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THE 2010 CENSUS MASTER ADDRESS FILES: ISSUES AND CONCERNS

HEARING

BEFORE THE

SUBCOMMITTEE ON INFORMATION POLICY, CENSUS, AND NATIONAL ARCHIVES

OF THE

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

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THE 2010 CENSUS MASTER ADDRESS FILES: ISSUES AND CONCERNS

WEDNESDAY, OCTOBER 21, 2009

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON INFORMATION POLICY, CENSUS, AND NATIONAL ARCHIVES,
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:25 p.m. in room 2154, Rayburn House Office Building, Hon. Wm. Lacy Clay (chairman of the subcommittee) presiding.

Present: Representatives Clay, Maloney, Norton, Watson, McHenry, Westmoreland, and Chaffetz.

Staff present: Darryl Piggee, staff director/counsel; Jean Gosa, clerk; Yvette Cravins, counsel; Frank Davis and Anthony Clark, professional staff members; Charisma Williams, staff assistant; Carla Hultberg, chief clerk (full committee); Adam Hodge, deputy press secretary (full committee); Leneal Scott, information systems manager (full committee); John Cuaderes, minority deputy staff director; Adam Fromm, minority chief clerk and Member liaison; and Chapin Fay, minority counsel.

Mr. CLAY. The Subcommittee on Information Policy, Census, and National Archives will come to order.

Good afternoon and welcome to today's hearing entitled, "The 2010 Master Address Files: Issues and Concerns." Today's hearing will examine the quality and quantity of addresses encompassing the master address file.

Before we begin today, I would first like to publicly express my condolences to the family and friends of Bill Sparkman. Mr. Sparkman was a Census worker found murdered in Kentucky. This incident is extremely unfortunate and immensely troubling. Census workers are doing a great civic duty for their country, and it is intolerable that such violations occur.

Further, I would like to commend Director Groves on his efforts and concern for his employees. It is evident that the safety and well-being of Census employees are of paramount concern to him. I, along with this subcommittee, await swift justice for those responsible for such a horrendous act.

Also I would like to, on another note, recognize a group of visitors here who are part of the House Democracy Partnership. We have 24 members of parliament from four countries this week for a seminar on committee operations, with an emphasis on organizing and holding public hearings. The visiting members are observ-

ing video of a hearing and meeting with House staff and Members to discuss the organization and conduct of hearings.

I want to welcome those members of parliament here from the country of Kenya, as well as Peru. Welcome. Hopefully you will get something out of this hearing, which I am sure you will.

Without further ado, on our panel we will hear first from Dr. Robert Groves, Director of the Census Bureau. Dr. Groves will provide the status of the Bureau's ongoing efforts to compile and update the master address file, including LUCA and its appeal process, Special Gulf Coast initiatives, address canvassing, and group quarter validation.

Welcome again, Dr. Groves.

We will then hear from Government witnesses who will testify and assess the compilation of the master address file. These witnesses will offer recommendations they believe will improve the Bureau's efforts.

Our final testimony will come from a stakeholder who will discuss her organization's concerns about census 2010. She will provide her organization's actual experiences with hard-to-count populations. She will also offer practical solutions to aid in the partnership between the Bureau and community-based organizations.

Without objection, the Chair and ranking minority member will have 5 minutes to make opening statements, followed by opening statements not to exceed 3 minutes by any other Member who seeks recognition.

Without objection, Members and witnesses may have 5 legislative days to submit a written statement or extraneous materials for the record.

Again, the purpose of today's hearing is to examine the master address file. This subcommittee is committed to reviewing the daunting and critical task of counting the population. This constitutionally mandated exercise has wide ramifications. The results are used to apportion legislative districts at the Federal and State level. Moreover, the distribution of more than $400 billion annually in Federal assistance to local, State, territorial, and tribal governments rely upon this count. Civic prestige, marketability, and regional political power also rest upon these numbers.

As we look forward to April 1, 2010, the subcommittee evaluates the status of the Bureau's efforts to count all inhabitants of this country. The master address file is an essential component of the 2010 decennial census; thus, an assessment of the compilation of our addresses is of fundamental interest and concern to the subcommittee.

Today's hearing will focus on the Bureau's progress in the compilation, scheduling, cost, and transparency of the master address file. The subcommittee will explore all aspects of master address file, including but not limited to LUCA, the LUCA appeal process, address canvassing, update leave, special Gulf Coast initiatives, and budgetary matters. The Bureau's interaction and cooperation with local and county governments, community organizations, stakeholders will further be explored. The success of the census is dependent on the quality of the address list.

I thank the witnesses for appearing today and look forward to their testimony.

I now yield to the distinguished ranking minority member, Mr. Chaffetz of Utah.

[The prepared statement of Hon. Wm. Lacy Clay follows:]

Wm. Lacy Clay
Chairman
Information Policy, Census, and National Archives Subcommittee
Oversight and Government Reform Committee

"The 2010 Census Master Address Files: Issues and Concerns"

Wednesday, October 21, 2009
2154 Rayburn HOB
2:00 p.m.

Good Afternoon, and Welcome to today's hearing entitled, "The 2010 Master Address Files: Issues and Concerns."

Before we begin today, I would first like to publicly express my condolences to the family and friends of Bill Sparkman. Mr. Sparkman was the Census worker found murdered in Kentucky. This incident is extremely unfortunate and immensely troubling. Census workers are doing a great civic duty for their country, and it is intolerable that such violations occur. Further, I would like to commend Director Groves on his efforts and concern for his employees. It is evident that the safety and well-being of Census employees are of paramount concern to him. I,

along with this subcommittee, await swift justice for those responsible for such a horrendous act.

THE PURPOSE OF TODAY'S HEARING IS TO EXAMINETHE MASTER ADDRES FILE. THIS SUBCOMMITTEE IS COMMITTED TO REVIEWING THE DAUNTING AND CRITICAL TASK OF COUNTING THE POPULATION. THIS CONSTITUTIONALY MANDATED EXERCISE HAS WIDE RAMIFICATIONS. THE RESULTS ARE USED TO APPORTION LEGISLATIVE DISTRICTS AT THE FEDERAL AND STATE LEVELS.

MOREOVER, THE DISTRIBUTIOIN OF MORE THAN $400 BILLION ANNUALLY IN FEDERAL ASSISTANCE TO LOAL, STATE, TERRITORIAL AND TRIBAL GOVERNMENTS, RELY UPON THIS COUNT. CIVIC PRESTIGE, MARKETABILITY, AND REGIONAL POLITICAL POWER ALSO REST UPON THESE NUMBERS.

AS WE LOOK FORWARD TO APRIL 1, 2010, THE SUBCOMMITTEE EVAULATES THE STATUS OF THE BUREAU'S EFFORTS TO COUNT ALL INHAITANTS OF THIS COUNTRY. THE MASTER ADDRESS FILE ("MAF") IS AN ESSENTIAL COMPONENT OF THE 2010 DECENNIAL CENSUS. THUS, AN ASSESSMENT OF THE COMPILATION OF ADDRESSES IS OF FUNDAMENTAL INTEREST AND CONCERN TO THE SUBCOMMITTEE.

TODAY'S HEARING WILL FOCUS ON THE BUREAU'S PROGRESS IN THE COMPILATION, SCHEDULING, COST, AND TRANSPARENCY OF THE MASTER ADDRESS FILE.

THE SUBCOMMITTEE WILL EXPLORE ALL ASPECTS OF MAF, INCLUDING BUT NOT LIMITED TO LUCA, THE LUCA APPEAL PROCESS, ADDREESS CANVASSING, UPDATE/LEAVE, SPECIAL GULF COAST INITIATIVES, AND BUDGETARY MATTERS. THE BUREAU'S INTERACTION AND COOPERTAION WITH LOCAL AND COUNTY GOVERNMENTS, COMMUNITY ORGANIZATIONS, AND STAKELHOLDERS WILL FURTHER BE EXPLORED.

THE SUCCESS OF THE CENSUS IS DEPENDENT ON THE QUALITY OF THE ADDRESS LIST. I THANK THE WITNESSES FOR APPEARING TODAY AND LOOK FORWARD TO THEIR TESTIMONY.

Mr. CHAFFETZ. Thank you, Mr. Chairman. Thank you for all of you who are participating in this, and thank you very much for our guests. I hope you find this informative and I appreciate your joining us here today.

As we work on this very daunting, huge, massive task of trying to count every person in the United States of America our time line is short. Here we have less than 6 months to go, and undoubtedly the challenges will be huge. Of particular concern that I would like to make sure of is are we up to the task of making sure that everyone is fairly counted, that they are not under-counted and they are not over-counted, and that we have the tools necessary and the technology in place in order to make that happen.

I have specific questions and concerns about the viability of the work force that is being hired in order to do this enumeration; specifically, the practice of hiring known criminals. I know the background checks and the fingerprinting have been an issue, and I would appreciate an update along the way in that regard.

And then I also have questions as to why we don't or to what degree we do utilize and tap into what we already do in the U.S. Postal Service. They already have a Federal work force of hundreds of thousands of people who go to every home, every address in this country. I recognize some have Post Office boxes and what not, and there are certain challenges with illegally subdivided homes and what not, as Ms. Jacobs I am sure will address, but, with that being said, mapping out this country, why we are not more closely aligned with literally hundreds of thousands of people who do this on an almost everyday basis is something I think is worth at least a few questions along the way.

I look forward to your testimony and appreciate the interaction today. That is what this process is all about.

I thank the chairman for the time and yield back.

Mr. CLAY. I thank the gentleman from Utah.

Would Mr. Westmoreland care to make an opening?

Mr. WESTMORELAND. No, thank you.

Mr. CLAY. Thank you. Then, if there are no additional opening statements, we will now receive testimony from the witnesses before us today.

I want to start by introducing our panel. We will hear first from Dr. Robert Groves, Director of the Census Bureau. Dr. Groves has authored numerous books and articles. He was a recipient of the prestigious Julius Shiskin Memorial Award in 2008. He has a B.A. from Dartmouth and a master's in sociology and statistics, and further earned a doctorate from Michigan. Dr. Groves' book, "Non-response in Household Interview Surveys," with Mick Cooper received the 2008 AAPOR Book Award.

Dr. Groves began his tenure as Director on July 15, 2009.

Next we will hear from Mr. Robert Goldenkoff, who currently serves as the Director of Strategic Issues at the Government Accountability Office. Mr. Goldenkoff is responsible for reviewing the 2010 census and Government-wide human capital reform. He has also developed a body of work related to transportation security, combating human trafficking, and Federal statistical programs.

Mr. Goldenkoff's various works have been published in the Public Administration Review Policy Studies Journal, Government Executive, and Technology Review.

Thank you for being here.

Next we will hear from Mr. Todd Zinser, Inspector General of the Department of Commerce. As the Inspector General, Mr. Zinser leads a team of auditors, evaluators, investigators, attorneys, and administrative staff responsible for promoting economy and efficiency in detecting and preventing fraud, waste, and abuse in a vast array of business, scientific, economic, and environmental programs administered by the Department and its 13 bureaus.

Thank you, Mr. Zinser, for coming today.

Our final witness will be Ms. Ilene Jacobs from California Rural Legal Assistance. Ms. Jacobs is the Director of Litigation, Advocacy and Training. She has spent 30 years of her legal career as an advocate for housing and civil rights in low income communities in urban and rural United States. Ms. Jacobs taught housing law for the UC Davis Law School and women and the law for Yuba Community College. She obtained her B.A. from Boston University and J.D. from the Northwestern University School of Law. She has coauthored two publications on the under-counted farm workers and indigenous groups in the census.

Ms. Jacobs is the CRLA delegate to the National 2010 Census Advisory Committee, for which she is chair of an ad hoc subcommittee on hard-to-locate housing units.

Thank you all for appearing before this subcommittee today.

It is the policy of the subcommittee that all witnesses before they testify be sworn in. Can I ask you to stand?

[Witnesses sworn.]

Mr. CLAY. Let the record reflect that the witnesses answered in the affirmative.

Each of you will have an opportunity to make an opening statement. Your complete written testimony will be included in the hearing record. The yellow light will indicate that it will be time to sum up, and the red light will indicate that your time has expired.

Dr. Groves, you may proceed first.

STATEMENTS OF ROBERT GROVES, DIRECTOR, U.S. CENSUS BUREAU; ROBERT GOLDENKOFF, DIRECTOR, STRATEGIC ISSUES, GOVERNMENT ACCOUNTABILITY OFFICE; TODD ZINSER, DEPARTMENT OF COMMERCE, INSPECTOR GENERAL; AND ILENE JACOBS, DIRECTOR, LITIGATION, ADVOCACY AND TRAINING, CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

STATEMENT OF ROBERT GROVES

Dr. GROVES. Thank you. Chairman Clay, Ranking Member Chaffetz, other subcommittee members, I am happy to be here to testify with regard to the master address file for the 2010 census.

When I testified here on September 22nd, I noted at that time a set of professional judgments about the assessment of the 2010 preparations, and I noted at the end of this month we would be finished with our internal evaluation of the master address file. I re-

alize the schedules of the committee didn't work to hit that time exactly right. I will tell you as much as we know, I promise today, but there is still work to be done, and I would be happy to meet with the full committee or any subset when we have that full report ready.

Let me begin by reminding us of what the master address file is. It is literally an inventory of all the addresses and descriptions of units, along with their geographical locations. It is the source of the mailing of all the questionnaires and delivery of the decennial forms, so it is a big deal for the 2010 census, and the quality of that master address file is appropriately a target of this subcommittee's scrutiny.

There are three major quality criteria that I will talk about today. One is its completeness, its coverage, does it contain all of the housing units in the United States? Second, are the addresses on each of those housing units complete, or the physical descriptions? Can we mail or find the housing units in our later operations? And then third, do we know where these units are? Is the spatial accuracy what we need to have for a successful census?

We have done three important things over the decade I think it is important to know that were designed to improve the quality of the master address file. The first thing that was done is a reflection of what happened in 2000. It was a result of the 2000 census that there were more duplicates in this frame than were expected. One source of the duplicates had to do with group quarters housing units, and we have blended those two lists together with the hope that will reduce the kind of duplication we found in 2000.

We have realigned all the streets and roads in the country to reflect changes over the decade, and we are fulling using, in cooperation with the Postal Service, codes that determine how best to get forms to particular addresses, whether we should mail them or deliver them ourselves.

We have also been updating this frame throughout the decade through, again, a cooperation with the Postal Service on the delivery sequence file, and then through our own field work in the American community survey and other surveys, especially in rural areas.

Mr. Chairman, you mentioned the so-called LUCA program, which is the local update of census addresses. It plays, as you know, a critical role. It is a key, both symbolic and real, cooperation with local and State governments throughout the country, as well as tribal governments. This is an important part of building the master address file.

Mr. Chairman, I want to thank you, along with Representative Maloney, former ranking member of the subcommittee, Michael Turner, Representative Michael Thompson, and a former ranking member of the full committee, Representative Tom Davis, for your support last year. You wrote a Dear Colleague letter in March and you helped to spread the word about the LUCA program to your colleagues on the Hill, and it helped, as you will see in just a few minutes.

We invited in 2007 about 40,000 different tribal, State, and local governments to participate in this local program. About 12,000, 11,500 of them, registered. About 29 percent of the governments

are represented by that 11,000. That is a disappointing number when you first see that, but those governments represent about 92 percent of the housing units in the country. So that is kind of the first evaluation of LUCA that one could mount.

One way to evaluate it is to compare it to what happened in 2000. In 2000 we had about 18,000 governments registered. They represented less than 92 percent of the total housing units in the country. So overall on participation in LUCA we had greater participation this decade than last, and that is something that we are grateful for.

We received submissions reflecting changes to our address list from those local governments from about 79 percent of the governments that had registered. That is about 8,100 governments. This compares to about 67 percent submission in the 1998 LUCA and 48 percent in the 1999 LUCA. So once again the participation, the submission of these lists to us from the local governments was somewhat better than in 2000, another good sign.

We then matched these addresses supplied by local governments against the master address file and we sent out all those addresses for the address canvassing operation that took place in the summer.

Let me mention a couple of things about other improvements in the local update program. We had a single cycle of review. This reduced the complexity of participating governments. We had a longer review period, 120 days versus 90. We allowed a variety of ways to participate that seemed to fit the different problems local governments were facing. We provided easy to use software that they could download on their desktops to help. And for the first time we allowed State governments to represent lower governments within their States. That partially explains the lower count of participation of governments but the higher percentage of housing units represented.

The preliminary figures from this program show that about 8 million addresses were provisionally added to the master address file for verification. Thirty million of the addresses submitted by the local update program matched addresses already on the file, and we had 2 million corrections to addresses.

Then, as you know, over the summer in 2009 Census Bureau staff walked every street and road in the country and visited 145 million locations that consisted of the 145 million units on the then master address file. The only areas that we omitted from this were remote Alaska and parts of Maine that represent about 35,000 households of the 134 million.

I can give you the results of the address canvassing work. About 98 million addresses on that list of 145 million were verified as is. Twenty million were corrected. Usually that was a street name correction, small changes. Five million were moved to another block. Ten million were added. They weren't on the address list before and they weren't on the LUCA submission list. So at the current time, the master address file consists of about 134 million records. That turns out to match independent estimates of the housing unit count. That is a good sign so far in our comparisons.

The figures show that about 21 million addresses fall into either a delete or duplicate or non-residential category. Sixteen million of

those were deletes; that is, we couldn't find them when we got out there. And about 4 million were duplicates that were found to exist in other places in the master address file. About a million of the addresses we had on the list were non-residential. They have now been omitted.

Two million of them were what we called other living quarters. These are things like assisted living facilities, dormitories, group homes. We sort of set those aside, and right now as we speak there are people visiting those group quarters, because that was a problem in 2000, making sure we had all the unit identifications right in those group facilities. We are out there right now making sure we have correct unit identifiers, and that is going to pay off come spring when we do the measurement.

With respect to the results of address canvassing on the local update cases, themselves, our initial results show that about 66 percent of the LUCA addresses were deleted, identified as duplicate, or found to be non-residential. About 29 percent of the addresses were verified, corrected, or moved, and about 5 percent were unresolved in address canvassing but will remain in the enumeration universe.

We are now reviewing this operation, as I said at the opening, and I am happy to get back to you when we have all of the evaluative results on that program.

You know that we have other programs that will improve hopefully the master address file. We are right now out asking the same local governments to give us new construction updates. We have invited about 29,000 governments to participate in this. About 15,000 have already said yes, and we are off and running on that.

We are also going to make other updates to this file. We are not through for 2010. We will get other updates from the U.S. Postal Service, from the delivery sequence file. We are going to have a count review program that is going to go out early in 2010, and then we are going to have updates from other field operations. Our attempt in this is to get the most up-to-date master address file we can.

