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Testimony

Before the Subcommittee on Information Policy, Census, and National Archives, Committee on Oversight and Government Reform, House of Representatives

For Release on Delivery
Expected at 2:00 p.m. EDT
Tuesday, April 24, 2007

2010 CENSUS

Design Shows Progress, but Managing Technology Acquisitions, Temporary Field Staff, and Gulf Region Enumeration Require Attention

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Highlights

Highlights of [GAO-07-779T](#), testimony before the Subcommittee on Information Policy, Census, and National Archives, Committee on Oversight and Government Reform, House of Representatives

Why GAO Did This Study

The decennial census is a Constitutionally-mandated activity that produces data used to apportion congressional seats, redraw congressional districts, and allocate billions of dollars in federal assistance. The Census Bureau (Bureau) estimates the 2010 Census will cost \$11.3 billion, making it the most expensive in the nation's history. This testimony discusses the Bureau's progress in preparing for the 2010 Census to (1) implement operations to increase the response rate and control costs; (2) use technology to increase productivity; (3) hire and train temporary staff; and (4) plan an accurate census in areas affected by hurricanes Katrina and Rita.

The testimony is based on previously issued GAO reports and work nearing completion in which GAO observed recruiting, hiring, and training practices in the 2006 test, and visited localities that participated in the Local Update of Addresses Dress Rehearsal as well in the Gulf Coast region.

What GAO Recommends

At this time, GAO is not making new recommendations, but past reports recommended steps for the Bureau to enhance the mobile computing devices and promote an accurate census in areas impacted by hurricanes Katrina and Rita. The Bureau generally agreed with these recommendations and has acted to implement some of them.

www.gao.gov/cgi-bin/getrpt?GAO-07-779T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Mathew J. Scire at (202) 512-6806 or sciremj@gao.gov.

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What GAO Found

The Bureau has made progress towards implementing a re-engineered census design that holds promise for increasing the response rate, thereby controlling the cost of the census while promoting accurate results. The re-engineered design includes a short form only census designed to increase the response rate by about 1 percent and a targeted second mailing, which is expected to increase response by between 7 to 10 percent. Both of these initiatives are new, have been tested, and will be a part of the 2010 Census design. According to Bureau officials, a 1 percent increase in the response rate can save \$75 million, making these initiatives critical to the new design.

Uncertainty surrounds a keystone to the reengineered census, the mobile computing device (MCD). The MCD allows the Bureau to automate operations and eliminate the need to print millions of paper questionnaires and maps used by census workers to conduct census operations and to assist in managing payroll. The MCD, tested in the 2004 and 2006 census tests, was found to be unreliable. While a contractor has developed a new version of the MCD, the device will not be field tested until next month, leaving little time to correct problems that might emerge during the 2008 Dress Rehearsal.

Timeline of Selected Key Decennial Events

Dates	Decennial activity
Jan. 2007–Jan. 2010	Local Update of Census Addresses (localities assist in updating address lists and maps)
Feb. 2006–Jan. 2009	2008 Dress Rehearsal (Bureau's rehearsal of all planned decennial operations)
Jan. 2008	Opening of 12 Regional Census Centers
Oct. 2008	Opening of about 455 Local Census Offices
Apr.–Sept. 2009	Address Listing Activities (staff validate address lists and maps)
Apr. 1, 2010	Census Day
Apr.–July 2010	Nonresponse Follow-up (field staff follow-up in person at housing units of nonresponding persons)
Dec. 31, 2010	Delivery of apportionment counts to the President
Mar. 31, 2011	Complete delivery of redistricting data to the states

Source: GAO summary of Census Bureau data.

The Bureau faces challenges in recruiting, hiring, and training an estimated 600,000 temporary employees. For example, opportunities exist for the Bureau to hone its recruiting efforts to identify individuals who would be more likely to be effective at census work and willing to work throughout an operation. Also, census workers indicated a need for additional training on reluctant respondents as well as location-specific challenges they encounter. The Bureau must also be prepared to accurately count the population affected by hurricanes Katrina and Rita. The Bureau has contacted local officials in the Gulf Area and is developing a plan that includes workshops and special staffing considerations.

Mr. Chairman, Mr. Turner, Members of the Subcommittee:

Thank you for the opportunity to be here today to discuss the status of the Census Bureau's (Bureau) progress in preparing for the 2010 Census. Based on issued and ongoing work, my testimony today addresses the Bureau's efforts to prepare for the next decennial by (1) implementing operations designed to improve the completeness and accuracy of the census as well as to increase response rate and hence control costs, (2) using automation and technology to increase productivity, (3) recruiting, hiring, and training peak temporary staff of about 600,000 in 2010 in a challenging environment, and (4) planning how to ensure an accurate population count in areas affected by hurricanes Katrina and Rita.

As you know, Mr. Chairman, the census is a critical national effort mandated by the Constitution. Census data are used to apportion seats in the Congress, redraw congressional districts, allocate billions of dollars in federal assistance to state and local governments, and for numerous other public and private sector purposes. In addition, the census is a complicated undertaking and substantial investment, requiring careful planning, risk management, and oversight to ensure its ultimate success. The Bureau estimates the 2010 Census will cost \$11.3 billion over its life-cycle, making it the most expensive census in our country's history, even after adjusting for inflation. Since the 2000 Census, we have been examining how the Bureau is preparing for the 2010 Census, including incorporating lessons learned from the 2000 Census into its planning for the 2010 decennial. Given the importance of a successful enumeration, for the last 3 decennials, we have supported an approach to oversight that is timely, rigorous, constructive, and holds the Bureau accountable for results.

