Review (NPR), the Commerce IG, and our office have urged NOAA to aggressively pursue cost-effective alternatives to its

agency-designed, -owned, and -operated fleet for acquiring marine data.

Most of NOAA's fleet of research and survey vessels are approaching, or have passed, their 30-year life expectancies. This is a long-standing issue. Following reports by us and others, Commerce initially identified the NOAA fleet as a material weakness in its annual Federal Managers' Financial Integrity Act (FMFIA) report for fiscal year 1990. In 1993 NPR recommended that NOAA experiment with public/private competitions to help fulfill its minimum number of days-at-sea requirements. However, NOAA has experienced significant difficulties in its efforts to plan and implement solutions, and the NOAA fleet still remains a material weakness.

Since 1990, NOAA has developed several fleet replacement and modernization plans, and each has been criticized by the Commerce IG for not pursuing alternative approaches strongly enough. For example, in a 1996 program evaluation report on NOAA's 1995 fleet modernization plan, the Commerce IG recommended that NOAA terminate its fleet modernization efforts; cease investing in its ships; immediately begin to decommission, sell, or transfer them; and contract for the

required ship services. According to the Commerce IG, NOAA's failure to adopt a sound business approach to obtaining the best fleet services for its programs will continue to expose its programs to unnecessary costs and risks.

Historically, NOAA has taken the position that its ships provide unique services and generally are cost competitive. More recently, however, Commerce has taken a more active oversight role in this area; and NOAA now outsources with the private sector, universities, and other public entities for more of these services. According to the Department, NOAA has decommissioned almost one-third of its fleet since 1990 and currently outsources for at least 40 percent of its research and survey needs. In the fishery research area, for example, NOAA's plan for the next 10 years calls for outsourcing a minimum of 47 percent of these requirements; using cooperative state and foreign programs for another 16 percent; and relying on its current in-house fleet, or replacement ships, for the remaining 37 percent.

Although NOAA has made some progress, more needs to be done. When NOAA first identified this issue as a material weakness

in 1990, it estimated that the issue would be resolved by 1993. Today, NOAA has not committed to a specific completion date but estimates that the rehabilitation or replacement of its existing fleet could take up to 15 years. In the meantime, NOAA continues to rely heavily on its old, inefficient in-house fleet, which does not have the latest state-of-the-art technology, and plans to replace at least some of these ships. Continuing congressional oversight of the NOAA fleet and another closely related, inseparable issue—the NOAA Corps that manages and operates the NOAA fleet—could help ensure that NOAA is aggressively pursuing the most cost-effective alternatives for acquiring marine data.

The Need for the NOAA Corps Remains Questionable

Greater long-term reliance on outsourcing raises questions about the continued viability of the NOAA Corps that manages and operates the in-house fleet of ships. The NOAA Corps comprises about 240 uniformed service commissioned officers who are covered by a military-like pay and benefits system. These NOAA Corps officers also do rotational shore duty in NOAA's five line offices and manage and fly the NOAA aircraft that are used to penetrate hurricanes and to carry out other research and surveys. Like

the Public Health Service Corps, the NOAA Corps performs civilian rather than military functions.

In 1995, NPR, noting that the NOAA Corps was the smallest uniformed military service and that the fleet it commanded was obsolete, recommended that the NOAA Corps be gradually reduced in numbers and eventually eliminated. We reported in October 1996 that the NOAA Corps generally does not meet the criteria and principles cited by the Department of Defense for a military compensation system. We also noted that other agencies, such as the Navy, the Environmental Protection Agency, and the Federal Emergency Management Agency, use federal civilian employees or contractors to carry out duties similar to the functions that NOAA assigns to the Corps.

NOAA developed an ambitious legislative proposal and transition plan to "disestablish" or civilianize the Commissioned Corps, which was introduced in the 105th Congress, by request, as S. 877, in June 1997. NOAA's transition plan included 3 basic steps: (1) involuntarily retiring the 120 officers with at least 15 years of service, (2) creating up to 299 new civilian positions in NOAA and placing the 170 officers not

eligible for retirement in these civilian positions, and (3) filling the remaining civilian positions with retired officers or other civilian personnel. The Commerce IG had serious concerns that NOAA's proposal was inconsistent with congressional direction on outsourcing for ship services as well as the NPR recommendation for eventual elimination of the NOAA Corps. Further, the IG believed that NOAA's plan would have led to the conversion of too many officers to civilian positions, thereby locking in the current organizational structure and limiting opportunities for outsourcing.

