



Testimony

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

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2010 CENSUS

Census Bureau Is Making Progress on the Local Update of Census Addresses Program, but Improvements Are Needed

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Highlights of [GAO-07-1063T](#), 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

The Department of Commerce’s U.S. Census Bureau (Bureau) seeks updated information on the addresses and maps of housing units from state, local, and tribal governments through the Local Update of Census Addresses (LUCA) program. This testimony discusses (1) the status of the LUCA program, and (2) the Bureau’s response to prior issues raised by GAO as well as new challenges related to the program.

The testimony is based on a GAO report issued on June 14, 2007. GAO reviewed LUCA program documents, met with and surveyed participants in the LUCA Dress Rehearsal, and interviewed Bureau officials and local officials.

What GAO Recommends

At this time, GAO is not making any new recommendations, but GAO’s June 2007 report recommended that the Secretary of Commerce direct the Bureau to take several actions to improve the LUCA program, including further assessing usability issues of the MAF/TIGER Partnership Software (MTPS) and the computer-based training (CBT) software, as well as providing further instructions on converting files. GAO also recommended that the Bureau collect additional data on localities that agree to participate but provide no response.

www.gao.gov/cgi-bin/getrpt?GAO-07-1063T.

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

2010 CENSUS

Census Bureau Is Making Progress on the Local Update of Census Addresses Program, but Improvements Are Needed

What GAO Found

The Bureau has conducted its planned LUCA operations in accordance with its published timeline. The Bureau has also taken steps to reduce burden and improve training for localities that participate in LUCA—all areas GAO and others had identified as needing improvement. For instance, to reduce participant burden, the Bureau provided a longer period for reviewing and updating LUCA materials; provided options for submitting materials for the LUCA program; combined the collection of LUCA addresses from two separate operations into one integrated program; and created MAF/TIGER Partnership Software (MTPS), which is designed to assist LUCA program participants in reviewing and updating address and map data. Also, the Bureau has planned improvements to the 2010 LUCA program training and plans to supplement the workshops with computer-based training (CBT).

Time frame	Activity	Status
February 2006	LUCA advance notification letters and informational materials mailed to highest elected officials.	<i>Completed</i>
March to May 2006	Census Bureau invited local governments to participate in the LUCA Program.	<i>Completed</i>
May 2006	Census Bureau conducted training workshops for participants.	<i>Completed</i>
June 2006	Census Bureau shipped the LUCA review materials to each participating government.	<i>Completed</i>
June to October 2006	LUCA participants reviewed and updated the address list and returned their comments to the Census Bureau’s regional office.	<i>Completed</i>
November to December 2006	Census Bureau reviewed the participants’ LUCA submission and updated the MAF/TIGER geographic database.	<i>Completed</i>
April to June 2007	Census Bureau conducts address canvassing (field check) operation.	<i>Under way</i>
December 2007 to January 2008	Participants review feedback materials.	<i>To be completed</i>

Sources: U.S. Census Bureau and GAO analysis.

LUCA participants that GAO surveyed report that they had adequate time to complete the LUCA review, and a majority of the participants were satisfied with the options for submitting materials. However, the Bureau faces new challenges. For instance, the Bureau tested MTPS with only one local government and did not test its CBT software in the LUCA Dress Rehearsal. Also, many participants had difficulty converting Bureau-provided files to their own software formats. Finally, the Bureau does not collect certain data on localities that agree to participate in LUCA but provide no response. This information is needed to fully assess the effect of the LUCA program on address lists and population counts.

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

I am pleased to be here today to discuss the Census Bureau's (Bureau) progress in testing and implementing its Local Update of Census Addresses (LUCA) program. In 1994 Congress required the Bureau to develop a local address review program in order to give local and tribal governments greater input into the Bureau's address list development process.¹ This program, LUCA, gives these governments the opportunity to review the accuracy and completeness of the Bureau's address information for their respective jurisdictions, and suggest corrections where warranted. In Census 2000, LUCA participants expressed frustrations about the program, including the burden the program placed on the resources of local governments. As a result, the Bureau undertook efforts in preparation for the 2010 LUCA to reduce this burden. My testimony today discusses (1) the current status of the LUCA effort, and (2) how the Bureau is addressing prior issues and new challenges associated with implementing LUCA.

