Testimony of

THE HONORABLE TODD J. ZINSER
INSPECTOR GENERAL

U.S. DEPARTMENT OF COMMERCE

before the

Senate Committee on Homeland Security and Governmental Affairs

Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security

Wednesday, July 18, 2012

Census: Planning Ahead for 2020

Mr. Chairman, Ranking Member Brown, and Members of the Subcommittee:

Thank you for inviting us to testify today on lessons learned from the 2010 decennial and methods the Census Bureau could employ to design a cost effective and accurate enumeration in 2020.

The constitutionally mandated decennial census is perhaps the most schedule-driven project mounted by the federal government. Each decade the Census Bureau must enumerate the population in years ending in zero and deliver the results by December 31 to support apportionment of Congressional representation, a cornerstone of our democracy. My testimony today is informed by the oversight we have provided last decade to both the planning of the 2010 decennial and its execution.

As we look ahead, there can be no question that the 2020 decennial must incorporate bold approaches in order to achieve cost containment while maintaining or improving accuracy in enumerating an ever-growing and increasingly hard-to-count population. Since the 2010 decennial completed operations, we have issued reports that offer the Census Bureau and Congress recommendations with those goals in mind (see appendix for details). The next decennial calls for new design elements and meticulous planning and testing—along with unprecedented transparency on the part of the Bureau, including early and continuous engagement with key stakeholders.

While it seems that the 2010 decennial has just completed, we are rapidly approaching a critical decision point for the 2020 decennial, a point that must be engaged in a significantly more constrained budget environment. The critical juncture is that the Census Bureau must analyze the 2020 decennial design alternatives and make a design decision by the end of fiscal year (FY) 2014. We must pay attention now because, as Congress is discussing agency budget authorities for FY 2013, all federal agencies are developing their FY 2014 budget submissions. The Bureau's budget seeks to leverage its current survey operations with the research and testing of new decennial design options and drive critical decisions the Bureau makes in setting the cost trajectory for the next census.

The Census Bureau has vowed to contain costs of the 2020 decennial to an amount at a similar level to 2010. That is an important and admirable goal. However, last decade the Census Bureau made a similar vow: "Contain costs by conducting . . . a reengineered census for an amount that is less than the cost of repeating the methodology used in Census 2000." The life cycle cost of the 2000 decennial was $8.2 billion in constant 2010 dollars. The Bureau estimated in June 2003 that the cost of repeating the 2000 methodology in 2010 would be $12.2 billion. The final cost of the 2010 decennial was $12.8 billion. We simply cannot afford to repeat the cost growth experienced over prior decennials. Census must employ a new methodology.

Our testimony today will address three points: first, we will review some important challenges the 2010 decennial encountered. Next, we will detail some of the changes the Census Bureau and its stakeholders expect to improve the 2020 decennial. Finally, we will highlight key issues for the Bureau, the Department, and Congress to consider as the Bureau works to bring about these changes.

Congress must pay early and sustained attention to the Census Bureau's development of design alternatives, adaptation of strategy, and development of budgets to support the 2020 decennial. This attention includes monitoring program developments, developing any necessary legislation to enable a reengineered census, and support for early and mid-decade research and testing requirements. Without this attention and oversight, there will be significantly greater risk to the Bureau's ability to contain costs.

I.   Long-Standing Challenges the 2010 Census Faced

The Census Bureau successfully completed decennial field operations in 2010. In May 2011, Census issued its assessment of decennial accuracy, which showed laudable results. The Bureau could even point to participation rate success that corresponded to cost savings: it had projected earlier in the decade that each 1 percent increase in the mail response rate would reduce the Bureau's costs by an estimated $85 million. It is generally accepted that the United States has been experiencing declining mail response due to decreasing public participation in surveys over the past 3 decades. The 2010 decennial nonetheless achieved a higher than expected participation rate of 75.8 percent (versus the planned 69 percent). The Department attributes the higher response to conducting the paid advertising campaign and public relations efforts as well as implementing a short-form-only questionnaire.
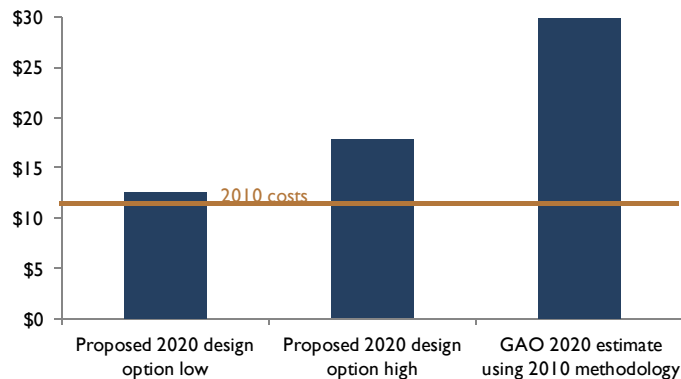
Despite these successes, the 2010 decennial carried with it a high cost and a level of risk that should not be repeated. Oversight bodies—including Congress, GAO, and OIG—held hearings

