



Testimony

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2010 CENSUS

Redesigned Approach Holds Promise, but Census Bureau Needs to Annually Develop and Provide a Comprehensive Project Plan to Monitor Costs

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Highlights

Highlights of [GAO-06-1009T](#), a testimony before the Subcommittee on Science, the Departments of State, Justice, and Commerce, and Related Agencies, Committee on Appropriations, House of Representatives

Why GAO Did This Study

The U.S. Census Bureau (Bureau) estimates that the 2010 Census will cost over \$11.3 billion, making it the most expensive in our history. The U.S. House of Representatives and Senate appropriation bills propose to reduce the Bureau's fiscal year 2007 budget request, raising questions about the Bureau's design of the 2010 Census and associated costs. Based on issued GAO work, this testimony addresses the extent to which the Bureau has (1) made progress redesigning its approach, including nonresponse follow-up, a key cost driver; and (2) developed a comprehensive project plan for the 2010 Census, as well as timely, detailed cost data for effective oversight and cost control.

What GAO Recommends

A January 2004 GAO report recommended that the Bureau develop a comprehensive project plan for the 2010 Census that would include milestones, itemized costs, and measurable goals. While the Bureau disagreed with the recommendation, it stated it would provide such a plan to Congress and GAO. More than 2 years passed and the Bureau did not provide this plan. In testimonies during March and June 2006, GAO reemphasized the need for such a plan. GAO still believes that in this era of serious budget challenges, it is important for the Bureau to implement this recommendation not only for the upcoming fiscal year budget but every fiscal year of the 2010 Census' life-cycle.

www.gao.gov/cgi-bin/getrpt?GAO-06-1009T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Brenda S. Farrell at (202) 512-6806 or farrellb@gao.gov.

2010 CENSUS

Redesigned Approach Holds Promise, but Census Bureau Needs to Annually Develop and Provide a Comprehensive Project Plan to Monitor Costs

What GAO Found

Since 2000, the Bureau has made significant progress in redesigning the 2010 Census. Preparations for the 2010 Census appear to be further along than at a similar point of the 2000 Census; the Bureau plans to make the most extensive use of contractors in its history to implement such mission-critical tasks as data collection and processing, and updating addresses and maps; and it has developed new initiatives, such as changing to a short-form-only census and automating field operations to reduce nonresponse follow-up costs. Still, the Bureau will have to resolve challenges that could increase the costs of the census. For example, the Bureau will need to effectively monitor contracts, as \$1.9 billion of the \$11.3 billion life-cycle costs will be spent on seven major contracts. The Bureau has agreed to take steps to mitigate some of these challenges, such as enhancing the ability of key contract project offices to better manage contracts through such actions as developing action plans with milestones for key activities and regularly briefing senior managers. Also, the use of hand-held mobile computing devices (MCD) to help reduce nonresponse follow-up costs by automating operations and managing the agency's payroll is a key component of the redesigned census. However, the MCDs experienced reliability problems during testing. The Bureau maintains that those problems will be fixed by developing a new MCD through a contract awarded in March 2006; however, the new MCD will not be tested until the 2008 Dress Rehearsal, and little time will remain to develop, test, and incorporate refinements if the MCDs do not perform as expected. If after the Dress Rehearsal the MCD is found to be unreliable, the Bureau could be faced with the remote but daunting possibility of having to revert to the costly paper-based census used in 2000.

The Bureau has not developed and provided a comprehensive, integrated project plan that details milestones, itemized costs, and measurable goals for completing key activities. Also, the Bureau's \$11.3 billion life-cycle cost estimate lacks timely and complete supporting data, because it does not contain the most current information from testing and evaluation nor does it provide sufficient information on how changing assumptions could affect costs. For example, one key assumption that has not been updated pertains to the use of the MCDs. The Bureau anticipates that their use could reduce administrative and support costs in its local census offices, including 50 percent cost reductions for staff and office space. However, the 2004 Census Test showed that more help desk staff and more storage space would be needed to support the devices. The Bureau did not change the life-cycle cost estimate because, in the view of Bureau managers, field tests are for operational purposes, not to inform cost estimates. However, using test results to update cost assumptions could assist the Bureau and external policymakers to oversee costs and make necessary resource allocations. Furthermore, absent a comprehensive plan and updated cost information, the effect of proposed 2007 budget reductions on the overall design and life-cycle costs of the 2010 Census cannot be determined.

