

GAO

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2010 CENSUS

Data Collection Is Under
Way, but Reliability of Key
Information Technology
Systems Remains a Risk

Statement of Robert Goldenkoff, Director
Strategic Issues



GAO

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Highlights of [GAO-10-567T](#), a 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

In March 2008, GAO designated the 2010 Census a high-risk area in part because of information technology (IT) shortcomings and uncertainty over the ultimate cost of the census, now estimated at around \$15 billion. The U.S. Census Bureau (Bureau) has since made improvements to various IT systems and taken other steps to mitigate the risks to a successful census. However, last year, GAO noted that a number of challenges and uncertainties remained, and much work remained to be completed under very tight time frames.

As requested, this testimony provides an update on the Bureau's readiness for an effective headcount, covering (1) the reliability of key IT systems; (2) a broad range of activities critical to an effective headcount, some of which were problematic in either earlier 2010 operations or in the 2000 Census, and (3) the quality of the Bureau's cost estimates. The testimony is based on previously issued and ongoing GAO work.

What GAO Recommends

GAO is not making new recommendations in this testimony, but past reports recommended that the Bureau strengthen its testing of key IT systems and better document and update its cost estimates. The Bureau generally agreed with these recommendations and is in varying stages of implementing them.

View [GAO-10-567T](#) or [key components](#). For more information, contact Robert Goldenkoff at (202) 512-2757 or goldenkoffr@gao.gov.

2010 CENSUS

Data Collection Is Under Way, but Reliability of Key Information Technology Systems Remains a Risk

What GAO Found

Overall, the Bureau's readiness for a successful headcount is mixed. On the one hand, performance problems continue to plague a work flow management system essential for the Bureau's field operations and a payroll processing system that will be used to pay more than 600,000 temporary workers. Both systems have not yet demonstrated the ability to function reliably under full operational loads, and the limited amount of time that remains to address their shortcomings creates a substantial challenge for the Bureau. Aside from the mail response, which is outside of the Bureau's direct control, the difficulties facing these two automated systems represent the most significant risk, jeopardizing the cost and quality of the enumeration.

On the other hand, the rollout of other key enumeration activities is generally on track, and the Bureau has taken action to address some previously identified problems. For example, the Bureau has taken steps to reduce the number of temporary workers with unreadable fingerprint cards, a problem that affected an earlier field operation. Among other actions, the Bureau plans to digitally capture a third and fourth set of fingerprints if the first two sets cannot be read for background security checks. The Bureau's 2010 Census communications campaign is also more robust than the one used in the 2000 Census. Key differences from the 2000 campaign include increased partnership staffing, expanded outreach to partner organizations, targeted paid advertising based on market and attitudinal research, and a contingency fund to address unexpected events. To increase participation rates, the Bureau plans to mail a second, replacement questionnaire to census tracts that had low or moderate response rates in the 2000 Census. To help ensure that hard-to-count populations are enumerated, the Bureau plans to employ several initiatives. For example, Service Based Enumeration is designed to count people who lack permanent shelter at soup kitchens, mobile food vans, and other locations where they receive services. The Be Counted program is designed to reach those who may not have received a census questionnaire. To help ensure a complete count of areas along the Gulf Coast, the Bureau is hand delivering an estimated 1.2 million census forms in areas that were devastated by hurricanes Katrina, Rita, and Ike.

In addition, the Bureau re-examined its cost estimate for Nonresponse Follow-up, the largest and most costly field operation where census workers follow up in person with nonresponding households. The Bureau provided a range of estimates, with \$2.3 billion as the mid-point. However, the Bureau's analyses of cost are not complete. According to the Bureau, it continues to reexamine the cost of two other operations related to nonresponse follow-up.

Moving forward, it will be important for the Bureau to quickly identify the problems affecting key IT systems and test solutions. Further, given the complexity of the census and the likelihood that other glitches might arise, it will be important for the Bureau to stay on schedule, monitor operations, and have plans and personnel in place to quickly address operational issues.

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss the U.S. Census Bureau's (Bureau) readiness for the 2010 Census. With Census Day, April 1, fast approaching, the nation has entered one of the most crucial time periods in the decade-long census life-cycle. In mid-March, the Bureau delivered questionnaires to around 120 million households, and in the coming weeks, the Bureau will launch additional operations aimed at counting people in migrant worker housing, boats, tent cities, homeless shelters, nursing homes, dormitories, prisons, and other diverse dwellings, as well as millions of households that fail to mail back their census questionnaires, all in an effort to ensure a complete and accurate enumeration. In short, the success of these operations will have a major impact on the ultimate cost and accuracy of the census.

The task confronting the Bureau is enormous. Few peacetime endeavors, if any, can match the 2010 Census in terms of size, scope, complexity, and immutable deadlines. Indeed, to secure a successful headcount, the Bureau needs to align thousands of activities, process millions of forms, hire around 1 million temporary employees, and partner with thousands of public and private sector entities across the country. The Bureau needs to do all this and more, do it right, and do it under an extremely tight schedule.

At the same time, the unprecedented commitment of resources and total cost of the census—now estimated at around \$14.7 billion—underscores the importance of identifying lessons learned from the 2010 headcount in order to reexamine the nation's approach to the 2020 Census and future population tallies.

As you know, in March 2008, we designated the 2010 Census a high-risk area because of cost overruns and weaknesses in the Bureau's information technology (IT) acquisition and contract management function.¹ In the months that followed, the Bureau made commendable progress in reducing the risks to a successful census. Nevertheless, this past February, we testified that overall the Bureau's readiness for a successful headcount is mixed. On the one hand, key IT systems—most notably an automated system used to manage field data collection known as the Paper-Based

¹GAO, *Information Technology: Significant Problems of Critical Automation Program Contribute to Risks Facing 2010 Census*, [GAO-08-550T](#) (Washington, D.C.: Mar. 5, 2008).

Operations Control System (PBOCS) and a personnel and payroll processing system called the Decennial Applicant Personnel and Payroll System (DAPPS)—were experiencing significant performance issues.² On the other hand, the rollout of other key enumeration activities is generally on track, and the Bureau has taken action to address some previously identified problems.

As requested, my remarks today will focus on the Bureau's preparedness for the 2010 Census and the challenges and opportunities that lie ahead. In particular, I will provide an update on the progress the Bureau is making in addressing issues that prompted us to designate the 2010 Census a high-risk area, including (1) the reliability of key IT systems; (2) a broad range of activities critical to an effective headcount, some of which were problematic in either earlier 2010 operations or in the 2000 Census; and (3) the quality of the Bureau's cost estimates. The broad range of activities I will discuss today include procedures for fingerprinting temporary employees; the rollout of key marketing efforts aimed at improving the participation of hard-to-count populations and how American Recovery and Reinvestment Act of 2009 (Recovery Act)³ funds are being used as part of that effort; the Bureau's plans for mailing a second, follow-up questionnaire and the removal of late mail returns; and the Bureau's plans to enumerate people who are vulnerable to being missed by the census, including the homeless and those displaced by recent economic conditions and the hurricanes that slammed the Gulf Coast.