and issued reports that examined the costs and risks that the 2010 decennial incurred during its decade of planning and execution. At the request of Congress, we issued quarterly reports, including a final report in June 2011 that identified management challenges and included recommendations for the 2020 decennial. Some of the challenges OIG found most significant in our quarterly reports to Congress concerned:

- *Cost estimation;*

- *Data collection;*

- *Administrative records;*

- *An Internet response option;* and

- *Risk management.*

Cost estimation. Throughout the decade, the Census Bureau remained uncertain of what the 2010 decennial's total cost would ultimately be. With a life cycle cost estimate of more than $11 billion in 2003, the projection topped $14 billion in 2008 and ultimately totaled in excess of $12 billion as decennial operations concluded in 2010. The final cost was nearly twice the cost of the 2000 Census (nominal dollars)—due in part to a late-stage design change and higher-than-expected contractor costs. In recent history, the cost of the decennial census has roughly doubled during each cycle. In a December 2010 report, GAO estimated that using the 2010 decennial design in 2020 could end up costing up to $30 billion (see figure 1).

Figure 1. Projected 2020 Decennial Life Cycle Costs in Nominal Dollars (Billions)

Source: U.S. Census Bureau business plan; GAO reporting

Data collection. In preparation for the 2010 decennial, the Census Bureau tried to contain costs by automating the largest, most costly decennial operations through the use of handheld computers (HHCs). Unfortunately, it lacked the knowledge and experience to effectively manage the large, complex IT acquisition, greatly limiting the value of automated field data collection efforts. For one of the lengthiest, most cost-intensive operations

(nonresponse followup), the Bureau abandoned use of the HHCs and resorted to pencil-and-paper field data collection.

Administrative records. The Census Bureau used administrative records—information collected for the administration of programs and provision of services by federal, state, and local governments and commercial entities—to a very limited extent (e.g., United States Postal Service data) during the 2010 decennial. More extensive administrative records use could have reduced the cost of the nonresponse operations (which, at $2 billion, were the most costly of the 2010 decennial) and helped the Bureau avoid inaccurate enumerations.

An Internet response option. The Census Bureau offered an Internet response option in the 2000 decennial but did not publicize its availability. While it received only 65,000 unique electronic submissions, the Internet was deemed a viable response option. The Bureau did not, however, implement this option for the 2010 decennial; consequently, it relied primarily on paper-intensive operations, which were cumbersome, error-prone, and expensive.

Risk management. OIG quarterly reports on the 2010 decennial identified significant problems in project planning (e.g., not employing critical path management or thoroughly reviewing project start and end dates up front) and risk management (e.g., starting such activities late in the decennial life cycle and not completing contingency plans on time) that the Bureau needs to resolve to contain costs and maintain information quality for future decennials.

In May 2012, the Bureau issued its assessment of the quality of the 2010 counts. Currently, it is implementing an ambitious program to evaluate the design, methods, processes, and operations to build upon its past successes, while overcoming its shortcomings, as it plans the 2020 decennial.

II.   The 2020 Census: A More Complete, Cost-Effective Enumeration Requires Fundamental Changes and Bold Approaches

First, the Census Bureau must make fundamental changes to the *design, cost estimation,* and *risk management* of the decennial census to obtain a quality count for a more reasonable cost. Decisions made during this decade's early years will be critical for setting the course for how well the 2020 count is performed and how much it will ultimately cost. Table 1 shows a high-level timetable of the 2020 decennial life cycle and the required deliverables. Failure to meet the deliverables imperils the schedule, which could drive up the costs of this decennial census as in 2010.