As you know, the census is a critical national effort mandated by the Constitution. Census data are used to apportion seats in the Congress, redraw congressional districts, allocate billions of dollars in federal assistance to state and local governments, and for numerous other public and private sector purposes. Hence, failure for the decennial is not an option and the Bureau employs a number of quality assurance programs throughout the course of the census to ensure it delivers quality data. One such program is LUCA. The success of LUCA can help to contribute to accurate address lists and precise maps, which are key to a quality census. Together, accurate address lists and maps help ensure that (1) questionnaires are properly delivered; (2) unnecessary and costly follow-up efforts at vacant and nonexistent residences are reduced; and (3) the population is counted in their proper locations, which is the basis of congressional apportionment and redistricting.

My remarks today are based primarily on our recent report on how the Bureau has improved its LUCA program since the last decennial.² During the autumn of 2006, we observed preparations for and the conduct of LUCA for the 2008 Dress Rehearsal in sites located in North Carolina and

¹Census Address List Improvement Act, Pub. L. 103-430 (Oct. 31, 1994).

²GAO, *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).

California. We reviewed LUCA program documents and interviewed Bureau officials. Further, we conducted a Web-based survey of LUCA Dress Rehearsal participants in California and North Carolina to gauge their satisfaction with how the Bureau addressed prior recommendations and new challenges for the LUCA program. We also performed structured phone interviews with several localities that decided not to participate in the LUCA Dress Rehearsal.³ We conducted our work in accordance with generally accepted government auditing standards.

In summary, Mr. Chairman, our recent work has shown that the Bureau has made progress in planning for and implementing LUCA. For example, the Bureau has completed nearly all of its planned LUCA Dress Rehearsal operations in accordance with its published timeline, and has taken steps to reduce participant workload and burden and improve training. However, the Bureau can do more to mitigate possible difficulties that participants may have with new LUCA software and training. Specifically, the Bureau could do more to assess the usability of software designed to assist LUCA participants in reviewing and updating address and map data and to test computer-based training. In addition, many participants in the Dress Rehearsal experienced problems converting Bureau-provided address files into their own software formats. The Bureau could do more to provide information to localities on how to convert files from the Bureau to their respective applications.

We also found that the Bureau could do more to understand the effect that the LUCA program may have. For example, while the Bureau planned to assess the contribution of LUCA to housing unit counts, it had not decided whether to assess the contribution of the program to the population count, and it did not plan to collect information on the number of participants involved in LUCA that do not respond because they have no changes. The Bureau agreed to implement recommendations we made that address each of the concerns discussed above. We look forward to its action plan, due in August 2007, for how it will implement our recommendations.

³Sixty-two localities were eligible to participate in the LUCA Dress Rehearsal. The Bureau identified 44 state, county, and municipal governments that had signed up to participate, had been shipped at least some of the material needed to perform their reviews, and had not subsequently formally indicated to the Bureau that they had decided to drop out of the review process. As part of our Web-based survey, questionnaires were sent to 42 local governments and completed by 31 such governments, for a response rate of 74 percent. Of the 18 localities that were eligible to participate in the LUCA Dress Rehearsal but did not take part in the program, we also conducted 7 structured interviews (in person and by telephone).

Background

The Bureau's approach to building complete and accurate address lists and maps consists of a series of operations that sometimes overlap and are conducted over several years. These operations include partnerships with the U.S. Postal Service and other federal agencies; state, local and tribal governments; local planning organizations; the private sector; and nongovernmental entities. LUCA is one of those operations that give local and tribal governments direct input into the Bureau's address database.

LUCA was first implemented for the 2000 Census.⁴ Under the LUCA program, the Bureau is authorized (prior to the decennial census) to share individual residential addresses with officials of tribal, state, and local governments who agree to protect the Title 13 confidentiality of the information.⁵ LUCA allows participants to review, comment on, and provide updated information on the list of addresses and maps that the Bureau will use to deliver questionnaires within their communities. According to the Bureau, because of their knowledge of or access to data in their jurisdictions, LUCA participants may be better positioned to identify some housing units that are hard to find or are hidden. For example, local governments may have alternate sources of address information—such as utility bills, tax records, information from housing or zoning officials, or 911 emergency systems—which can help the Bureau build a complete and accurate address list.

For 2010, the Bureau plans to invite approximately 40,000 entities to participate in LUCA.⁶ After localities that opt to participate in LUCA have submitted their updated maps and address lists, the Bureau conducts a field check called address canvassing. At that time, the address canvassers for the 2010 Census, will go door-to-door (using handheld computers equipped with a global positioning system) updating the address list. Through the address canvassing operation, the Bureau can ensure that all changes submitted for the LUCA program actually exist and that they are assigned to the correct census block. After address canvassing the Bureau will provide feedback to LUCA participants on the

⁴The 2000 LUCA program had two separate components: the 1998 city-style address operation and the 1999 non-city-style address operation.