Mr. Chairman, Mr. Mollohan, and Members of the Subcommittee:

Thank you for the opportunity to be here today to discuss the overall design of the 2010 Census and associated costs, in light of proposed budget reductions¹ totaling approximately \$50 million from the U.S. Census Bureau's (Bureau) \$878 million fiscal year 2007 budget request. First, let me emphasize that the Bureau, which is a part of the Commerce Department, is aware of the need to contain 2010 Census costs and has taken some actions, including early planning, to contain those costs. In fact, one of the Bureau's stated goals for the 2010 Census is to contain costs. However, according to the Bureau's estimate, the 2010 Census will be the most expensive census in our nation's history, even after adjusting for inflation, totaling over \$11.3 billion. Based on our issued work, my testimony today specifically addresses the extent to which the Bureau has (1) made progress redesigning its approach, including actions related to nonresponse follow-up, a key cost driver; and (2) developed a comprehensive, integrated project plan for the 2010 Census, as well as timely, detailed cost data for effective oversight and cost control. My main point today is that while the Bureau has planned early and reengineered the decennial census to contain costs, the Bureau has not developed and provided a comprehensive, integrated project plan to help monitor costs; and the Bureau's September 2005 life-cycle cost estimate for the 2010 Census does not reflect current information from testing and evaluation, lacks detailed information, and does not make clear the relationship between various cost drivers and the ultimate estimate. As a result, the impact of proposed reductions to the Bureau's fiscal year 2007 budget request can not be determined.

Today's hearing is particularly crucial as many decennial activities will be finalized in fiscal year 2007, while others will just be getting started. The Bureau is completing the last of its field tests—the 2006 Census Test, being held in the central portion of Travis County, Texas, and at the Cheyenne River American Indian Reservation and Tribal Trust Lands in South Dakota, where the Bureau is evaluating key operations and the type of equipment that it plans to employ for the full enumeration in 2010. The evaluations from 2006 testing, the content for the 2010 census questionnaire, and the baselining of all 2010 program requirements are also being finalized in 2007. We agree with Bureau officials who stated

¹Science, State, Justice, Commerce, and Related Agencies Appropriations Act, 2007, H.R. 5672, 109th Cong. tit. II (2006).

that, as 2010 approaches it becomes increasingly more difficult to make significant changes to the decennial's design without affecting the overall success of the census. A major milestone getting underway in 2007 will be the preparatory activities for a "Dress Rehearsal" scheduled for 2008 in San Joaquin County, California, and nine counties in Eastern North Carolina, including the city of Fayetteville. While "Census Day" for the Dress Rehearsal is April 1, 2008, preparations—such as opening the local census offices, recruiting and hiring, and updating and verifying the address file—will take place during fiscal year 2007. Finally, with three major contracts already in place, in 2007, the Bureau plans to award three of four remaining major 2010 decennial contracts.

The decennial census is a crucial, constitutionally mandated activity undertaken by the Bureau. The stakes for a successful census are very high. The data that the census produces are used to reapportion the seats of the U.S. House of Representatives; realign the boundaries of the legislative districts of each state; allocate about \$200 billion dollars each year in federal financial assistance; and provide a social, demographic, and economic profile of the nation's people to guide policy decisions at each level of government. Further, businesses use census data to target new services and products and to tailor existing ones to demographic changes.

Over the decades, the decennial census has grown in cost and complexity, and we have been reviewing the national enumeration on behalf of Congress. Over the years, through scores of reports and testimonies, we have acquired broad institutional knowledge that gives us a historical view of the key ingredients of a successful census. One such ingredient is strong and continued congressional involvement in the decisions that influence the direction of the census. As you are keenly aware, Mr. Chairman, congressional support and funding of the reengineered census are essential to the ultimate success of the decennial.

As a backdrop for this testimony, I want to highlight several broad themes that have emerged from our work over the years—lenses really—through which to view the Bureau's business environment. They are important because they ultimately affect the Bureau's readiness to conduct the census and the quality of the results.

First, completing the decennial census is a monumental undertaking, and the Bureau recognizes that streamlined and efficient operations are critical for the census' cost-effectiveness. The Census' sheer size and complexity make it a risky and fragile enterprise. The 2000 Census, for example, involved the hiring of more than 500,000 enumerators on a temporary

basis, opening 511 local census offices and 24,000 questionnaire assistance centers nationwide, processing 1.5 billion sheets of paper, and in 10 weeks following up with 42 million nonrespondent households. The size of the census means that small problems can magnify quickly, and big problems could be overwhelming. For example, 60 seconds might seem like an inconsequential amount of time, but in 2000, if enumerators had spent just 1 minute more at each household during nonresponse follow-up, almost \$10 million would have been added to the cost of the census, assuming a pay rate of around \$13 per hour, with wages ranging from \$8.25 to \$18.50 per hour for enumerators in 2000, depending on the location.