Today's hearing is particularly timely. The Bureau is now conducting the 2008 Dress Rehearsal's Local Update of Census Addresses (LUCA) program, where local, state, and tribal governments are given the opportunity to review and suggest changes to Census Bureau address lists and maps. Beginning in early May 2007, the Bureau will deploy the hand-held mobile computing devices (MCDs)—a keystone to the reengineered Census—to verify address data as part of the address canvassing portion of the Dress Rehearsal. We plan to be on-hand to observe the functionality and usability of the MCDs at the dress rehearsal sites in North Carolina and California where the Bureau will conduct a dry run of the full enumeration planned for 2010. "Census Day" for this exercise is April 1, 2008.

As we have testified in the past, the Bureau's ongoing reengineering of the decennial census—including changes in the survey design and greater use of technology—could have important benefits in improved efficiencies and cost-containment as well as the accuracy, quality, and consistency of data collected. But these changes, as well as intervening events, raise new risks that bear watching. Also, given the sheer size of census operations, refinements to recruiting, hiring, and training can have substantial results.

In summary, our recent work on the reengineering of and preparations for the 2010 decennial have yielded a number of observations about actions the Bureau has taken to promote an accurate and cost-effective census.

- The Bureau has taken steps to increase response rates through such measures as moving to a short form, and utilizing a second mailing.
- The MCD version being deployed during the upcoming dress rehearsal will be used for the first time in the field—this is the prototype under contract for the 2010 Census—and if it does not function as expected or needed, little time will be left for the Bureau to take corrective action. Overall, the Bureau's greater reliance on contractor-developed automation and technology for the 2010 Census call for greater focus on sound acquisition and management of these key investments.
- The Bureau's efforts to recruit, hire, and train a sufficient workforce to enumerate an increasingly hard-to-find and reluctant population in a more technology-dependent census presents a unique challenge for the Bureau to refine its recruiting practices and enhance its training.
- The intervention of hurricanes Katrina and Rita have placed additional demands on the Bureau to prepare for enumerating a large population displaced by these devastating storms, in an environment in which local governments' capacities are constrained and physical infrastructure and services have not yet returned to normal.

Given these complexities, our message remains that the risks associated with the decennial must be closely monitored, evaluated, and managed, with mitigation plans in place where appropriate, to help ensure that accurate results are delivered on time and within projected costs.

My remarks today are based primarily on reports that we have issued from 2002 through July 2006 on the planning and development of the 2010 Census, as well as the results of work nearing completion. (Please see app. I for a list of relevant reports.) For the 2004 field test, we visited Queens, New York, and several counties in rural south-central Georgia. We visited the Texas and South Dakota test sites during the 2006 field test. During these visits we observed such operations as the address canvassing

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 non-response follow-up operation (NRFU)—where enumerators collect information from those households that do not return their initial questionnaire. We also observed key recruiting, hiring, and training activities during the 2006 test completed last summer. During the autumn of 2006, we observed preparations for and the conduct of the Local Update of Census Addresses (LUCA) phase of the 2008 Dress Rehearsal in sites located in North Carolina and California, and in January 2007 we visited areas in Louisiana, Mississippi, and Texas affected by hurricanes Katrina and Rita. We conducted our work in accordance with generally accepted government auditing standards.

Background

The decennial census is the nation’s largest, most complex survey. In April 2009, address canvassing—a field operation for verifying and correcting addresses for all households and street features contained on decennial maps—will begin. One year later, the Bureau will mail census questionnaires to the majority of the population in anticipation of Census Day, April 1, 2010. Those households who do not respond will be contacted by field staff through the NRFU operation to determine the number of people living in the house on Census Day, among other information. In addition to address canvassing and NRFU, the Bureau conducts other operations, for example, to gather data from residents from group quarters, such as prisons or college dormitories. The Bureau also employs different enumeration methods in certain settings, such as remote Alaska enumeration, in which people living in inaccessible communities must be contacted in January 2010 in anticipation of the spring thaw which makes travel difficult, or update/enumerate, a data collection method involving personal interviews, used in communities where many housing units may not have typical house number-street name mailing addresses. Further, the efforts of state and local government are enlisted to obtain a more complete address file through the LUCA program.

The census is also conducted against a backdrop of immutable deadlines, and the census’s 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 mandated reporting requirements, census activities must occur at specific times and in the proper sequence. The table below shows some dates for selected, key decennial activities.