My testimony today is based on our ongoing and completed reviews of key census-taking operations.⁴ In our review, we analyzed key documents, including plans, procedures, and guidance for the selected activities, and interviewed cognizant Bureau officials at headquarters and local census offices. In addition, we made on-site observations of certain census promotional events in Boston, Washington D.C., and Atlanta, and observed the Bureau's efforts to hand deliver census questionnaires to those in hurricane-affected areas along the Gulf Coast.

²GAO, *2010 Census: Key Enumeration Activities Are Moving Forward, but Information Technology Systems Remain a Concern*, [GAO-10-430T](#) (Washington, D.C.: Feb. 23, 2010).

³Pub. L. No. 111-5 (Feb. 17, 2009).

⁴See related GAO products at the end of this statement.

On March 18, 2010, we provided the Bureau with a statement of facts for our audit work, and on March 22, 2010, the Bureau provided written comments. The Bureau made some suggestions where additional context or clarification was needed, and where appropriate, we made those changes. We conducted our work in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audits to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In summary, the Bureau's readiness for conducting the 2010 Census remains mixed. Aside from the mail response rate, which is outside of the Bureau's direct control, the most significant risk jeopardizing the cost and quality of the enumeration lies in the performance problems that continue to plague DAPPS and PBOCS. Indeed, neither system has yet demonstrated the ability to function reliably under full operational loads, and the limited amount of time that remains to improve the reliability of these systems creates a substantial challenge for the Bureau.

In other areas, the Bureau continues to make progress. For example, the Bureau has improved its fingerprinting procedures for temporary workers, and its plans to enumerate certain hard-to-count populations are generally on track and more robust compared to similar efforts during the 2000 Census.

Finally, the Bureau's analyses of cost are not complete. While the Bureau has finalized its reexamination of Nonresponse Follow-up (NRFU) costs, it continues to update the costs for other NRFU-related operations.

Now that the enumeration is under way, it is important to keep in mind that the size and scope of the tally makes various glitches all but inevitable. In light of this difficult operating environment, as the Bureau well knows, it will be critical to (1) stay on schedule; (2) closely monitor operations with appropriate cost, performance, and scheduling metrics; and (3) have appropriate plans and personnel in place to quickly address operational issues.

Importantly, I also want to stress, as we have done in the past, that the Bureau cannot conduct a successful enumeration on its own. Indeed, the

decennial census is a shared national undertaking, and it is now up to the general public to fulfill its civic responsibility to mail back the census questionnaires in a timely fashion.⁵ According to the Bureau, each percentage point increase in the mail response rate saves taxpayers around \$85 million and yields more accurate data compared to information collected by enumerators from nonrespondents. The bottom line, Mr. Chairman, is that a key determinant of the success of the 2010 Census is now in the hands of the American people.

Background

As you know, Mr. Chairman, the decennial census is a constitutionally mandated enterprise critical to our nation. Census data are used to apportion congressional seats, redraw congressional districts, and help allocate hundreds of billions of dollars in federal aid to state and local governments each year.

Although an accurate population count is always a difficult task, the 2010 Census is a particular challenge because of various societal trends, such as concerns over personal privacy, more non-English speakers, and more people residing in makeshift and other nontraditional living arrangements because of economic dislocation or natural disasters. As a result, the Bureau is finding it increasingly difficult to locate people and get them to participate in the census.

In developing the 2010 Census, a long-standing challenge for the Bureau has been the reliability of its IT systems. For example, in March 2009, we reported that the Bureau needed to develop a master list of interfaces between systems, set priorities for the testing of interfaces based on criticality, and develop testing plans and schedules.⁶ In the months that followed, while the Bureau strengthened its management and oversight of its IT systems, additional work was needed under very tight time frames.

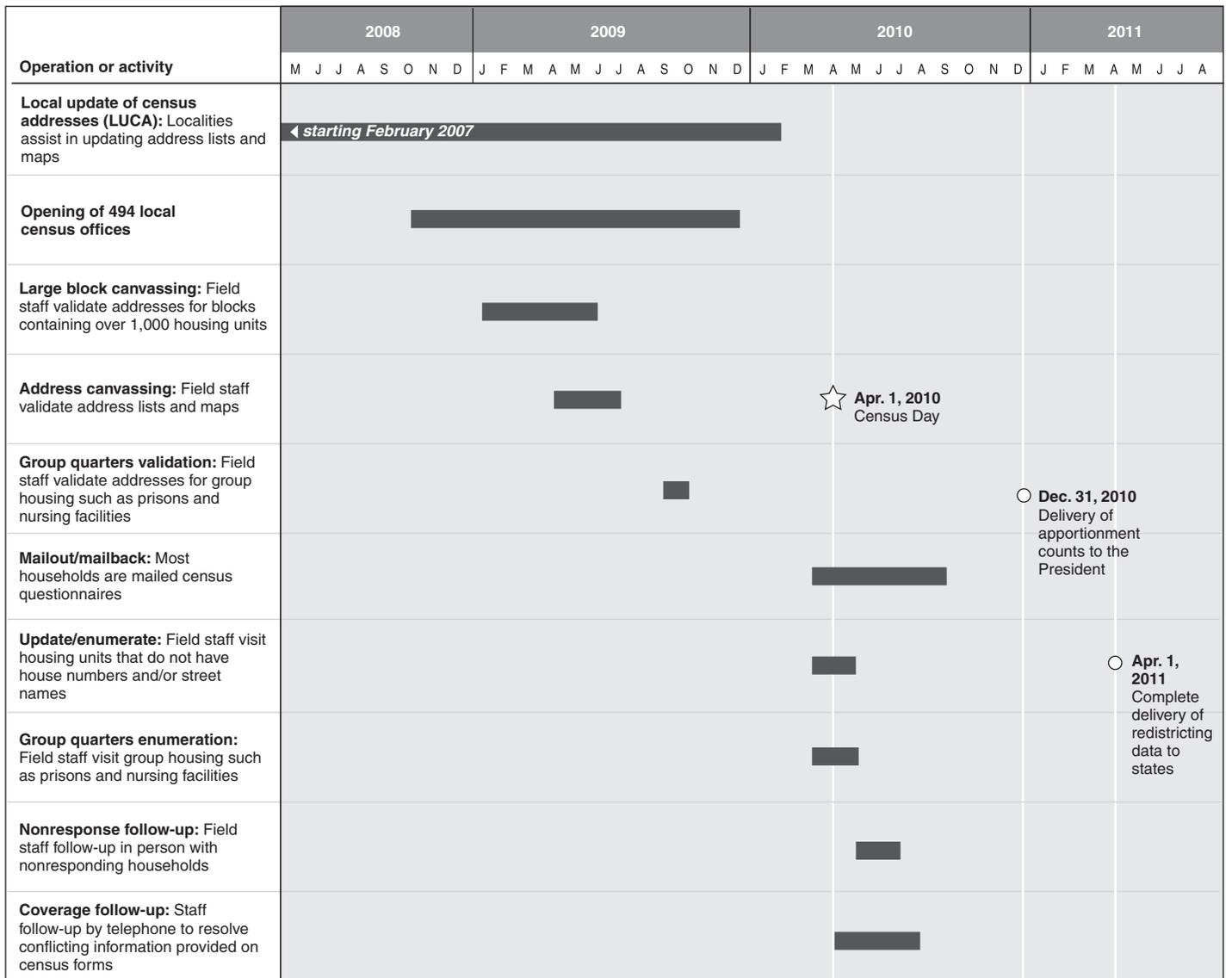
More generally, now that the census has moved to the operational phase, it will be important for the Bureau to stay on schedule. The enumeration has several absolute deadlines, and an elaborate chain of interrelated pre- and