Table 1. 2020 Census Life Cycle and Corresponding Major Deliverables

FYs 2012–2014	FYs 2015–2018	FYs 2019–2023
Research and Testing	*Operational Development and Systems Testing*	*Readiness Testing, Execution, and Closeout*
Conduct research and testing and field tests	Develop and baseline operational requirements	Test systems readiness
Develop and baseline systems engineering processes	Conduct systems development and testing	Update frame address
Determine strategy for major acquisitions	Conduct operational and systems tests	Conduct enumeration activities
Determine and refine initial operational designs	Establish field infrastructure	Execute Census Day
	Final operational refinements	Deliver apportionment counts and redistricting data

Source: U.S. Census Bureau information

Design. As part of its effort to redesign the 2020 decennial, the Census Bureau has generated rough order of magnitude cost estimates for four preliminary design options, referred to by the Bureau as Design Alternatives 1, 2, 3, and 4, spanning the decennial life cycle of FYs 2012–2023.[1] Each of the four known design alternatives varies to the extent of address listing, mode of enumeration, and infrastructure setup. Table 2 (next page) provides a high-level summary of the differences among the different decennial design alternatives.

---

[1] There are two other design alternatives for which the Bureau has yet to generate cost estimates. Design Alternatives 5 and 6 rely heavily, or nearly exclusively, on the use of administrative records and include no address field operations. Testing involving these two options remains ongoing and the extent of their potential use is unknown.

Table 2. Comparison of Four Decennial Census Design Alternatives

	Design Alternative 1	Design Alternative 2	Design Alternative 3	Design Alternative 4
Address field operations	**Full**	**Targeted**		
Enumeration	Traditional (mail) and Internet	Multimode contact (e.g., phone, Internet, mail)	Visit households, then use administrative records	Use administrative records, then visit households
Infrastructure	**Decentralized** (many local census offices and modest IT improvements)		**Hybrid** (fewer local census offices and shared IT platforms)	

Source: U.S. Census Bureau

Design Alternative 1, the most expensive option, would cost a projected $17.8 billion and makes few changes to the 2010 decennial design. Design Alternative 4, the least expensive option at a projected cost of $12.6 billion, relies most heavily on new approaches (e.g., targeted field operations and administrative record use). The costs of the remaining two options fall between these figures. The Census Bureau bases these costs on assumptions that the American Community Survey (ACS) program will continue. With Congress debating the elimination of funding for this survey, which replaced the long-form questionnaire for the 2010 decennial, the Bureau must prepare to factor the significant uncertainty this would create into ACS planning and 2020 decennial designs.
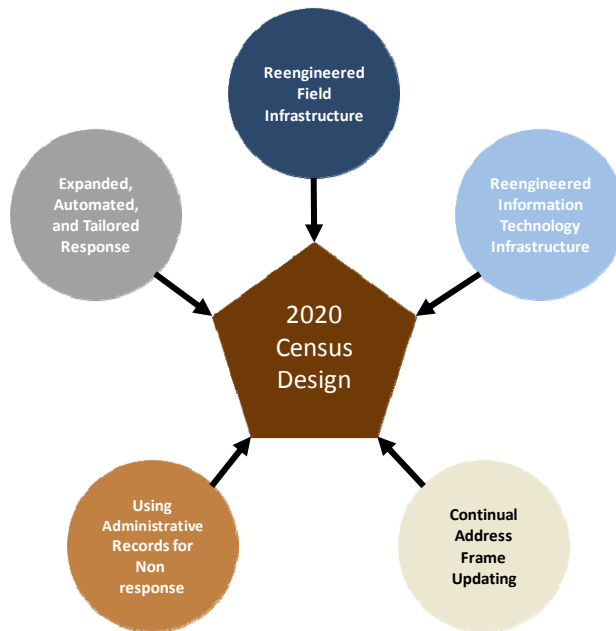
Cost estimation. The Census Bureau plans to update estimates annually to improve future budget requests. Per its decennial business plan, the Bureau will have a preliminary operational design by FY 2015 based on initial research and testing. From then on, the budget for 2020 decennial should provide more accurate estimates for the finalized design and associated costs. This is important because 71–80 percent of decennial costs, depending on the design, are incurred in the 3 years leading up to enumeration (FYs 2018–2020). If the Bureau is successful with its testing for a new design, the best-case scenario would be a 2020 decennial that ends up costing roughly the same as the 2010.