The Subcommittee on Oceans and Fisheries, Senate Committee on Commerce, Science, and Transportation, held hearings on S. 877 but did not take action on the bill. According to Commerce's annual performance plan for fiscal year 1999, however, NOAA has begun recruiting civilian replacements for some vacant NOAA Corps positions. In June 1998, NOAA announced a new restructuring plan for the NOAA Corps. Rather than doing away with the Corps, NOAA's new plan focuses on the need for a NOAA Commissioned Corps of 240 officers to operate its current ships and aircraft. It also calls for a new civilian director of the NOAA Corps and a new recruiting program. Thus, the NOAA Corps

still exists, and NOAA plans to increase the number of officers by 15 in fiscal year 1999.

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Improving Financial Management Systems and Processes

The Department of Commerce faces several challenges in the financial management area. Audits and the Department's own internal reviews continue to show that (1) there are numerous areas where Commerce must improve its financial procedures to comply with federal accounting standards and to effectively reconcile and close its books at year-end and (2) Commerce does not have effective automated systems to support sound financial management.

The Department still lacks a single integrated financial system, adequate

internal controls, and accounting and financial systems that comply with federal laws and regulations. As a result, Commerce received a disclaimer of opinion on its fiscal years 1996 and 1997 consolidated financial statements. Also, Commerce continues to face significant challenges in implementing new computer systems to meet federal requirements and make all of its systems Year 2000 compliant. Most Commerce bureaus also lack the basic financial and performance information they need to manage their programs and activities and improve their performance.

As for fiscal year 1996, Commerce's IG was unable to render an opinion on the reliability of the Department's fiscal year 1997 consolidated financial statements. Sufficient documentation could not be provided to support property, accounts payable, and accrued expenditures. Additionally, the IG reported that (1) the Department's systems could not provide accurate and reliable financial and performance information, (2) reconciliations of account balances were not adequately performed, and (3) controls surrounding cash receipts and accounts receivables were ineffective. Of the 15 individual Commerce entities or funds audited, 8 received an unqualified opinion, 3

received an unqualified opinion on their Statements of Financial Position and a disclaimer on their Statements of Operations, 2 received a qualified opinion on their Statements of Financial Position and a disclaimer on their Statements of Operations, and 2 received a disclaimer of opinion on their overall financial statements. According to Commerce's Chief Financial Officer (CFO), for example, the International Trade Administration's (ITA) financial management problems are so significant that Commerce has decided not to have an audit performed of ITA for fiscal year 1998 because significant financial management problems continue. Instead, ITA will focus on correcting its financial weaknesses before it receives another financial audit.

In his message accompanying the fiscal year 1997 financial statements, the Department's CFO stated that Commerce must improve its financial management and noted that only 30 percent of the Department's budget authority is covered by an unqualified audit opinion. However, the Department made progress in this area during fiscal year 1997 as six bureaus received opinions that were improved over those that they received for fiscal year 1996. For example, Commerce's largest bureau—NOAA—received a qualified

opinion on its Statement of Financial Position for fiscal year 1997, compared to the disclaimer of opinion that it received on its overall financial statements for fiscal year 1996.

The Commerce IG's fiscal year 1997 Report on Internal Control Structure stated that 7 of the 10 reportable conditions identified by the auditors are considered as material weaknesses. Specifically, the Department's current financial management systems are not effective in preparing and reporting the financial results of the Department and its bureaus. The report stated that Commerce's existing financial systems are seriously outdated and fragmented; unable to provide timely, complete, and reliable financial information; inadequately controlled; and costly and difficult to maintain. The financial systems, as a whole, do not comply with the requirements of the FMFIA or the Federal Financial Management Improvement Act of 1996 (FFMIA). For example, NOAA's financial accounting system does not substantially comply with FFMIA in that its financial management systems do not support the preparation of timely, accurate financial statements.

Following are the seven material weaknesses at Commerce that the IG's report cited for fiscal year 1997, all of which were repeat material weaknesses from fiscal year 1996.

- The Department's financial management should be improved to provide accurate and reliable financial and performance information.
- The Department's systems should be improved to provide accurate and reliable financial and performance information.
- Preparation of the consolidated financial statements should be improved.
- Controls surrounding the identification of potential contingent liabilities and unasserted claims should be improved.
- Controls surrounding property should be improved.
- Controls surrounding obligations/undelivered orders, accounts payable/accrued expenditures, and expenses should be improved.
- Reconciliations should be improved.

To address concerns with financial management systems, the IG's report for fiscal year 1997 noted that the Department began developing the Commerce Administrative Management System (CAMS)

in 1992. CAMS is intended to provide the Department with an effective internal control environment that meets the requirement for a single, integrated financial management system. CAMS was under development at four Commerce bureaus for several years, and implementation was delayed considerably. As a result, the Department overhauled its approach and focused most of its resources on completing a pilot implementation of CAMS at the Bureau of the Census by July 1998. According to Commerce's CFO, the pilot at Census has been completed, and a decision has been made to adopt a version of CAMS at Census and at two major Commerce bureaus—NOAA and the National Institute of Standards and Technology (NIST). The systems used for other Commerce bureaus may vary. According to the Department's CFO, an integrated departmentwide financial management system will be implemented by September 2001 at an estimated total cost of $256 million.