Second, sound risk management is important to a successful census because many risks are interrelated, and a shortcoming in one operation could cause other operations to spiral downward. For example, a low mail response rate would drive up the follow-up workload, which in turn would increase staffing needs and costs (of course, the reverse is also true, where a success in one operation could have a number of positive downstream impacts). Rigorous up-front planning and testing, as well as risk mitigation plans, are the best ways to stave off these problems. In the 2000 Census, the Bureau successfully planned and mitigated risk in recruiting and hiring workers by using management information systems capable of tracking key operations with real-time measures. To recruit the vast army of people needed to fill the ranks of its workforce for the 2000 Census, the Bureau set a recruitment goal of 2.4 million qualified applicants. Because the Bureau tracked the progress local census offices were making in meeting their individual goals, it was able to mitigate risk by quickly raising pay rates and taking other actions at those offices where recruitment was lagging. In the end, the Bureau exceeded its recruitment goal by 100,000 applicants.

Third, the census is conducted against a backdrop of immutable deadlines; the census' elaborate chain of interrelated pre- and post-Census Day activities is predicated upon those dates. The Secretary of Commerce is legally required to (1) conduct the census on April 1 of the decennial year, (2) report the state population counts to the President for purposes of congressional apportionment by December 31 of the decennial year, and (3) send population tabulations to the states for purposes of redistricting no later than 1 year after the April 1 census date. To meet these legally mandated reporting requirements, census activities need to take place at specific times and in the proper sequence. We agree with Bureau officials who recently stated that the design and plans being implemented are too far down the road and time is too short to allow for significant adjustments to be effectively implemented. In fact, as Census Day

approaches, the tolerance for any operational changes becomes increasingly small. Indeed, considerable risk and cost increases could accompany design changes that occur late in the decade.

My remarks today are based on GAO-issued work on the planning and development of the 2010 Census. These reports are listed in attachment I. We analyzed Bureau cost and planning documents and data and interviewed key Bureau officials regarding the 2004 and 2006 Census Tests, contract monitoring, and the life-cycle cost estimate. In conducting our work, we visited the Texas and South Dakota test sites; Queens, New York; and several counties in rural south-central Georgia, where an earlier field test was held in 2004. During these visits we observed the address-cavassing operation, where workers go door to door verifying addresses and updating maps as part of the Bureau's effort to build a complete and accurate address list, and we observed the nonresponse follow-up operation, in which enumerators collect information from those households that do not return their initial questionnaire. We conducted our work in accordance with generally accepted government auditing standards.

The Bureau Has Made Significant Progress Preparing for the 2010 Census

The Bureau has made significant progress redesigning its approach for conducting the 2010 Census, including early planning, a greater reliance on contractors, and actions related to nonresponse follow-up, a key cost driver. Specifically, the Bureau's preparations for the 2010 Census appear to be further along than at a similar point during the planning cycle for the 2000 Census. The Bureau also plans to make the most extensive use of contractors in its history, turning to the private sector to supply a number of different mission-critical functions, including data collection, data processing, and address and map updates. In addition, the Bureau has developed new initiatives to reduce the cost of nonresponse follow-up that include using a short-form-only census questionnaire and automating field operations.

The Design of the 2010 Census Shows Promise

For the 2010 decennial, the Bureau developed a design for the census early in the decade, and Congress has been supportive of the Bureau's approach. However, the situation 10 years ago for the 2000 decennial was somewhat different. In testimony before Congress in late 1995, we expressed concern that Congress and the Bureau had not agreed on the fundamental design and budget of the census, and that the longer this situation continued, the greater the risk that the census would not be planned well and that hundreds of millions of dollars would be spent

inefficiently.² Indeed, the final life-cycle cost for the 2000 Census exceeded the original estimates by about \$1.5 billion, or about 30 percent.

While this time the Bureau has planned earlier than in the past, it needs to do more. The Bureau has a significant responsibility to provide Congress with detailed documentation and analyses that provide support and justification for its 2007 budget and 2010 life-cycle cost estimate, especially during a time when the nation is facing serious fiscal challenges. In our view, the Bureau needs to inform Congress in a timely manner on the cost and progress being made toward a successful 2010 Census.

In planning early for the 2010 Census, the Bureau established four goals aimed at addressing shortcomings with the 2000 enumeration: (1) increase the relevance and timeliness of data, (2) reduce operational risk, (3) increase coverage and accuracy, and (4) contain costs. To achieve these goals, three components—all new operations—are key to the Bureau's plans for 2010:

- enhancing procedures for building its address list, known as the Master Address File (MAF), and its associated geographic information system, called the Topologically Integrated Geographic Encoding and Referencing (TIGER®) database;³
- replacing the census long-form questionnaire with the American Community Survey (ACS)⁴; and
- conducting a short-form-only decennial census supported by early research and testing.