Risk management. In previous work, we recommended that risk management activities begin from the outset of the current decennial census life cycle, rather than just before field operations (which defined risk management for the 2010 effort). Similarly, a National Research Council report on redesigning the 2020 decennial encouraged planning for the next decennial to start early in the life cycle to ensure a more cost-effective design. For the next decennial, the Census Bureau should implement appropriate risk management from the outset and finalize contingency plans prior to the start of decennial operations.

Next, the upcoming decennial must incorporate bold approaches in order to achieve cost containment while maintaining or improving accuracy in enumerating an ever-growing and increasingly hard-to-count population. The Census Bureau has mapped these new directions with five major 2020 design research tracks (see figure 2, next page). Specifically, the Bureau is

considering strategies for reducing cost and increasing quality: automating *data collection*, reorganizing the *field infrastructure*, reengineering the *IT infrastructure* (including an Internet option), enhancing map quality through *continual address updating*, and using *administrative records*.

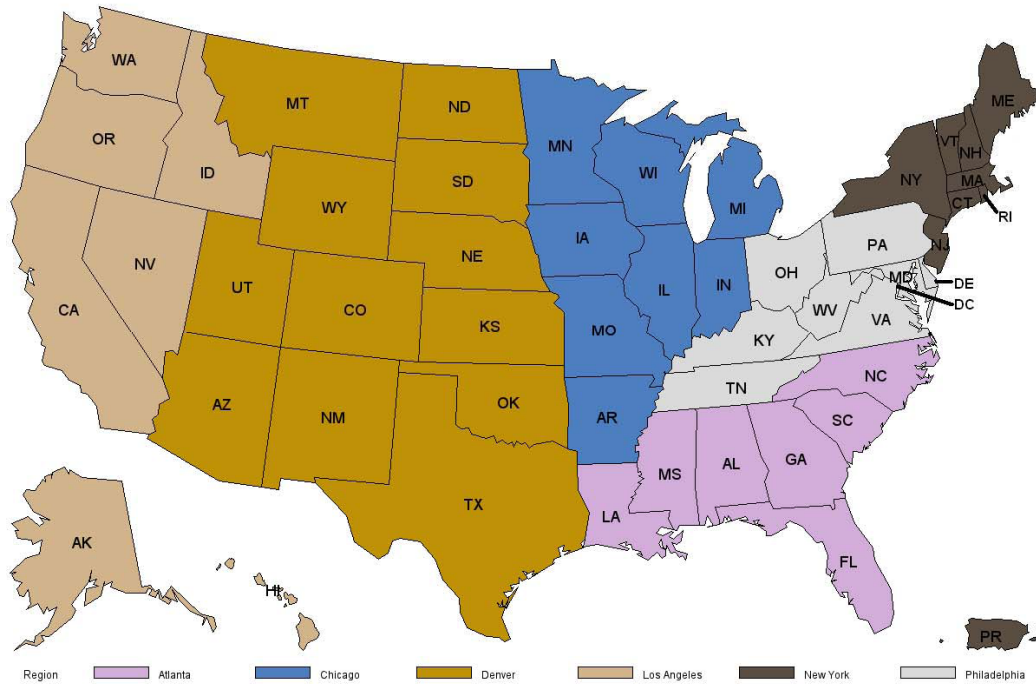**Figure 2. Five Major Research Tracks for the 2020 Census Design**

Source: U.S. Census Bureau

These design tracks are new to the 2020 decennial planning process. However, the impending departure of the Bureau's director puts these initiatives at risk, as they require strong leadership.

Data collection. Tailoring response options and automating data collection in the field could replace millions of paper forms and maps, and it remains a viable goal. To that end, the Census Bureau is launching a project to establish an adaptive design approach to conducting data collection faster and cheaper than the current prevailing survey philosophy, which strives for the highest response rate until time or money runs out. The "Adaptive Design" project creates a centralized, data-driven system that enables the Bureau to realize efficiencies in data collection, make knowledgeable tradeoffs between costs and errors, and to make better decisions on when to stop data collection efforts. However, in order to automate data collection in 2020, Census must improve its IT acquisition process early in the decade.