⁵13 U.S.C. §9(a).

⁶For the 2000 Census, of the 39,051 eligible entities—such as cities and counties—for LUCA participation, 20,718 chose not to participate; 5,525 entities signed participation agreements; 2,877 entities returned materials but recorded no updates or action; and 9,931 entities submitted at least one address action or challenged at least one block.

actions taken. Should local governments disagree during LUCA 2010, they can appeal the Bureau's actions to the Census Address List Appeals Office. In preparation for the 2010 Census, both LUCA and the subsequent address canvassing operation will be tested as part of the Bureau's Dress Rehearsal taking place in nine counties in the Fayetteville, North Carolina, area and San Joaquin County, California.

The Bureau Has Completed Nearly All Planned Activities for the LUCA Dress Rehearsal and the First Step of the 2010 LUCA Program

The Bureau has completed nearly all planned operations for the LUCA Dress Rehearsal in accordance with the LUCA Dress Rehearsal timeline (see fig. 1).⁷ On June 26, 2007 the Bureau expects to complete address canvassing—an operation designed to verify all housing units at the Dress Rehearsal sites, including changes provided by LUCA participants. Next, the Dress Rehearsal participants will have the opportunity to review materials regarding their submissions—this is scheduled to take place from December 2007 through January 2008.

The Bureau met the first date on its LUCA Dress Rehearsal timeline when it mailed the advance notification letters and informational materials to the highest elected officials in February 2006. The Bureau officially invited localities to participate in LUCA, provided participant training, and shipped LUCA materials on schedule. Additionally, localities reviewed and updated LUCA materials within the June to October 2006 period specified on the timeline. The Bureau also finished its review of participants' LUCA submissions and updated the MAF/TIGER⁸ geographic database in December 2006.

⁷Bureau headquarters and the Charlotte regional office provided us with internal timelines for the 2010 LUCA Program and the LUCA Dress Rehearsal operations held in parts of California and North Carolina from June through October 2006. Additionally, we obtained a public version of the Bureau's timelines for both the LUCA Dress Rehearsal and the 2010 LUCA Program from its Web site, <http://www.census.gov/geo/www/luca2010/luca.html>.

⁸The Bureau's address list is known as the Master Address File (MAF); its associated geographic information system is called the Topologically Integrated Geographic Encoding and Referencing (TIGER) database. TIGER is a registered trademark of the U.S. Census Bureau.

Figure 1: Bureau's LUCA Dress Rehearsal Timeline and Status

2008 LUCA Dress Rehearsal Program Schedule		
Time frame	Activity	Status
February 2006	LUCA advance notification letters and informational materials mailed to highest elected officials.	Completed
March to May 2006	Census Bureau invited local governments to participate in the LUCA Program.	Completed
May 2006	Census Bureau conducted training workshops for participants.	Completed
June 2006	Census Bureau shipped the LUCA review materials to each participating government.	Completed
June to October 2006	LUCA participants reviewed and updated the address list and returned their comments to the Census Bureau's regional office.	Completed
November to December 2006	Census Bureau reviewed the participants' LUCA submission and updated the MAF/TIGER geographic database.	Completed
April to June 2007	Census Bureau conducts address canvassing (field check) operation.	Under way
December 2007 to January 2008	Participants review feedback materials.	To be completed

Sources: U.S. Census Bureau and GAO analysis.

It is important to note that while the Bureau generally met the time frames listed in its published LUCA Dress Rehearsal timeline, some activities were not included in that timeline. For example, plans to test newly developed software, which is intended to assist participating localities in their 2010 LUCA reviews, and test the new computer-based LUCA training were not included in the Bureau's LUCA Dress Rehearsal schedule—precluding the opportunity to test these software products under census-like conditions.

To begin preparation for the 2010 Census, LUCA has already sent the advance notification letters to the highest elected officials in each of the eligible localities (see fig. 2). For Census 2000, slightly over half of the eligible localities chose not to participate; for the 2010 Census, the Bureau has set a participation goal of 60 percent.