Steps that the Bureau has taken to correct problems it encountered when planning past censuses are another sign of the thoroughness of the Bureau's planning process. For example, early in the decade, senior

² GAO, *Decennial Census: Fundamental Design Decisions Merit Congressional Attention*, [GAO/T-GGD-96-37](#) (Washington, D.C.: Oct. 25, 1995).

³ The TIGER database is a mapping system that identifies all visible geographic features, such as type and location of streets, housing units, rivers, and railroads. To link TIGER to the master address file, the Bureau assigns every housing unit in the master address file to a specific location in the TIGER, a process called "geocoding." TIGER is a registered trademark of the U.S. Census Bureau.

⁴ ACS is intended to be a monthly survey of 250,000 households that, under the Bureau's plans, will replace the long-form census questionnaire.

Bureau staff considered various goals for the 2010 Census and articulated a design to achieve those goals. Moreover, staff with operational experience in the census participated in the 2010 design process. According to Bureau officials, this was a departure from the 2000 planning effort, in which Bureau staff with little operational experience played key roles in the design process, resulting in impractical reform ideas that could not be implemented.

Bureau Will Make Extensive Use of Contractors for 2010 Census

For the 2010 Census the Bureau plans to make the most extensive use of contractors in its history, turning to the private sector to supply a number of different mission-critical functions, including nationwide data collection and processing activities, and improvements to the address file and maps. The Bureau estimates that of the \$11.3 billion total cost of the census, around \$1.9 billion (or 17 percent) will be spent for its seven largest contracts. To date, the Bureau has awarded three of its seven major contracts that account for approximately \$1.3 billion. Those contracts support (1) MAF/TIGER modernization; (2) the development and operation of the Decennial Response and Integration System (DRIS)—a system planned to integrate decennial responses; and (3) the Field Data Collection Automation (FDCA) program—a system designed to provide field staff with the equipment and infrastructure needed to collect census data. As detailed below, it will be important for the Bureau to monitor the contracts to avoid late design changes and hastily designed, untested systems that could result in additional costs.

In fiscal year 2007, the Bureau will also award three of four remaining major decennial contracts as follows:

- in February 2007, the Bureau plans to award the contract for Data Access and Dissemination System II, which will replace the Bureau's current data tabulation and dissemination system;
- in March or April 2007, the 2010 Census printing contract will be awarded; and,
- in April 2007, the Bureau will begin to lease office space for the 2010 Census.

The exact date for the 2010 communications contract—which is set to be awarded sometime in fiscal year 2008—is not yet firmly established.

As we noted in our May 2006 report, the Bureau has a tight schedule for systems development and testing; therefore, it will be important for the Bureau to keep the award of decennial contracts on schedule. To stay on

schedule, we recommended that the Bureau ensure that key systems provided by contractors are fully functional and ready to be assessed as part of the 2008 Dress Rehearsal.⁵ While the Bureau neither agreed nor disagreed with this recommendation, the Bureau did state that it would be providing the results from the 2006 Census Test to the FDCA contractor. Staying on track is important because we previously reported that during the 1998 Dress Rehearsal for the 2000 Census a number of new features were not test-ready; as a result, the Bureau said it could not fully evaluate them with any degree of assurance as to how they would affect the census.⁶ These late design changes and hastily developed, untested systems resulted in additional costs to the census.

We recognize that contractors can help the Bureau address the challenges it faces as it plans for and implements the 2010 Census, especially as it becomes increasingly difficult to count the nation's population with the Bureau's in-house staff and capabilities. For example, the contractors that the Bureau relied on to perform some of its major decennial activities during Census 2000 generally performed well.⁷ However, increased reliance on contractors entails certain management challenges, including overseeing them to ensure that they meet the Bureau's needs in an effective, economical, and timely manner. For example, according to the Department of Commerce Office of Inspector General, the Bureau did not have sufficient program management staff to efficiently acquire systems and manage complex, high-dollar contracts during Census 2000.⁸ As a result, the cost of the Bureau's data capture system increased from \$49 million to \$238 million by the end of that decennial.

Closely monitoring these major contracts will be important. In March 2006, we testified that while project offices responsible for the DRIS and FDCA

⁵ GAO, *2010 Census: Census Bureau Generally Follows Selected Leading Acquisition Practices, but Continued Management Attention Is Needed to Help Ensure Success*, [GAO-06-277](#) (Washington, D.C.: May 18, 2008).