Field infrastructure. In June 2011, the Census Bureau announced a significant regional office restructuring. Marking the first such change since 1961, the Bureau expects to complete restructuring by January 1, 2013. The number of offices that manage nationwide surveys using thousands of permanent field representatives will decrease from 12 to 6 (see figure 3, next page).

Figure 3. Census Regions, Effective January 1, 2013

Source: U.S. Census Bureau

According to the Census Bureau, this reorganization aims to lower costs, improve efficiency, and increase responsiveness. The Bureau used objective criteria to select office closures and expects to save $15–18 million annually, starting in FY 2014, with few staff reductions. With the new 2020 decennial design still under development, it is unknown how these changes in the field will impact the Bureau's goal of containing the cost of the decennial census while preserving data quality.

IT infrastructure. The Census Bureau must improve its IT acquisition process early in the decade. To effectively implement a cost-effective and high-quality, redesigned data-collection operation for 2020, the Bureau must leverage emerging technologies. It is currently exploring the idea of a program similar to the U.S. Department of Defense's Venture Catalyst Initiative (DeVenCI).[2] Such an operation could increase the Bureau's awareness of emerging commercial technologies developed by nontraditional suppliers, as well as provide insight on census redesign needs and requirements to potential new suppliers.

The Internet is another tool that should reduce decennial IT costs. Statistical agencies in other countries, including Australia, Canada, New Zealand, and the United Kingdom, have employed the Internet to collect census data. An Internet response option would not be new to the United States either. The Bureau intends to provide an Internet response option

---

[2] According to the Department of Defense, DeVenCI fosters interaction among venture capitalists, small innovative companies, and potential Defense customers to identify and adopt emerging commercial technologies to meet Defense needs; *see* Department of Defense, *DeVenCI (Defense Venure Catalyst Initiative)*, http://devenci.dtic.mil.

in 2020 and as part of the ACS. Given the pervasiveness of the Internet and the public's ever-increasing reliance on it, we find it difficult to envision a 2020 Census without an Internet response option, albeit one that addresses IT security concerns.

Continual address updating. The Census Bureau describes "an accurate, comprehensive, and timely [address] list" as "one of the best predictors of a successful census." If the list is incomplete or inaccurate, people may be missed or counted more than once. Errors in the Bureau's master address file also increase the costs of nonresponse followup and other census operations. To reduce costs for the 2020 decennial—as we reported in May, the bureau spent nearly $1.4 billion in the decade preceding 2010 to produce the decennial census address list—the Bureau intends a continuous program of more robust updates of its maps and addresses database. A continuously updated, accurate database would improve the address lists and maps throughout the decade and support a less costly targeted address canvassing operation. To achieve this for 2020, the Bureau has introduced a $407 million initiative, called the Geographic Support System (GSS), to reduce costs. The Bureau also looks to gain enhanced address-list sharing capabilities with tribal, state, county, and local governments; this would bolster their Local Update of Census Addresses (LUCA) Program and the improvements it can make to the Bureau's address list.

Using administrative records. Greater use of administrative records offers the potential to enhance the decennial census in a number of important areas: from improving the master address file to finding households or individuals who may otherwise be missed to providing quality control for the enumeration process. These personal records contain information that individuals have already provided to the government, such as their names, addresses, age, sex, race, and a wide variety of demographic, socioeconomic, and housing information.

As indicated in the Census Bureau's 2020 business plan, supplementing decennial operations with information from these records could potentially reduce enumeration costs and help the Bureau avoid inaccurate enumerations in the following ways:

- Improving the address list;
- Supplying answers to questions with invalid or blank responses;
- Providing information for households that do not respond to the questionnaire, an in-person visit, or a phone interview;
- Offering quality control; and
- Helping assess overall decennial accuracy (i.e., coverage measurement).

However, relevant statutes governing other federal agencies do not facilitate the use of administrative records by the Census Bureau because these statutes either do not compel agencies to provide their records to the Bureau in response to requests or state that agencies are only required to provide certain information to the Bureau.

Finally, as we stated in our final 2010 decennial quarterly report to Congress, Census must implement a more effective decennial test program using the *American Community Survey (ACS)* as a test environment.