Figure 2: Bureau’s 2010 LUCA Timeline

Tentative 2010 Census LUCA Program Schedule	
Time Frame	Activity
January 2007 to February 2007	LUCA advance notice letters mailed to the highest elected officials and other contacts in all active functioning governments.
July 2007	LUCA invitation letters and registration materials mailed to the highest elected official and other contacts of each government.
July 2007 to January 2008	Invited governments register for LUCA and the Bureau ships the LUCA review materials to each participating government.
August 2007 to March 2008	LUCA participants review and update the address list and maps and return their comments to the Census Bureau’s Regional Office.
April 2008 to October 2008	Census Bureau reviews the participant’s LUCA submission and updates the Master Address File and the TIGER geographic database.
November 2008 to May 2009	Census Bureau prepares for and conducts the Address Canvassing Operation using GPS-equipped handheld computers.
June 2009 to October 2009	Census Bureau ships feedback materials to the LUCA participants showing how the Bureau processed each government’s LUCA submissions.
September 2009 to December 2009	LUCA participants review their LUCA feedback and have the opportunity to appeal the results to the LUCA Appeals Office.
September 2009 to January 2010	LUCA Appeals Office reviews and adjudicates the appeals.

Source: U.S. Census Bureau.

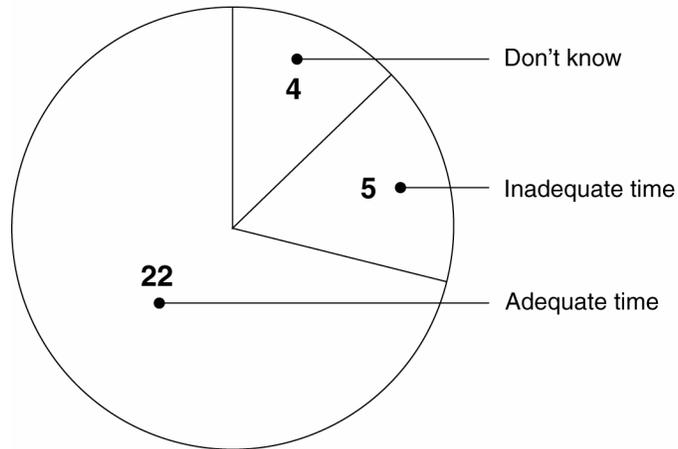
Note: See the Bureau’s Web site, <http://www.census.gov/geo/www/luca2010/luca.html>.

Bureau Modified LUCA to Address Issues from the Census 2000 Experience, but Faces New Challenges for 2010

The Bureau has taken steps to reduce participants’ workloads and burdens and improve training—all areas that the National Research Council (NRC), we, and others had identified as needing improvement for Census 2000. Building on the progress it has made, the Bureau could take additional steps to address new challenges in these areas, as well as issues related to measuring overall program effectiveness.

To reduce the workload and burden on LUCA participants, the Bureau provided a longer period—from 90 to 120 days—for reviewing and updating LUCA materials. This extension was well received by LUCA Dress Rehearsal participants, as the majority of respondents to our survey indicated that 120 days allowed adequate time for them to complete the LUCA review (see fig. 3).

Figure 3: LUCA Dress Rehearsal Participants' Views on the Adequacy of Time Allowed to Complete the Review



Source: GAO Web-based survey of LUCA dress rehearsal participants.

Another change aimed at reducing workload and burden is providing localities with more options for how they may participate in the LUCA program. Those options are: (1) full address list review with count review, (2) Title 13 local address list submission, and (3) non-Title 13 local address list submission. The options differ in the level of review of Bureau materials by participating localities and in requirements to adhere to rules concerning confidentiality of information. For example, under option 1, participants directly edit Bureau-provided address lists and maps. Under option 2, participants review Bureau-provided maps but submit their own address lists in Bureau-provided formats. Under option 3, participants do not receive address lists from the Bureau, but may provide their own address lists to the Bureau and edit Bureau-provided maps. A majority of LUCA Dress Rehearsal participants that we surveyed were satisfied with the options that the Bureau provided.

To assist LUCA participants in updating the Bureau's address list and maps electronically, the Bureau has created MAF/TIGER Partnership Software (MTPS). This software will enable users to import address lists and maps for comparison to the Bureau's data and participate in both the LUCA and another geographic program, the Boundary and Annexation

Survey (BAS)⁹ at the same time. The Bureau has also planned improvements to the 2010 LUCA program training by separately offering specialized workshops for informational and technical training and by supplementing the workshops with computer-based training (CBT). Finally, based on complaints about the multiphased LUCA program from the 2000 experience (where some participants found the two separate operations for city-style and non-city-style addresses to be confusing), the Bureau designed the 2010 LUCA program to be a single operation for all addresses.

All of these steps are intended to help reduce the burden on localities' participation in LUCA. However, there are additional steps the Bureau could take to ease participant burden. For example, the Bureau could do more to assess the usability of the MTPS software. The Bureau did not test MTPS as part of the LUCA Dress Rehearsal, and tested MTPS with only one locality in preparation for the 2010 LUCA program. Properly executed user-based methods for software testing can give the truest estimate of the extent to which real users can employ a software application effectively, efficiently, and satisfactorily. In response to recommendations to our report on the 2010 LUCA program, the Bureau agreed to better assess the usability of the MTPS for 2010.