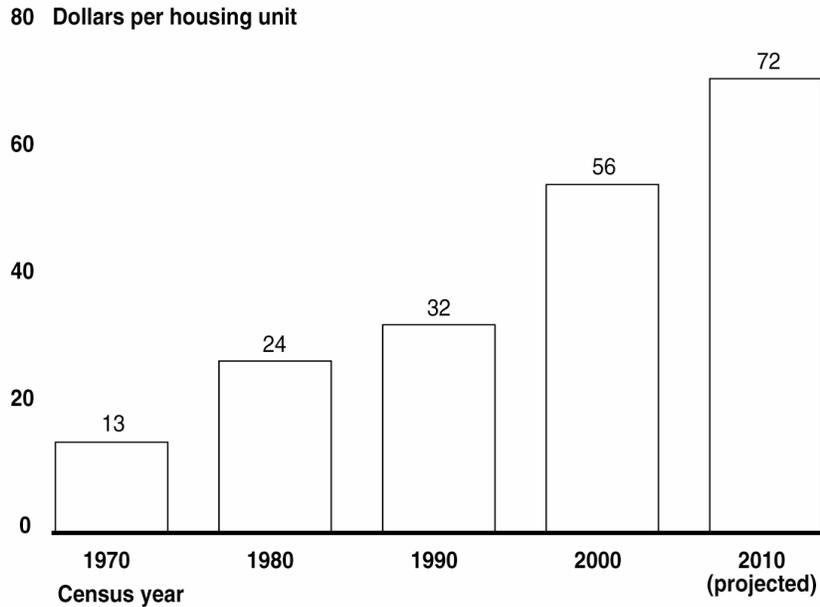
Table 1: Timeline of Selected Key Decennial Events

Beginning and End Dates	Decennial activity
Jan. 2007–Jan. 2010	Local Update of Census Addresses (localities assist in updating address lists and maps)
Feb. 2006–June 2009	2008 Dress Rehearsal (Bureau’s rehearsal of all planned decennial operations)
Jan. 2008	Opening of 12 Regional Census Centers
Oct. 2008	Opening of 455 Local Census Offices
Apr.–Sept. 2009	Address Listing Activities (Bureau field staff validate address lists and maps)
Apr. 1, 2010	Census Day
Apr.–July 2010	Nonresponse Follow-up (Field staff follow-up in person at housing units of nonresponding persons)
Dec. 31, 2010	Delivery of apportionment counts to the President
Mar. 31, 2011	Complete delivery of redistricting data to states

Source: GAO summary of Census Bureau data.

The Bureau estimates that the 2010 Census will cost \$11.3 billion over its life-cycle, making it the most expensive in the nation’s history. While some cost growth is expected, partly because the number of housing units has increased, the estimated cost escalation has far exceeded the housing unit increase. The Bureau estimates that the number of housing units for the 2010 Census will increase by 10 percent over 2000 Census levels, but the average 2010 cost to enumerate a housing unit is expected to increase by about 29 percent from 2000 levels (from \$56 to \$72) (see fig. 1). As the Bureau plans for 2010, maintaining cost effectiveness will be one of the single greatest challenges confronting the agency.

Figure 1: Decennial Census Average Cost per Housing Unit (in Constant Fiscal Year 2000 Dollars)



Source: GAO analysis of U.S. Census Bureau figures.

According to the Bureau, the increasing cost of the census is caused by various societal trends—such as increasing privacy concerns, more non-English speakers, and people residing in makeshift and other nontraditional living arrangements—making it harder to find people and get them to participate in the census.

The Bureau Has Taken Steps to Increase Response Rates

The Bureau has reengineered the decennial census, including implementing new initiatives aimed at increasing the response rate. Furthermore, the Bureau also plans to begin to implement its outreach and communications campaign, an effort used in the 2000 Census that was designed to increase awareness and encourage individuals to respond to the census questionnaire. Increasing the decennial's response rate can result in significant savings because the Bureau can reduce the staffing and costs related to NRFU, as well as yield more complete and accurate data. According to the Bureau, for every one-percentage point increase in the response rate, the Bureau will be able to save \$75 million.

The Bureau plans to increase response rate by several means, including conducting a short-form-only census. The Bureau is able to do this

because in 1996 the Bureau began efforts to replace the decennial long form with the American Community Survey. Since 1970, the overall mail response rate to the decennial census has been declining steadily, in part, because of the burden of responding to the long form, which was sent to a sample of respondents. In the 1980 Census, the overall 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 but in 2000 appeared to be leveling off at about 64 percent. In the 2000 Census when comparing the short form to the long form the Bureau found the short form response rate of 66.4 percent was 12.5 percentage points higher than the long form response rate of 53.9 percent. While the difference between the long and short form response rates are significant, the Bureau in its initial assumption for the 2010 Census predicted that conducting a short-form-only census will yield only a 1-percent increase in the overall mail response rate.

A targeted second mailing to households that fail to respond to the initial census questionnaire can increase the ultimate response rate. According to Bureau studies, sending a second questionnaire could yield a gain in overall response of 7 to 10 percentage points from non-responding households, thus potentially saving the Bureau between \$525 million to \$700 million dollars (given that every 1 percentage point increase in response may save \$75 million). In reports, we have highlighted that a targeted second mailing could boost the mail response rate, which in turn would result in considerable savings by reducing the number of costly personal visits enumerators would need to make to nonresponding households.¹ The Bureau has never before included this operation as part of a decennial census and over the decade has been testing its feasibility. A targeted second mailing was a part of 2006 test and boosted the response rate by 8.8 percent at the Austin, Texas test site. According to Bureau officials targeted second mailing will be a part of the 2010 Census design.

For the 2010 Census the Bureau also intends to increase response rates by undertaking a public awareness campaign as it did in the previous census. In the 2000 Census that effort was comprised of two major activities:

¹GAO, *2010 Census: Basic Design Has Potential, but Remaining Challenges Need Prompt Resolution*, [GAO-05-9](#) (Washington, D.C.: Jan. 12, 2005) and GAO, *2000 Census: Contingency Planning Needed to Address Risk That Pose a Threat to a Successful Census*, [GAO/GGD-00-6](#) (Washington, D.C.: Dec. 14, 1999).