⁶ GAO, *2010 Census: Basic Design Has Potential, but Remaining Challenges Need Prompt Resolution*, [GAO-05-9](#) (Washington, D.C.: Jan. 12, 2005).

⁷ For example, the data capture system exceeded its performance goals for accuracy, and the advertising campaign blanketed the country with more than 250 advertisements in 17 languages, which helped boost the response rate higher than the Bureau had expected.

⁸ Department of Commerce Office of Inspector General, *Improving Our Measure of America: What Census 2000 Can Teach Us in Planning for 2010*, OIG-14431 (Washington, D.C.: Spring 2002).

contracts had carried out initial acquisition management activities, neither office had the full set of capabilities needed to effectively manage the acquisitions.⁹ For DRIS, the Bureau's project office had established baseline requirements, but the Bureau had not validated the requirements and had not implemented a process for managing the requirements. Also, the project office had identified the project's risks but had not developed written mitigation plans or established milestones for completing key risk mitigation activities. As for FDCA, the Bureau again had specified baseline requirements but had not validated them. While the project office had begun activities to oversee the contractor's performance, it had not determined which performance measures it would use, and the office had not implemented a risk management process. Until these basic management activities are implemented, both systems could face increased risks of cost overruns, schedule delays, and performance shortfalls. The Bureau has agreed to take steps to mitigate some of these challenges, such as enhancing the ability of key contract project offices to better manage contracts through such actions as developing action plans with milestones for key activities and regularly briefing senior managers.

Bureau Has Taken Steps to Reduce Nonresponse Follow-up Costs, but Challenges with Technology Remain

Since 2000, the Bureau has reengineered the decennial census and has begun to implement new initiatives to reduce the cost of nonresponse follow-up, including a short-form-only census and automation, the key feature of which is the use of hand-held mobile computing devices (MCD). First, the Bureau plans to contain the cost of nonresponse follow-up by increasing mail response through a short-form-only census. The overall mail response rate has been declining steadily since 1970. In the 1980 Census, the mail response rate was 75 percent, 3 percentage points lower than it was in the 1970 Census. In the 1990 census, the mail response rate dropped to 65 percent and, in 2000, appeared to be leveling off at about 64 percent. Contributing to this decline was the unwillingness of some of the public to complete the long form. Specifically, the response rates during the 1990 and 2000 censuses to the short form were higher than the response rate to the long form. Bureau data suggest a 1 percent increase in the mail response rate would result from conducting a short-form-only census.

⁹ GAO, *Census Bureau: Important Activities for Improving Management of Key 2010 Decennial Acquisitions Remain to be Done*, [GAO-06-444T](#) (Washington, D.C.: Mar. 1, 2006).

Secondly, by using the MCD, the Bureau plans to automate field data collection to contain the cost of nonresponse follow-up. If successfully used, the MCD would allow the Bureau to automate operations and eliminate the need to print millions of paper questionnaires and maps used by census workers to conduct address canvassing and nonresponse follow-up, as well as managing field staff's payroll. The benefits of using the MCD have been tested in the 2004 and 2006 tests. For example, during the 2004 Census Test, the MCD allowed the Bureau to successfully remove over 7,000 late mail returns from enumerators' assignments, reducing the total nonresponse follow-up workload by nearly 6 percent. The ability to remove late mail returns from the Bureau's nonresponse follow-up workload reduces costs, because census workers no longer need to make expensive follow-up visits to households that return their questionnaire after the mail-back deadline.

However, the MCDs experienced significant reliability problems during the 2004 and 2006 census tests. At this point, the uncertainty surrounding the MCD's reliability constitutes a risk to the cost-effective implementation of the 2010 Census. Specifically, during the 2004 Census Test, the MCDs experienced transmission problems, memory overloads, and difficulties with a mapping feature—all of which added inefficiencies to the test's nonresponse follow-up operation.¹⁰ During the 2006 Census Test's address canvassing operation, the device was slow to pull up address data and accept the data entered by census workers. Further, the MCD's global positioning system (GPS) receiver—a satellite-based navigational system to help workers locate street addresses and collect coordinates for each structure in their assignment area—was also unreliable. According to Bureau officials, some workers had trouble receiving signals; but even when a signal was available, the receiver was slow to find assignment areas and correct map locations. The Bureau extended the operation 10 days and still was unable to complete the job, leaving census blocks in Austin, Texas and on the Cheyenne River Reservation, South Dakota unverified.