⁵GAO, *2010 Census: Census Bureau Continues to Make Progress in Mitigating Risks to a Successful Enumeration, but Still Faces Various Challenges*, [GAO-10-132T](#) (Washington, D.C.: Oct. 7, 2009).

⁶GAO, *Information Technology: Census Bureau Testing of 2010 Decennial Systems Can Be Strengthened*, [GAO-09-262](#) (Washington, D.C.: Mar. 5, 2009).

post-Census Day activities are predicated upon those dates. Specifically, the Department of Commerce—the Bureau’s parent agency—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 reporting requirements, census activities need to take place at specific times and in the proper sequence. A timeline of key census operations is shown in figure 1.

Figure 1: Time Frames for Key Census Activities



Source: GAO summary of U.S. Census Bureau information.

Key IT Systems Continue to Experience Significant Performance Issues

Although the Bureau has made progress in testing and deploying IT systems for the 2010 Census, significant performance issues need to be addressed with both PBOCS, the work flow management system, and DAPPS, the automated system the Bureau is using to process applicants and handle the payroll of the more than 600,000 temporary employees who are to work on the census during peak operations.

In March 2009, we reported that the Bureau had a number of problems related to testing of key IT systems, including weaknesses in test plans and schedules, and a lack of executive-level oversight and guidance.⁷ In that report, we recommended that the Bureau complete key system testing activities and improve testing oversight and guidance. The Bureau agreed with our recommendations. Since that time, we have been monitoring and tracking the Bureau's progress and, in February 2010, we testified that while progress had been made in respect to system testing, key IT systems were facing critical performance issues.⁸

For example, we reported that in December 2009, the Bureau completed two iterations of a key performance test, known as the Decennial Application Load Test. As part of the test, more than 8,000 field staff at about 400 local census offices performed a combination of manual and automated tests to assess the performance of key IT systems, including DAPPS and the first release of PBOCS. In the first test, DAPPS failed and other key systems, including PBOCS, performed slowly. In the second iteration, DAPPS completed the test, though performance was slow. Bureau officials stated that DAPPS performance shortfalls were a result of three major issues, involving system hardware, software, and the operating system. They said that they were taking several steps to resolve these issues, including upgrading and reconfiguring the system, and deploying additional hardware to support the system, and planned to complete these efforts by the end of February. At the time, officials acknowledged that it was critical that DAPPS be fully functional under a heavy load by mid-March, when the Bureau would begin hiring a large number of temporary employees (about 600,000) for NRFU who will need to be paid using the system.

The Bureau has since completed many steps to improve DAPPS performance, and more are planned. However, as of mid-March, the

⁷GAO-09-262.

⁸GAO-10-430T.

system was still experiencing capacity limitations and slow response. These shortcomings were occurring even though approximately 100,000 temporary employees were currently being paid using the system versus the more than 600,000 employees that will need to be paid at the peak of field operations. For example, Bureau officials stated that they had already instructed DAPPS users to implement several work-arounds to improve system performance, such as reducing the number of system-intensive reports generated during peak hours. As of March 22, Bureau officials stated that they had completed additional steps to improve DAPPS performance, including upgrading and reconfiguring the system's software and installing additional hardware. However, Bureau officials also stated that additional testing and system refinements may be needed to determine if these upgrades will address the performance issues previously described. Bureau officials stated that they may not have sufficient time and resources to add additional server capacity if these upgrades are not sufficient, so if performance problems remain, officials stated that the Bureau will identify additional work-arounds to reduce the demand on the system, including limiting the frequency and times when field office staff can generate certain reports and run system-intensive operations.

Performance issues with PBOCS still need to be addressed as well. While the first release of this system was deployed for early census field operations in January 2010 and certain components of the second release were deployed in February 2010, both releases have known defects, such as limited functionality, slow performance, and problems generating certain progress and performance reports. For example, Bureau officials from a local census office in the Gulf Coast, working on hand delivering questionnaires in the hurricane-affected area, indicated that PBOCS has been operating very slowly and is occasionally unavailable. Although not necessarily indicative of PBOCS issues occurring elsewhere in the country, it does highlight some of the productivity problems resulting from the shortcomings with PBOCS. The Bureau has also had to restrict the number of PBOCS users per local census office due to capacity limitations. In many cases, temporary work-arounds have been communicated to field staff; however, these issues must be resolved and retested. Furthermore, the component of the second release that will be used to manage NRFU, the largest field operation, is still being tested and is not planned for deployment until mid-April 2010—about 3 weeks later than planned. With the NRFU operation scheduled to begin in early May 2010, this leaves little time to address issues identified during testing. Lastly, the development and testing of the third release of PBOCS is needed before the system is

ready for later field operations, such as the final check of housing unit status (known as field verification), scheduled to begin in August 2010.

In recognition of the serious implications that a failed PBOCS would have for conducting the 2010 Census, the Bureau has taken additional steps to mitigate the outstanding risks. For example, in June 2009, the Bureau chartered an independent assessment team, chaired by the Bureau’s Chief Information Officer, to monitor and report on, among other things, the system’s development and testing progress. Further, the Bureau stated that in January 2010, it also established the 2010 Census Application Readiness and Infrastructure Stability Group in order to centralize leadership and coordination efforts across key systems, including PBOCS. These efforts are encouraging. However, the aggressive development and testing schedule presents various challenges. For example, two of the three releases of PBOCS were not included in the performance test in December because development of these releases had not yet been completed. This increases the risk that performance issues, such as those described above, may reoccur in future releases of the system, and the Bureau’s ability to resolve and retest these issues before the system is needed for key field operations will be limited.