Some participants will not rely on the MTPS. For these participants, the Bureau could do more to help them use their own software. We found that participants in the LUCA Dress Rehearsal experienced problems converting files from the Bureau's format to their respective applications—our survey of LUCA Dress Rehearsal participants revealed that the majority of respondents had, to some extent, problems with file conversions to appropriate formats. Our fieldwork also revealed issues pertaining to file conversion. For example, one local official noted that it took him two days to determine how to convert the Bureau's pipe-delimited files. The Bureau previously informed us that, to mitigate the potential burden on localities that choose not to use MTPS, it would provide technical guidance on file conversion through its LUCA technical help desk; however, it does not plan to provide instructions for converting Bureau-provided address files through other means. At present, the Bureau does not know how many localities will opt not to use MTPS for

⁹The Bureau conducts the BAS annually to collect information about selected defined geographic areas. The BAS is used to update information about the legal boundaries and names of all governmental units in the United States.

LUCA as part of the 2010 Census, but those localities may face the same challenges faced by participants in the LUCA Dress Rehearsal. In response to recommendations in our report on the 2010 LUCA program, the Bureau agreed to disseminate instructions on file conversion on its Web site and provide instructions to help desk callers.

The Bureau did not test the CBT it developed to supplement its new workshops for informational and technical training during the Dress Rehearsal. Though participants were not provided with CBT in the LUCA Dress Rehearsal, our work found that this method of training is viewed by participants as helpful. Specifically, respondents to our survey ranked CBT higher than classroom training, in terms of being “extremely” or “very” useful. Additionally, local officials told us that CBT was more convenient for them because they need not leave their offices or adjust their schedules to learn how the LUCA program works. Because this is a new aspect of the LUCA program and will be used nationally, it is important to test and improve the training prior to implementing it for multiple local jurisdictions. In response to recommendations in our report on the 2010 LUCA program, the Bureau agreed to test the CBT software with local governments.

Overall, the effect that the LUCA program may have on housing unit and population counts is not known. To perform such analysis, the Bureau should collect additional data. Specifically, we found that although the Bureau has not finalized its evaluation plans regarding the 2010 LUCA program, Bureau officials have stated that it intends to assess the LUCA’s contribution to housing unit counts and would consider a plan to assess the program’s contribution to the census population count. Such analysis is important because it would provide a measure of the ultimate effect of LUCA on achieving a complete count of the population. However, the Bureau does not have a method of distinguishing between localities that agreed to participate in the program but do not submit an update because they have no changes, and localities that did not submit an update because they did not review the materials. Without this information, the Bureau cannot fully measure the extent to which local reviews have contributed toward accurate address lists and population counts. In response to recommendations in our report on the 2010 LUCA program, the Bureau agreed to establish a process for localities to indicate that they participated in LUCA but found no changes to address lists and maps.

In summary, Mr. Chairman, the success of the census depends in large part on the ability of the Bureau to locate and deliver questionnaires to every household in the United States. To accomplish this monumental task, the Bureau must maintain accurate address and map information for every location where a person could reside. We applaud the moves the Bureau has undertaken to improve its LUCA program so that user workload and burden are reduced, thus, making it easier for local and tribal governments to provide input into the accuracy and completeness of the Bureau's address information for their respective jurisdictions. However, there is more the Bureau can do to address information- technology-based challenges to the LUCA program prior to the 2010 Census. The Bureau performed little user testing of MTPS and no user testing of the CBT module for the LUCA Dress Rehearsal. Testing new technology will help the Bureau identify any issues related to the usability of the MTPS and CBT software. Finally, without better data on why some localities that agree to participate do not provide updated information, the Bureau may be hampered in its ability to estimate the effect of the LUCA program on the MAF database and the census population count.

As in the past, we look forward to supporting this subcommittee's oversight efforts to promote a timely, complete, accurate, and cost-effective census.

Mr. Chairman, Mr. Turner, this concludes my prepared statement. I would be pleased to respond to any questions that you or other members of the subcommittee might have.

Contact and Acknowledgments

For questions regarding this testimony, please contact Mathew J. Scire` on (202) 512-6806, or by e-mail at sciremj@gao.gov. Individuals making contributions to this testimony include Lisa Pearson, David Bobruff, Betty Clark, Jennifer Edwards, Ernie Hazera, Mark Ryan, and Tim Wexler.

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