While acknowledging that the MCD's performance is an issue, the Bureau believes the problem will be addressed through a contract that was awarded on March 30, 2006, to develop a new MCD, among other things. However, the new MCD will not be operationally tested until the 2008 Dress Rehearsal, and if problems do emerge, little time will be left to

¹⁰ [GAO-05-9](#).

develop, test, and incorporate refinements. In our May 2006 report, we highlighted the tight time frames to develop the MCD and recommended that systems being developed or provided by contractors for the 2010 Census—including the MCD—be fully functional and ready to be assessed as part of the 2008 Dress Rehearsal.¹¹ The Department of Commerce noted in its comments on our draft report that the Bureau provided competitors for the contract with information about the design, requirements, and specification for the 2006 test in the request for proposals. Commerce also noted that the Bureau would share preliminary results from the 2006 test with the firm that was awarded the contract, upon the availability of those results. The Bureau, however, did not specify when preliminary results would be available. If after the 2008 Dress Rehearsal the MCD is found not to be reliable, the Bureau could be faced with a remote but daunting possibility of having to revert to the costly, paper-based census used in 2000. The Bureau in its 2005 life-cycle cost estimate did indicate that if it were to conduct a paper-based census in 2010 using the same methods as 2000, the life-cycle cost would increase by \$1.3 billion dollars. However, as discussed in more detail later in this testimony, we are unable to determine the validity of the Bureau's cost estimates, paper-based or not, because those estimates are not supported by timely and detailed data. Nevertheless, we support the Bureau's efforts to contain cost and look forward to seeing the MCD that is currently being designed under the FDCA contract as well as more details concerning the Bureau's cost estimates.

Bureau Does Not Have Sufficient Planning and Cost Documentation for the 2010 Census

Despite its emphasis on cost containment, the Bureau does not have a comprehensive, integrated project plan that details milestones and itemized costs for completing key activities for the 2010 Census, and its \$11.3 billion life-cycle cost estimate for the 2010 Census lacks timely and complete supporting data. The supporting data of the estimate are not timely because they do not include the most current information from testing and evaluation, and the estimate is not complete because it does not provide sufficient information on how changing assumptions could affect cost. Absent this information, we are unable to determine the affect proposed budget reductions will have in 2007, as well as the impact of

¹¹ GAO, *2010 Census: Census Bureau Generally Follows Selected Leading Acquisition Planning Practices, but Continued Management Attention Is Needed to Help Ensure Success*, [GAO-06-277](#) (Washington, D.C.: May 18, 2006).

those reductions on the overall design and the Bureau's 2010 life-cycle cost estimate.

Cost for Each Decennial Census Continues to Significantly Increase

In our January 2004 report, we reported that the Bureau's cost projections for the 2010 decennial census continue an escalating trend.¹² As previously noted, the Bureau now estimates the 2010 Census will cost over \$11.3 billion, making it the most expensive in history, even after adjusting for inflation. Although some cost growth can be expected, in part because the number of housing units—and hence the Bureau's workload—has become larger, the cost growth has far exceeded the increase in the number of housing units. For example, the Bureau estimates that the number of housing units for the 2010 Census will increase by 10 percent over 2000 Census levels, while the average cost per housing unit for 2010 is expected to increase by approximately 29 percent from 2000 levels.

Moreover, the risk exists that the actual, final cost of the census could be considerably higher. Indeed, the Bureau's initial cost projections for previous censuses proved to be too low because of such factors as unforeseen operational problems or changes to the fundamental design. For example, during the 2000 Census, the Bureau was unable to finalize its fundamental design until late in the decade because of lack of agreement between the administration and Congress over the design. This required the Bureau to proceed down a dual track. The Bureau estimated that the 2000 Census would cost around \$4 billion if sampling was used, as opposed to \$5 billion for a traditional census without sampling. In the end, the price tag for the 2000 Census (without sampling) was over \$6.5 billion, a 30 percent increase in cost.

Bureau Has Not Provided a 2010 Comprehensive Project Plan

Our January 2004 report contained a recommendation for improving the transparency, comprehensiveness, and timeliness of the 2010 Census' life-cycle costs. We specifically recommended that the Bureau develop a comprehensive, integrated project plan for the 2010 Census, and we also emphasized the importance of providing information on the interrelationships and dependencies among project milestones. Such a project plan would be updated as needed and would include: (1) detailed milestones that identify all significant interrelationships; (2) itemized

¹² GAO, *2010 Census: Cost and Design Issues Need to Be Addressed Soon*, [GAO-04-37](#) (Washington, D.C.: Jan. 15, 2004).

estimated costs of each component, including a sensitivity analysis, and an explanation of significant changes in the assumptions on which these costs are based; (3) key goals translated into measurable, operational terms to provide meaningful guidance for planning and measuring progress, and (4) risk and mitigation plans that fully address all significant potential risks. We noted then that, although some of this information is available piecemeal, to facilitate a thorough, independent review of the Bureau's plans and hold the agency accountable for results, having a single, comprehensive document would be important. Although the Bureau disagreed with the recommendation, it stated it would develop and provide such a document to Congress and GAO. More than 2 years passed and the Bureau did not provide this plan. The Bureau has stated that it agrees with the Office of Management and Budget that the annual budget submission process is the appropriate vehicle for providing comprehensive and detailed cost information on 2010 Census planning. However, in our view, having a single comprehensive project plan that is updated annually, as we recommended in 2004, would have provided the Bureau with additional support for its fiscal year 2007 budget request. Further, GAO reemphasized the need for such a plan in testimonies during March and June 2006.