In addition to DAPPS and PBOCS, the Bureau will rely on six other key automated systems to conduct the census. Progress has been made with respect to system testing. However, much system testing remains to be completed in the next few months, as shown in table 1.

Table 1: Status of Key System Testing Activities

Census system	Description	Status of testing activities
Headquarters Processing – Universe Control and Management	Organizes address files into enumeration “universes,” which serve as the basis for enumeration operations and response data collection.	System development is divided into three phases. According to the Bureau, the first of three phases was deployed for initial operations in July 2009, which was completed in January 2010. Limited functionality of the second release was deployed beginning in December 2009, and deployment of the remaining functionality is planned to be completed by September 2010.
Headquarters Processing – Response Processing System	Receives response data and edits the data to help eliminate duplicate responses by, for example, identifying people who have been enumerated more than once.	System development is divided into six components. The first component of this system was deployed in February 2010. The program plans to complete testing of the five remaining components by December 2010.

Census system	Description	Status of testing activities
Master Address File/Topologically Integrated Geographic Encoding and Referencing system	Provides geographic information and support to aid the Bureau in establishing where to count the U.S. population for the 2010 Census.	The system has been functioning in a limited capacity since September 2007; however, additional testing is needed for 2010 operations. As of January 2010, all nine test plans for 2010 operations have been finalized. Testing activities for one test plan have been completed, seven are under way, and one has not yet started. Geographic information needed to support key operations, such as NRFU, is planned to be delivered by April 2010.
Field Data Collection Automation (FDCA)	Provides automation support for field data collection operations. It includes the development of handheld computers for the address canvassing operation and the systems, equipment, and infrastructure that field staff will use to collect data.	Development and testing for FDCA has been completed. The FDCA applications related to address canvassing were deployed and the operation completed. Map printing software has been deployed to field offices. The FDCA contractor is supporting map printing activities.
Decennial Response Integration System	Collects and integrates census responses from all sources, including forms and telephone interviews.	Six increments of system development and testing, as well as additional operational testing, have been completed. System functionality for paper data capture capabilities were deployed in early March 2010. Additional functionality for the coverage follow-up operation, where census workers follow-up to resolve conflicting information provided on census forms, is planned for deployment in mid-April 2010.
Data Access and Dissemination System II (DADS II)	Replaces legacy systems for tabulating and publicly disseminating data.	The system consists of two subsystems, each with three iterations of development and testing. For one subsystem, the program is testing the second of the three iterations. For the other subsystem, the program is currently testing the third iteration. DADS II is needed for operations beginning in December 2010.

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

Given the importance of IT systems to the decennial census, it is critical that the Bureau ensure that DAPPS, PBOCS, and other key systems are thoroughly tested and able to meet full operational requirements. The limited amount of time to resolve what are, in certain cases, significant performance issues creates a substantial challenge for the Bureau.

The Implementation of Key Enumeration Activities Continues to Make Progress

In contrast to the IT systems, the rollout of other activities is going more smoothly. Indeed, the Bureau has taken steps to address certain previously identified problems, and its plans to improve the enumeration of hard-to-count groups are generally more robust compared to similar activities during the 2000 Census. Those activities include procedures for fingerprinting temporary employees; the rollout of key marketing efforts aimed at improving the participation of hard-to-count populations; the Bureau's plans for mailing a second, follow-up questionnaire and the removal of late mail returns; activities aimed at including the homeless and people residing in nonconventional dwellings; and the Bureau's plans to

secure a complete count of those in the hurricane-affected areas along the Gulf Coast.

Bureau Has Taken Steps to Reduce the Number of Unclassifiable Fingerprints of Temporary Workers

The Bureau plans to fingerprint its temporary workforce for the first time in the 2010 Census to better conduct background security checks on its workforce of hundreds of thousands of temporary census workers.⁹ However, the Bureau found that during address canvassing, an operation that the Bureau conducted in the summer of 2009 to verify every address in the country, 22 percent of the workers (approximately 35,700 people) hired for the operation had unclassifiable prints. The Federal Bureau of Investigation (FBI) determined that this problem was generally the result of errors that occurred when the prints were first taken at the local census offices.

To fingerprint workers during address canvassing, Bureau employees captured two sets of fingerprints on ink fingerprint cards from each temporary worker by the end of the workers' first day of training. The cards were then sent to the Bureau's National Processing Center in Jeffersonville, Indiana, to be scanned and electronically submitted to the FBI. If the first set of prints were unclassifiable, then the National Processing Center sent the FBI the second set of prints. If the results showed a criminal record that made an employee unsuitable for employment, the Bureau either terminated the person immediately or placed the individual in a nonworking status until the matter was resolved.

To help ensure the success of fingerprinting operations for NRFU—which will peak at approximately 484,000 fingerprint submissions over a 3-day period from April 28-30, 2010—the Bureau will follow similar procedures, but has taken additional steps to improve fingerprint image quality. The steps include refining training manuals used to instruct local census office staff on how to take fingerprints, scheduling fingerprint training closer to when the prints are captured, and increasing the length of training. Further, the Bureau plans on using an oil-free lotion during fingerprinting that is believed to raise the ridges on fingertips to improve the legibility of the prints.

⁹For the 2000 Census, temporary employees were subject only to a background check on their names.

The Bureau has also revised its procedures for refingerprinting employees when both fingerprint cards cannot be read. During address canvassing, if both sets of fingerprints were unclassifiable, workers were allowed to continue working if their name background check was acceptable and would be refingerprinted only if rehired for future operations. Under the revised policy, the Bureau plans, wherever operationally feasible, to digitally capture a third and fourth set of fingerprints if the FBI cannot classify the first two sets. The Bureau plans to purchase approximately 1,017 digital fingerprint scanners. Each local census office will receive at least one machine, with the remaining scanners to be distributed at the discretion of the Regional Director. The Bureau estimates that this additional step could reduce the percentage of workers with unclassifiable prints from 22 percent to approximately 10 to 12 percent, or an estimated 60,000 to 72,000 temporary workers for NRFU. We did not receive a response from the Bureau on whether it will allow those workers with unclassifiable prints to continue to work on NRFU operations.

The Bureau's Communications Campaign Is Aimed at Hard-to-Count Groups

A complete and accurate census is becoming an increasingly daunting task, in part because the nation's population is growing larger, more diverse, and more reluctant to participate. To overcome these challenges, the Bureau has developed the Integrated Communications Campaign aimed at, among other things, improving the mail response rate and reducing the differential undercount.¹⁰ An undercount occurs when the census misses a person who should have been included; an overcount occurs when an individual is counted in error. What makes these errors particularly problematic is their differential impact on various subgroups. Minorities, renters, and children, for example, are more likely to be undercounted by the census while more affluent groups, such as people with vacation homes, are more likely to be enumerated more than once. As shown in table 2, the 2010 communications campaign consists of four components: the partnership program, paid advertising, public relations, and an educational program called Census in Schools.