So let me sum up. I said there are three evaluative criteria for the master address file. Coverage is first. Relative to 2000 I noted that fewer governments participated in the local update program but they represented a higher proportion of all addresses in the country than 2000. I noted that State and local governments provided addresses that form about 2 percent of the total valid addresses on the file after address canvassing. And after address canvassing the total number of units on the file is comparable to an independent estimate of the count of housing units in the country.

The second criteria is the completeness of addresses, and we found about 2 million other living quarters that are now being revisited to get those addresses right, those identifiers right. We are expecting a lot of these to revert to a single housing unit by the time we are through with this operation.

We continue to evaluate the current status of the master address file, and I am hopeful that I could talk more about this in a later hearing in front of this committee.

I thank the committee for this opportunity to testify and look forward to your questions.

[The prepared statement of Dr. Groves follows:]

PREPARED STATEMENT OF
ROBERT M. GROVES
DIRECTOR
US CENSUS BUREAU

2010 Census: Master Address File, Issues and Concerns

Information Policy, Census, and National Archives Subcommittee
Oversight and Government Reform Committee

21 October 2009

Chairman Clay, Ranking Member McHenry, members of the Subcommittee, I appreciate this opportunity to testify before you regarding the Master Address File for the 2010 Census. When I appeared before the subcommittee on September 22 to discuss my assessment of the 2010 Census, I noted that we would have initial empirical evaluations of the Master Address File at the end of this month. I realize that schedules of the committee did not permit a hearing at that time; I'm happy to tell you everything we know about the quality of the Master Address File as of today. But there is more to learn, and I hope I can meet with the committee when the final analysis is available.

Master Address File (MAF)

The Master Address File, or MAF, is an inventory of all addresses and physical/location descriptions assembled by the Census Bureau, including their geographic locations. The MAF serves as the source of addresses for mailing and delivering decennial census forms and for physically locating the addresses when necessary (such as during Nonresponse Follow-Up).

In its earliest state, the MAF was an amalgamation of the 1990 Census Address Control File and the United States Postal Service's (USPS) Delivery Sequence File (DSF). Census 2000 was the first major effort undertaken to update and, in a sense, validate the MAF.

Since Census 2000, the Census Bureau has continuously updated the MAF and implemented various enhancements to position it for the 2010 Census. The quality of the MAF is critical to the success of the 2010 Census. The Census Bureau strives to ensure the following tenets of quality:

- Coverage – The MAF should ensure that each housing unit in the United States is included in the Census. Therefore, consistent and complete nationwide coverage is essential to the quality of the MAF.

- Address Completeness - Each address within the MAF should have the most complete information available to ensure delivery of questionnaires and subsequent enumeration of every housing unit and group quarters within the United States. For example, in a multi-unit structure, if we do not have unique unit designations for each apartment, we will likely have problems delivering questionnaires to each address and determining who did not respond so that we can follow up to obtain an interview.

- Spatial Accuracy - The accuracy of the ground location of each address in the MAF ensures that every household is counted in the correct location. The accuracy of this location also ensures the accuracy of counts, statistics, and distribution across statistical and tabulation areas.

Throughout this decade, the Census Bureau has taken various steps to enhance the MAF and our ability to accurately represent the universe of living quarters and the location of those living quarters. For example, we have:

- Adopted an integrated approach to the maintenance of our housing unit inventory and our group quarters' inventory. A key lesson from Census 2000 was that keeping separate address lists for housing units and Group Quarters led to some duplication. While once maintained separately, we have merged our lists into a single source – the MAF.
- Undertaken a multi-year effort to redesign our MAF and Topographically Integrated Geographic Encoding and Reference System, better known as TIGER, databases resulting in a more robust and efficient approach to

maintaining and updating the data. For example, prior to the redesign, MAF and TIGER data were stored in county-level files. Now that the data are kept nationally, we can more easily match and update across counties.

- Completed a Nationwide program, the MAF/TIGER Accuracy Improvement Program (MTAIP) where all features (streets, roads, etc.) across the county were spatially aligned. This, along with the collection of GPS coordinates in Address Canvassing will result in a more accurate representation of the location of addresses. This, in turn, will help us successfully locate the addresses during the census and improve accuracy in the tabulation of our data.
- Implemented the MAF Geocoding and Office Resolution (MAFGOR) program, which resulted in updates to the MAF and TIGER that facilitated our ability to determine in which block an address is located.
- Developed a code, referred to as the Address Characteristic Type (ACT), which characterized each geographic block by type of address (city-style, non city-style) and coverage of the USPS's Delivery Sequence File (DSF). This code was used in our 2010 Census planning process to determine the appropriate enumeration methodology. In prior censuses, the determination of enumeration methodology was less precise. We did not use deliverability information from the U.S. Postal Service as part of our criteria to determine where to use the postal service and where to deliver questionnaires ourselves. This resulted in questionnaires for entire neighborhoods being returned to us as undeliverable by the USPS.

In addition to these enhancements, we continuously updated the MAF during the years between the 2000 and 2010 censuses. These efforts provided a current base from which to build the initial universe of addresses for the 2010 Census. Sources of MAF updates included:

- Updates received twice a year from the USPS including the DSF, as well as other files that facilitate the linkage of one form of an address to another if the addressing formats differ.
- Field work conducted by the Census Bureau field staff updating the address list for specific geographic areas to support the current demographic surveys (such as the Current Population Survey) and to support the Community Address Updating System (CAUS). The CAUS aims to incorporate changes to addresses in non-urban communities in the U.S. These areas are excluded from automated updates from Postal Service files and require the use of trained field staff to add, update, or delete non-city-style addresses in the MAF.

- Address and location (geocoding) information from the American Community Survey.

Collectively, the update of the MAF from various partnership and field operations and the verification of these addresses through the 2010 Census Address Canvassing are the first steps to ensuring the quality and coverage of addresses in the 2010 Census. But our efforts do not end there.

Local Update of Census Addresses (LUCA) Program

While we implemented these ongoing updates to the MAF, we also implemented various efforts specific to enhancing it for the 2010 Census. A major enhancement over our approach for Census 2000 involved the Local Update of Census Addresses (LUCA) program.

LUCA plays a critical role in ensuring the accuracy and success of the 2010 Census. By working with tribal, state, and local governments, we incorporate updates and new information into our MAF and digital mapping system, TIGER that are based on their timely and intimate local knowledge of these local governments. This is a key program to enhance the transparency and improve the quality of the decennial census.

Mr. Chairman, I want to thank you, along with Representative Maloney, the former ranking member of this subcommittee, Representative Michael Turner, Representative Michael Thompson, and the former ranking member of the Full Committee, Representative Tom Davis for your support of the LUCA program last year. The "Dear Colleague" you coauthored on March 28, 2008, helped educate members of Congress about the LUCA program and stressed the importance of local government participation. Your support helped get the word out about LUCA registration and increase participation in the program.

The Census Bureau kicked off the LUCA program in 2007. We invited 39,379 tribal, state and local governments to participate in the program. Approximately 11,500 governments registered, about 29 percent of the governments eligible to participate, but representing approximately 92% of housing units. In Census 2000, more than 18,000 governments registered for the Census LUCA Program, representing 92 percent of the housing units in Mailout/Mailback areas and representing 68 percent of the housing units in the rest of the country; the drop in registrations is in some measure attributable to higher-level governments, including states, registering to participate on behalf of

lower-level entities within their boundaries. Governments were offered three options for participating: options 1 & 2 involved the sharing and review of confidential Census Address data with feedback; option 3 provided for the sharing of non-confidential Census Address Counts for governments to review without feedback.

All three options allowed governments to participate according to their needs and resources. They could choose to focus on areas where addresses are likely to be missed, such as areas of new construction, areas changed from single family to multi-family units, commercial areas that were converted to residential, and areas undergoing significant change due to economic displacement or natural disasters. In addition, participants had 120 days to review the Census Address List, as opposed to the 90 days afforded in 2000.

We received submissions reflecting changes to the address list and/or count list and/or maps from 79 percent of the governments that registered to participate, or just over 8,100 participants. This compares to 67 percent of LUCA 1998 participants and 48 percent of LUCA 1999 participants who provided updates, and may indicate that the Census Bureau better communicated the LUCA participation requirements for the 2010 Census. Submissions from LUCA participants were matched against the MAF, and then sent out in the Address Canvassing operation for verification. The Geography Division has now processed the results of Address Canvassing, including those LUCA submissions that were verified in the field, into the MAF and TIGER databases, and LUCA feedback materials are being produced.

There are several reasons that the 2010 LUCA program might be more effective than that of the prior decade.

2010 LUCA Program improvements

- Single cycle of review for all addresses (city and non-city style) rather than separate cycles that were especially confusing to governments with both types of addresses in Census 2000 LUCA. These governments received their lists of city style and non-city style addresses separately and at different times, which made it difficult to determine what addresses were actually missing from the list altogether.
- 120-day review period for participants rather than 90 days allowed for Census 2000 LUCA. Although there were significant delays in the

deployment of LUCA materials to participants, the 120-day review period was preserved for all but about 30 participants (one quarter of one percent).

- Multiple program participation options that for the first time allowed governments to submit their own address lists for the Census Bureau to use for matching/update, and a non-Title 13 confidential option for governments unwilling/unable to meet our data confidentiality and security requirements.
- Free availability of easy-to-use desktop software to assist participants with their review and update of the census address list and maps.
- Significantly earlier communication with eligible governments about the LUCA Program to allow them more preparation time; this was accomplished with an informational mailout to eligible governments 6 months prior to the LUCA invitation mailout in August, 2007. Contact was made with the state affiliates of the National Association of Counties and the National League of Cities, constituting 44 State associations and 49 State leagues, throughout the spring and summer of 2007.
- Encouragement for different levels of government to collaborate on participation, which helped overcome participation barriers facing under-resourced governments.
- State governments' eligibility to participate in LUCA for the first time, with 28 registering to do so.
- Computer-based training for the submission process available for the first time.

The preliminary figures from our LUCA program show:

- about 8 million addresses were provisionally added to the MAF for verification in Address Canvassing;
- 30 million LUCA submissions matched to addresses already [?] on the MAF;
- 2 million corrections to addresses on the MAF;

As planned, we requested and received updates from LUCA participants in advance of the 2010 Census Address Canvassing operation.

Local Update of Census Addresses Appeals Process

Beginning in October 2009 and ending December 2009, each Option 1 and Option 2 LUCA participant that either provided updates or certified that the list was

correct receives a feedback packet from the Census Bureau. Option 3 participants may not appeal, because they do not receive the detailed address level feedback materials required for the basis of an appeal, nor do they comply with Title 13 confidentially requirements. The feedback packet contains the most recently updated full address list as well as specific feedback on action taken by the Census Bureau for each LUCA add, correction or block count challenge. These packets are sent on a rolling basis; the first feedback packets were sent last week and the last will be sent by December 11, 2009. Participants that disagree with the Census Bureau's determination on any of the corrections they offered or any address deletions from the Address Canvassing Operation have 30 days from the time they receive the feedback to appeal each such determination to the 2010 Census LUCA Appeals Staff. We will know the universe of governments that filed an appeal by late January. The 2010 Decennial Census LUCA Appeals Staff, a temporary Federal entity independent of the Census Bureau and overseen by the Office of Management and Budget (OMB), will review the evidence provided for each appealed address or challenged block. Once the Appeals Officer concludes his/her review and submits a recommendation, the Director of the Appeals Staff will submit his determination, which is final, to both the Census Bureau and the eligible government. An explanation for the determination will be included. All appeals must be processed and resolved by Census Day, April 1, 2010. Addresses for which the appeal is sustained will be visited by Census field staff and enumerated if found during the Vacant Delete Check Operation.

In Census 2000, in our Mailout/Mailback areas, 645 governments appealed 313,853 addresses; the Appeals Office accepted 303,410 of them; and ultimately 141,580 of them were enumerated in the census. In the rest of the country, 620 governments appealed 18,442 addresses; the Appeals Office accepted all of them; and ultimately 10,053 of them were enumerated in the census.

Address Canvassing

The first nationwide field operation to update the MAF in the 2010 Cycle was Address Canvassing, conducted in the summer of 2009. During Address Canvassing, field staff performed a 100-percent canvassing operation to validate all existing addresses on the MAF (including those from early in the decade and from the LUCA program) and to add any newly discovered addresses. This operation was conducted in all areas of the country except remote areas in

Alaska, approximately 28,000 addresses, and Maine, approximately 7,000 addresses, out of the approximately 134 million addresses in the country.

To ensure the quality of the address list resulting from the 2010 Address Canvassing operation, we designed and successfully implemented several measures during the operation:

- Address-level edits built into the software to ensure data quality at the time of collection.
- Development of special job aids to address small multi-unit structures, hard-to-locate units, and areas impacted by natural disasters.
- Validation of addresses added to the address list though non-field programs such as LUCA or DSF updates.
- A quality control component in the operation.
- Verification of deleted addresses during Address Canvassing.

Additionally, before applying any of the updates from the Address Canvassing operation to the MAF, we also instituted several components of quality assurance into the MAF updating processing, including:

- Validation checks and acceptance criteria on incoming data.
- Matching of addresses to existing data in the MAF.

We successfully completed the Address Canvassing operation over the summer, whereby census staff checked a total of 145 million addresses, making additions or deletions where necessary. As previously stated, this included 8 million addresses added by tribal, state and municipal governments in the Local Update of Census Addresses program, approximately 3 million more addresses than 2000. At this time, we are analyzing the characteristics of the MAF. Preliminary evaluation of the Address Canvassing Operation indicates it was successful in that it was produced on time and within the required quality assurance parameters. Listers also updated and verified existing addresses, added addresses not currently on the address list and deleted addresses from the list that were not found or existed in another form. Listers updated maps by deleting and adding features, and updating feature names.

We do have some initial empirical assessments. These early figures show that about 21 million addresses fall into the deletes, duplicates, or non-residential category. Of these, 16 million were deletes (53 percent were from Census 2000 lists; 27 percent from LUCA; 7 percent from USPS; and 12 percent from other

sources). About 4 million were duplicates, and one million were non-residential, meaning they were determined during address canvassing to be businesses or structures for other uses.

Other early figures show that 98 million addresses were verified as is, 20 million were corrected (e.g., street name change), 5 million were moved to another block and 10 million were added (not on address list before and not from LUCA). The current address list stands at 134 million addresses.

About 2 million were coded as Other Living Quarters. By "other living quarters" we mean structures where larger numbers of unrelated individuals live (such as dormitories and assisted living quarters) as well as trailers or other movable units. As I speak, we're re-inspecting these structures in the newly instituted Group Quarters Validation operation.

With respect to the results of Address Canvassing on LUCA updates, our initial results show that 66 percent of the provisionally added LUCA addresses were deleted, identified as a duplicate, or found to be nonresidential. About 29 percent of the provisional addresses were verified, corrected, or moved; 5 percent were unresolved in Address Canvassing and will remain in the enumeration universe.

Review of the entire Address Canvassing Operation is now underway. When this process has concluded and the final summaries of how many changes were made to the Master Address File are available, I will be happy to provide them to the Subcommittee.

At this point, we can say that approximately 2 million addresses have been sent to the Group Quarters Validation Operation and 132.4 million addresses are considered to be housing units at this point. Of the known housing units, 119.1 million are in Mailout/Mailback areas, 11.9 million are in Update/Leave areas, 1.4 million are in Update/Enumerate areas, and 27,600 are in Remote Alaska.

New Construction Program

The New Construction program will give governments the opportunity to submit city-style addresses for units constructed after the Address Canvassing operation. The program is offered to local and tribal jurisdictions that contain blocks where the Census Bureau plans to mail questionnaires to the housing units. In other areas, the Census Bureau will have enumerators hand deliver

questionnaires to all housing units in each block and update the address list for any new housing units. Tribal and local governments with any area included in mailout-mailback are eligible to participate whether or not they participated in the LUCA Program. Although state governments were eligible to participate in the LUCA, they are not included in the New Construction Program, primarily because they do not have on-the-ground knowledge about construction activity at the local level.

The Census Bureau will send the program materials to the New Construction liaison. The New Construction liaison must submit a list of city-style addresses, assigned to the census blocks within its jurisdiction in the Census Bureau predefined format. The maps or spatial data are for use as a reference for assigning Census tract and block codes (geo-coding) for each submitted address. No street or boundary updates will be accepted. Address lists submitted without geo-coding information will not be accepted.

We invited 28,684 governments to participate in the New Construction Program. Of them, thus far we heard back from 14,528 governments, with 5,882 governments having registered for the program by the October 8, 2009 deadline.

Ongoing 2010 Census MAF Updates

As was mentioned previously, one critical indicator of the quality of the address list is how well it covers the housing unit universe. We need to ensure that every living quarter is represented on the MAF once and only once. We also need to ensure that the address information we have is sufficient to either mail a questionnaire to a specific address and/or for us to locate an address to drop off a questionnaire or revisit the address in our various 2010 Census operations.

Although we have concluded the Address Canvassing operation, updating the MAF does not end with Address Canvassing. Many additional programs and operations will impact/improve the coverage of the MAF. These operations and programs include:

- Additional updates from the US Postal Service's Delivery Sequence File (DSF) - In October 2009 and again in February 2010, the Census Bureau geography staff will match addresses in the DSF to the MAF. During this match, we will harvest city-style addresses that are not currently on our MAF. This match occurs in areas that are considered mail-out/mail-back. The updates from the October 2009 DSF will be included in the initial

Census mail-out, and updates from February 2010 will be included later in the Census enumeration process (e.g., during nonresponse followup), but will not receive a mail-out questionnaire.

- The Count Review Program - In early 2010, the Count Review Program will provide the Federal State Cooperative Program for Population Estimates (FSPCE) an opportunity to provide housing unit data for comparison to the extract of the MAF used for enumeration. The goal is to identify clusters of housing units that are missing from the enumeration universe. Additional review provided by the Population Division will ensure a consistent minimum review across the nation.

- Additions, updates, and deletions from other field operations - Within most major 2010 Census field operations after Address Canvassing (Group Quarters Validation, Update Leave, Update Enumerate, Nonresponse Followup), field workers are provided the opportunity to add newly discovered addresses and delete addresses that they are unable to find on the ground or that are represented multiple times in their workload.

All of these activities share the goal of having every housing unit included once and only once in the MAF, with its location properly reflected geographically.

Summary of our Current Knowledge of the Master Address File for 2010

At the beginning of my presentation I noted that there are three principal criteria for the evaluation of the Master Address File. We have indirect indicators of each of these, only in a preliminary fashion at the moment.