2010 Cost Estimate Lacks Timely and Complete Information

The Bureau's most recent cost estimate is not based on timely and complete information. As stated in our January 2004 report, the Bureau derived its 2010 cost estimate, in June 2001, by using the actual cost of the 2000 Census combined with assumptions about such cost drivers as (1) staffing needs, (2) enumerator productivity, (3) pay rates for census workers, (4) the nonresponse rate for mailing back the questionnaires,¹³ and (5) inflation.¹⁴ However, the most recent life-cycle cost estimate¹⁵ does not incorporate current information about assumptions made in 2001, leaving us unable to link information on assumptions among the cost estimates released in 2001, 2003, and 2005. For example, one key assumption that has not been updated pertains to the use of a new technology—new hand-held, GPS-enabled MCDs. These devices are important to the success of the 2010 census because they are expected to

¹³ Lower mail-back response rates increase costs by necessitating costly follow-up visits by enumerators to nonresponding households and/or the mailing of a follow-up questionnaire.

¹⁴ [GAO-04-37](#).

¹⁵ U.S. Census Bureau: *Census Bureau Estimated Life Cycle Costs for Reengineering the 2010 Decennial Census Program* (Washington, D.C.: September 2005).

make possible automated and streamlined address canvassing, nonresponse follow-up, coverage measurement, and payroll operations. The Bureau anticipated that the use of MCDs would facilitate reductions in administrative and support costs in the Bureau's field offices, including a 50 percent reduction in clerical and administrative local census office staff costs and a 50 percent reduction in space at each local census office. However, the Bureau's existing assumptions about the use and reliability of the MCD were not updated to reflect information from the 2004 Census Test, which revealed that assumptions about staffing and space associated with the new technology had changed since the June 2001 life-cycle estimate. Specifically, Bureau evaluations of the 2004 test show that more help desk staff at the local census office were needed to support the use of the MCD, and additional storage space was needed for the devices. However, the Bureau did not use this information when revising its cost estimate in 2005 because, according to Bureau officials, they conduct field tests for operational purposes only—not to inform the cost estimates. In our view, revising cost estimates on the most recent information—including test results that are pertinent to cost assumptions—can assist the Bureau and external decision makers to oversee costs and make necessary resource allocations to help ensure a successful, cost-effective census.

The Bureau's cost estimate also lacks complete information, such as sensitivity analysis regarding assumptions that could affect cost drivers. OMB Circular A-94 provides guidelines for cost-benefit analysis of federal programs and recommends that agencies develop a sensitivity analysis for major projects with significant uncertainty, like the decennial census. The circular provides a method for determining how sensitive outcomes relate to changes in assumptions. In January 2004, we reported that the Bureau could provide more robust information on the likelihood that the values the Bureau assigned to key cost drivers could differ from those initially assumed. We also stated that updates of the life-cycle cost could be timelier—previously the life-cycle cost estimate had been provided at 2-year intervals.¹⁶ While the Bureau agreed to provide updates of the life-cycle cost annually, the Bureau's latest life-cycle cost document does not contain a sensitivity analysis on assumptions that impact cost.

Having transparent information about cost estimates is especially important, because decennial costs are sensitive to many key assumptions.

¹⁶ [GAO-04-37](#).

In fact, for the 2000 Census, the Bureau's supplemental funding request for \$1.7 billion in fiscal year 2000 primarily involved changes in assumptions related to increased workload, reduced employee productivity, and increased advertising. Given the cost of the census in an era of serious national fiscal challenges, it would be beneficial for the Bureau and Congress to have sensitivity information about the likelihood—high, medium, or low—that certain assumptions would drive costs. By providing this information, the Bureau would better enable Congress to consider funding levels in this uncertain environment.