¹⁰Differential undercount describes subpopulations that are undercounted at a different rate than the total population.

Table 2: 2010 Census Communications Campaign Components

Component	Description
Partnership program	Engages key government and community organizations and gains their commitment to support the census, focusing resources on hard-to-count communities. Among other contributions, partners help recruit census workers, help locate space for Questionnaire Assistance Centers and for testing census job applicants, sponsor community events to promote census participation, and motivate individuals to complete their census forms.
Paid advertising	Uses numerous paid media sources, such as TV, radio, the Internet, and magazines, to encourage census participation, particularly by hard-to-count populations, such as minorities, renters, and linguistically isolated populations.
Public relations	Engages audiences via media activities to create credible, memorable messages.
Census in Schools	Provides schools with lesson plans and teaching materials to support existing curricula so that students can get the message home to parents and guardians that answering the census is important and confidential.

Source: U.S. Census Bureau.

For the 2010 Census, the Bureau has expanded its outreach to partner organizations, which include state and local governments, community groups, and businesses. The Bureau increased partnerships from approximately 140,000 during the 2000 Census to more than 210,000 as of March 2010. The Bureau's partnership program stems from its recognition that without the assistance and support of members of local communities—trusted voices—the message that participating in the census is important and confidential will not reach everyone, particularly those in hard-to-count areas and populations. The Bureau hopes that local people who are trusted by the communities they represent can promote the census and persuade everyone to respond.

The communications campaign's initial budget of \$410 million was increased by \$220 million in additional funds appropriated by the Recovery Act.¹¹ As a result, the Bureau was able to greatly expand its communications campaign activities. For example, the Bureau hired about 3,000 partnership staff, over 2,000 more than it originally planned to hire, and increased its paid advertising purchases targeted at specific ethnic or language audiences by more than \$33 million (85 percent) over its initial

¹¹Pub. L. No. 111-5, div. A, tit. II, 123 Stat. 115, 127. In the conference report accompanying the Act, the conferees stated that "of the amounts provided, up to \$250,000,000 shall be for partnership and outreach efforts to minority communities and hard-to-reach populations." H.R. Conf. Rep. No. 116-16 at 417 (2009). According to the Bureau, it plans to use \$220 million for expanding the communications campaign and \$30 million for expanding its coverage follow-up operation, where census workers follow-up to resolve conflicting information provided on census forms.

plan of about \$39 million. The increased funding should enhance the Bureau's capacity to reach out to hard-to-count communities. In all, the Bureau plans to spend about \$72 million on paid advertising targeted to specific ethnic or language audiences, which is about \$11 million more than the almost \$61 million the Bureau plans to spend targeting the general population.

However, even with the additional Recovery Act funds, the Bureau plans to spend less for some components of the 2010 paid media buys than it did for 2000, when compared in constant 2010 dollars. For example, although the total budget for the 2010 paid advertising is \$253 million, which is about \$12 million (5 percent) more than 2000, the Bureau plans to spend about \$133 million of it on the total advertising buy, which is about \$27 million (17 percent) less compared to the about \$160 million spent in 2000. Table 3 shows the Bureau's 2010 budget for paid media buys by target audience compared to what was spent in 2000.

Table 3: Paid Advertising Buys by Target Audience, 2000 Census vs. 2010 Census

Component	2000 Census (2000 actual expenditures in 2010 constant dollars)	2010 Census (budgeted)
Total buy	\$160,406,244	\$133,003,094
Mass audience	84,441,528	60,811,800
Ethnic/Language audience	75,964,716	72,191,294
Hispanic	27,535,788	25,496,100
Black (including African and Caribbean)	24,816,618	22,978,350
Asian	14,603,328	13,521,600
Native Hawaiian and Pacific Islanders	214,326	1,100,000
American Indian/Alaska Native	4,088,232	3,785,400
Emerging audiences ^a	2,198,664	2,035,800
Puerto Rico	1,892,484	2,400,000
Island areas	615,276	0
New legacy languages ^b	Not applicable	874,044

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

^aEmerging audiences includes Polish, Russian, and Arabic speaking populations.

^bNew legacy languages includes Portuguese, German, Italian, Greek, French, and Yiddish.

In addition, the Bureau’s 2010 budget for items other than the actual media buys—research, testing, labor, travel, production, and other overhead costs—outpaced that spent in 2000. As shown in table 4, for 2010 the Bureau budgeted almost \$120 million for such overhead costs, while in 2000 the Bureau spent just over \$80 million, in constant 2010 dollars. That \$120 million is 47 percent of the total paid media budget, while in 2000 overhead costs accounted for about 33 percent of the paid media budget.

Table 4: Paid Advertising Purchases and Overhead 2000 Census vs. 2010 Census (in millions)

	Paid media budget (including overhead)	Overhead	Percentage of overhead vs. paid media budget
2000 Census (actual expenditures in 2010 constant dollars)	\$240.6	\$80.2	33
2010 Census (budgeted)	252.8	119.8	47

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

Decreased spending on paid advertising and increased spending on overhead costs, in real terms, may seem like a step in the wrong direction for promoting census participation. However, by better targeting paid advertising buys the Bureau expects to reach those who have historically been the hardest to count. For example, the Bureau based its decisions on how to allocate spending across different ethnic and language audiences based on a variety of factors, such as historical response data for an area, prevalence of hard-to-count households in a market, population size, and availability of in-market media, among others. The Bureau also received input from staff in census regional offices, as well as an independent 2010 Census advisory group called the Race and Ethnic Advisory Committee.

Further, the Bureau targeted the paid advertising messages based on market and attitudinal research. For example, the Bureau’s attitudinal research identified five mindsets people have about the census, ranging from what Bureau research identified as “leading edge”—those who are highly likely to respond—to the “cynical fifth” who are less likely to participate because they doubt that the census provides tangible benefits. The Bureau used this information to develop messages to motivate each cohort to participate in the census. To target the cynical fifth, for example, the Bureau developed advertising with the message that the census is important to their community.

In addition to the use of TV and radio broadcasts, in 2010, the Bureau is using new methods, such as downloadable podcasts, YouTube videos, and social media networks such as Facebook and Twitter. Further, the Bureau is integrating census messages into programming, talk, and entertainment shows in an attempt to appeal to people in new and more personal ways.

In addition, as shown in table 5, the Bureau has made other noteworthy changes to 2010 paid advertising and partnership program activities, which are aimed at expanding outreach to hard-to-count groups and better monitoring and evaluating campaign effectiveness.