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- conducting the first-ever paid advertising campaign aimed at increasing the mail response rate, including the historically undercounted populations, and
 - leveraging the value of local knowledge by building 140,000 partnerships at every level including state, local , and tribal governments; community-based organizations; and the media and private-sector organizations to elicit public participation in the census.

In 2001 we reported that for the 2000 Census, it appeared that encouraging people to respond to the census questionnaire was successful, in part due to the Bureau's partnership efforts.² For example, according to the Bureau, it achieved an initial mail response rate of about 64 percent, 3 percentage points higher than it had anticipated when planning for NRFU. This was a noteworthy accomplishment and, as a result, the Bureau had over 3 million fewer housing units to follow-up with than it had initially planned.

The Bureau will soon begin its outreach and communication effort for 2010. The Bureau plans to award the communications contract in August 2007 and will begin hiring partnership specialists at headquarters starting in fiscal year 2008.

The Bureau's Plans for Greater Use of Automation and Technology Demand Greater Risk Management

The MCD is a keystone to the reengineered census. It allows 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 NRFU, as well as assisting to manage field staff's payroll. The benefits of using the MCD were tested in the 2004 and 2006 tests. According to the Bureau, 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 NRFU workload by nearly 6 percent. The ability to remove late mail returns from the Bureau's NRFU workload reduces costs, because census field workers no longer need to make expensive follow-up visits to households that return their questionnaire after the mail-back deadline. If the Bureau had possessed this capability during the 2000 Census, it could have eliminated the need to visit nearly 773,000 late-responding households and saved an estimated \$22 million (based on our estimate that a 1-percentage-point increase in

²GAO, *2000 Census: Review of Partnership Program Highlights Best Practices for Future Operations*, [GAO-01-579](#) (Washington, D.C.: Aug. 20, 2001).

workload could add at least \$34 million in direct salary, benefits, and travel costs to the price tag of NRFU³).

However, the Bureau's ability to collect and transmit data using the MCD is not fully tested and, at this point, constitutes a risk to the cost-effective implementation of the 2010 Census. During the 2004 test of NRFU and the 2006 test of address canvassing, the MCDs experienced significant reliability problems. For example, 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 NRFU operation.⁴ Moreover, during the 2006 test, 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.

Bureau officials believe the MCD's performance problems will be addressed through a contract awarded on March 30, 2006, to develop a new MCD. A prototype of the MCD has been developed and delivered by the contractor for use in the 2008 Dress Rehearsal. However, operational testing of the MCD will not occur until May 2007, when address canvassing for the 2008 Dress Rehearsal occurs, and if problems do emerge, little time will be left to 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. We are currently reviewing the cost, schedule and performance status of the contract for the MCDs.

We plan to visit the dress rehearsal sites to determine the functionality of the devices to collect and transmit data. If after the 2008 Dress Rehearsal the MCD is found not to be reliable, the Bureau could be faced with the daunting possibility of having to revert to the costly, paper-based census used in 2000.

Although the greater use of automation offers the prospect of greater efficiency and effectiveness, these actions also introduce new risks. The automation of key census processes involves an extensive reliance on

³GAO/GGD-00-06.

⁴GAO-05-9.

contractors. Consequently, contract oversight and management becomes a key challenge to a successful census. As part of the Bureau's plans to increase the use of automation and technology for the 2010 Census, the Bureau estimates that it will spend about \$ 3 billion on information technology (IT) investments. The Bureau will be undertaking several major acquisitions, including the Decennial Response Integration System (DRIS)—a system for integrating paper and telephone responses; the Field Data Collection Automation (FDCA) program—the systems and support equipment for field office data collection activities including the MCDs to be used by enumerators; the Data Access and Dissemination System (DADS II)—a system for tabulating and disseminating data from the decennial census and other Bureau surveys to the public; and the modernization of the Master Address File/Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) system, which provides the address list, maps, and other geographic support services for the decennial and other Bureau surveys, known as the MAF/TIGER Accuracy Improvement Project (MTAIP). Together these and other systems are to support collection, processing, and dissemination of census data.

In March 2006, we testified on the Bureau's acquisition and management of two key information technology system acquisitions for the 2010 Census—FDCA and the DRIS.⁵ We reported on the Bureau's progress in implementing acquisitions and management capabilities for these initiatives. To effectively manage major IT programs, organizations should use sound acquisition and management processes to minimize risk and thereby maximize chances for success. Such processes include project and acquisition planning, solicitation, requirement development and management, and risk management. We reported that while the project offices responsible for these two contracts have carried out initial acquisition management activities, neither office had the full set of capabilities they needed to effectively manage the acquisitions, including implementing a full risk management process. We also made recommendations for the Bureau to implement key activities needed to effectively manage acquisitions. For example, we recommended that the Bureau's project office for DRIS complete a project plan and obtain stakeholder concurrence before initiating additional development work

⁵GAO, *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).