Background. ACS data are used in countless ways; its strength is in supplying a timely, consistent set of data, nationwide, across various levels of geography. The ACS provides:

- Annual statistics for all areas with populations greater than 65,000;
- 3-year estimates for all areas with populations greater than 20,000; and
- 5-year estimates for all areas.

Replacing the census long-form questionnaire with the ACS was a key goal of the 2010 decennial redesign. After eliminating the long-form questionnaire for 2010, the Census Bureau anticipated an improved 2010 response rate by featuring a short-form-only questionnaire. The ACS simplified the once-a-decade population and housing enumeration and provides the detailed demographic, housing, social, and economic characteristics throughout the decade in support of government programs, the business community, and the general public.

The ACS and testing for the 2020 decennial. Leading up to the 2010 decennial, the Census Bureau conducted three large site tests in 2004, 2006, and 2008. Although the Bureau scheduled its site tests at 2-year intervals, each one transpired over 3 years of planning, implementation, and evaluation—resulting in overlap with prior or subsequent tests. This overlap made it difficult for the Bureau to build on experiences and incorporate feedback from previous tests into the operational design it examined in the next test. For the 2020 decennial, the Bureau intends to implement smaller, focused research and testing.

The ACS infrastructure allows for the creation and testing of enterprise-wide solutions to obstacles that face all survey and decennial operations. In our final 2010 report, we suggested that the Census Bureau use the ACS to explore areas such as questionnaire content and design, response options (such as the Internet), use of administrative records, and targeted field data collection procedures and methodologies. According to the Bureau, Internet-response option tests have already produced useful results and will soon be implemented in the ACS. An ACS Internet response option that meets federal security standards would help the Bureau develop an IT infrastructure for its 2020 decennial program earlier in the decade. The cost and expense of building a secure Internet response option, for one-time decennial use, was cited by the Bureau as one reason for not using the Internet in 2010.

The ACS and a more efficient Census workforce. We have also suggested using the existing trained workforce, based primarily in the Census regions, for enhancing the 2020 decennial. This permanent workforce conducts other Census surveys such as the ACS on an ongoing basis. Using these workers to continuously update the maps and address list throughout the decade could reduce the size and improve the accuracy of the end-of-decade map and address updating operations.

By meeting these challenges, the Census Bureau and its stakeholders can maintain or improve on the quality of the 2020 decennial while containing cost.

III. Key Issues for the 2020 Decennial

The Census Bureau, the Department of Commerce, and Congress should take immediate action to lay the groundwork for a cost-effective 2020 decennial. We have identified the following key issues for consideration:

Departmental oversight of automated data collection. Departmental oversight should play a role: early in the process, it can reveal whether the Census Bureau has considered all reasonable project alternatives or if it is assuming too much risk. In this way, the Department can work with the Bureau to address problems before unnecessary costs accumulate. Supported by early independent cost estimates and independent assessments, its oversight can play a critical role in ensuring decennial IT investments stay on track.

Planning within a constrained Census budget. As research and testing continues, the Census Bureau must contend with and plan for several challenges that could adversely impact the next decennial. Like the rest of the federal government, it is operating in a constrained budget environment. In FY 2012, as a result of a reduction in its budget request for FY 2012, the Bureau canceled 20 of 109 studies that aimed to measure its performance in the 2010 decennial. The Bureau must be strategic in how it spends it available funding. And it must provide the Secretary and Congress reliable and transparent budget requests.

Continuity of leadership. Leadership continuity is essential to maintain momentum as planning progresses for the 2020 decennial. Absent stable, committed leadership, any organization tends to revert to its embedded culture. Because of the long planning cycle for the decennial, it is particularly critical that stable leadership chart the direction for the Census Bureau according to a consistent vision. A leadership void adds risk to the Bureau's management of critical issues (e.g., budget, operational design, and questionnaire content). Reverting to historical practices is a particular risk for the Bureau in the absence of strong leadership. It will be important to make the appointment of a new Director a priority.

Internet use and data-sharing. The Census Bureau is in the process of testing several design strategies for the 2020 decennial. In order to prepare for 2020, the Bureau must make a preliminary design decision by the end of FY 2014. Decisions made during the next 2 years will largely determine the cost and quality of the next decennial; thus, the Bureau must use the lessons learned from 2010 to guide its future decisions, and Congress may need to consider plans and legislation related to an Internet option and data-sharing to help achieve a cost-effective 2020 decennial census. For improving the address list through data sharing, the Bureau will need to look to Congress to address Title 13 restrictions on the Bureau reciprocating address information with the very partners who assist the Bureau. Specifically, while the Census Address List Improvement Act of 1994 helped by authorizing the LUCA program, further legislative action would help establish even better methods of two-way address sharing.