Coverage of Housing Units in the Country

- Relative to 2000, fewer governments participated in the Local Update of Census Addresses program to provide local updates of addresses; however, they did represent 92 percent of all addresses in the country. The comparison with 2000 is complicated by state government participation that included lower-level governments in 2010.
- The state and local governments provided addresses that form about 1.7 percent of the total valid addresses on the file after Address Canvassing. In addition, updates from local governments provided block codes for approximately 4 million addresses that were on the MAF but without a geocode.

- After Address Canvassing, the total number of units on the file is comparable to independent estimates of the housing unit count.

Address Completeness of Units on the File
Address Canvassing found about 2 million "other living quarters," now being revisited to aid in the identification of individual living units within them. We expect many of these to revert to a single housing unit definition after the Group Quarters Validation step this fall.

We continue to evaluate the current status of the Master Address File, and I hope that I might present the final pre-Census evaluation to this committee in the future. Please note though that much work remains to ensure a complete address list for the 2010 Census. The New Construction Program, the Count Review Program, additional updates from the U.S. Postal Service, and our own field work during the enumeration will provide more updates (both adds and deletes) to the 2010 Census address list.

Future Activities and Risks

Over the next two months, hundreds of important tasks must be completed across all components of the decennial census program.

There are a number of external events that could lead to delays or operational problems, such as a major hurricane, a widespread outbreak of H1N1 flu, or a major, last-minute design change imposed upon the program.

Internally, some of the major activities and risks over the next 60 days include:

- Completing the Group Quarters Validation operation this month so that we can update our control files for the enumeration of these places next spring. The field operation is going well, and we believe our systems are ready to capture and process the results, but at this stage of the census we are on a tight schedule that must be adhered to.

- Opening 344 additional Local Census Offices (LCOs) by the end of December in order to be ready to implement the major operations of the census next spring. Although this effort is going well at the moment, at any location, we risk running into space build-out issues, equipment deployment issues, telecom issues, or even bankruptcy issues with the leaser.

- Beginning recruiting for our major field operations next year, including deployment of toll-free jobs lines to the LCOs. Although it appears that current economic conditions will make recruiting of qualified applicants easier than in past censuses, between now and next spring we must fill over 1 million temporary positions. This is a massive challenge, which can be affected by things outside our control, such as a change in the economy. We also know there are some places in the country with high employment rates where we may have more difficulty in attracting enough applicants.

- Continuing the work on Paper-Based Operations Control System (PBOCS), which has an aggressive system development lifecycle due to the applications de-scoped from Field Data Collection Automation (FDCA), and a fixed schedule prior to 2010 Census operations. We believe this is being managed well, and that we are on schedule for the deployment and use of these systems, but the schedule is very tight, with little room for any slippage.

- Preparing for and beginning production of the address label files for 2010 Census questionnaires and Advance Letters. Again, we believe this is on schedule for timely completion, but any significant problems with these efforts could jeopardize many aspects of the program.

- Completing a number of activities related to enhancements to our language outreach efforts. We believe these activities can be completed and integrated on schedule, but these efforts are on a tight schedule as well.

- Completing the first Operations Test and Dry Run for our Data Capture Centers and Call Centers. Developmental work and testing is going well, but we must stay on track to ensure these centers are ready next spring to capture and process census forms, and respond to public questions and assistance requests.

Conclusion

Mr. Chairman, the Census Bureau is very sensitive to the concerns you have expressed in the past with respect to what we are doing to address the undercount, to ensure we don't miss people in the upcoming Census. Continual

maintenance and update of the Master Address File is one very important and extensive way we do that; we want to make sure every household that exists and is occupied receives a form to complete and mail back. Additionally, we want to work with our state, local and tribal government officials in a way that makes it easier, not harder, for them to share their information on new and existing addresses so we can get this right and not miss anyone. We think our process will allow us to do just that.

I thank the committee for this opportunity to testify and would be happy to answer any of your questions.

Mr. CLAY. Thank you, Dr. Groves. We know you hit the ground running at the Census Bureau, and we thank you for your service.

Mr. Goldenkoff, you are recognized for 5 minutes.

STATEMENT OF ROBERT GOLDENKOFF

Mr. GOLDENKOFF. Mr. Chairman, Ranking Member McHenry, members of the subcommittee, I am pleased to be here today to discuss the Census Bureau's progress in building a complete and accurate address list. As you know, a quality address list, along with precise maps, are key to a successful census. If the Bureau's address lists and maps are inaccurate, people can be missed, counted more than once, or included in the wrong location.

That said, compiling an accurate address list is no easy task. One reason for this is that people can reside in hidden and nontraditional housing units such as converted attics and basements, as well as in cars, boats, trailers, motels, tent cities, and labor camps.

While these living arrangements have long existed, the large number of foreclosures the Nation has recently experienced, as well as the natural disasters that have hit the Gulf Coast and other regions, have likely increased the number of people living in less conventional housing.

In addition to housing units, which include single-family homes, apartments, and mobile homes, many people also reside in facilities called group quarters, which include prisons, dormitories, nursing homes, and similar locations.

The Bureau's database of the Nation's roughly 140 million addresses is called the master address file [MAF]. As requested, my testimony will describe the preliminary results of three MAF building operations that can help locate hidden housing units and other traditionally hard-to-count populations. The operations we reviewed are LUCA, address canvassing, and group quarters validation.

I will also provide an update on the IT systems the Bureau will use to update and extract information from the MAF database.

My testimony today has two main points. First, the Bureau goes to great lengths to ensure the accuracy of the address file using multiple operations that include partnerships with the Postal Service, extensive field verifications, and numerous other activities. Second, the operations we reviewed generally proceeded as planned and we did not observe any significant operational setbacks.

Still, the overall effectiveness of the Bureau's efforts will not be known until later in the census when the Bureau completes various assessments.

Turning first to LUCA, the Bureau partnered with State, local, and tribal governments, tapping into their knowledge of local populations and housing conditions in order to develop a more complete and accurate address list. More than 8,000 jurisdictions participated in the program between November 2007 and March 2008. However, LUCA submissions generated a relatively small percentage of additions to the MAF. For example, of around 36 million potential additions that localities submitted, just 2.4 million or 7 percent were new addresses not already in the MAF. The others were duplicate addresses, nonexistent or nonresidential.

Address canvassing finished ahead of schedule, in part because of improvements the Bureau made to the hand-held computers used to collect data, as well as because of lower than expected employee turnover. Nevertheless, the operation exceeded its original budget estimate of $356 million by $88 million, a cost overrun of 25 percent.

A key reason for the overrun was that the Bureau did not update its cost estimates to reflect changes to the address canvassing workload. Further, the Bureau did not follow its staffing strategy and hired too many listers.

Recognizing the difficulties associated with address canvassing in the hurricane affected areas along the Gulf Coast, the Bureau developed supplemental training materials to help listers identify addresses where people are or may be living when census questionnaires are distributed early next year. For example, the materials noted that people might be living in trailers, homes marked for demolition, and nonresidential spaces such as storage areas above restaurants.

To help ensure group quarters are accurately included in the census, the Bureau is conducting an operation called group quarters validation, which is going on right now. The Census Bureau developed and tested new procedures to improve how it identifies and counts these facilities based on lessons learned from the 2000 census.

With respect to the automated system that supports the MAF, although the Bureau has improved aspects of its IT management, we continue to be concerned about the lack of finalized test plans, incomplete metrics to gauge progress, and an aggressive testing and implementation schedule going forward.

In summary, the Bureau has taken extraordinary measures to produce a quality address list and associated maps. Still, accurately locating each and every dwelling in the Nation is an inherently challenging endeavor, and the overall quality of the Bureau's address list will not be known until later in the census when the Bureau completes the assessments that Dr. Groves mentioned.

Chairman Clay, Ranking Member McHenry, and members of the subcommittee, this concludes my remarks. I will be happy to answer any questions that you may have.

[The prepared statement of Mr. Goldenkoff follows:]

United States Government Accountability Office

GAO

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

Efforts to Build an Accurate Address List Are Making Progress, but Face Software and Other Challenges

Statement of Robert Goldenkoff
Director, Strategic Issues

GAO-10-140T

GAO
Accountability·Integrity·Reliability

Highlights

Highlights of GAO-10-140T, 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 decennial census is a constitutionally mandated activity that produces data used to apportion congressional seats, redraw congressional districts, and help allocate billions of dollars in federal assistance. A complete and accurate master address file (MAF), along with precise maps—the U.S. Census Bureau's (Bureau) mapping system is called Topologically Integrated Geographic Encoding and Referencing (TIGER®)—are the building blocks of a successful census. If the Bureau's address list and maps are inaccurate, people can be missed, counted more than once, or included in the wrong location. This testimony discusses the Bureau's readiness for the 2010 Census and covers: (1) the Bureau's progress in building an accurate address list; and (2) an update of the Bureau's information technology (IT) system used to extract information from its MAF/TIGER® database. Our review included observations at 20 early opening local census offices in hard-to-count areas. The testimony is based on previously issued and ongoing work.

What GAO Recommends

GAO is not making new recommendations, but past reports recommended improvements to the Bureau's address-building procedures, as well as to the management and testing of the MAF/TIGER® system. The Bureau generally agreed with these recommendations and has taken steps to implement some of them.

View GAO-10-140T or key components. For more information, contact Robert Goldenkoff, 202-512-2757, goldenkoffr@gao.gov.

October 21, 2009

2010 CENSUS

Efforts to Build an Accurate Address List Are Making Progress, but Face Software and Other Challenges

What GAO Found

The Bureau has taken, and continues to take measures to build an accurate MAF and to update its maps. From an operational perspective, the Local Update of Census Addresses (LUCA) and address canvassing generally proceeded as planned, and GAO did not observe any significant flaws or operational setbacks. Group quarters validation got underway in late September as planned. A group quarters is a place where people live or stay that is normally owned or managed by an entity or organization providing housing and/or services for the residents (such as a boarding school, correctional facility, health care facility, military quarters, residence hall, or dormitory).

LUCA made use of local knowledge to enhance MAF accuracy. Between November 2007 and March 2008, over 8,000 state, local, and tribal governments participated in the program. However, LUCA submissions generated a relatively small percentage of additions to the MAF. For example, of approximately 36 million possible additions to the MAF that localities submitted, 2.4 million (7 percent) were not already in the MAF. The other submissions were duplicate addresses, non-existent, or non-residential.

Address canvassing (an operation where temporary workers go door to door to verify and update address data) finished ahead of schedule, but was over budget. Based on initial Bureau data, the preliminary figure on the actual cost of address canvassing is $88 million higher than the original estimate of $356 million, an overrun of 25 percent. The testing and improvements the Bureau made to the reliability of the hand held computers prior to the start of address canvassing played a key role in the pace of the operation, but other factors were important as well, including the prompt resolution of technical problems and lower than expected employee turnover. The Bureau's address list at the start of address canvassing consisted of 141.8 million housing units. Listers added around 17 million addresses and marked about 21 million for deletion. All told, listers identified about 4.5 million duplicate addresses, 1.2 million nonresidential addresses, and about 690,000 addresses that were uninhabitable structures. The overall quality of the address file will not be known until later in the census when the Bureau completes various assessments.

While the Bureau has made some improvements to its management of MAF/TIGER® IT such as finalizing five of eight test plans, GAO continues to be concerned about the lack of finalized test plans, incomplete metrics to gauge progress, and an aggressive testing and implementation schedule going forward. Given the importance of MAF/TIGER® to an accurate census, it is critical that the Bureau ensure this system is thoroughly tested.

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

I am pleased to be here today to report on the U.S. Census Bureau's (Bureau) progress in building a complete and accurate address list. As you know, a complete and accurate address list, along with precise maps, are the fundamental building blocks of a successful census. An accurate address list is critical because it both identifies all households that are to receive a census questionnaire and serves as the control mechanism for following up with households that fail to respond to the initial mailout questionnaire. Precise maps are critical for counting the population in their proper locations—the basis of congressional reapportionment and redistricting. If the Bureau's address list and maps are inaccurate, people can be missed, counted more than once, or included in the wrong location. The Bureau's database of the nation's approximately 140 million addresses is called the Master Address File (MAF); and the Bureau's mapping system is the Topologically Integrated Geographic Encoding and Referencing (TIGER®) database.[1]

On its face, it would appear that building an accurate address list would be a relatively straightforward task given the obvious nature of many dwellings and the availability of postal addresses. However, people do not always reside in conventional housing units, and in fact can reside in "hidden" housing units such as converted attics and basements, as well as cars, boats, trailers, labor camps, and other less traditional locations. Although these types of dwellings have always existed, the large number of foreclosures the nation has recently experienced, as well as the natural disasters that have hit the Gulf Coast and other regions, have likely increased the number of people doubling-up, living in motels, tent cities, and other types of less conventional housing. The Bureau has found that such individuals are at greater risk of being missed in the census. Moreover, in addition to housing units (which include single family homes, apartments, and mobile homes), many other people reside in prisons, dormitories, nursing homes, and similar group living arrangements known as "group quarters."

One of the Bureau's long-standing challenges has been reducing the differential impact of errors in the census. Minorities, renters, and children, for example, are more likely to be missed by the census while

[1]TIGER is a registered trademark of the U.S. Census Bureau.

more affluent groups, such as people with vacation homes, are more likely to be enumerated more than once. Because the success of the census, including reducing the differential undercount, rests, in large part, on the quality of the Bureau's address list and maps, the Bureau goes to great lengths over the course of the decade to ensure the accuracy of MAF/TIGER using multiple operations that include partnerships with the U.S. Postal Service and other federal agencies; state, local, and tribal governments; and local planning organizations. In all, the Bureau's operational plan includes 11 operations that contribute to the accuracy of the address list.

Nevertheless, because of the diversity and complexity of living arrangements in our nation, compiling an accurate address file is no easy task. During the 2000 Census, for example, Bureau evaluations estimated that of the 116 million housing units in the final census count, about 2.3 million housing units were incorrectly included in the census and about 2.7 million housing units were missed.

As requested, my testimony will describe the Bureau's progress in building an accurate address file for the 2010 Census, paying particular attention to the Bureau's preliminary results of three MAF-building operations that can help locate hidden housing units and other traditionally hard-to-count populations: the Local Update of Census Addresses (LUCA) program, the Address Canvassing operation, and Group Quarters Validation (an initial phase of a multistep effort to ensure these types of dwellings are properly located and counted). The Bureau has completed LUCA and Address Canvassing, while Group Quarters Validation just got underway a few weeks ago (each of these operations are described in greater detail later in my statement). I will also provide an update on the information technology (IT) system the Bureau will use to update and extract information from its MAF/TIGER database. In our prior work, we noted that the system faced challenges because of an aggressive testing schedule.

My remarks also include observations that could help inform the design of the next decennial census. Rigorous planning and perhaps even a fundamental reexamination of the census might be required because the current approach to the national enumeration may no longer be financially sustainable. Indeed, the cost of conducting the census has, on average, doubled each decade since 1970 in constant 2010 dollars. If that rate of cost escalation continues into 2020, the nation could be looking at a $30 billion census.

My testimony today is based on our ongoing and completed reviews of the Bureau's efforts to build an accurate address file and maps, as well as our reviews of the Bureau's testing and implementation of selected IT systems. We completed our review of the Local Update of Census Addresses and the Address Canvassing operation in October and our findings are included in this testimony. Our review of the Group Quarters Validation operation began in September and is ongoing.

To evaluate the preliminary results of address building operations, we reviewed and analyzed scheduling, budget, design, operational and testing plans for the 2010 Address Canvassing operation and interviewed cognizant Bureau officials at headquarters and early opening local census offices.[2] In addition, our reviews of the Bureau's efforts to build an accurate address file included on-site observations at a number of locations across the country. For example, for address canvassing, we conducted 38 observations of address listers and crew leaders as they went door to door and interviewed local census office managers in 20 urban, suburban, and rural census offices. We selected these early opening local census offices because they were located in hard to count areas as determined by data from the 2000 Census. To make these selections, we also used other factors such as their percentage of rural population to obtain diversity in urban/rural populations and proximity to hurricane-affected areas. The locations chosen for observations were not a random selection, and thus results may not be generalizable nationwide. We collected data on the Bureau's preliminary results of its MAF building activities during interviews and follow-up meetings with the Bureau. Based on our limited examination of this information thus far, we consider these data sufficiently reliable for providing current information on MAF building activities for this testimony. Finally, in order to provide an update on the IT system, we relied on previously published GAO work.

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.

[2]The Bureau managed the Address Canvassing and Group Quarters Validation operations out of 151 early opening local census offices.

In summary, the Bureau has, and continues to take extraordinary measures to build an accurate address list and update its maps. Further, from an operational perspective, LUCA and address canvassing generally proceeded as planned (and in fact, address canvassing finished ahead of schedule), and we did not observe any significant flaws or major operational setbacks. Group Quarters Validation got underway in late September as planned. Importantly, however, the overall quality of the address file will not be known until later on in the census when the Bureau completes various assessments. Identifying valid housing units, especially hidden housing units and other nontraditional housing stock, is an inherently complex task. While the Bureau has made some improvements to its management of MAF/TIGER IT, we continue to be concerned about the lack of finalized test plans, incomplete metrics to gauge progress, and an aggressive testing and implementation schedule going forward.

Background

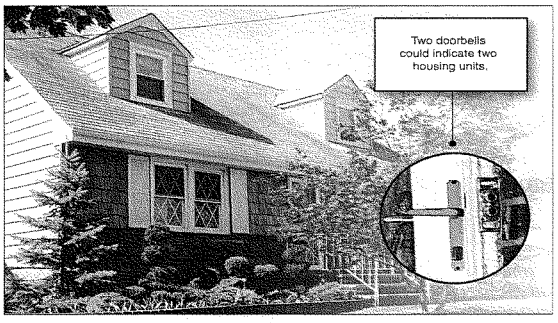
As you know, Mr. Chairman, the decennial census is a constitutionally mandated enterprise critical to our nation. Census data are used to apportion seats and redraw congressional districts, and to help allocate over $400 billion in federal aid to state and local governments each year.

We added the 2010 Census to our list of high-risk areas in March 2008, because improvements were needed in the Bureau's management of IT systems, the reliability of handheld computers (HHC) that were designed in part to collect data for address canvassing, and the quality of the Bureau's cost estimates. Compounding the risk was that the Bureau canceled a full dress rehearsal of the census that was scheduled in 2008, in part, because of performance problems with the HHCs during the address canvassing portion of the dress rehearsal, which included freeze-ups and unreliable data transmissions. In response to our findings and recommendations, the Bureau has strengthened its risk management efforts, including the development of a high-risk improvement plan that described the Bureau's strategy for managing risk and key actions to address our concerns. Overall, since March 2008, the Bureau has made commendable progress in getting the census back on track, but still faces a number of challenges moving forward.