Table 5: Key Differences between 2000 and 2010 Paid Advertising and Partnership Activities

Paid advertising and partnership activities	2000 Census	2010 Census
Campaign development and targeting	Targeted advertisements by segmenting the population into three groups of census participation likelihood, based on measures of civic participation in an area, such as school board involvement.	Advertisements targeted based in part on actual 2000 Census participation rates and attitudinal research.
	Paid media messages developed in 16 languages.	Paid media messages developed in 28 languages.
	No electronic and Web-based communications.	Electronic and Web-based communications available.
	Majority of paid advertising resources targeted to national mass audience.	Majority of paid advertising resources targeted to ethnic/language audiences.
Implementation	Hired about 600 partnership staff.	Hired about 3,000 partnership staff.
	Partnership staff spoke 35 languages.	Partnership staff speak 124 languages.
	No rapid response/media contingency fund for unexpected events.	Established a \$7.4 million rapid response/media contingency fund to address unexpected events, such as lower response rates in certain areas.
Monitoring	No real-time metrics to measure effectiveness of paid media and limited real-time tracking of partnership activities.	Established metrics to measure effectiveness of paid media and partnership program, such as real-time tracking of attitudes through national polling and value-added contributions of partner organizations.
	Partnership tracking system cumbersome and not user-friendly.	Revamped partnership tracking system by, among other things, allowing for up-to-date monitoring of partner activity and new Web-based interface.
Evaluation	Evaluation measuring the impact of paid media and partnership program on awareness of the census.	Evaluation of awareness of the census, and controlled experiment measuring the impact of increased paid advertising exposure on mail response.
	No cost benefit analysis.	Cost benefit analysis of paid advertising.

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

In summary, our analysis suggests that the paid advertising and partnership activities, along with the other components of the Bureau's communications campaign, are generally more robust than the Bureau's promotional efforts during the 2000 Census, in that the entire effort is more comprehensive and activities appear to be more data driven and targeted. Moving forward, the key challenge facing the campaign is that it must not only raise awareness of the census, it must also influence participation, a far more difficult task.

In addition to the communications campaign, the Bureau is taking other steps to reach out to the public. Particularly noteworthy is the 2010 Census Web site (<http://2010.census.gov/2010census>), which describes, among other topics, the purpose of the census, why it is important, and how the Bureau protects the confidentiality of responses. Information on the census is available in dozens of languages. Further, the Web site contains a "Director's Blog" where the head of the Bureau posts his thoughts on the enumeration and responds to topical issues and public concerns. For example, a recent posting explained why, in some cases, there is a difference between the address on the mailings one receives from the Bureau and the physical location of the house. Similar information is provided on the Web site in a list of frequently asked questions (FAQ).

Looking ahead to the 2020 Census, some of the issues in the Director's Blog and FAQs could, to some extent, be handled proactively and more efficiently through the Bureau's household mailings. For example, questions arose as to why the Bureau spent money on an advance mailing telling people their questionnaires would be arriving soon. Although research has shown that advance mailings can help increase the response rate and thus save money, this was not mentioned in the advance letter, and the Director had to discuss it in his blog in order to reduce confusion and criticism. Likewise, some people might have been confused by getting a separate census questionnaire, the American Community Survey, prior to the decennial questionnaire. This too, could have been addressed as part of an advance letter. While not every eventuality can be foreseen, as the Bureau plans for 2020, it will be important for it take stock of the various inquiries and concerns that arose at the time of the 2010 questionnaire mailings, and determine whether any of them could be explained up front as part of the advance letter. Doing so could help improve the public's understanding of the Bureau's approach and help head off issues that could undermine the response rate, the Bureau's credibility, or both.

Second Census Questionnaire Has Potential to Increase Response Rate

The Bureau's strategy to mail a second, or replacement, census questionnaire will be implemented for the first time in 2010 and is an important step toward improving response and decreasing costs. According to Bureau studies, mailing a replacement questionnaire increases overall response from households that do not respond to the initial questionnaire, which could generate significant cost savings by eliminating the need for census workers to obtain those responses via personal visits.

The Bureau plans to mail approximately 30 million replacement questionnaires to all households in census tracts that had the lowest response rates in 2000 Census (known as blanket replacement). Also, the Bureau plans to mail approximately 12 million replacement questionnaires to nonresponding households in other census tracts that had low-to-moderate response rates in 2000 (known as targeted replacement). In order to enhance the effectiveness of the replacement mailing, the Bureau will include a cover letter to distinguish the initial and replacement questionnaires and as an effort to avoid receiving duplicate responses. Replacement questionnaires will be English only, regardless of whether the household will receive a bilingual English/Spanish questionnaire in the initial mailing.¹² According to a Bureau official, mailing a bilingual replacement questionnaire was logistically impractical for 2010, given the limitations of the printing process and the 5-day time frame for the targeted replacement mailing. Thus, in looking forward to the 2020 Census, it will be important for the Bureau to evaluate the possibility of sending bilingual replacement questionnaires to those households that initially received a bilingual questionnaire.

The Bureau plans to mail replacement questionnaires between April 1 and April 10 and develop an initial list of nonresponding households on April 7. Because the Bureau will likely receive replacement questionnaires after April 7, it must be able to effectively remove these late mail returns from the list of nonresponding households, or the NRFU workload. Removing late mail returns is important because it prevents enumerators from visiting households that already returned their census forms, thus reducing NRFU workload and cost as well as respondent burden. As shown in table 6, the Bureau plans to remove late mail returns from the NRFU workload four times using one automated and three manual

¹²The Bureau has identified about 13 million households that will receive a bilingual questionnaire for the 2010 Census.

processes. The Bureau has some experience with the manual process because some local census offices did some testing of late mail removals during the 2000 Census. In addition, they have developed quality assurance procedures for the manual removal process. In the weeks ahead, it will be important for the Bureau to ensure that local census offices follow these procedures so that households are not unnecessarily visited by an enumerator or inadvertently removed from the follow-up workload and missed in the census count.

Table 6: Replacement Mailing and Late Mail Returns Removal Are on a Tight Schedule

Activity	Date
Initial census questionnaires mailed	March 15-17, 2010
Census Day	April 1, 2010
Blanket replacement questionnaires mailed	April 1-3, 2010
Targeted replacement questionnaires mailed	April 6-10, 2010
NRFU workload created	April 7, 2010
Automated removal of late mail returns	April 21, 2010
First manual removal of late mail returns (even-numbered assignment areas)	April 24-25, 2010
Second manual removal of late mail returns (odd-numbered assignment areas)	May 1-2, 2010
Third manual removal of late mail returns	June 2010 ^a

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

^aThe third clerical removal occurs when 95 percent of the work in a local census office is completed and the remaining assignments are brought in to redistribute.

The Bureau Will Employ Special Operations and Programs to Help Enumerate Certain Hard-to-Count Populations

The Bureau has historically experienced challenges in enumerating hard-to-count populations, which has contributed to the undercount in previous decennials. Those at risk of being missed by the census include people living in nonconventional dwellings, such as cars and boats, as well as those living in large group households and converted basements or attics. People commonly referred to as “homeless” are also at risk of being missed.