Administrative records use. The Census Bureau possesses appropriate authority to request and use administrative records from all government sources under 13 U.S.C. § 6, and the Privacy Act permits other agencies to disclose their records to the bureau. However, legislation governing other federal agencies either does not compel those

agencies to provide their records to the Bureau in response to requests or states that agencies are only required to provide certain information to the Bureau, limiting its usefulness. Congressional guidance on the disclosure and permitted uses of administrative records for the decennial census would be necessary to facilitate administrative records use by the Bureau.

The ACS and the 2020 decennial. Two recent developments may potentially impact both the ACS and the Census Bureau's decisions on decennial design, planning, and implementation.

First, Congress has initiated debate as to whether the ACS, which currently requires a response from each sampled household, should become voluntary. As part of its deliberations, Congress will consider the implications of making this a voluntary survey. Census Bureau research conducted in 2002 and 2003 indicated that a voluntary ACS would result in:

- Mail response rates falling by over 20 percentage points;

- Annual costs increases, by at least 38 percent, to achieve a comparable level of reliability; and

- Reduced data quality for areas of low response and small population groups (e.g., blacks, Hispanics, Asians, and American Indians).

The Census Bureau's concern about a lower response rate appears to be consistent with the recent results of the Canadian census. That country's 2011 census, which occurs every 5 years, shifted its long-form data collection from mandatory to voluntary—and experienced a 25 percent decline in its long-form questionnaire response rate.

Congress is also considering whether or not to completely eliminate funding for the ACS. As part of its deliberations, Congress will consider the implications that defunding the survey will have on the 2020 decennial, including:

- The replacement of a continuous nationwide testing process with discrete large-scale site tests, upon which the Census Bureau can determine a more cost-effective decennial design;

- The loss of a trained and experienced workforce, distributed across the nation to support decennial operations;

- The ability to establish an IT infrastructure to support an Internet response option that meets federal security standards; and

- The potential need to reinstate the long-form decennial questionnaire, currently not a factor in any design alternative.

Considering the Census Bureau's goal of maintaining the quality and containing the costs of the 2020 decennial, defunding the ACS would create significant uncertainty for decennial planning.

Appendix

2020 Decennial Recommendations to the Census Bureau Director from 2011 and 2012 OIG Reports

Recommendation	2020 Decennial Life Cycle Phase
Census 2010: Final Report to Congress (OIG-11-030-I; June 27, 2011)	
1. Conduct an analysis of the causes of the significant cost savings for 2010 field operations and incorporate those findings into any future validation studies to generate a more accurate final cost estimate.	Research and Testing
2. Obtain and use independent cost estimates to validate internally derived cost estimates (that include contingency reserves).	Research and Testing
3. Develop a transparent decision documentation strategy to account for 2020 census program and spending decisions.	Research and Testing
4. Improve the transparency of the decennial budget process, especially the presentation of surplus (or elimination of the surplus) as shown in the monthly financial management reports.	Research and Testing; Operational Development and Systems Testing; Readiness Testing, Execution, and Closeout
5. Reevaluate the practice of frontloading and develop a better process for developing workload and cost assumptions.	Operational Development and Systems Testing; Readiness Testing, Execution, and Closeout
6. Explore alternative approaches for conducting the 2020 Census that include (1) Internet and web-based response options, (2) automated field data collection alternatives, (3) utilizing administrative records, and (4) incorporating into the decennial process experienced field representatives who conduct nondecennial Census surveys each year.	Research and Testing; Operational Development and Systems Testing
7. Improve communication with the public on concurrent enumeration surveys and better inform people who did not receive decennial census forms at their homes how they might participate.	Research and Testing; Operational Development and Systems Testing
8. Increase the sample size of the American Community Survey (or other surveys) to use as a test environment for conducting smaller tests of new processes, procedures, and systems.	Research and Testing
9. Thoroughly review and improve decennial census training methods.	Research and Testing; Operational Development and Systems Testing
10. Explicitly address enumerator safety in collaboration with the Department, law enforcement agencies, and Congress.	Research and Testing; Operational Development and Systems Testing; Readiness Testing, Execution, and Closeout