One of the Bureau's long-standing challenges has been building an accurate address file, especially locating unconventional and hidden housing units, such as converted basements and attics. For example, as shown in figure 1, what appears to be a single-family house could contain an apartment, as suggested by its two doorbells. The Bureau has trained address listers to look for extra mailboxes, utility meters, and other signs

of hidden housing units, and has developed training guides for 2010 to help enumerators locate hidden housing. Nonetheless, decisions on what is a habitable dwelling are often difficult to make—what is habitable to one worker may seem uninhabitable to another.

Figure 1: Single or Multiunit Housing?



Source: GAO.

If the address lister thought the house in figure 1 was a single family home, but a second family was living in the basement, the second family is at greater risk of being missed by the census. Conversely, if the lister thought a second family could be residing in the home, when in fact it was a single family house, two questionnaires would be mailed to the home and costly nonresponse follow-up visits could ensue in an effort to obtain a response from a phantom housing unit.

LUCA Submissions Generated a Small Percentage of Additions to the MAF

Under the LUCA program, the Bureau partners with state, local, and tribal governments, tapping into their knowledge of local populations and housing conditions in order to secure a more complete count.[3] Between November 2007 and March 2008, over 8,000 state, local, and tribal governments provided approximately 42 million addresses for potential addition, deletion, or other actions. Of those submissions, approximately 36 million were processed as potential address additions to the MAF—or what the Bureau considers "adds."[4]

According to Bureau officials, one reason LUCA is important is because local government officials may be better positioned than the Bureau to identify unconventional and hidden housing units due to their knowledge of particular neighborhoods, or because of their access to administrative records in their jurisdictions. 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). In addition, according to Bureau officials, providing local governments with opportunities to actively participate in the development of the MAF can enhance local governments' understanding of the census and encourage them to support subsequent operations.

The preliminary results of address canvassing show that the Bureau added relatively few of the address updates submitted for inclusion in the MAF through LUCA. Of approximately 36 million addresses submitted, about 27.7 million were already in the MAF. Around 8.3 million updates were not in the MAF and needed to be field-verified during address canvassing. Of these, about 5.5 million were not added to the MAF because they did not exist, were a duplicate address, or were nonresidential. Address canvassing confirmed the existence of around 2.4 million addresses submitted by LUCA participants that were not already in the MAF (or about 7 percent of the 36 million proposed additions).[5]

[3]Census Address List Improvement Act of 1994, Pub. L. No. 103-430.

[4]For 2010 LUCA, there were three options for participation, one of which enabled localities to submit the entire address list for their entity without comparing it to the Bureau's list of addresses. The Bureau processed these submissions as "adds" in order to match and unduplicate the records against those in the MAF. Therefore, the 36 million adds includes every address for those entities that submitted their entire address list to the Bureau for matching.

[5]The remaining 438,722 addresses could not be resolved and were included in the census.

Bureau officials have indicated that they began shipping out detailed feedback to eligible LUCA participants on October 8, 2009, that includes information on which addresses were accepted. On November 1, 2009, the Office of Management and Budget is scheduled to open the LUCA appeals office that will enable LUCA participants who disagree with the Bureau's feedback to challenge the Bureau's decisions. This appeals process allows governments to provide evidence of the existence of addresses that the Bureau missed. If the government's appeal is sustained, then Bureau will include those addresses in later enumeration activities, and enumerate them if they are located in the field.

The LUCA program is labor intensive for both localities and the Bureau because it involves data reviews, on-site verification, quality control procedures, and other activities, but produced marginal returns. While these were unique additions to the MAF that may not have been identified in any other MAF-building operation, they were costly additions nonetheless. As a result, as the Bureau prepares for the 2020 Census, it will be important for it to explore options that help improve the efficiency of LUCA, especially by reducing the number of duplicate and nonexistent addresses submitted by localities.

The Bureau Generally Completed Address Canvassing Ahead of Schedule but Went Over Budget

The Bureau conducted address canvassing from March to July 2009. During that time, about 135,000 address listers went door to door across the country, comparing the housing units they saw on the ground to what was listed in the database of their HHCs. Depending on what they observed, listers could add, delete, or update the location of housing units.

Although the projected length of the field operation ranged from 9 to 14 weeks, most early opening local census offices completed the effort in less than 10 weeks. Moreover, the few areas that did not finish early were delayed by unusual circumstances such as access issues created by flooding. The testing and improvements the Bureau made to the reliability of the HHCs prior to the start of address canvassing, including a final field test that was added to the Bureau's preparations in December 2008, played a key role in the pace of the operation; but other factors, once address canvassing was launched, were important as well, including the (1) prompt resolution of problems with the HHCs as they occurred and (2) lower than expected employee turnover.

With respect to the prompt resolution of problems, the December 2008 field test indicated that the more significant problems affecting the HHCs had been resolved. However, various glitches continued to affect the HHCs

in the first month of address canvassing. For example, we were informed by listers or crew leaders in 14 early opening local census offices that they had encountered problems with transmissions, freeze-ups, and other problems. Moreover, in 10 early opening local census offices we visited, listers said they had problems using the Global Positioning System function on their HHCs to precisely locate housing units. When such problems occurred, listers called their crew leaders and/or the Bureau's help desk to resolve the problems. When the issues were more systemic in nature, such as a software issue, the Bureau was able to quickly fix them using software patches.

Moreover, to obtain an early warning of trouble, the Bureau monitored key indicators of the performance of the HHCs, such as the number of successful and failed HHC transmissions. This approach proved useful as Bureau quality control field staff were alerted to the existence of a software problem when they noticed that the devices were taking a long time to close out completed assignment areas.

The Bureau also took steps to address procedural issues. For example, in the course of our field observations, we noticed that in several locations listers were not always adhering to training for identifying hidden housing units. Specifically, listers were instructed to knock on every door and ask, "Are there any additional places in this building where people live or could live?" However, we found that listers did not always ask this question. On April 28, 2009, we discussed this issue with senior Bureau officials. The Bureau, in turn, transmitted a message to its field staff emphasizing the importance of following training and querying residents if possible.

Lower than expected attrition rates and listers' availability to work more hours than expected also contributed to the Bureau's ability to complete the Address Canvassing operation ahead of schedule. For example, the Bureau had planned for 25 percent of new hires to quit before, during, or soon after training; however, the national average was 16 percent. Bureau officials said that not having to replace listers with inexperienced staff accelerated the pace of the operation. Additionally, the Bureau assumed that employees would be available 18.5 hours a week. Instead, they averaged 22.3 hours a week.

The Bureau's address list at the start of address canvassing consisted of 141.8 million housing units. Listers added around 17 million addresses and marked about 21 million for deletion because, for example, the address did not exist. All told, listers identified about 4.5 million duplicate addresses, 1.2 million nonresidential addresses, and about 690,000 addresses that

were uninhabitable structures. Importantly, these preliminary results represent actions taken during the production phase of address canvassing and do not reflect actual changes made to the Bureau's master address list as the actions are first subject to a quality control check and then processed by the Bureau's Geography Division.

The preliminary analysis of addresses flagged for add and delete shows that the results of the operation (prior to quality control) were generally consistent with the results of address canvassing for the 2008 dress rehearsal. Table 1 compares the add and delete actions for the two operations.

Table 1: Percentage of Add and Delete Lister Actions (Prior to Quality Control or Bureau Processing) for 2010 Address Canvassing and 2008 Dress Rehearsal Address Canvassing

	2010 Address Canvassing	2008 Dress Rehearsal Address Canvassing
Adds	10.8%	8.5%
Deletes	13.2%	12.8%

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

Address Canvassing Costs Exceeded Budget Because of Unanticipated Workload and Hiring

According to the Bureau's preliminary analysis, the estimated cost for address canvassing field operations was $444 million, or $88 million (25 percent) more than its initial budget of $356 million.[6] As shown in table 2, according to the Bureau, the cost overruns were because of several factors.

[6]Address canvassing costs for field operations include training, work hours, and mileage for temporary field staff. These costs do not include recruiting, large block canvassing, office infrastructure, management or technical support staff, IT contracts, and partnership program or communication campaign activities.

Table 2: Bureau's Preliminary Analysis of Address Canvassing Costs Exceeding Budget

Reasons for exceeding budget	Estimated costs (in millions)
Increased initial workload	$41
Underestimated quality control workload	34
Training additional staff	7
Fingerprinting (funded separately)	6
Total	**$88**

Source: U.S. Census Bureau.

One such factor was that the address canvassing cost estimate was not comprehensive, which resulted in a cost increase of $41 million. The Bureau underestimated the initial address canvassing workload and the fiscal year 2009 budget by 11 million addresses. Further, the additional 11 million addresses increased the Bureau's quality control workload, where the Bureau verifies certain actions taken to correct the address list. Specifically, the Bureau did not fully anticipate the impact these additional addresses would have on the quality control workload, and therefore did not revise its cost estimate accordingly. Moreover, under the Bureau's procedures, addresses that failed quality control would need to be recanvassed, but the Bureau's cost model did not account for the extra cost of recanvassing addresses. As a result, the Bureau underestimated its quality control workload by 26 million addresses which resulted in $34 million in additional costs, according to the Bureau.

Bringing aboard more staff than was needed also contributed to the cost overruns. For example, according to the Bureau's preliminary analysis, training additional staff accounted for about $7 million in additional costs.[7] Bureau officials attributed the additional training cost to inviting additional candidates to initial training due to past experience and anticipated no show and drop out rates, even though (1) the Bureau's staffing plans already accounted for the possibility of high turnover and (2) the additional employees were not included in the cost estimate or budget.

[7]Officials clarified that training costs should exclude training hours spent for fingerprinting and conducting 4 hours of actual production work as part of training.

The largest census field operation will be next summer's nonresponse follow-up, when the Bureau is to go door to door in an effort to collect data from households that did not mail back their census questionnaire. Based on the expected mail response rate, the Bureau estimates that over 570,000 enumerators will need to be hired for that operation. To better manage the risk of staffing difficulties while simultaneously controlling costs, several potential lessons learned for 2010 can be drawn from the Bureau's experience during address canvassing. For example, we found that the staffing authorization and guidance provided to some local census managers were unclear and did not specify that there was already a cushion in the hiring plans for local census offices to account for potential turnover. Also, basing the number of people invited to initial training on factors likely to affect worker hiring and retention, such as the local unemployment rate, could help the Bureau better manage costs.

According to Bureau officials, they are reviewing the results from address canvassing to determine whether they need to revisit the staffing strategy for nonresponse follow-up and have already made some changes. For example, in recruiting candidates, when a local census office reaches 90 percent of its qualified applicant goal, it is to stop blanket recruiting and instead focus its efforts on areas that need more help, such as tribal lands. However, in hiring candidates, the officials pointed out that they are cautious not to underestimate resource needs for nonresponse follow-up based on address canvassing results because they face different operational challenges in that operation than for address canvassing. For example, for nonresponse follow-up, the Bureau needs to hire enumerators who can work in the evenings when people are more likely to be at home and who can effectively deal with reluctant respondents, whereas with address canvassing, there was less interaction with households and the operation could be completed during the day.

Problems with accurately estimating the cost of address canvassing are indicative of long-standing weaknesses in the Bureau's ability to develop credible and accurate cost estimates for the 2010 Census. Accurate cost estimates are essential to a successful census because they help ensure that the Bureau has adequate funds and that Congress, the administration, and the Bureau itself can have reliable information on which to base decisions. However, in our past work, we noted that the Bureau's estimate lacked detailed documentation on data sources and significant assumptions, and was not comprehensive because it did not include all

costs.[8] Following best practices from our *Cost Estimating and Assessment Guide*, such as defining necessary resources and tasks, could have helped the Bureau recognize the need to update address canvassing workload and other operational assumptions, resulting in a more reliable cost estimate.[9]

The Bureau Needs to Improve Its Policies for Fingerprinting Temporary Employees

To better screen its workforce of hundreds of thousands of temporary census workers, the Bureau plans to fingerprint its temporary workforce for the first time in the 2010 Census.[10] In past censuses, temporary workers were subject to a name background check that was completed at the time of recruitment. The Federal Bureau of Investigation (FBI) will provide the results of a name background check when temporary workers are first recruited. At the end of the workers' first day of training, Bureau employees who have received around 2 hours of fingerprinting instruction are to capture two sets of fingerprints on ink fingerprint cards from each temporary worker. The cards are then sent to the Bureau's National Processing Center in Jeffersonville, Indiana, to be scanned and electronically submitted to the FBI. If the results show a criminal record that makes an employee unsuitable for employment, the Bureau is to either terminate the person immediately or place the individual in nonworking status until the matter is resolved. If the first set of prints are unclassifiable, the National Processing Center is to send the FBI the second set of prints.

Fingerprinting during address canvassing was problematic. Of the over 162,000 employees hired for the operation, 22 percent—or approximately 35,700 workers—had unclassifiable prints that the FBI could not process. The FBI determined that the unclassifiable prints were generally the result of errors that occurred when the prints were first made. Factors affecting the quality of the prints included difficulty in first learning how to effectively capture the prints and the adequacy of the Bureau's training.

[8]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).

[9]GAO, *GAO Cost Estimating And Assessment Guide: Best Practices for Developing and Managing Capital Program Costs*, GAO-09-3SP (Washington, D.C.: March 2009).

[10]The National Crime Prevention and Privacy Compact, enacted in 1998, generally requires that fingerprints be submitted with all requests for criminal history record checks for noncriminal justice purposes, 42 U.S.C. § 14616. For the 2000 Census, the FBI did not have the capacity to timely process the fingerprints of Census's temporary workforce, so they were subject to only a name background check.

Further, the workspace and environment for taking fingerprints was unpredictable, and factors such as the height of the workspace on which the prints were taken could affect the legibility of the prints.

Consistent with FBI guidance, the Bureau relied on the results of the name background check for the nearly 36,000 employees with unclassifiable prints.[11] Of the prints that could be processed, fingerprint results identified approximately 1,800 temporary workers (1.1 percent of total hires) with criminal records that name check alone failed to identify. Of the 1,800 workers with criminal records, approximately 750 (42 percent) were terminated or were further reviewed because the Bureau determined their criminal records—which included crimes such as rape, manslaughter, and child abuse—disqualified them from census employment.

Projecting these percentages to the 35,700 temporary employees with unclassifiable prints, it is possible that more than 200 temporary census employees might have had criminal records that would have made them ineligible for census employment. Importantly, this is a projection, and the number of individuals with criminal backgrounds that were hired for address canvassing, if any, is not known.

Applying these same percentages to the approximately 600,000 people the Bureau plans to fingerprint for nonresponse follow-up, unless the problems with fingerprinting are addressed, approximately 785 employees with unclassifiable prints could have disqualifying criminal records but still end up working for the Bureau.[12]

Aside from public safety concerns, there are cost issues as well. The FBI charged the Bureau $17.25 per person for each background check, whether or not the fingerprints were classifiable.

The Bureau has taken steps to improve image quality for fingerprints captured in future operations by refining instruction manuals and providing remediation training on proper procedures. In addition, the Bureau is considering activating a feature on the National Processing

[11]The Bureau will refingerprint employees with unclassifiable prints if they are rehired for another operation.

[12]The approximately 600,000 workers to be fingerprinted for nonresponse follow-up include over 570,000 enumerators and other field staff, such as crew leaders and field operation supervisors.

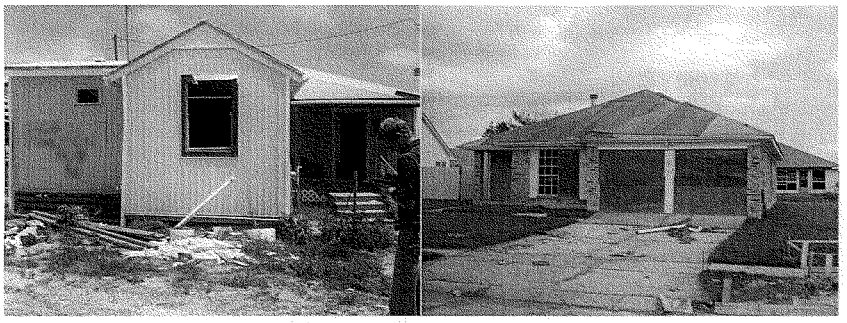
Center's scanners that can check the legibility of the image and thus prevent poor quality prints from reaching the FBI. These are steps in the right direction. As a further contingency, it might also be important for the Bureau to develop a policy for refingerprinting employees to the extent that both cards cannot be read.

The Bureau Used Enhanced Training and Guidance for Canvassing Hurricane Affected Areas

The scale of the destruction in those areas affected by Hurricanes Katrina, Rita, and Ike made address canvassing in parts of Mississippi, Louisiana, and Texas especially challenging (see fig. 2). Hurricane Katrina alone destroyed or made uninhabitable an estimated 300,000 homes. Recognizing the difficulties associated with address canvassing in these areas because of shifting and hidden populations and changes to the housing stock, the Bureau, partly in response to recommendations made in our June 2007 report,[13] developed supplemental training materials for natural disaster areas to help listers identify addresses where people are, or may be, living when census questionnaires are distributed. For example, the materials noted the various situations 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 material also described the clues that could alert 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.

[13]GAO, *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).

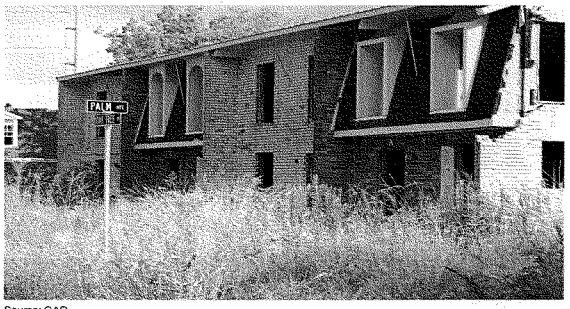
Figure 2: Locating and Counting People Displaced by Storms Presents a Challenge



Source: GAO.

Additional steps taken by the city of New Orleans also helped the Bureau overcome the challenge of canvassing neighborhoods devastated by Hurricane Katrina. As depicted in figure 3 below, city officials replaced the street signs even in abandoned neighborhoods. This assisted listers in locating the blocks they were assigned to canvass and expedited the canvassing process in these deserted blocks.

Figure 3: Replacement Street Signs Facilitated Address Canvassing in New Orleans



Source: GAO.

To further ensure a quality count in the hurricane-affected areas, the Bureau plans to hand-deliver an estimated 1.2 million questionnaires (and simultaneously update the address list) to housing units in much of southeast Louisiana and south Mississippi that appear inhabitable, even if they do not appear on the address list updated by listers during address canvassing. 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 will be counted where they are living on Census Day.