Given the existing weaknesses in the internal control structure at Commerce, along with the Department's inability to properly record and support financial and performance information, however, the IG's report noted that implementation of the new system(s)

raises concerns about the integrity of the data from the old systems that will be used to bring the new system(s) on line. If inaccurate data are input into the new computer system, the Department could continue to face data reliability problems, even with the new system(s).

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Using the Results Act to Improve Performance and Decisionmaking

The Results Act is the centerpiece of the statutory framework that the Congress has put in place in the 1990s to strengthen federal decisionmaking and accountability and to improve federal effectiveness and efficiency by promoting a new focus on results, service quality, and customer

satisfaction. In crafting the Results Act, the Congress recognized that congressional and executive branch decisionmaking had been severely handicapped by the absence in many agencies of the basic underpinnings of well-managed organizations. The Results Act is intended to address basic management problems and deficiencies that have been typical throughout the federal government.

The Results Act provides an opportunity for the Department of Commerce to improve its performance and effectiveness and to enhance congressional and executive branch oversight and decisionmaking in the four major management challenge areas highlighted in this report as well as in other program and mission-support areas. As we have reported, however, using the Results Act to improve performance and decisionmaking will continue to be especially challenging for the Department for several reasons.

Because of its "holding company" nature and the diversity of its missions and functions, the Department historically has not been managed on the basis of a unified mission and shared goals, strategic management of the Department has been based in its bureaus, and its key administrative functions

and processes have been decentralized. This diversity and lack of a centralized management approach both complicate and challenge Commerce's efforts to rethink its missions, goals, and how it does business and to consider alternative strategies for achieving its goals in the most efficient and effective manner possible.

A focus on results as envisioned by the Results Act implies that federal programs contributing to the same or similar results will be closely coordinated to ensure that goals and performance measures are consistent and mutually reinforcing. Overlap of missions and functions is a critical problem for Commerce in that it shares responsibility for major budget functions with at least 14 other federal departments and agencies and does not have exclusive or even lead responsibility for any of those functions. Thus, Commerce must recognize that its efforts are but one factor among many that may influence whether, and the degree to which, these program efforts collectively achieve intended results.

Good financial, management, and program information are key to the successful implementation of the Results Act. Without it, accountability for performance toward

results-oriented goals cannot be ensured. However, the Department must contend with three significant obstacles—antiquated financial management information systems, weak performance measures, and the conversion of its information systems to meet Year 2000 requirements.

Over the years, the Department has accumulated many diverse responsibilities in a piecemeal fashion, operated with unclear missions, and lacked an overall coherent and coordinated strategy for achieving its missions and goals. Because of this and the other issues discussed earlier, the Department faces an especially formidable challenge in developing and presenting focused, useful Departmentwide strategic and performance plans that both cover all of its programs and activities and meet other criteria in the Results Act and related guidance.

As we have reported, its strategic and performance plans to date under the Results Act have not adequately addressed the four major management challenges discussed in this report and have been lacking in several other respects. For example, the Department's September 1997 strategic plan recognized major management challenges in

the Census, NWS modernization, and financial management areas but did not relate them to its strategic goals and objectives or indicate specifically how and when the Department expects to overcome these challenges. Similarly, the Department's first annual performance plan for fiscal year 1999 identified and discussed major unresolved management challenges in the Census, NWS modernization, NOAA fleet, and financial management areas. However, the plan did not (1) relate these challenges to specific strategic or performance goals, (2) fully acknowledge their significance and performance implications, or (3) include performance goals for corrective actions for those challenges whose resolution is critical to the Department's mission or could materially impede the achievement of program goals.

The Department agrees that its earlier Results Act plans were lacking in several respects and seems committed to improving the quality and usefulness of its future plans. At their request, we met with Commerce officials on several occasions to discuss how the Department could improve its fiscal year 2000 annual performance plan. According to the Department, its 2000 performance plan will be more reader friendly, more focused

than its earlier plans, contain fewer strategic goals and performance measures but will contain more outcome-oriented performance goals, provide more specifics on how it will verify and validate its actual performance, and include more complete and effective discussions of crosscutting programs and the four major management challenges that are discussed in this report.

Even with these enhancements, however, we believe that the Department of Commerce will continue to face a significant management challenge in using the Results Act to improve its performance and to facilitate better congressional and executive branch oversight and decisionmaking in these and other program and mission-support areas. The Congress may wish to hold hearings on Commerce's implementation of the Results Act to explore the implementation issues and four major management challenges highlighted in this report and to reach agreement with the Department on its missions and priorities, strategic and performance goals, and the measures to be used in judging its success in achieving those goals and meeting these major management challenges.

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