Recommendation	2020 Decennial Life Cycle Phase

11. Regarding requirements management:
  a. Institutionalize effective requirements management processes that balance Census stakeholder needs and make appropriate cost, schedule, and performance tradeoffs;
  b. Ensure that major stakeholders fully participate throughout the entire acquisition process; and
  c. Maintain accurate cost estimates on cost reimbursement contracts to align them with identified requirements and subsequent changes.
	Research and Testing;
	Operational Development and Systems Testing

12. Align system development schedules with operational deadlines to allow adequate time to test systems before their deployment.	Research and Testing
13. Continuously update the maps and address lists throughout the decade, supplementing these activities with targeted address canvassing at the end of the decade.	Research and Testing; Operational Development and Systems Testing
14. Review both address canvassing practices and post-data collection processing to minimize errors on the maps that support subsequent operations.	Research and Testing; Operational Development and Systems Testing
15. Develop acquisition lifecycle oversight procedures to manage project risk that correspond to government and industry best practices.	Research and Testing
16. Strengthen and implement a risk management strategy and relevant contingency plans before starting 2020 decennial census operations.	Research and Testing; Operational Development and Systems Testing; Readiness Testing, Execution, and Closeout
17. Develop a 2020 decennial lifecycle schedule early in the decade, finalizing the operational schedules as soon as practicable after research and testing are completed.	Research and Testing; Operational Development and Systems Testing; Readiness Testing, Execution, and Closeout

18. Regarding the partnership program and special enumeration operations:
  a. Improve advance coordination with partnership organizations,
  b. Ensure Partnership specialist skills are aligned with project requirements,
  c. Establish procedures to mitigate the risk of duplicate enumerations, and
  d. Institute a more effective process for selecting and confirming sites to enumerate.
	Readiness Testing, Execution, and Closeout

19.
  a. Specify how to align Partnership activities and objectives with local Census office schedules to remedy current systemic shortcomings.
  b. Ensure joint Partnership- local Census office manager training as part of the decennial process.
  c. Refine the recruitment and hiring process and training of Partnership assistants.
  d. Provide Partnership assistants adequate electronic resources to do their job.
	Readiness Testing, Execution, and Closeout

Recommendation	2020 Decennial Life Cycle Phase
2020 Census Planning: Delays with 2010 Census Research Studies May Adversely Impact the 2020 Decennial Census (OIG-12-023-I; April 5, 2012)	
1. Prioritize further the 2010 Census Program Evaluation and Experiments (CPEX) studies, and focus program resources, to ensure that the most critical studies affecting the cost and quality of the 2020 Census are completed.	Research and Testing
2. Improve the transparency of the 2010 CPEX program by posting study plans, expected publication dates for the 109 studies, and final reports online as soon as practicable so that stakeholders can review and monitor the Bureau's progress in redesigning the 2020 Census.	Research and Testing
High-Quality Maps and Accurate Addresses Are Needed to Achieve Census 2020 Cost-Saving Goals (OIG-12-024-I; May 10, 2012)	
1. Develop a master address file/topologically integrated geographic encoding and referencing system database (MTdb) measure for determining address list quality at a low level of geography that (a) provides a fair and equal opportunity for targeting selection, (b) drives selection and planning decisions, and (c) is well-documented and verifiable.	Research and Testing
2. Work with the Department to determine the feasibility of improving methods of sharing MTdb information throughout the decade with governmental entities (partners) to create a uniform, national address list.	Research and Testing; Operational Development and Systems Testing; Readiness Testing, Execution, and Closeout
3. Investigate and remedy the exclusion of 500,000 ungeocoded address records, which had been designated as valid U.S. Postal Service delivery addresses, from the 2010 census.	Research and Testing
4. Conduct the necessary research, develop a proven methodology, and allocate the necessary funds to continuously reduce the number of ungeocoded records throughout the decade.	Research and Testing; Operational Development and Systems Testing; Readiness Testing, Execution, and Closeout
5. Develop and implement quality indicator tools, including use of administrative records, to ensure that updates to the MAF are accurate.	Research and Testing

OIG-12-030-T