Validating the Group Quarters Address List Is Important for Reducing Potential Duplicates and Other Errors

To help ensure group quarters are accurately included in the census, the Bureau is conducting an operation called Group Quarters Validation, an effort that is to run during September and October 2009, and has a workload of around 2 million addresses in both the United States and Puerto Rico.[14] During this operation, census workers are to visit each group quarter and interview its manager or administrator using a short questionnaire. The goal is to determine the status of the address as a group quarter, housing unit, transitory location, nonresidential, vacant, or delete. If the dwelling is in fact a group quarter, it must then be determined what category it fits under (e.g., boarding school, correctional facility, health care facility, military quarters, residence hall or dormitory, etc.), and confirm its correct geographic location. The actual enumeration of group quarters is scheduled to begin April 1, 2010.

According to the 2005-2007 American Community Survey 3-year estimates, more than 8.1 million people, or approximately 2.7 percent of the population, live in group quarter facilities. Group quarters with the largest populations include college and university housing (2.3 million), adult correctional facilities (2.1 million), and nursing facilities (1.8 million). The Bureau drew from a number of sources to build its list of group quarters addresses including data from the 2000 Census, LUCA submissions, internet based research, and group quarters located during address canvassing.

During the 2000 Census, the Bureau did not always accurately enumerate group quarters. For example, in our prior work, we found that the population count of Morehead, Kentucky, increased by more than 1,600 when it was later found that a large number of students from Morehead State University's dormitories were erroneously excluded from the city's population when the Bureau incorrectly identified the dormitories as being outside city limits and in an unincorporated area of Rowan County. Similarly, North Carolina's population count was reduced by 2,828 people, largely because the Bureau had to delete duplicate data on almost 2,700 students in 26 dormitories at the University of North Carolina at Chapel Hill. Precision is critical because, in some cases, small differences in population totals could potentially impact apportionment and/or redistricting decisions.

[14]According to the Bureau, group quarters are "places where people live or stay in a group living arrangement that are owned or managed by an entity or organization providing housing and/or services for the residents."

The Bureau developed and tested new group quarters procedures in 2004 and 2006 that were designed to address the difficulties the Bureau had in trying to identify and count this population during the 2000 Census. For example, the Bureau integrated its housing unit and group quarters address lists in an effort to reduce the potential for duplicate counting as group quarters would sometimes appear on both address lists. Moreover, the Bureau has refined its definition of the various types of group quarters to make it easier to accurately categorize them. The operation began on September 28, as planned, in all 151 early opening local census offices and was 95 percent complete as of October 16, 2009. We have begun observations and will report our findings at a later date.

It Will Be Important for the Bureau to Determine Return on Investment for Each MAF-Building Activity

With the cost of enumerating each housing unit continuing to grow, it will be important for the Bureau to determine which of its multiple MAF-building operations provide the best return on investment in terms of contributing to accuracy and coverage. According to the Bureau, it is planning to launch over 70 evaluations and assessments of critical 2010 Census operations and processes, many of which are focused on improving the quality of the MAF. For example, the Bureau plans to study options for targeted address canvassing as an alternative to canvassing every block in the country. The Bureau considered two major criteria for determining which studies to include in their evaluation program—the possibility for significant cost savings in 2020 and/or the possibility of significant quality gains in 2020. As the Bureau makes plans for the 2020 Census, these and other studies could prove useful in helping the Bureau streamline and consolidate operations, with an eye toward controlling costs and improving accuracy.

Completing Testing for MAF/TIGER System Will Be a Challenge

Automation and IT systems will play a critical role in the ability of MAF/TIGER to extract address lists, maps, and provide other geographic support services. In our prior work, however, we have called on the Bureau to strengthen its testing of the MAF/TIGER system. In March 2009, for example, we reported and testified that while the MAF/TIGER program had partially completed testing activities, test plans and schedules were incomplete and the program's ability to track progress was unclear.[15]

[15]GAO, *Information Technology: Census Bureau Testing of 2010 Decennial Systems Can Be Strengthened*, GAO-09-262 (Washington, D.C.: Mar. 5, 2009) and GAO, *Information Technology: Census Bureau Needs to Strengthen Testing of 2010 Decennial Systems*, GAO-09-413T (Washington, D.C.: Mar. 5, 2009).

Specifically, while the Bureau had partially completed testing for certain MAF/TIGER products (e.g., database extracts)[16] related to address canvassing, subsequent test plans and schedules did not cover all of the remaining products needed to support the 2010 Census. Further, Bureau officials stated that although they were estimating the number of products needed, the exact number would not be known until the requirements for all of the 2010 Census operations were determined. As such, without knowing the total number of products and when the products would be needed, the Bureau risked not being able to effectively measure the progress of MAF/TIGER testing activities. This in turn increased the risk that there may not be sufficient time and resources to adequately test the system and that the system may not perform as intended. At that time we recommended that the MAF/TIGER program establish the number of products required and establish testing plans and schedules for 2010 operations.

In response to our recommendations, the Bureau has taken several steps to improve its MAF/TIGER testing activities, but substantial work remains to be completed. For example, the MAF/TIGER program has established the number of products and when the products are needed for key operations. Furthermore, the program finalized five of eight test plans for 2010 operations, of which the testing activities for one test plan (address canvassing) have been completed; three are under way; and one has not yet started. Lastly, the program's test metrics for MAF/TIGER have recently been revised; however, only two of five finalized test plans include detailed metrics. While these activities demonstrate progress made in testing the MAF/TIGER system, the lack of finalized test plans and metrics still presents a risk that there may not be sufficient time and resources to adequately test the system and that the system may not perform as intended.

Given the importance of MAF/TIGER to establishing where to count U.S. residents, it is critical that the Bureau ensure this system is thoroughly tested. Bureau officials have repeatedly stated that the limited amount of time remaining will make completing all testing activities challenging.

[16]For MAF/TIGER, testing activities are defined by products needed for key activities, such as address canvassing and nonresponse follow-up.

Concluding Observations

The Bureau recognizes the critical importance of an accurate address list and maps, and continues to put forth tremendous effort to help ensure MAF/TIGER is complete and accurate. That said, the nation's housing inventory is large, complex, and diverse, with people residing in a range of different circumstances, both conventional and unconventional. The operations we included in this review generally have proceeded as planned, or are proceeding as planned. Nevertheless, accurately locating each and every dwelling in the nation is an inherently challenging endeavor, and the overall quality of the Bureau's address list will not be known until the Bureau completes various assessments later in the census. Moreover, while the Bureau has improved its management of MAF/TIGER IT systems, we continue to be concerned about the lack of finalized test plans, incomplete metrics to gauge progress, and an aggressive testing and implementation schedule going forward. Given the importance of MAF/TIGER to an accurate census, it is critical that the Bureau ensure this system is thoroughly tested.

On October 15, 2009, we provided the Bureau with a statement of facts for our ongoing audit work pertaining to this testimony, and on October 16, 2009, the Bureau forwarded written comments. The Bureau made some suggestions where additional context or clarification was needed and, where appropriate, we made those changes.

Mr. Chairman and members of this Subcommittee, this concludes my statement. I would be happy to respond to any questions that you might have at this time.

If you have any questions on matters discussed in this statement, please contact Robert N. Goldenkoff at (202) 512-2757 or by e-mail at goldenkoffr@gao.gov. Other key contributors to this testimony include Assistant Director Signora May, Peter Beck, Steven Berke, Virginia Chanley, Benjamin Crawford, Jeffrey DeMarco, Dewi Djunaidy, Vijay D'Souza, Elizabeth Fan, Amy Higgins, Richard Hung, Kirsten Lauber, Andrea Levine, Naomi Mosser, Catharine Myrick, Lisa Pearson, David Reed, Jessica Thomsen, Jonathan Ticehurst, Kate Wulff, and Timothy Wexler.

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Mr. CLAY. Thank you so much, Mr. Goldenkoff.

Mr. Zinser, you are recognized for 5 minutes.

STATEMENT OF TODD ZINSER

Ms. ZINSER. Thank you, Mr. Chairman, Ranking Member McHenry, members of the subcommittee. We appreciate the opportunity to testify today about the Census Bureau's master address file.

My testimony covers three points, Mr. Chairman.

First, building the master address file is an enormously important and enormously complex undertaking. Second, my office has focused a lot of our work on the Census operations used to build the file, and, not surprisingly given the enormity of the task, the operations are prone to errors and omissions. Third, Census continues to work very hard to carry out operations to improve the master address file and compensate for those errors and omissions, and the execution of those operations is critically important.

The Census Bureau describes an accurate, comprehensive, and timely list as one of the best predictors of a successful census. Errors on the master address file can cause people to be missed or counted more than once, as well as increase cost and the public burden by requiring enumerators to visit non-existent or duplicate locations during the non-response followup operation.

After the 2000 census the Bureau launched an ambitious plan to maintain and update both the master address file and the census maps through a variety of operations. They accomplished some of their plans, but still relied on a massive address canvassing operation at the end of the decade as the primary operation for verifying, updating, or deleting addresses, adding missing addresses, updating streets on the maps, and geo-coding every structure. Address canvassing employed 140,000 temporary workers and cost over $400 million, not including the cost of the hand-held computers.

Our work over the decade on the master address file has identified consistent problems. We observed the 2006 site test in Austin and Cheyenne River Reservation, the 2008 dress rehearsal, and the address canvassing operation, itself. My written statement includes examples of the types of errors and omission we observed in those operations, including missing, duplicate, and erroneous master address file addresses, problems with listers not following procedures, and other problems with process and execution. Our work in this area has caused us to have concerns about the overall quality of the address list.

The Census Bureau has operations designed to update the 2009 address list and potentially mitigate some of the issues that affect master address file reliability. These include group quarters validation, the LUCA appeals process, new construction adds, and update leave and update enumerate. These represent some of the most significant efforts planned and underway to strengthen and update the master address file. It is critically important that the Bureau execute these operations well. I believe the Census is working hard to do so.

However, if we were to be asked what other actions the Census Bureau could take at this point, we would offer two suggestions

that could assess the quality of the master address file right now and provide information that could be used in subsequent improvement operations and potentially provide the opportunity for additional address list corrections.

First, Census should take advantage of housing unit estimates to help assess master address file quality. For the past 20 years, the Bureau has produced annual estimates of housing units for States, counties, and local governments. These statistics are used as controls for several Census Bureau surveys and could be used for the decennial as benchmarks against which potential over- or undercounting of housing could be measured. For example, after census 2000, count comparisons for over 800 of the Nation's most rural counties indicated potential under-coverage in 275 of the counties. Use of housing estimates could identify these types of discrepancies now, before the decennial census, and perhaps steps could be taken to address them.

Second, the Bureau could make greater use of administrative records as another source for checking address quality. Such records collected by all levels of Government and the private sector are used by census in conducting several of its statistical operations. By matching current administrative records to the master address file, Census could both assess master address file quality and potentially add missing addresses.

Even if the Bureau determines that incorporating missed addresses identified in this process would not be feasible at this stage of the decennial, there would still be benefits to assessing the address file and identifying areas where addresses are missing. It would allow subsequent field operations to be alerted on a targeted basis of the high potential for an accurate list for that area and the need for greater attention to those areas.

Mr. Chairman, this completes my summary, and I would be happy to respond to any questions.

[The prepared statement of Mr. Zinser follows:]

Testimony of

THE HONORABLE TODD J. ZINSER
INSPECTOR GENERAL

U.S. DEPARTMENT OF COMMERCE

before the

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

Wednesday, October 21, 2009

Census 2010: Importance of the Master Address File and Steps Census Can Take to Strengthen Its Quality

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

Thank you for inviting us to testify on the status of the Census Bureau's master address file, which has important implications for the accuracy of next year's census. My testimony today will describe how the master address file, or MAF, is used—including its relationship to address canvassing and the bureau's plans to improve it. We will also offer suggestions for strengthening MAF quality and, with it, the likelihood of Census 2010 success.

ADDRESS ACCURACY IS KEY TO CENSUS SUCCESS

The mission of the 2010 census—to count people *once, only* once, and in the *right place*—is a difficult task. For the successful completion of the 2010 census, the Census Bureau must:

- Identify all potential structures in which people might reside—estimated to total more than 130 million housing units—and accurately depict them on census maps.
- Determine the best method of enumerating people living in those structures—either by mail or through in-person interviews.
- Accurately aggregate its enumerations by statistical and political jurisdictional boundaries.

The ability to improve accuracy and contain costs depends on two major elements: delivering questionnaires to the correct physical locations; and motivating the public to complete and—in most cases—mail back their forms. When this does not happen, the bureau must enumerate the population through expensive non-response follow-up and other operations that require temporary workers to go door-to-door to obtain census information. Projected to cost $80–90 million for each additional percentage point of the public that a census enumerator must visit, non-response follow-up represents Census's single largest cost driver. Follow-up operations also introduce the possibility that individuals may be counted more than once.

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 MAF can also increase costs and the public burden by requiring visits to nonexistent or duplicate locations in non-response follow-up.

For the 2010 decennial, the bureau will rely on the MAF to identify all places in which people live—or could live—and stay. The MAF is intended to be a current, comprehensive list of every address in the nation, whether occupied or vacant. The bureau associates MAF addresses with their locations on the bureau's digital map, known as TIGER *(Topologically Integrated Geographic Encoding and Referencing)*. This process is referred to as *geocoding*. Only geocoded addresses are included in the address canvassing operation, and only geocoded addresses receive census questionnaires. Geocoding is the method the bureau uses to fulfill its mandate to count people in the right location.

THROUGHOUT THE DECADE, BUREAU'S ATTEMPTS TO ENHANCE ADDRESS LIST MET WITH ONLY PARTIAL SUCCESS

Following Census 2000, the bureau launched an ambitious plan to maintain and update the MAF and TIGER databases. Planned activities included integrating the two systems into a single MAF/TIGER database, realigning every street and boundary in the TIGER database, conducting the annual Boundary and Annexation survey to update the legal boundaries of all governmental units, updating the MAF semiannually with U.S. Postal Service (USPS) addresses, determining the physical locations of ungeocoded postal service addresses, and updating rural areas using staff from the American Community Survey (the survey that replaced the long-form census). The first four of these activities were implemented fully, the last two only partially.

Census's initial 2010 design also included maintaining and updating the address list throughout the decade and using a targeted approach to address listing. The bureau estimated that $155 million in savings could be achieved. These savings depended on the use of Global Positioning System (GPS)-equipped handheld devices to reduce time and travel costs associated with non-response follow-up and a targeted approach rather than

employing a massive end-of-decade address listing operation. In March 2004, Census issued a planning memorandum that stated that the bureau no longer believed that "we can assume this approach will be perfected for 2010."

For the 2010 decennial, two principal address-updating operations were ultimately used, incorporating local government-provided address information through an operation known as Local Update of Census Addresses (LUCA), and nationwide address canvassing. Over 8,000 state, local, and tribal governments participated in LUCA, adding more than 8 million addresses to the MAF that were also included in the address canvassing operation. MAF/TIGER will evolve from Census 2000 through the 2010 operations. Updates occur throughout the decade, the most significant being the twice yearly U.S. Postal Service address updates. In addition, several 2010 Census operations provide an opportunity to add housing units, and a final USPS update occurs in February 2010.

Costing over $400 million, address canvassing was designed to ensure that the census address list and maps are as accurate as possible by verifying, updating, or deleting addresses; adding missing addresses; updating streets on the TIGER maps; and geocoding every structure by assigning GPS coordinates. During this huge operation, about 140,000 temporary decennial staff, using handheld computers containing MAF addresses and TIGER maps, tried to identify every location at which an individual could live or stay and ensure that it was correctly recorded and geocoded. Address canvassing for the 2010 Census was completed in July 2009.

To provide some idea of the magnitude of this undertaking, address canvassing began with about 145 million addresses; after verifying, adding, and deleting housing units, the final housing unit count was reduced to just under 134 million addresses.

OFFICE OF INSPECTOR GENERAL (OIG) WORK THROUGHOUT THE DECADE ILLUSTRATES THE EFFECT THAT ERRORS AND OMISSIONS CAN HAVE ON MAF QUALITY

Developing an accurate MAF and maps has been a long-standing challenge for the Census Bureau. We have issued 29 reports and testimony on the decennial census since March of 2000, with over half of them addressing this subject in particular. These 17 products contained numerous recommendations for improving MAF and TIGER. Our reviews have consistently found problems with the maps and address information, and we have raised concerns about the effectiveness of address canvassing to correct these errors.

2006 SITE TEST IDENTIFIED EXAMPLES OF DIFFICULTIES WITH ADDRESS ACCURACY AND CANVASSING APPROACH

In evaluating activities to update the MAF and related maps during the Census Bureau's 2006 test of planned decennial operations, designed to test proposed concepts, systems, and procedures for the 2010 Census, we reviewed actual field operations in the test locations. We found examples of missing, duplicate, and erroneous addresses.

The 2006 test was conducted in two locations: a portion of Travis County, Texas, that included parts of the city of Austin and its suburbs; and the Cheyenne River Reservation and Off-Reservation Trust Land in South Dakota. We visited both locations several times to observe address canvassing and two enumeration operations; we found a number of issues with the MAF and maps.

In South Dakota, the bureau tested address canvassing using the handheld computers followed by the update/enumerate operation it planned to use in the 2010 census. Update/enumerate is used to count American Indians living on reservations, colonias (usually rural, Spanish-speaking communities), resort areas with high concentrations of seasonally vacant living quarters, and other hard-to-find rural populations. During update/enumerate, which is a paper-based operation, Census staff go door-to-door to collect population data. They are instructed to also make any needed corrections to the bureau-generated maps and address lists that they use to locate housing units. Our findings from this test included the following:

- The bureau's update/enumerate procedure requires staff to systematically travel all streets, roads, and paths in each block in a clockwise direction, comparing housing units on the ground with those on the maps. During the operation, we observed that enumerators had difficulty finding their assignment areas, reading the map spots (which represent individual housing units), and associating address descriptions with the correct housing units because address canvassing did not adequately improve maps or housing unit descriptions.

- Enumerators often could not determine where to start canvassing because one or more assignment area's boundaries were unmarked, nonexistent, or otherwise difficult to find and had inaccurately portrayed landmarks. Enumerators consequently resorted to traversing from map spot to map spot, which caused them to miss some housing units. We identified a number of missed or duplicate housing units along such boundary lines.

- As we traversed portions of 12 reservation assignment areas containing a total of 480 housing units after completion of update/enumerate, we found 35 that were never enumerated; 25 of these were not even on the map. For the remaining 10, enumerators misidentified the target housing unit and enumerated the wrong household, thereby creating duplicate enumerations. Further, these 35 housing units were not enumerated during the subsequent coverage follow-up operation.