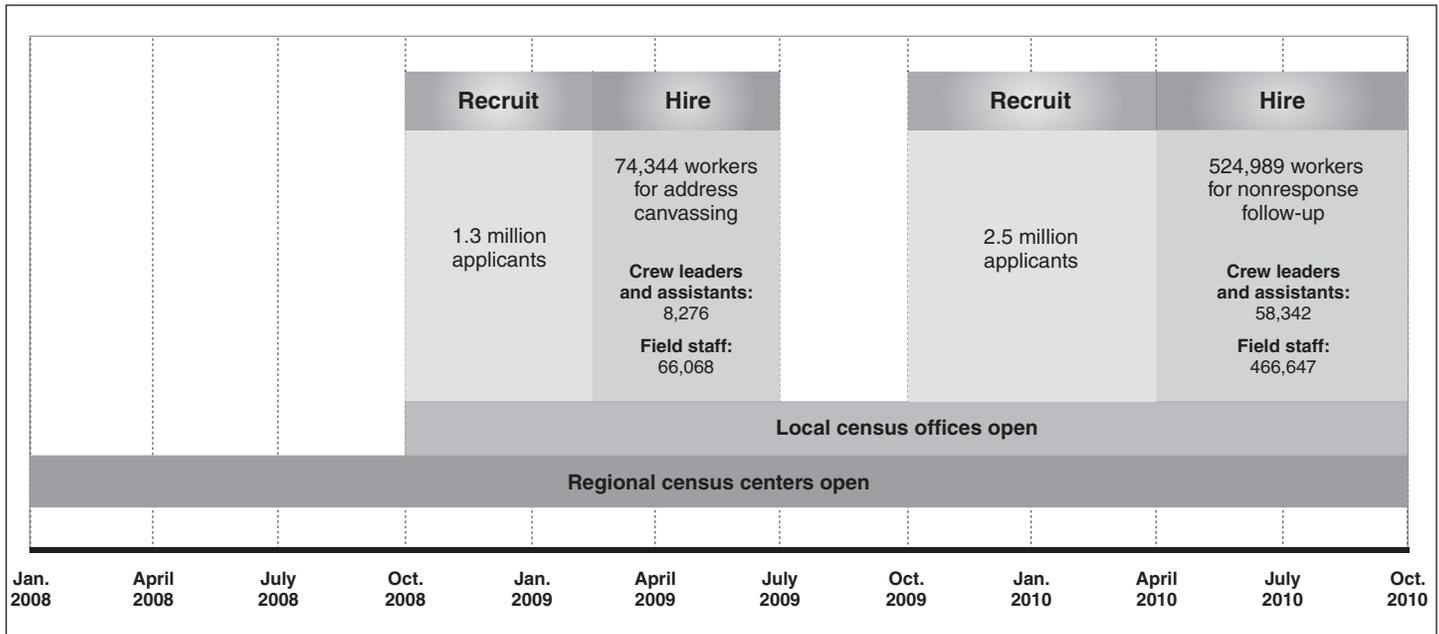
and obtain validation, management, and customer approval of DRIS requirements. In response to our recommendation, the Bureau has finalized the project plan for DRIS and has obtained stakeholders' commitment. As a result, the DRIS project office will have the direction that it needs to successfully avoid unanticipated changes.

We are reviewing the cost, schedule, and performance status for DRIS, FDCA, MTAIP, and DADS II to determine whether the Bureau is adequately managing risks associated with these key systems. Effective risk management includes identifying and analyzing risks, assigning resources, developing risk mitigation plans and milestones for key mitigation deliverables, briefing senior-level managers on high-priority risks, and tracking risks to closure and is an important project management discipline to ensure that key technologies are delivered on time, within budget, and with the promised functionality. This discipline is essentially important given the immovable decennial census deadline. We are scheduled to complete our work on that engagement by September 2007

The Bureau Can Improve Its Recruiting, Hiring, and Training Efforts

Prior to Census Day, Bureau field staff perform the address canvassing operation, during which they verify the addresses of all housing units. The Bureau estimates spending \$350 million to hire about 74,000 field workers for the address canvassing operation. About 1 year later, the Bureau mails out questionnaires to about 130 million households nationwide. However, the Bureau expects that about 40 million households will not return the questionnaire. To collect information from those households, the Bureau hires temporary field staff—based out of local census offices—to visit each nonresponding household in its NRFU operation. The Bureau expects to spend over \$2 billion to employ about 525,000 temporary field staff for that activity. As shown in fig. 2, in total the Bureau will recruit and test 3.8 million applicants for addressing canvassing and NRFU, hiring some 600,000 people for the 2010 Census.

Figure 2: The Bureau’s Recruiting and Hiring Timeline for Temporary Field Staff During the 2010 Census



Source: GAO and U.S. Census Bureau.

The Bureau Can Refine Its Approach to Recruiting and Hiring Temporary Field Staff

For the 2010 Census, the Bureau plans to use a similar approach to recruit and hire workers as it used during Census 2000. These strategies made the Bureau a more attractive employer to prospective candidates and helped provide a steady stream of applicants during Census 2000. Despite a tight labor market, the Bureau attracted about 3.7 million qualified applicants and hired about half a million enumerators at peak. Some of the broad approaches from 2000 that the Bureau plans on implementing for the 2010 census include

- recruiting five times more applicants than the needed number of field workers to ensure a considerable depth in the applicant pool from which to hire;
- “frontloading” or hiring twice the number of people needed to do the work in anticipation of high levels of turnover;
- exercising the flexibility to raise pay rates for local census offices that were encountering recruiting difficulties; and
- launching a recruitment advertising campaign, which totaled over \$2.3 million for Census 2000.