To help ensure that these individuals are counted, the Bureau plans to employ several initiatives. For example, Service Based Enumeration (SBE) is designed to count people who lack permanent shelter at soup kitchens, regularly scheduled mobile food vans, and other locations where they receive services. This operation, along with a count of people living outdoors, is to take place from March 29 to March 31, 2010.

Moreover, the Bureau's Be Counted program is designed to reach those who may not have received a census questionnaire, including people who do not have a usual residence, such as transients, migrants, and seasonal farm workers. The program makes questionnaires available at community centers, libraries, places of worship, and other public locations throughout the country. The questionnaires are typically available in six different languages, with assistance guides in 59 languages, as well as Braille and large-print English guides. The Bureau has also set up staffed Questionnaire Assistance Centers (QAC), at which people can ask questions and obtain guidance on filling out their questionnaires.

According to the Bureau, it plans to establish 30,000 QAC sites that will also have Be Counted forms, as well as 10,000 stand alone Be Counted locations.¹³ To determine where to locate the Be Counted and QAC sites, the Bureau used demographic information and worked with local partnership specialists who used their knowledge of the area to help ensure they were placed in areas with large hard-to-count populations. The program is scheduled to run from March 19 to April 19, 2010.

Although these efforts have the potential to produce a more complete and accurate count, during the 2000 Census, as we noted in our prior work, such efforts experienced various implementation issues.¹⁴ Table 7 describes some of those issues, and the steps the Bureau says it has taken to address them for 2010.

¹³The 10,000 Be Counted Centers will only provide the questionnaires. There will not be staff there to provide questionnaire assistance, assistance guides, or translated forms.

¹⁴GAO, *2000 Census: Progress Report on the Mail Response Rate and Key Operations*, GAO/T-GGD/AIMD-00-136 (Washington, D.C.: Apr. 5, 2000).

Table 7: Challenges Identified in 2000 and How the Bureau Addressed Them

Issue	Challenges GAO identified in 2000	Bureau's response to resolve issues for 2010
Inadequate materials and supplies	Enumerators said that they did not have a sufficient supply of questionnaires and training materials as they were preparing to conduct the SBE effort.	Enumerators will use one type of questionnaire for SBE enumeration, as opposed to the three different types used in 2000. The Bureau believes this approach should minimize confusion and the amount of time required to sort and package materials.
Inadequate training	There was inadequate training for census enumerators because of training materials arriving late; for example, training materials, including a video of a mock soup kitchen visit, arrived too late at one census office, so it was not used to train the enumerators before they started SBE.	The Bureau has consolidated SBE and Group Quarters Enumeration (GQE) training, since SBE is a segment of its GQE effort. Unlike in 2000, the training was not uniform and consistent across the country for each SBE operation, which also affected the timely delivery of training materials.
Lack of advance planning	Lack of advance planning resulted in enumerators showing up at facilities at inappropriate times or bringing too many personnel, which can be intimidating to homeless people.	Through its group quarters advance visit operation, the Bureau documented issues that could affect SBE enumeration operations and estimated the number of people needed to enumerate each facility. Where needed, the Bureau will also send cultural advocates from the community to help alleviate cultural barriers, because local knowledge is critical at these particular sites.

Source: GAO.

In 2000, we reported on limitations that hampered the effectiveness of the Be Counted and QAC sites.¹⁵ They included the following:

- the Bureau was not always satisfied with site selections that local partners proposed,
- a lack of visibility at Be Counted sites,
- inadequate recordkeeping and monitoring, and
- a lack of quality services provided at QACs.

For the 2010 Census, the Bureau hopes to address these issues in part by

- establishing guidelines in selecting Be Counted sites, to ensure consistency among those involved in decision making about site selection;
- having a banner clearly visible to individuals as they walk into a facility that houses a Be Counted site;
- establishing procedures to strengthen recordkeeping activities at Be Counted sites, including an online system that tracks services the QACs provide on a daily basis; and

¹⁵GAO, *2000 Census: Actions Taken to Improve the Be Counted and Questionnaire Assistance Center Programs*, GAO/GGD-00-47 (Washington, D.C.: Feb. 25, 2000).

-
- staffing the QACs with trained and paid census staff, compared to 2000 when some QAC staff were volunteers.

The Bureau Has Tailored Operations to Enumerate Hurricane-Affected Areas

The scale of the destruction in areas affected by hurricanes Katrina, Rita, and Ike has made getting a complete and accurate population count in parts of Mississippi, Louisiana, and Texas especially challenging (see fig. 2). Hurricane Katrina alone destroyed or made uninhabitable an estimated 300,000 homes. As we have previously testified,¹⁶ the Bureau, partly in response to recommendations made in our June 2007 report,¹⁷ developed supplemental training materials for natural disaster areas to help census address listers, when developing the census address list, identify addresses where people are, or may be, living when census questionnaires are distributed. For example, the materials noted the various situations that address listers might encounter, such as people living in trailers, homes marked for demolition, converted buses and recreational vehicles, and nonresidential space, such as storage areas above restaurants. The training materials also described the clues that could alert address listers to the presence of nontraditional places where people are living and provided a script they should follow when interviewing residents on the possible presence of hidden housing units.

¹⁶GAO, *2010 Census: Efforts to Build an Accurate Address List Are Making Progress, but Face Software and Other Challenges*, [GAO-10-140T](#) (Washington, D.C.: Oct. 21, 2009).

¹⁷GAO, *2010 Census: Census Bureau Has Improved the Local Update of Census Addresses Program, but Challenges Remain*, [GAO-07-736](#) (Washington, D.C.: June 14, 2007).

Figure 2: Locating and Counting People Displaced by Storms Presents a Challenge Because Occupied Housing Units Could Be Hard to Identify



Source: GAO.

To ensure a quality count in the hurricane-affected areas, the Bureau is hand delivering an estimated 1.2 million census questionnaires in these areas through the Update Leave operation, where census workers update addresses and provide a mailback census questionnaire to each living quarters in their assigned areas. The Bureau began delivering questionnaires on March 1, 2010, to housing units that appear inhabitable in much of southeast Louisiana, south Mississippi, and Texas, even if they do not appear on the Bureau's address list. Occupants are being asked to complete and return the questionnaire by mail. Census workers are also identifying modifications for the Bureau's address list, including additions, deletions, corrections, and spotting duplicate information. The Update Leave operation is scheduled to last 25 days, and as of March 22, 2010, the Bureau had completed 67 percent of the workload.

Our observations in the New Orleans area, while not generalizable to other parts of the country, identified some of the challenges that census workers experience in the field. Some of those challenges include dogs and other safety concerns, long distances traveled between addresses, and the remains of housing units that were left uninhabitable by Hurricane Katrina at the same locations as occupied housing units (see fig. 3). These types of challenges could drive up costs because they slow productivity, or might affect accuracy because they make it difficult to determine habitability.