Our findings for Travis County related to address canvassing and group quarters enumeration included the following:

- One lister could not find a block that contained several structures because it was bordered by an unnamed road not accurately represented on the handheld computer's map. As a result, the GPS you-are-here function indicated, in error, that the block was in the middle of an empty field. The lister did not delete the misplaced road from the map and did not canvass the actual location.

- After conducting a limited Internet search and speaking with only four group home administrators, we learned of at least 15 group quarters that were not on the list. Given the limited nature of our inquiry, many more were likely to have been missed. Identifying group quarters is important to those representing the various constituencies in group homes, even if the residents are counted via the housing unit questionnaire or during non-response follow-up operations, because data users want accurate facility and population counts.

- During our on-site observation of the group quarters enumeration operation, we became aware of two such facilities that also received housing unit questionnaires. We then reviewed 59 group quarters addresses to determine if any matched a housing unit address, which would mean that it also received a housing unit questionnaire. Six of the 59 group quarters addresses were confirmed by Census Bureau staff as, in fact, having also been listed as housing unit addresses that received housing unit questionnaires, which may have resulted in duplicate counting.

2008 Dress Rehearsal Identified Ungeocoded USPS Addresses, Missed Housing Units, and Inconsistencies between Physical and Mailing Addresses that Caused Listing Errors

We assessed address canvassing again in the 2008 dress rehearsal—reviewing information for 18,694 addresses from 125 assignment areas (100 randomly selected by Census and another 25 that we observed during dress rehearsal address canvassing). Many of the issues we reported in 2006 remained. Although we could not project an error rate to the overall MAF based on our sample, the regularity with which these problems surfaced suggests that they may be significant and could reduce the accuracy of the 2010 count. Census expects that other subsequent operations, such as update/leave (a questionnaire is left for the respondent to return by mail), new construction, and new postal service addresses, will resolve some of these errors, but—as we discuss later in this testimony—none will provide a comprehensive solution for identifying missed addresses that could be included in next year's census.

Specific dress rehearsal findings included the following:

- Two MAF improvement programs were canceled in 2007. The following year the programs were canceled. One program in particular, the MAF geographic office resolution program, would have linked (geocoded) USPS addresses to a specific location.

- Millions of ungeocoded Postal Service addresses in the MAF set the stage for missed housing units and increased workloads. For example, a 352-unit apartment complex was missing from the address canvassing list. The complex was built after 2000 and was in the MAF, but it was not geocoded and was therefore not on the address list given to the employee assigned to canvass the area. The canvasser correctly added 346 addresses, but mistakenly missed six apartment units and added one that did not exist.

  We do not know if and how often this may have occurred during address canvassing conducted for the 2010 census, but to the extent that it did, the occupants of housing units not added to the list face an increased risk of not being counted. These errors could likely have been avoided if the geocoding program had been funded. With the 2010 address canvassing operation now completed, 3.3 million MAF address records still remain ungeocoded.

- The second problem pertaining to ungeocoded addresses relates to inconsistencies between physical and mailing addresses. A 391-unit retirement community illustrates how the workload increases for a poorly maintained address list. Canvassing lists for the retirement community contained "location" addresses—street names and unit numbers (e.g., 3629 E. Adams Avenue)—but in this case they did not correspond to the Postal Service mailing addresses. This is because USPS uses the complex name and unit number, known as the "vanity" address (e.g., 3629 ABC Apartments). The vanity addresses exist in the MAF (as provided by Postal Service updates) but are not geocoded to a specific block location, so they do not appear on canvassers' lists.

  If these developments had been new during 2010 address canvassing, listers would have had to add them to the MAF. However, residents likely would not receive a questionnaire anyway because the location addresses are often not recognized by the Postal Service. Consequently, these addresses will go into the costly non-response follow-up operation.

- Duplicate addresses were entered into the MAF during address canvassing. We found examples of quality-control staff reinstating addresses that had been correctly deleted by the canvasser, and incorrectly adding addresses to canvassers' lists. In one example, 17 addresses correctly verified by a canvasser in one block were added to an adjacent block during quality control. Therefore, two sets of identical addresses now existed on the same street.

In 2000, geography-matching operations in Census Bureau headquarters would have attempted to identify and eliminate the identical addresses from the second block. But for 2010, Census has decided that it must keep these duplicate addresses as valid housing units to avoid missing a residence. According to the bureau, if it receives completed questionnaires from both, the addresses will still not be identified as duplicates since the housing units are in separate blocks. Such instances will likely result in over-counting.

- We also found that several hundred addresses in our sample were duplicates except for ZIP code. Up-to-date addresses were added by a LUCA operation conducted as part of dress-rehearsal testing, but the updates were not recognized as the same housing units in the MAF because the ZIP codes were different, so the LUCA addresses did not override the outdated entries. We brought this to the attention of Census staff, who told us that for 2010, they will not match on the entire zip code, only the first three digits, which should prevent duplication from occurring.

2010 ADDRESS CANVASSING OPERATION: LISTERS DID NOT CONSISTENTLY FOLLOW BUREAU PROCEDURES, THEY COULD NOT MAKE DATA CORRECTIONS, AND POOR PERFORMERS WERE NEITHER RETRAINED NOR REMOVED

With the beginning of address canvassing last spring, we have given considerable attention to assessing the management issues and risks involved in planning and conducting field operations. We observed the address canvassing operation firsthand across the country, and issued two reports[1] on address canvassing. A third such report, detailing the quality-control issues summarized below, is forthcoming.

We observed both the initial listing and subsequent quality-control steps. OIG staff first observed address canvassing in 15 different locales in 5 of the 12 Census regions. Based on the problems we observed, we expanded the number and breadth of our field address-canvassing quality-control observations to 63 listers in 37 rural and 14 urban areas around the country.

Findings from our observations of address canvassing include the following:

- Listers failed to conform to address-listing and map-spotting procedures in seven different locales representing all five regions in which we had observers. On April 23, 2009, we recommended to Census that it immediately communicate in writing with its field offices to reinforce the need to follow documented procedures. Census responded rapidly by issuing an e-mail message to field staff and conducted a teleconference with its regional directors about the issue.

[1] *Observations and Address Listers' Reports Provide Serious Indications That Important Address Canvassing Procedures Are Not Being Followed* (May 4, 2009, OIG-19636-01) and *Problems Encountered in the Large Block Operation Underscore the Need for Better Contingency Plans* (August 7, 2009, OIG-19171-02). See the appendix for a full listing of all OIG reports and testimony on the census from March 2000 through October 2009.

- Quality-control staff were unable to correct the address list after the quality check of a sample of housing units had been completed without the need for additional canvassing. Census staff often identified errors in a subsequent operation intended to verify all addresses deleted by the initial address lister. However, the handheld computers—performing as specified by Census—did not allow most address-list changes during that operation. Consequently, while confirming deletions, quality-control listers identified housing units on the list that should have been deleted; or discovered housing units, streets, and new developments that were not added. They were unable, however, to update the address list and maps on the handheld computers.

- Census acknowledged this inability to make unplanned corrections in the field using the handheld devices, and by the end of March of this year, headquarters instructed the field to use a paper form referred to as an INFO-COMM to record address and map errors found after the quality check had passed. According to address canvassing manuals, INFO-COMMs were to be used to identify canvassing problems, typically related to broken handheld computers or inaccessible areas due to locked gates or similar situations, including those deemed to be threatening.

  Prior to the end of address-canvassing, Census personnel resolved INFO-COMMs with local Census office managers. However, recording address list corrections on INFO-COMMS was a new process. Therefore Census has no way of reliably knowing whether all necessary corrections were recorded on INFO-COMMs or if all INFO-COMMs were collected by the local census offices.

- Census did not retrain or remove poorly performing listers from the initial listing operation. While Census uses the quality check, in part, to identify poorly performing listers, the canvassing operation proceeded so quickly that the quality check did not begin until after much of address canvassing was completed.

- Our observations also noted a relaxing of map spot standards in five of the 12 Census regions. According to Census, however, it does not consider its actions to be a relaxation of standards, although it did issue guidance during the quality-control operation stating that, as long as listers placed the map spot reasonably in relationship to other living quarters in the block, the map spot was acceptable. Yet such loosely placed map spots defeat one of the primary justifications for obtaining GPS-aligned positioning: to ensure that listers geographically place housing units in the exact correct location for purposes of redistricting and governmental tabulations.

As we reported in August in our first quarterly report to Congress, the Census Bureau's ability to effectively oversee decennial progress has long been hampered by inherent weaknesses in its systems and information for tracking schedule, cost, and risk-

management activities. While the bureau's management of risk represents a significant improvement over the 2000 census, which lacked a formal risk-management process, much more remains to be done.

For example, as part of its risk-mitigation strategy, Census selected 11 of 24 program-level risks for the development of contingency plans. One risk area identified was related to the MAF and referred to as "Housing Unit Duplicates and Misses." However, even at this late hour, this plan is still being formulated, and no date has been set for its completion.

THE BUREAU HAS OPERATIONS PLANNED TO IMPROVE THE MAF, BUT COULD TAKE ADDITIONAL STEPS TO ENHANCE THE QUALITY OF THE ADDRESS LIST PRIOR TO 2010 DECENNIAL OPERATIONS

The Census Bureau has operations subsequent to address canvassing that will continue to update the MAF. Examples of some of the bureau's most significant planned operations that will improve the address file include the following:

- Group Quarters Validation—a field operation designed to determine if addresses identified in canvassing as "other living quarters," such as marinas, college dormitories, prisons, assisted living facilities, and nursing homes, have been correctly classified and are not, for example, housing units or non-residential. Fieldwork started late September and is scheduled to finish in late October. (We are currently reviewing this operation.)
- New Construction Adds—an operation to be conducted between November 2009 and March 2010 that will allow local governments to provide addresses of recently built living quarters whose construction began after address canvassing and is expected to be complete by April 1, 2010.
- Update/Leave and Update/Enumerate—enumerators canvass assignment areas to update residential addresses, including adding living quarters that were not included on the address listing pages; update Census Bureau maps; and either leave or complete a questionnaire for each housing unit. These occur in communities with special enumeration needs and in which many housing units may not have house-number-and-street-name mailing addresses, or do not receive USPS delivery. These operations occur during the March to early-June 2010 timeframe.
- Be Counted—unaddressed "Be Counted" questionnaires are left at selected sites such as libraries and various other community locations for one month starting March 19, 2010. The forms have a mailing deadline of May 1, 2010. Addresses on these forms require geocoding and if not currently on the address list, require verification to ensure they are housing units after they are received by the bureau.

DETERMINING THE QUALITY OF THE ADDRESS LIST NOW

The completion of address canvassing represents a major milestone in the 2010 census process. Despite errors, this list provides a baseline of the address list as it existed at the end of July 2009. The planned operations described above will be valuable in identifying missed and new addresses, but they do not provide a comprehensive assessment or corrections based on a review of the errors in the MAF. In responding to the question of what additional steps the bureau should consider to improve the MAF, we make several suggestions. In so doing, we recognize Census officials must account for the nonnegotiable deadlines that they must meet, and the potential impact that these suggestions would have on its remaining operations.

Census should consider the following approaches to assess and improve the quality of the MAF. The goal is to afford some level of assurance of the accuracy and completeness of the MAF, and provide a roadmap for improvement.

✓ HOUSING UNIT ESTIMATES REPRESENT AN EXISTING TOOL THAT COULD HELP ASSESS MAF QUALITY

For the past two decades, the Census Bureau has produced annual estimates of housing units for the nation, states, counties, and local jurisdictions as part of its program for estimating population between censuses. The estimates are calculated by cumulatively adding new housing to the current decennial's housing unit count (and subtracting those demolished) for each level of geography.

These estimates already serve as controls for many of the bureau's surveys. Further, the bureau used these benchmarks to assess under- and over-counts at the county level for Census 2000. For example, count comparisons for over 800 of the nation's most rural counties indicated potential undercoverage in 275 of the counties. In our work on the Census 2000 MAF, we recommended that the bureau use those results to inform remaining decennial operations in the many counties with significant discrepancies. In rural areas, knowledge of a significant number of missing addresses would alert the update/leave and update/enumerate operations to expect an increased workload.

✓ While these estimates are not without flaws, these data could again be used by the bureau to analyze potential shortfall or excess with the MAF for the 2010 decennial, at least at the county level, and to target areas where improvements to the MAF are needed.

ADMINISTRATIVE RECORDS CAN HELP ASSESS AND IMPROVE THE MASTER ADDRESS FILE

Another source of data for assessing the quality of the MAF are administrative records—data collected for the administration of programs and provision of services by federal, state, and local governments and commercial entities. Administrative records include, for example, address information from housing assistance, health services, and tax forms. The bureau already uses administrative records directly in its economic censuses and surveys to create yearly housing and population estimates. However, the bureau has not used this type of administrative record to incorporate missing addresses into the MAF. The current MAF could be compared against address data contained in administrative records to help identify errors and, in certain instances, to add missing addresses.

Census has considered the use of administrative records to supplement and guide the decennial census since the 1990s, when it began a formal administrative records program. The bureau has continued to process and collect this information and has developed a wealth of knowledge in the processing, matching, and deletion of duplicates for literally billions of records on an annual basis. In response to the high and differential undercount in the 1990 census, the bureau in 2000 used administrative records to evaluate housing unit coverage.

The bureau already uses administrative records—in the form of the Postal Service file—as a major component in building and updating the MAF. Use of administrative records to directly enhance the address file has the potential to improve the quality of the decennial with information the bureau already has on hand.

CENSUS CAN TAKE SPECIFIC STEPS NOW TO BETTER ENSURE BROADER CENSUS COVERAGE THROUGH ACCURATE ADDRESSES

The Census Bureau should consider comparing the MAF against the annual housing unit estimates in multiple geographic areas to help determine whether the results of address-list building to date appear reasonable. Further, the bureau should consider matching current administrative records to the MAF, since this provides the ability to both assess MAF quality and directly validate and improve the MAF by identifying and potentially adding missing addresses. Completing theses operations quickly could provide the opportunity to add missing addresses to its questionnaire mailing list.

While it is late in the process to affect the initial mailout/mailback list created this month, a supplemental mailing list for housing units including results from Group Quarters Validation will be created in December. This supplemental address file and the address file for the targeted replacement questionnaire, which will be mailed in early April to

certain non-responding households, provide opportunities to incorporate missed addresses.

We recognize that this approach is not without risk. The bureau would have to deal with ungeocoded and duplicate addresses, which could be handled similarly to the approach used in the *Be Counted* program, but would increase the workload. Census would have to evaluate whether the increased workload could be accomplished without jeopardizing its existing operations. Given the late date, we anticipate that the Census Bureau may be reluctant to consider these steps. However, there are strong reasons to explore these approaches, and we would recommend that the bureau give them serious consideration.

If the bureau determines that incorporating missed addresses would be too burdensome at this stage of the decennial, there would still be benefits to identifying areas where addresses are missing. This includes alerting subsequent field operations, on a targeted basis, of the high potential for an inaccurate list and the need for increased vigilance in address list update and enumeration activities. This would inform Census managers of the need for emphasis in these areas.

The importance of the Master Address File cannot be overstated for this decade or the next, nor can the challenges faced by the bureau in achieving a high-quality address list for the census. Our numerous observations of address canvassing throughout the decade reinforce the difficult and error-prone nature of the task. Twice in this past decade our evaluations have resulted in recommendations that Census reassess the desirability of conducting this massive end-of-decade operation and consider whether alternative, more effective strategies for developing the address list are feasible.

I would also like to point out that many of the areas I have discussed, including use of administrative records, are relevant to early planning for the 2020 census, and we hope that the bureau will use its experiences with Census 2010 to inform its decision-making for 2020. As we look ahead to 2020, Congress may want to work with the bureau to consider developing more cost-effective alternatives to 100-percent address canvassing.

Mr. Chairman, this concludes my prepared statement. I would be pleased to respond to any questions that you or any other Members of the Subcommittee may have at this time.

APPENDIX

Office of Inspector General Reports/Testimony on the Decennial Census, 2000 through October 2009

Documents pertaining to address files and canvassing are highlighted in bold italics.

(Reports/testimony are available in the OIG Census Reading Room at http://www.oig.doc.gov/oig/reports/census_reading_room/index.html)

2009

- ***The 2010 Census: Update of Key Decennial Operations,*** testimony before the Senate Committee on Homeland Security and Governmental Affairs, Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security, October 7, 2009.

- *The 2010 Census and Integrated Communications Campaign,* testimony before the House Committee on Oversight and Government Reform, Subcommittee on Information Policy, Census, and National Archives, September 22, 2009.

- ***2010 Census: First Quarterly Report to Congress,*** August 7, 2009 (OIG-19791-1).

- **Memorandum to Director, Bureau of the Census, with Recommendations from *2010 Census: First Quarterly Report to Congress,*** August 7, 2009 (OIG-19791-l).

- ***Problems Encountered in the Large Block Operation Underscore the Need for Better Contingency Plans,*** August 7, 2009 (OIG-19171-02).

- ***Observations and Address Listers' Reports Provide Serious Indications That Important Address Canvassing Procedures Are Not Being Followed,*** May 4, 2009 (OIG-19636-01).

- *Census 2010: Revised Field Data Collection Automation Contract Incorporated OIG Recommendations, But Concerns Remain Over Fee Awarded During Negotiations,* March 3, 2009 (CAR 18702).

- ***Census 2010: Delays in Address Canvassing Software Development and Testing, Help Desk Planning, and Field Office Deployment Have Increased Operational Risk,*** February 12, 2009 (OIG-19171).

APPENDIX

2008

- ***Census 2010: Dress Rehearsal of Address Canvassing Revealed Persistent Deficiencies in Approach to Updating the Master Address File,*** October 17, 2008 (OSE-18599).

- *FY 2008 FISMA Assessment of the Field Data Collection Automation System,* September 29, 2008 (OSE-19164).

- *Census 2010 Decennial: Census Should Further Refine Its Cost Estimate for Fingerprinting Temporary Staff,* August 8, 2008 (OIG-19058-1).

- ***Census 2010 Decennial: OIG Reviews Through the Decade Identify Significant Problems in Key Operations,*** June 4, 2008 (OIG-19217).

2007

- *Follow-up Review of the Workers' Compensation Program at the Census Bureau Reveals Limited Efforts to Address Previous OIG Recommendations,* September 28, 2007 (IPE-18592)

- ***Census 2010: Key Challenges to Enumerating American Indian Reservations Unresolved by 2006 Census Test,*** September 19, 2007 (OSE-18027).