As in 2000, the Bureau faces the daunting tasks of meeting its recruiting and hiring goals. However, it also faces additional challenges, such as demographic shifts whereby the population is increasingly diverse and difficult to locate, and newer challenges, like the Bureau's use of handheld computers for data collection in the field. It does plan some improvements to how it recruits and hires its temporary workforce to carry out the 2010 Census. For example, the Bureau has conducted and incorporated information collected from employee debriefings that could improve its recruiting and hiring processes. Bureau officials believe this feedback would be helpful in evaluating and refining its hiring and recruiting processes and intend to incorporate some of that information for the 2008 Dress Rehearsal. However, it can do more to target its recruitment of field staff.

The Bureau casts a wide net to recruit its temporary workforce to ensure it has a large enough applicant pool from which to hire. In commenting on a draft of this work, Commerce noted that the Bureau's priority is to reach out as broadly as possible to the diverse communities in the county to attract several million applicants. We recognize that when recruiting and hiring for hundreds of thousands of positions, the Bureau faces a challenge in assessing applicants' potential success or willingness to work. However, opportunities exist for the Bureau to hone its recruiting efforts to identify individuals who would be more likely to be effective at census work and willing to continue working throughout an operation. Along those same lines, the Bureau could also evaluate the factors associated with an applicant's success, willingness to work in an operation, and likelihood of attrition to refine its hiring. Despite Commerce's reservations about refining its current recruiting and hiring strategies, we believe that the Bureau could do more to understand what makes for a successful recruit and, by hiring such applicants, reduce operating costs.

Another recruiting and hiring issue we identified in our completed work is related to how the crew leaders are selected. We found that the Bureau's tools for hiring crew leaders could better distinguish the skills needed for those positions. Crew leaders fill an important role in the Bureau's field activities because they supervise the work of crews of field workers; train field workers; and will be counted on to troubleshoot the MCDs. We found that despite the different skill requirements of crew leaders and other field staff—for example, while it was important for field staff working in the NRFU operation to have arithmetic and visual identification skills, crew leaders need those skills as well as additional skills, such as management, leadership, and creative thinking—the Bureau used the same set of hiring tools to hire individuals for crew leaders and other field positions during

the 2006 Census Test. In its review of the 2004 Census Test, the Department of Commerce Office of Inspector General OIG also reported that Bureau officials said that the applicants' the multiple-choice test does not capture the technical or supervisory skills needed by crew leaders.⁶

The Bureau hired a contractor to assess whether the tools used during the 2006 Census Test selected individuals with the skills necessary to conduct field work using MCDs;⁷ however, the Bureau has no current plans to make changes to its hiring process that would include differentiated hiring tools for crew leaders and other positions. Without hiring tools that distinguish between skills needed for the crew leader and other positions, the Bureau does not have assurances that it is selecting crew leaders that can best perform important duties like providing training, managing other field staff, and troubleshooting handheld computers. In commenting on our draft, Commerce indicated that the Bureau needs to evaluate its hiring tools. It is also working to identify and test what the appropriate skills are for the crew leader position.

Finally, we found that the Bureau does not collect performance data needed to rehire former workers from prior or ongoing operations to whom it may give hiring priority. Officials say they try to exclude those terminated for cause (such terminations can result when workers have performance or conduct problems such as selling drugs or striking another worker). Bureau officials point to its internal systems, which, they say preclude the rehiring of employees who were terminated for cause. However, the OIG and field officials told us that poor performers may not always be terminated. Without better information on employee performance, the Bureau cannot ensure that the weakest performers are not rehired. Over the course of the 2006 Census Test, almost 15 percent of all field staff were rehired. If this percentage were to be rehired during the 2010 Census, the Bureau would not have performance data to meaningfully evaluate whether to rehire approximately 90,000 individuals. The Bureau believes that the pace of the decennial, particularly NRFU, is such that local census officials would not have enough time to consider past performance when making hiring decisions. However, we believe that the Bureau has enough time. For example, performance data could be

⁶Department of Commerce, Office of Inspector General, *Improving Our Measure of America: What the 2004 Census Test Can Teach Us in Planning for the 2010 Decennial Census*, OIG-16949 (Washington, D.C.: September 2004).

⁷Bureau officials told us that final results of this study are not yet available.

collected during address canvassing to be used to assess workers for NRFU, nearly one-year later.

Opportunities Exist for the Bureau to Improve Training for Field Staff

The Bureau has employed essentially the same approach to training since the 1970 Census. To conduct training, the Bureau solicits free or low-cost training spaces from local organizations, such as churches or libraries. Training classes typically include 15 to 20 students. Crew leaders usually train their crews, with the assistance of at least one crew leader assistant, using a verbatim training approach, whereby crew leaders read training scripts word-for-word over the course of several days. Similarly, the crew leaders were themselves trained by their supervisors in a “train-the-trainers” approach. The length of training varies by operation; for NRFU, training took almost 42 hours over the course of 6 days during the 2006 test.