Figure 3: Trailers Made Uninhabitable by Hurricanes Located on Same Lots as Occupied Trailers



Source: GAO.

By hand delivering questionnaires, the Bureau hopes to ensure that housing units that may have been missed will receive and return questionnaires, ultimately improving the accuracy of the count. Finally, the Bureau stated that it must count people where they are living on Census Day and emphasized that if a housing unit gets rebuilt and people move back before Census Day, then that is where those people will be counted. However, if they are living someplace else, then they should be counted where they are living on Census Day.

The Bureau Has Revised Its Cost Estimate for Nonresponse Follow-up but Needs to Complete Additional Updates as Planned

In 2008, we reported that the Bureau had not carried out the necessary analyses to demonstrate that the then life-cycle cost estimate of about \$11.5 billion for the 2010 Census was credible, and we recommended that the Bureau better document and update the estimate, to which it generally agreed.¹⁸ Since then, two early census field operations have experienced major differences between their estimated and actual costs. For address canvassing, where census workers verify address lists and maps, actual costs exceeded the Bureau's initial estimate of \$356 million by \$89 million, or 25 percent. In contrast, for group quarters validation, where census workers verify addresses of group housing, actual costs were below the Bureau's estimate of \$71 million by about \$29 million, or 41 percent.¹⁹

Because of cost overruns during address canvassing, as well as concerns over the increased number of vacant units due to foreclosures, the Bureau has implemented our recommendation and reexamined and updated the assumptions and other data used to support the cost estimate for NRFU, the most costly and labor-intensive of all census field operations. The Bureau recently provided us with the results from that reexamination. Although we have not fully assessed the Bureau's analysis, our preliminary review shows that the Bureau provided a range of possible NRFU cost estimates, with \$2.3 billion being the midpoint. The amount budgeted for NRFU is \$2.7 billion. In assessing the estimate, the Bureau considered a number of cost drivers. For example, the Bureau reviewed (1) fieldwork assumptions—such as miles driven per case, pay rates, hours worked per week, and attrition—which the Bureau updated based on actual 2000 Census data, national and field tests, and address canvassing results; (2) factors affecting response rate and hence NRFU workload, such as the national trend in survey response, use of a bilingual questionnaire and

¹⁸See GAO, *2010 Census: Census Bureau Should Take Action to Improve the Credibility and Accuracy of Its Cost Estimate for the Decennial Census*, [GAO-08-554](#) (Washington, D.C.: June 16, 2008). In [GAO-08-554](#), we reported that the Bureau had not performed sensitivity analysis (examining each cost estimate assumption or factor independently, while holding all others constant) or uncertainty analysis (capturing the cumulative effect of risks, which provides a level of confidence for the estimate), and had not obtained an independent cost estimate. As noted in GAO's *Cost Estimating and Assessment Guide*, these steps provide a basis for determining whether a cost estimate is credible and are key best practices for cost estimation. See GAO, *GAO Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Capital Program Costs*, [GAO-09-3SP](#) (Washington, D.C.: March 2009).

¹⁹In a preliminary assessment, the Bureau attributed cost overruns in address canvassing to increased initial workload, underestimated quality control workload, and the need to train additional staff. The Bureau has not yet provided a cost assessment for group quarters validation.

replacement mailing for 2010, and the vacancy rate; and (3) enumerator productivity rates, which are based on regional managers' concerns over enumerating vacant units and non-English-speaking households. Further, in its analysis, the Bureau cited holding pay rates for NRFU temporary staff at 2009 levels, rather than increasing rates for 2010, as one of the reasons for the reduction in NRFU costs.

According to the Bureau, two cost drivers—workload, based on the mail response rate, and productivity—are uncertain and could have a significant effect on the ultimate cost of NRFU. For example, the Bureau states that if the response rate decreases by 2 percentage points due to extreme circumstances, such as an immigration backlash, costs could increase by \$170 million. Likewise, if PBOCS continues to experience performance problems causing 2 weeks of lost productivity, the Bureau says it would need to hire and train more staff to complete NRFU in order to deliver the apportionment counts to the President by December 31, 2010, which, according to the Bureau, could increase costs by about \$138 million.

As we previously stated, revising cost estimates with updated data is an important best practice for cost estimation. However, the Bureau's analyses of cost are not complete. While the Bureau has finalized its reexamination of NRFU cost, it continues to update the costs for other NRFU-related operations. These operations include the NRFU Reinterview, a quality assurance procedure designed to ensure that field procedures were followed and to identify census workers who intentionally or unintentionally produced data errors. It also includes the Vacancy/Delete Check operation, which is a follow-up to NRFU and is designed to verify the status of addresses classified as vacant or addresses determined to be nonexistent (deletes) during NRFU, as well as cases added since the NRFU workload was initially identified. According to the Bureau, emerging information about the Vacancy/Delete Check operation suggests that the workload may be much higher than originally expected and could increase costs from \$345 million to \$482 million—by almost \$137 million, or 40 percent. The Bureau said that it will update the cost estimates of both these operations once additional information becomes available.

A reliable cost estimate is critical to the success of any program because it provides the basis for informed investment decision making, realistic budget formulation, meaningful progress measurement, proactive course correction when warranted, and accountability for results.

Concluding Observations

Mr. Chairman, with a week remaining until Census Day, the Bureau's readiness for the headcount is mixed. On the one hand, with data collection already under way, the ability of key IT systems to function under full operational loads has not yet been demonstrated. The issues facing these systems need to be resolved, and with little time remaining, additional testing must take place. Likewise, questions remain regarding the ultimate cost of the 2010 Census, as the Bureau continues to analyze the cost of NRFU-related operations.

On the other hand, certain operations, such as the communications campaign and efforts to enumerate group quarters, generally appear to be on track and more robust compared to similar efforts for the 2000 Census, better positioning the Bureau for a complete and accurate headcount. In the coming weeks and months, we will continue to monitor the Bureau's progress in addressing these issues, as well as the implementation of the census as a whole, on behalf of the subcommittee.

Mr. Chairman, this concludes my statement. I would be happy to respond to any questions that you or other members of the subcommittee may have at this time.

Contacts and Acknowledgments

If you have any questions on matters discussed in this statement, please contact Robert Goldenkoff at (202) 512-2757 or goldenkoffr@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this testimony. Key contributors to this testimony include Peter Beck, David Bobruff, Clayton Brisson, Benjamin Crawford, Dewi Djunaidy, Vijay D'Souza, Elizabeth Fan, Ronald Fecso, Richard Hung, Kirsten Lauber, Andrea Levine, Signora May, Lisa Pearson, David Powner, Stacy Spence, Jonathan Ticehurst, Cheri Truett, and Timothy Wexler.

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