2006

- ***Enumerating Group Quarters Continues to Pose Challenges,*** September 29, 2006 (OIPE-18046-09-06).

- ***Valuable Learning Opportunities Were Missed in the 2006 Test of Address Canvassing,*** March 31, 2006 (OIG-17524-03-06).

2005

- *FDCA Program for 2010 Census Is Progressing, but Key Management and Acquisition Activities Need to be Completed,* August 4, 2005 (OSE-17368)

2004

- ***Improving Our Measure of America: What the 2004 Census Test Can Teach Us in Planning for the 2010 Decennial Census,*** September 30, 2004 (OIG-16949-1).

2003

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- ***MAF/TIGER Redesign Project Needs Management Improvements to Meet Its Decennial Goals and Cost Objective,*** September 30, 2003 (OSE-15725).

2002

- ***Selected Aspects of Census 2000 Accuracy and Coverage Evaluation Need Improvements Before 2010,*** March 2002 (IG-14226).

- ***Improving Our Measure of America: What Census 2000 Can Teach Us in Planning for 2010,*** March 31, 2002 (OIG-14431).

2001

- ***Actions to Address the Impact on the Accuracy and Coverage Evaluation of Suspected Duplicate Persons in the 2000 Decennial Census,*** March 29, 2001 (ESA-OSE-13812).

2000

- *Re-enumeration at Three Local Census Offices in Florida: Hialeah, Broward South, and Homestead,* September 29, 2000 (ESA-13215).

- ***A Better Strategy Is Needed for Managing the Nation's Master Address File,*** September 2000 (ESA-OSE-12065).

- *Unjustified Decennial Census Unemployment Compensation Claims Should Be Reduced Because Terminations for Cause Were Mostly Well Documented,* September 29, 2000 (ESA-IPE-13212).

- *Telephone Questionnaire Assistance Contract Needs Administration and Surveillance Plan,* August 8, 2000 (ESA-OSE-12376).

- *Decennial Census Warehousing Operations Needed Attention,* July 28, 2000 (ESA-DEN-11950).

- *PAMS/ADAMS Should Provide Adequate Support for the Decennial Census, but Software Practices Need Improvement,* March 2000 (ESA-ESD-11684).

- *Accountable Property Used for the Decennial Census Needs Improved Controls; Bankcard Program Is Well Managed,* March 2000 (ESA-ESD-11781).

Mr. CLAY. Thank you very much, Mr. Zinser.

Ms. Jacobs, you may proceed.

STATEMENT OF ILENE JACOBS

Ms. JACOBS. Thank you, Mr. Chairman, and thank you, Ranking Member McHenry and members of the subcommittee, for giving me this opportunity to speak to you today about the master address file and to recommend improvements with respect to the development of the master address file.

I was glad to hear Dr. Groves refer to the master address file as a big deal, and I would like to reiterate his statement. It is a very big deal, particularly to the very hard-to-count populations that we represent throughout the 21 rural offices of California Rural Legal Assistance. Our mission is to ameliorate rural poverty and to ensure that rural communities have access to justice and the provision of basic human rights; therefore, we very much understand the importance of an accurate census and having accurate census data, which starts with an accurate master address file.

I would like to speak about the adverse impact in the communities we represent of having a less-than-accurate master address file and make some very practical recommendations for improvements.

We represent the hardest-to-count populations in the hardest-to-locate housing. We represent farm workers, the rural poor, immigrants, very diverse racial and ethnic groups, linguistically isolated populations, elderly, disabled, and most recently many foreclosure victims throughout rural California.

An inaccurate master address file in a mail-out/mail-back census means that our clients do not have adequate housing, they lack health care, they don't have job training, they have fewer educational opportunities, lower literacy, they have fewer needed municipal services like basic water and sewer, they lack community and economic development programs and resources, and it is harder to enforce the fundamental rights that they have guaranteed by law.

The direct impact on local government is very serious, because they lack the ability to meet the pressing needs of the hardest-to-count populations. There are social and economic costs not only to our clients but to the local governments that are there to serve them.

My prepared statement describes the structural bias in the development of the master address file. My involvement with the Census Bureau and concern about the master address file started when, after the 1990 census, we participated in a study that measured an at least 50 percent what we called mega-under-count of migrant and seasonal farm workers, and we attribute much of that mega-under-count to missing housing units. Not exclusively, but a significant part of that.

The structural bias in the development of the master address file has not been solved. I give a lot of credit to the Census Bureau for making improvements in instructions to address listers about hidden housing units and what types of units to include in the address file, but we still have the problem of complete omission of entire households because, in the hardest-to-count areas and areas of high

concentration of hidden housing units, the master address file is incomplete.

And if the master address file for 2010 is incomplete, that means that the master address file for use in the American community survey, Census Bureau's replacement for the long form, also will be incomplete, and that will result not only in omission of housing units but omission of people, and it will carry into the American community survey a skewed set of demographic characteristics of the most needy populations, particularly diverse racial and ethnic groups and the hardest-to-count populations that we represent.

I have made five key points and five key recommendations in our written testimony.

First, the hard-to-locate housing units in rural California and elsewhere need to be understood. They are backyard chicken coops, they are illegal garages, they are tool sheds that are rented out to families to live in, they are single family units and apartments that are subdivided into essentially one-room-per-complex household, and that can be a family or an extended family per room in a six-apartment dwelling.

They are motel rooms that are occupied by 20 migrant and seasonal farm workers at a time. They are trailer encampments. They are tarps and lean-tos built into canyons and the kind of housing that is unacceptable in this country, but, nevertheless, it is spread throughout rural California, and there are many similarities to concentrated urban areas when we talk about these hidden and illegal housing units.

In our study after the 2000 census—and I refer to that in my written testimony—we found that a very high percentage of these types of units were missed in the seven communities that we evaluated using the Census Bureau's methodology.

Second, address canvassing does not adequately identify these units, albeit improvements have been made.

Third, ultimately, as I said, it skews the population profile because the hidden units tend to be occupied by the hardest-to-count populations who then become very difficult to profile in the American community survey. This has a direct impact on all of our communities throughout the country, and it can be addressed in 2010 and in the ACS.

We first recommend that the Census Bureau adopt the address listing protocol that we used in 2000 in the L.A. region to count migrant and seasonal farm worker units and hidden units, that they implement this address listing protocol which was recognized by the GAO in its report on farm workers, and would extend to other hard-to-count populations.

Second, that the Census Bureau work with the regional offices, census partners, community-based organizations, and local governments to identify areas of high concentrations of hard-to-locate housing units and target those for tool kit enumeration operations, and by that I mean specifically utilizing update leave and update enumerate operations within mail-out/mail-back areas, not only in remote areas, because that is where the update leave and update enumerate type operations are utilized. I think they can be effectively utilized within hard-to-count and mail-out/mail-back areas.

We also should be using the knowledge of community-based organizations in the LUCA process, which presently the Census Bureau does not do, and the master address file should be evaluated in 2010 in areas of a high concentration of hard-to-locate housing units. That evaluation then could be used to carry over the best practices into the American communities survey.

I know I have run out of time and I apologize for that. There is a lot more I could say but I won't. I thank you very much for the opportunity to testify.

[The prepared statement of Ms. Jacobs follows:]

TESTIMONY OF ILENE J. JACOBS

DIRECTOR OF LITIGATION, ADVOCACY & TRAINING

CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

Information Policy, Census and National Archives Subcommittee

Of the Oversight and Government Reform Committee

"The 2010 Census Master Address File: Issues and Concerns"

Wednesday, October 21, 2009

2154 Rayburn House Office Building

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

Thank you for your invitation to reflect my assessment and review of the quality and quantity of the addresses the Census Bureau will use to mail out census forms next spring and to provide my opinion on the Census Bureau's efforts to capture addresses in rural communities, including address canvassing, LUCA and other methods to insure that the Bureau has the most accurate mailing list possible.

I am a Director of Litigation, Advocacy & Training for California Rural Legal Assistance, Inc. (CRLA), a statewide non-profit law legal services program that provides legal assistance and a variety of community education and outreach services annually to more than 40,000 low income Californians, many of whom represent the hardest to count populations in the Decennial Census. They include low-income rural families, recent immigrants, linguistically isolated groups, diverse racial and ethnic groups, school children, disabled persons, migrant and seasonal farm workers, single parents, renters, and the elderly. CRLA's mission is to ameliorate rural poverty and ensure that rural communities have access to justice and the provision of basic human rights. Census data and improving the differential undercount of hard to count populations are key to that mission when they accurately reflect the individual and communities we represent, thus, I also serve as our representative to the 2010 Census Advisory Committee and have served on Decennial Census Advisory Committees since CRLA's appointment in 1995.

This prepared statement provides comments related to Master Address File (MAF) quality and reflections on practical strategies for improving the MAF as part of ongoing census improvement. The Census Bureau has made a great deal of progress in preparing the MAF and developing methods to address differential undercount, but much more remains to be done in our collective efforts to assure that the census truly is "a mirror which reflects America". My remarks stem from a long and enjoyable period of time working with local community groups and Census Bureau staff to improve the decennial census and reflect a shared concern for

accurate census data as an essential tool for sound, evidence-based social and economic planning, allocation of program funding, community development and enforcement of fundamental rights. I have provided legal assistance to the underrepresented and exploited throughout my legal career so my concern about accurate census data is a necessary one. I also have focused on housing issues throughout my entire career —so my concern about the Master Address File is a natural one. I have worked with CRLA since 1986 (after working for several years with the National Housing Law Project and Legal Aid Bureau) when I came to California to focus on issues of housing for migrant and seasonal farmworkers and other rural Californians. The prevalence of crowded and sub-standard farmworker housing, the importance of census data for allocation of federal housing funds, as well as for public health, education, and social program funding, lead to my concerns about a more accurate census.

I began working with community based organizations, researchers, and Census Bureau staff in joint efforts to improve census enumeration of hard-to-count groups during the 1990 Decennial Census.

Types of Housing Associated with Inaccuracies in the Master Address File

My direct experience with issues related to the accuracy of the Master Address File (MAF) stems from CRLA's community education and outreach and representation of migrant and seasonal farmworker (MSFW) clients and other rural residents throughout California. MSFWs in our state, and throughout the country, typically live in crowded, sub-standard, marginal housing accommodations. My experience is consistent with the Census Bureau's own research and field experience in showing clearly that the most serious MAF problems arise when housing units are "hidden" or "low-visibility" or fall into the category of "unusual" or "unconventional" dwellings. Many of these housing units are not in the MAF because they are actively concealed, but many others do not appear on postal or commercial address lists simply because they are sub-standard, low-profile housing.

Some farmworker housing is disregarded, ignored or actively hidden because the accommodations are not fit for human habitation: garages, toolsheds, camper shells, travel trailers, barns, chicken coops, plywood "back houses" built behind a main house in *colonias* and farmworker *barrios* in rural towns across the country, shantytowns of shacks made of cardboard containers in San Diego County, gatherings of trees and tarps in onion fields, or open-air encampments in California cherry orchards, cottonwood groves along the Fresno River, or orange groves in southern Arizona, old motels with 20 workers in a room, trailer parks and campgrounds with areas set aside for migrant workers. Some housing is actively hidden as a way to control the workers who live in it. Farmworkers were held in conditions of indentured servitude in December 2008 in Florida, for example, housed in U-Haul trailers parked on a back road adjacent to a nature sanctuary. Asparagus cutters were housed from 1997-2000 by a farm

labor contractor in an isolated labor camp on one of the islands in California's Sacramento River delta.

There are many other cases, however, in rural areas and urbanized agricultural communities, where the housing units in which farmworkers and their families reside are similar to other "hidden" and substandard, exploitative housing. The dwellings might be considered basically liveable, but they do not conform to codes, standards or local zoning ordinances, for example, a room in an illegally sub-divided single-family home (actually a housing unit under Census definitions when it has a separate entrance). There are other circumstances in which housing where farmworkers live are legally permitted, i.e., low-income trailer parks or clusters of trailers along rural roads in agricultural areas, but they do not have mail delivery even when the area is one designated by the Census Bureau for mailout-mailback delivery of census forms. One of the 1990 ethnographic case studies of differential undercount sponsored by the Census Bureau's Center for Survey Methods Research (Montoya 1992) found farmworkers housed barracks-style in a local motel where rooms did not have individual mail addresses and it was not identified as "group quarters"; such motels, usually dilapidated, are quite common throughout California.[1]

The deplorable conditions of farmworker housing present an extreme case of MAF problems. The housing is neither identified as a housing unit or as group quarters, yet is often located in a mail-out/mail-back area, virtually guaranteed to be missed unless other enumeration special procedures or "toolkit" approaches are used. The housing conditions of most recent immigrants to the U.S. are similar, however, as the typically low-wage workers are striving to make ends meet by living in crowded and dilapidated "unconventional" housing conditions in both rural and urban communities. This results in similar patterns where extreme low-visibility housing units do not have postal addresses, are missed in routine Census Bureau canvassing, and in many cases unknown or only vaguely known by local municipal officials. It is also worthy of note that this type of housing also is often occupied by large or complex households, making it likely that missing the housing further exacerbates the differential undercount of racial and ethnic minorities. Anti-immigrant sentiment and ordinances in some communities also can mean that both recent and settled immigrants are likely to "hunker down" and seek to minimize their social visibility.

The Census Bureau has made numerous improvements in address canvassing in an effort to include these low visibility units, through improved training, instructions and job aids for hard to locate units, however, much work remains to be done to ensure that census forms are delivered to these hidden housing units, that the forms are delivered even if they are not mailed, and that the

[1] Martin Dale Montoya, "Ethnographic Evaluation of the Behavioral Causes of Undercount: Woodburn, Oregon", Report #25, Ethnographic Evaluation of the 1990 Decennial Census Report Series, Center for Survey Methods Research, Bureau of the Census, 1992.

complex households residing in these units are enumerated and accurately reflected in census data. We have worked in particular with the Los Angeles region in their efforts to identify hard to locate housing and areas in which these units are concentrated and to improve the undercount in these areas and are aware of similar work in other regions, but there must be a consistent and concentrated approach to improvement in reaching these hidden housing units not only in address canvassing operations, but throughout all decennial operations; and the approach needs to be carried over to the American Community Survey (ACS), the Census Bureau's replacement for the long form.

The Extent and Consequences of Master Address File Inaccuracies

Farm labor researchers Susan Gabbard, Edward Kissam, and Phillip Martin, used multiple methods in 1993 to determine the extent and causes of farmworker undercount in the 1990 census.[2] They used the best available models of causes of census undercount and independently-collected data from the National Agricultural Worker Survey (NAWS) to estimate a 1990 undercount of 48-52% of the overall MSFW population[3]; the largest component of the undercount by far was due to total household omission (40-43%%) although there was an additional component of undercount (8-9%) due to partial household omissions.

CRLA conducted field research using the ethnographic coverage measurement procedures which had been developed by the Census Bureau and its researchers in 2000[4] to assess the extent to which undercount of migrant and seasonal farmworkers persisted, despite our own education and outreach efforts, energetic Census Bureau efforts, and a substantial state-funded initiative to enhance enumeration.[5] The research, in seven farmworker case study communities, showed that from 6.4% to 27.6% of local residents in farmworker neighborhoods (all in mailout-mailback

[2] Susan Gabbard, Edward Kissam, and Philip L. Martin, "The Impact of Migrant Travel Patterns on the Undercount of Hispanic Farmworkers", Proceedings of the 1993 Research Conference on Undercounted Ethnic Populations, Bureau of the Census, Economics and Statistics Administration, U.S. Department of Commerce, October, 1993.

[3] David Fein, "The Social Sources of Census Omission: Racial and Ethnic Differences in Recent U.S. Censuses", Ph.D. dissertation, Department of Sociology, Princeton University, 1989. Fein's modeling was based on well-designed Census Bureau research, the Cause of Undercount Survey, essentially a triple-enumeration conducted in conjunction with the 1986 Los Angeles Test Census. Edward Kissam, CRLA census research partner, and I have stressed for many years that the operational causes of differential undercount are structurally similar in urban and rural areas, but play out differently because socioeconomic and housing conditions differ.

[4] The funds for the project were provided by The California Endowment.

[5] It is very important to recognize that most migrant and seasonal farmworkers in the United States do not live on farms and that many, particularly in California, live in areas with city-style addresses. Most of these areas are routinely designated as mail-out/mail-back areas for census form delivery. See Housing Assistance Council (2005) and various tabulations and reports from the National Agricultural Worker Survey.

areas) lived in a household that was totally omitted from census enumeration, an average of 14.2% of the population in the study areas.[6]

We could not definitively attribute total household omission to MAF deficiencies (since we did not have access to the MAF) and some of these enumeration errors probably stemmed from problems with non-response follow-up (NRFU), however, it is important to note that total household omission in these rural towns was well-correlated with community housing patterns, i.e., highest in Parlier, where farm labor researchers had documented high proportions of non-conforming "back houses" and lowest in Arvin, a very coherent community.[7] The California Institute for Rural Studies (CIRS) Parlier survey in the early 1990s had found that 22.2% of the survey respondents were living in "back houses", very close to the 27.6% that the CRLA research team found in 2000 to have resided in a totally-omitted households.[8]

The underlying causes of MAF omissions are the result of interactions between the prevailing social system in a community and census operations (including LUCA), which make certain types of housing units and households invisible or semi-visible. A serious consequence is that a flawed MAF always gives rise to bias in the subsequent survey-based demographic and socioeconomic profile of the population. The types of housing units that are not included in the MAF typically are more crowded ones; therefore the errors in the resulting enumeration are even greater than the underlying errors in the MAF. The meticulous CIRS analysis of Parlier housing showed that 16% of the housing units in the community were "back houses", but that 22% of the town's population lived in these low-visibility housing units. The reflection of the population in census data will be skewed if these units are missed in the MAF and not

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[6] Edward Kissam and Ilene Jacobs, "Census 2000 Undercount of Immigrants and Farmworkers in Rural California Communities", CRLA Report to The California Endowment, August, 2001. Our findings are further discussed in Edward Kissam and Ilene J. Jacobs, "Practical Research Strategies for Mexican Indigenous Communities in California Seeking to Assert Their Own Identity" in Jonathan Fox and Gaspar Rivera-Salgado, **Indigenous Mexican Migrants in the United States**, Center for U.S. Mexican Studies and Center for Comparative Immigration Studies, University of California, San Diego, 2004.