The Bureau and others, including us, have reported that the Bureau should consider alternate approaches to training delivery. Our review of the 2004 Census Test found that, as a result of the demographic and technological changes that have taken place since 1970, the Bureau might want to explore alternatives to its verbatim approach to training.⁸ Moreover, in 2004, the OIG suggested the Bureau explore the use of interactive training methods, as the Bureau does for other non-decennial surveys.⁹ For example, while many field staff we contacted during the 2006 test said their overall impression of training was generally positive, many added that videos or visuals would or might improve training. In addition, while the Bureau is providing some computer-based training on using the handheld computers in key operations, overall the Bureau has made limited changes to the approach it uses to deliver training and has not evaluated alternative approaches to providing training. It is notable that observations during the 2004 and 2006 tests showed that field staff may have missed important parts of training. Contractor employees saw students playing games on their MCDs during training for the 2006 test,¹⁰ and in 2004 the OIG saw students not paying attention and falling asleep in

⁸GAO-05-9.

⁹Department of Commerce OIG, OIG-16949.

¹⁰The MCDs developed by Harris will not include software that will allow field staff to play games during training.

class, concluding that some may not have learned how to conduct census operations.¹¹

The content of the Bureau's training for field staff also has not changed substantially since Census 2000, despite the fact that, according to the Bureau itself, collecting data from the nation's population has become increasingly difficult. Field workers we spoke to during the 2006 test noted two related issues on which they had not received sufficient training—dealing with reluctant respondents and handling location-specific challenges.

According to the Department of Commerce OIG, in 2004 field staff complained that they felt unprepared to deal with reluctant respondents; the OIG report recommended the Bureau consider adding content to enhance training on this topic.¹² Moreover, our review of the Bureau's summaries of debriefings it conducted after the 2006 test indicated that field staff found respondent reluctance to be a challenge.¹³ Crew leaders noted that this was the most difficult task enumerators faced. In our field visits, we observed that without adequate preparation in dealing with reluctant responders, field staff developed their own strategies when confronted with these situations, resulting in inconsistent and sometimes inappropriate data collection methods. For example, when unable to contact respondents, one Texas enumerator looked up respondent information online, tried to find a phone number for another respondent from a neighborhood cat's collar, and illegally went through residents' mail.

Field staff may also need more training in overcoming location-specific challenges, such as rural conditions on the Cheyenne River Indian Reservation in South Dakota; and counting the transient student population in Austin, Texas. For example, in Austin, one crew leader explained that training spent a lot of time on mobile homes—which did not exist in his area—but very little time on apartment buildings, which are common there. Based on our observations of the 2004 test, we suggested that the Bureau supplement the existing training with modules

¹¹Department of Commerce OIG, OIG-16949.

¹²Department of Commerce OIG, OIG-16949.

¹³As previously discussed, these sessions aimed to obtain information that will improve Bureau procedures, including training. We reviewed summaries of debriefings conducted for three operations—NRFU, update/enumerate, and address canvassing.

geared toward addressing the particular enumeration challenges that field staff are likely to encounter in specific locales.¹⁴ During this review, the Bureau told us that it works with regional offices to develop 10-minute training modules for specific locations. For example, in 2000, Bureau officials said enumerators in Los Angeles were trained to look for small, hidden housing units, such as apartments in converted garages. Bureau officials said they provide guidance on the length of the modules and when they should be presented. However, they said they were not sure how often this kind of specialized training took place, nor had they allocated time during training to present specialized information.

We believe the Bureau could do more to assist local offices provide training that recognizes local conditions. Specifically, based on work we will be reporting shortly, we will recommend that the Bureau centrally develop training modules covering enumeration strategies in a variety of situations, such as mobile homes, large apartment buildings, and migrant worker dwellings, which local officials can selectively insert into their training if there is a need to train their field staff on that topic. Such modules would enhance the effectiveness of training by giving greater attention to the challenges field staff are likely to face. In commenting on this recommendation, Commerce noted that the Bureau works with managers in each regional census center to customize a location-specific training module for local census offices. Nonetheless, developing modules for different types of locations centrally would allow the Bureau to control the consistency and quality of training throughout the nation.

Bureau Is Designing Decennial Activities in the Geographic Area Affected by Hurricanes Katrina and Rita

As part of our evaluation of the Bureau's LUCA dress rehearsal, we visited the localities along the Gulf Coast to assess the effect the devastation caused by Hurricanes Katrina and Rita might have on LUCA and possibly other operations. The effects of Hurricanes Katrina and Rita are still visible throughout the Gulf Coast region. Hurricane Katrina alone destroyed or made uninhabitable an estimated 300,000 homes; in New Orleans, local officials reported that Hurricane Katrina damaged an estimated 123,000 housing units. Such changes in housing unit stock continue to present challenges to the implementation of the 2010 LUCA Program in the Gulf Coast region and possibly other operations. Many officials of local governments we visited in hurricane-affected areas said they have identified numerous housing units that have been or will be

¹⁴GAO-05-9.

demolished as a result of hurricanes Katrina and Rita and subsequent deterioration. Conversely, many local governments estimate that there is new development of housing units in their respective jurisdictions. The localities we interviewed in the Gulf Coast region indicated that such changes in the housing stock of their jurisdictions are unlikely to subside before local governments begin reviewing and updating materials for the Bureau's 2010 LUCA Program—in August 2007.¹⁵ Local government officials told us that changes in housing unit stock are often caused by difficulties families have in deciding whether to return to hurricane-affected areas. Local officials informed us that a family's decision to return is affected by various factors, such as the availability of insurance; timing of funding from Louisiana's "Road Home" program;¹⁶ lack of availability of contractors; school systems that are closed; and lack of amenities such as grocery stores. As a result of the still changing housing unit stock, local governments in hurricane-affected areas may be unable to fully capture reliable information about their address lists before the beginning of LUCA this year or address canvassing in April 2009. Furthermore, operation of local governments themselves has been affected by the hurricanes (see fig. 3). These local governments are focused on reconstruction and at least two localities we spoke to questioned their ability to participate in LUCA.