Conclusions

Questions have been raised about the impact of proposed reductions in the Bureau's fiscal year 2007 overall budget request. Would such a budgetary change cause the dramatic changes in the decennial's overall design and life-cycle cost that the Bureau predicts? The answer is that given the lack of consolidated, timely, and detailed plans and cost estimates, we simply cannot tell. Importantly, this testimony notes that the preparatory steps for the 2010 Census have almost reached a point where the Bureau will no longer be able to effectively undertake design changes and other significant corrective actions if such are needed—for example, in response to unanticipated failures of the MCD. To help policymakers make informed decisions, including funding decisions, the Bureau needs to provide policymakers with comprehensive, timely, and updated information.

As we have previously reported, the Bureau has planned earlier than in the past and that its plans and efforts to reengineer the census have potential to contain costs. However, we believe the Bureau needs to do more. In this testimony, as well as in our previous reports and testimonies, we have discussed the Bureau's ongoing emphasis on reengineering the census to contain costs. We have noted that while the \$11.3 billion estimate makes the 2010 Census the most expensive in history, new cost drivers have emerged. As we previously recommended, a periodically updated comprehensive project plan and cost estimate that is supported by transparent, detailed, and comprehensive analyses and documentation would enable analysts, policymakers, and others to ascertain whether significant risks exist that could cause costs to increase. We believe that in this era of serious national budget challenges, it is important for the Bureau to implement our 2004 recommendation not only for this fiscal year but every fiscal year of the 2010 decennial life-cycle. To conduct its oversight and budgetary functions, Congress needs the Bureau to provide it with an annually updated comprehensive, integrated project plan which

includes milestones, itemized costs, measurable goals, and risk mitigation plans.

That concludes my statement, Mr. Chairman. I would be pleased to respond to any questions you or other members of the Subcommittee may have.

Contacts and Acknowledgments

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Attachment I: Related Products by GAO

GAO Products

2010 Census: Census Bureau Needs to Take Prompt Actions to Resolve Long-standing and Emerging Address and Mapping Challenges. [GAO-06-272](#). Washington, D.C.: June 15, 2006.

2010 Census: Costs and Risks Must be Closely Monitored and Evaluated with Mitigation Plans in Place. [GAO-06-822T](#). Washington, D.C.: June 6, 2006.

2010 Census: Census Bureau Generally Follows Selected Leading Acquisition Planning Practices, but Continued Management Attentions Is Needed to Help Ensure Success. [GAO-06-277](#). Washington, D.C.: May 18, 2006.

Census Bureau: Important Activities for Improving Management of Key 2010 Decennial Acquisitions Remain to be Done. [GAO-06-444T](#). Washington, D.C.: March 1, 2006.

2010 Census: Planning and Testing Activities Are Making Progress. [GAO-06-465T](#). Washington D.C.: March 1, 2006.

Information Technology Management: Census Bureau Has Implemented Many Key Practices, but Additional Actions Are Needed. [GAO-05-661](#). Washington, D.C.: June 16, 2005.

2010 Census: Basic Design Has Potential, but Remaining Challenges Need Prompt Resolution. [GAO-05-09](#). Washington, D.C.: January 12, 2005.

Data Quality: Census Bureau Needs to Accelerate Efforts to Develop and Implement Data Quality Review Standards. [GAO-05-86](#). Washington, D.C.: November 17, 2004.

Census 2000: Design Choices Contributed to Inaccuracies in Coverage Evaluation Estimates. [GAO-05-71](#). Washington, D.C.: November 12, 2004.

American Community Survey: Key Unresolved Issues. [GAO-05-82](#). Washington, D.C.: October 8, 2004.

2010 Census: Counting Americans Overseas as Part of the Decennial Census Would Not Be Cost-Effective. [GAO-04-898](#). Washington, D.C.: August 19, 2004.

2010 Census: Overseas Enumeration Test Raises Need for Clear Policy Direction. [GAO-04-470](#). Washington, D.C.: May 21, 2004.

2010 Census: Cost and Design Issues Need to Be Addressed Soon. [GAO-04-37](#). Washington, D.C.: January 15, 2004.

Decennial Census: Lessons Learned for Locating and Counting Migrant and Seasonal Farm Workers. [GAO-03-605](#). Washington, D.C.: July 3, 2003.

Decennial Census: Methods for Collecting and Reporting Hispanic Subgroup Data Need Refinement. [GAO-03-228](#). Washington, D.C.: January 17, 2003.

Decennial Census: Methods for Collecting and Reporting Data on the Homeless and Others Without Conventional Housing Need Refinement. [GAO-03-227](#). Washington, D.C.: January 17, 2003.

2000 Census: Lessons Learned for Planning a More Cost-Effective 2010 Census. [GAO-03-40](#). Washington, D.C.: October 31, 2002.

The American Community Survey: Accuracy and Timeliness Issues. [GAO-02-956R](#). Washington, D.C.: September 30, 2002.

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