¹⁵The period for local review and update of addresses and maps for the 2010 LUCA Program is August 2007-March 2008.

¹⁶The "Road Home" Program was implemented by the State of Louisiana to provide compensation of up to \$150,000 for eligible homeowners affected by hurricanes Katrina and Rita.

Figure 3: City Halls in Mississippi and Louisiana Have Been Destroyed and City Officials Now Operate Out of Trailers



Source: GAO (January 2007).

Note: Pictures are from January 2007.

The mixed condition of the housing stock in the Gulf Coast will increase the Bureau's address canvassing workload. During our field work, we found that hurricane-affected areas have many neighborhoods with abandoned and vacant properties mixed in with occupied housing units. Bureau staff conducting address canvassing in these areas may have an increased workload due to the additional time necessary to distinguish between abandoned, vacant and occupied housing units. Another potential issue is that due to continuing changes in the condition in the housing stock, housing units that are deemed vacant or abandoned during address canvassing may be occupied on Census Day (Apr. 1, 2010). Bureau officials said that they recognize there are issues with uninhabitable structures in hurricane-affected zones. They noted that addresses marked as vacant or uninhabitable during address canvassing in the Gulf Coast region will not be deleted from the MAF, and said that they may adjust training for Bureau staff in hurricane-affected areas.

Workforce shortages may also pose significant problems for the Bureau's hiring efforts for address canvassing. The effects of hurricanes Katrina and Rita caused a major shift in population away from the hurricane-affected areas, especially in Louisiana. This migration displaced many low-wage workers. Should this continue, it could affect the availability of such workers for address canvassing and other decennial census operations. Bureau officials recognize the potential difficulty of attracting these

workers, and have recommended that the Bureau be prepared to meet hourly wage rates for future decennial staff that are considerably higher than usual. It has noted that its Dallas regional office, which has jurisdiction over hurricane-affected areas in Texas, Louisiana, and Mississippi, will examine local unemployment rates to adjust pay rates in the region, and use “every single entity” available to advertise for workers in the New Orleans area.

Early in 2006, we recommended that the Bureau develop plans (prior to the start of the 2010 LUCA Program in August 2007) to assess whether new procedures, additional resources, or local partnerships, may be required to update the MAF/TIGER database along the Gulf Coast—in the areas affected by hurricanes Katrina and Rita.¹⁷ The Bureau responded to our recommendations by chartering a team to assess the effect of the storm damage on the Bureau’s address list and maps for areas along the Gulf Coast and develop strategies with the potential to mitigate these effects. The chartered team recommended that the Bureau consult with state and regional officials (from the Gulf Coast) on how to make LUCA as successful as possible, and hold special LUCA workshops for geographic areas identified by the Bureau as needing additional assistance. While the Bureau (through its chartered team, headquarters staff and Dallas regional office) has proposed several changes to the 2010 LUCA Program for the Gulf Coast region, there are no specific plans for implementing the proposed changes.

In summary, Mr. Chairman, we recognize the Bureau faces formidable challenges in successfully implementing a redesigned decennial census. It must also overcome significant challenges of a demographic and socioeconomic nature due to the nation’s increasing diversity in language, ethnicity, households, and housing type, as well as an increase in the reluctance of the population to participate in the census. The need to enumerate in the areas devastated by hurricanes Katrina and Rita is one more significant difficulty the Bureau faces. We applaud the moves the Bureau has undertaken to redesign the census; we have stated in the past, and believe still, that the reengineering, if successful, can help control costs and improve cost effectiveness and efficiency. Yet, there is more that

¹⁷GAO, *2010 Census: Census Bureau Needs to Take Prompt Actions to Resolve Long-standing and Emerging Address and Mapping Challenges*, [GAO-06-272](#) (Wash. D.C.: June 15, 2006), and GAO, *2010 Census: Costs and Risks Must be Closely Monitored and Evaluated with Mitigation Plans in Place*, [GAO-06-822T](#) (Wash. D.C.: June 6, 2006).

the Bureau can do in examining and refining its recruiting, hiring, and training practices and in preparing to enumerate in the hurricane-affected areas. Also, the functionality and usability of the MCD—a key piece of hardware in the reengineered census—bears watching as does the oversight and management of information technology investments. All told, these areas continue to call for risk mitigation plans by the Bureau and careful monitoring and oversight by the Commerce Department, the Office of Management and Budget, the Congress, GAO, and other key stakeholders. As in the past, we look forward to supporting this subcommittee’s oversight efforts to promote a timely, complete, accurate, and cost-effective census.

Contact and Acknowledgments

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Individuals making contributions to this testimony included Betty Clark, Carlos Hazera, Shirley Hwang, Andrea Levine, Lisa Pearson, Mark Ryan, Niti Tandon, and Timothy Wexler.

Appendix I: Related GAO Products

2010 Census: Redesigned Approach Holds Promise, but Census Bureau Needs to Annually Develop and Provide a Comprehensive Project Plan to Monitor Costs. [GAO-06-1009T](#). Washington, D.C.: July 27, 2006.

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 Attention 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.

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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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