[7] Much of the data on Parlier housing stems from field research conducted by Anna Garcia in 1989 for the U.S. Department of Labor (discussed in Chapter 9, "Northward out of Mexico: Migration Networks and Farm Labor Supply in Parlier, California" in David Griffith and Ed Kissam, **Working Poor: Farmworkers in the United States**, Temple University Press, 1995. Additional data stems from field research led by Anna Garcia as part of a subsequent study on farmworker health conducted by the California Institute of Rural Studies (Jennifer Sherman, Don Villarejo, Anna Garcia et al, "Finding Invisible Farmworkers: The Parlier Survey", CIRS, 1997.

[8] It is important to note that the CIRS Parlier Survey used "best practices" in farm labor household survey research which included complete on-the-ground mapping of community households—techniques similar to Census Bureau address canvassing but relying on field researchers trained in ethnographic research methods. These methods have, subsequently, been used in several leading farmworker research studies, most notably the community health research in 2003-2004 conducted by Richard Mines for the California Endowment's Agricultural Worker Health Initiative.

enumerated. Numerous studies of farmworkers and other immigrant populations have documented that the individuals and families living in the housing units at highest risk of being excluded from the MAF are more often foreign-born, have lower educational attainment, are more likely to be ethnic and linguistic minorities (e.g. in rural California, immigrants of Mixtec, Triqui, Maya, Zapotec, Purepecha origin), live in extreme poverty, and be very limited in English. The 2010 MAF will "ripple forward" into the household sample for the American Community Survey, thus setting the stage for skewing a multitude of socioeconomic and demographic characteristics if the Bureau does not take full advantage of this opportunity for improving the MAF. MAF errors are the first stage in a cycle in which social and economic disadvantage lead to social invisibility, subsequently reinforced by structural bias in the census, and, finally, amplified by inequitable access to federal, state, and locally-funded education, health, community development and social programs (including affordable housing) since funding allocation formulas are driven by census data.

Recommendations for Improvements to the Quality of the MAF

The Census Bureau has taken some important steps forward toward improving the MAF in the past decade, but more can be done to assure the quality and integrity of the decennial census. I will now briefly discuss some operational improvements to improve the MAF. My background and the focus in my remarks relates to enumeration of migrant and seasonal farmworkers, but there can be no doubt that similar initiatives will bear fruit in enhancing the enumeration of other hard-to-count populations, in both rural and in urban areas.

"Best Practices" for Address Canvassing: Enhanced, Ongoing Identification of Low-Visibility Housing Units

The GAO conducted a study and issued a report in 2003 that confirmed the utility of the efforts undertaken by CRLA and the Los Angeles and Seattle Regional offices to improve the MAF.[9] The GAO reported that our partnership identified more than 4,000 low-visibility housing units we believed were not included in the MAF; the Bureau reviewed and accepted 3,076 of these (more than 75%) as new additions.[10] CRLA hopes to pursue a similar strategy for 2010, working closely with the regional Census Bureau managers and their staff. I am confident that similar partnerships, formally established, would be valuable in other areas of California and the country. We found that the key to making this effort cost-effective was to provide high-quality training about the types of housing likely to have been omitted from the MAF to grassroots-level community workers who knew their local communities intimately and could work in partnership

[9] Report GAO-03-605, "Decennial Census: Lessons Learned for Locating and Counting Migrant and Seasonal Farmworkers", July, 2003.

[10] p. 20, GAO-03-605

with the Census Bureau. This made it possible for us to avoid wasting Census Bureau staff time with housing units that already were in the MAF. These address listing protocols need to be in put in place immediately and must be in operation throughout NRFU in order to be effective for enumeration of hard to locate housing units in rural and urban areas. The Census Bureau now has adopted similar protocols for its 2010 Targeted Non-Sheltered Outdoor Locations (TNSOL) enumeration, however, the operation is severely limited in scope because it is an essentially one day operation designed only to reach locations and service providers for the homeless.

Adequate training for Census Bureau staff assigned to address canvassing operations is an important part of "best practices", and again should be incorporated in all census operations so that addresses are identified, added to the MAF and enumerated throughout NRFU. The result of the GAO report and work by CRLA and the advisory committee resulted in the Census Bureau's development of a sound orientation manual on identifying housing units where MSFWs live. It is not clear that this manual is routinely or extensively used, or to what extent regional and local census office procedures, budgets, and timelines might adversely or positively affect the resulting address canvassing procedures.

Address canvassing has been limited to a time frame ending well before the Census is conducted, nevertheless, it should be feasible for Census Bureau regional offices to modify operational procedures to allow for ongoing improvement to the MAF (involving work with community based census partners, local municipal and county agencies, as well as Census Bureau staff), much farther along in the enumeration processes, including NRFU.[11]

A commitment to continuous MAF improvement, based on extended address canvassing, as well as expanded reliance on community partnerships in support of MAF improvement also will benefit from Census Bureau commitment to improve related skills of local census office (LCO) employees involved in canvassing and NRFU. Current Census Bureau procedures allowing hires of cultural facilitators in areas with concentrations of hard-to-count populations are an important first step, but more work will need to be done in defining the job skills needed, which often relate more to communication skills, cultural competency, language competency, analytic thinking and teamwork, than to educational attainment. It will be particularly useful to work hard to recruit and hire immigrants themselves (both those with work authorization who are not citizens and those who are naturalized citizens). We have worked with the Seattle and Los Angeles regional efforts in this arena and know that the recruitment/hiring tasks are challenging ones, but this is

[11] This might yield cost-savings and improved enumeration quality, particularly with respect to correctly tabulating Be Counted forms. A worrisome problem is that a valid report of a household reported on a Be Counted form will fail edit and be deleted because the housing unit is not in the MAF or cannot be easily found. We will work to assure that Be Counted forms meet validation requirements, but it is probably more cost-effective to develop procedures to include newly-discovered housing units in the MAF immediately, throughout NRFU. We also are concerned that NRFU is accomplished primarily by telephone.

all the more reason for Census Bureau attention to increasing local staffing diversity for MAF improvement in HTC tracts because this operation, perhaps even more than NRFU, requires Census Bureau staff to be able to establish trust in interaction with individual households.

MAF Improvement Using Targeted Update-Enumerate Procedures

The Census Bureau should target areas of high concentration of hidden or hard to locate housing units for special enumeration procedures. The census regional offices and community based partners are essential to these improvements and could prove invaluable for an accurate MAF and reducing the differential undercount. This would include targeting additional areas for update/list, update/leave or update/enumerate type operations, in addition to implementing special protocols described above for adding to the address list.

The Census Bureau secured expert technical support in 1999 to identify the major concentrations of migrant and seasonal farmworkers (MSFWs) in the country and used the analyses to guide targeted initiatives using enhanced enumeration procedures (including identification of low-visibility MSFW housing) in order to decrease the differential undercount of MSFWs. A updated study was commissioned in 2007, recognizing that patterns of MSFW residence might have changed in the ensuing period.[12] The 2007 study provided guidance for targeted enumeration in 2010 with details on the different types of low-visibility MSFW housing found in different parts of the country because low-visibility and hidden housing vary from state to state, county to county, and even from community to community within each of the counties with high concentrations of MSFWs. This study has been used to target address canvassing efforts, but it is unclear to what extent the procedures have been used and formalized and it is unclear to what extent this study or others like it will be used in targeting special enumeration procedures in other areas with hard to locate housing units.

The Census Bureau can build on and expand its strategy of developing targeted approaches oriented toward minimizing differential undercount, starting with MAF improvement. It would be valuable for the Bureau to work community based partners to identify local neighborhoods and small areas with hidden housing units, i.e., areas in which particularly serious problems of MAF quality (based on neighborhood characteristics) are known and to strategically implement targeted update-enumerate and update-leave procedures in addition to or in lieu of mail-out/mail-back with a flawed MAF.[13]

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[12] Contract Number 05-41823-0-0 "Identifying High Concentrations of Migrant and Seasonal Farmworkers" submitted by the Aguirre Division, JBS International to Population Division, Census Bureau.

[13] Improvements and operations such as these can have a positive effect with respect to dislocations caused by the current foreclosure crisis, since many houses in the MAF will be vacant, former occupants will be in "unconventional" housing units and crowded, complex circumstances.

The Bureau's hard-to-count (HTC) database (based on Census 2000 data) already provides an operational tool for targeted enumeration efforts based on scoring expected difficulty of enumeration because of housing and population characteristics known to be correlated with undercount. My understanding is that the Bureau is updating this planning/operational tool with data from the 2006 ACS[14]; this planning tool can be enhanced and updated utilizing partnerships with local community based organizations and local government[15]. The method of scoring in the HTC database could be enhanced by including additional demographic and other characteristics, which would improve its utility as a tool to guide decisions to allocate resources for targeted update-enumerate and update-leave operations. Researchers advise us that it is possible that revising the "crowded housing" component of the HTC index from a yes/no variable into a continuous variable of computed household size might improve the model's utility for targeting small areas with unusual housing. Bureau-community partnerships could be used to incorporate local community knowledge about the nature of housing accommodations in different neighborhoods and tracts into decisions for targeted update-enumerate operations, as well as including guidance (as in the Aguirre/JBS report about the types of low-visibility housing units likely to have been omitted from the MAF, e.g. clusters of trailers or "back houses", commercial space illegally converted to residential use, etc). I am aware that, in general, the Bureau's utilization of leave-enumerate procedures is constrained by cost but costs incurred "up front" might be offset by decreased costs in verifying Be Counted addresses and would improve the undercount of the hardest to count populations.[16]

Evaluate Hard to Locate Housing Units and the MAF and Incorporate Best Practices into the ACS

It is essential to have the Census Bureau incorporate in planned 2010 coverage measurement and evaluations appropriate methods to measure and evaluate the MAF in areas with high concentrations of hard to locate housing or hidden housing units.

A targeted post enumeration survey which included ethnographic research (as was the case in the 1986 Los Angeles test census and the 1990 ethnographic program) would be very effective in this effort if specifications were to include additional attention to the nature of housing accommodations in the area and, specifically and systematically, to assess prevalence of low-visibility and/or crowded housing. It will be critical to incorporate the recommended best

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[14] Presentation by J. Gregory Robinson, Antonio Bruce, Erin Love, and Guinevere Mills, "The Planning Database", October 8, 2008.

[15] Integration of local knowledge of community based groups also would improve LUCA results.

[16] I note that other improvements that might address enumeration of hard to count populations include expansion of the period of time in which Be Counted forms will be available and Questionnaire Assistance Centers (QACs) will be in operation. It is presently of very brief duration and limited hours.

practices and evaluation results into the ACS because the 2010 MAF will be the MAF for the ACS and the ACS will be the long form data after 2010.

Summary Conclusions

The Census Bureau faces inevitable challenges in generating a reliable Master Address File as the frame for a decennial census conducted predominantly via mail-out/mail-back procedures for eliciting household information as our society continues to become more ethnically, linguistically, and socio-economically diverse.

A "one size fits all" approach to census enumeration cannot be expected to work in a context where there is increasing demographic, socioeconomic, and cultural diversity coupled with increasing levels of social distrust, stemming from tensions between rich and poor, immigrants and native-born Americans, and ethnic diversity.[17] MAF improvement is an area where the Census Bureau can make significant further progress even with budget constraints. The key to success will be to build not only cordial but effective partnerships with community-based organizations, expanding partnerships from census promotion into partnerships where local and regional census offices rely more on local knowledge and insight to develop special procedures for addressing the characteristic enumeration challenges in a broad spectrum of local community contexts. An absolutely necessary condition which must be met to make such efforts effective (and cost-effective) is for the Census Bureau to become more flexible in its operational procedures, so that local problem solving can yield a maximum return in enhanced enumeration.

Efforts to improve the quality of the Master Address File are the first stage in broadening the overall scope of the Census Bureau's interactions with its local partners. Flexible procedures for joint problem solving will not only help in MAF improvement but can be an important step in building local trust in the seriousness, integrity, and commitment of the Census Bureau.

The LUCA process, for example, signals a Census Bureau commitment to local partnership in MAF development, however, local officials do not all fully understand the reasons why housing units are not in the MAF and may not have a good ground-level picture of housing conditions in the most blighted neighborhoods of their communities. Community groups may have a sound, vivid, understanding of housing conditions in their neighborhoods, but not understand the "system" problems involved in translating that knowledge into data that the Census Bureau can use to improve the MAF.

Census Bureau-community partnerships will need to go beyond the useful, but basic, cooperation typical of local Complete Count Committees and the basic cheerleading function of encouraging census participation by unmotivated and distrustful persons within the hard-to-count populations.

[17] See Robert Putnam's paper, "E Pluribus Unum: Diversity and Community in the 21st Century The Johan Skyte 2006 Prize Lecture", Nordic Political Science Association, 2007.

Collaboration in MAF development is a starting point to move further forward. The decennial census provides a unique opportunity to jumpstart the process of taking Bureau-local community partnerships to a higher level, and making them more effective and cost-effective. It will be important to begin right now to lay the groundwork so that working relationships established in 2010 and newly-tested "best practices" can contribute to an enhanced American Community Survey during the coming decade.

I thank the committee for the opportunity to present this testimony.

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Mr. CLAY. Perhaps we will have questions, but thank you, Ms. Jacobs, and thank the entire panel for their testimony.

I will now go to the ranking member, who has an opening statement, and you can also proceed into your questions.

Mr. MCHENRY. Thank you, Mr. Chairman.

Mr. CLAY. You are welcome.

Mr. MCHENRY. And thank you all for coming back and testifying, Dr. Groves, Mr. Goldenkoff in particular, who have been regular in being with us, and I certainly appreciate that.

Dr. Groves, thank you for following through on your commitment to testify frequently and keep us apprised of the process. I do appreciate all efforts that you have made. But I do think there has been some troubling news that we have seen since the Senate hearing on October 7th, and that this committee was not previously made aware of. First, the cost overruns, the significant cost overruns, I know they are not available, the cost estimates for address canvassing in your last testimony, Dr. Groves, but certainly 25 percent, going over budget by 25 percent is very significant.

Second, although Dr. Groves had informed us at the last census hearing that better cost estimation and control was needed, the Bureau admitted on October 7th that its models were grossly inadequate and can translate into future budgetary problems if not immediately addressed.

Third is the GAO study found that the Bureau's fingerprinting process for temporary workers was deeply flawed and could potentially result in criminals being hired as enumerators.

While I'm disappointed that these issues were not brought to our attention, I have no doubt that the Bureau is actively working to go through and create plans, operating procedures, and budgets that are accurate and proper.

But, having said that, there are some successes, as the GAO report indicates and as Dr. Groves' testimony indicates, as well. The timely and comprehensive completion of address canvassing was certainly a huge success, and the partnership programs, the media campaign efforts have been conducted in an unprecedented level, as no previous census has seen, reaching out to diverse groups of people across this country. And the first major wave of recruitment has met with an applicant pool that was much larger and more qualified than expected, although the GAO outlined some challenges with that, as well.

The Bureau has also started with a 2010 local update of census addresses [LUCA], as you all have testified to, that has been the most effective to date. That is certainly good news, and updating the master address file with that information is certainly good.

I want to reiterate my commitment to ensure that the Bureau stays on track with its planning, execution of the 2010 census.

Dr. Groves, you should not limit your communication on issues of concern to just public hearings. We would certainly appreciate whatever updates you can give us so that certain things like the budget overrun, we don't have to find out about through newspapers.

As Chairman Clay has said and I will reiterate, our doors are open. I think you will find that not just the ranking member and the chairman on this committee have their doors open, but all the

committee members. We want to make sure that this is the most accurate census in our Nation's history, and I think we have the capacity to do that. As Mr. Mesenborg and Dr. Groves have testified, that is their intent and the Bureau's intent.

So thank you for your testimony. I look forward to hearing your answers to questions.

[The prepared statement of Hon. Patrick T. McHenry follows:]

Statement of Ranking Member Patrick McHenry
Subcommittee on Information Policy, Census, and National Archives
"The 2010 Census Master Address File: Issues and Concerns"
October 21, 2009

Thank you, Chairman Clay, for holding today's hearing. There are significant concerns on both sides of the aisle about the Census Bureau's recently concluded address canvassing effort – budgetary and otherwise.

I do appreciate the Bureau honoring its commitment to appear more regularly before this subcommittee as we draw nearer to Census Day 2010. However, some deeply troubling information about current operations came out at a Senate hearing on October 7—information that this subcommittee was not previously aware of.

First, the Bureau testified that it faced a cost overrun for the recently-completed address canvassing effort that was an astounding 25 percent over budget.

Second, although Dr. Groves had informed us at our last census hearing that "better cost estimation and control" was needed, the Bureau admitted on October 7 that its models were grossly inadequate and could translate into future budgetary problems if not immediately addressed.

Third, a Government Accountability Office study found that the Bureau's fingerprinting process for temporary workers was

deeply flawed and could potentially result in criminals being hired as enumerators.

While I am disappointed that these issues were not brought to our attention sooner, I have no doubt that the Bureau takes problems with its operating procedures and budget very seriously, and is already drafting comprehensive plans to address and remedy them.

That said, the Bureau has also seen many successes this year.

At our last subcommittee hearing on the census, Dr. Groves testified on the timely and comprehensive completion of the address canvassing effort. The partnership program and media campaigns have been conducting unprecedented outreach activities for 2010, promoting census awareness among more diverse groups of people and in more foreign languages than ever before. The first major wave of recruitment has been met with an applicant pool that was much larger than expected.

The Bureau has also stated that its 2010 Local Update of Census Addresses (LUCA) program is the most effective to date, and I look forward to hearing more about that as well as improvements to the Master Address File.

I want to reiterate again my commitment as Ranking Member of this subcommittee to ensure the Bureau stays on track in its planning and execution of the 2010 Census. Dr. Groves, you should not limit your communication on issues of concern to just public hearings. Chairman Clay and I have repeatedly stated that our doors are always open and our staff are at the ready—

we are here to work together with the Census Bureau to prevent small concerns from ballooning into major problems.

Thank you Dr. Groves, and thank you to all the witnesses for being here today. I look forward to their testimony.

Mr. MCHENRY. With that, Mr. Chairman, would you like me to just go right into questions?

Mr. CLAY. Yes.

Mr. MCHENRY. OK. Thank you.

Dr. Groves, rehiring the temporary workers that address the address canvassing, I know that is certainly what you testified to before. In terms of fingerprinting, what procedure will these rehires go through?

Dr. GROVES. I want to make sure I got the question. Are you looking forward to non-response followup?

Mr. MCHENRY. Yes. I'm sorry. Going forward, when approximately 570,000, 600,000 are hired for the non-response followup, you will be taking applicants from the original address canvassing pool first, of course, because they have gone through the Bureau training. What is the procedure to check their criminal records?

Dr. GROVES. Well, let me step back a couple of steps to make sure that I am answering your question fully. The procedures on the fingerprinting are going through a critical review right now.

Mr. MCHENRY. Yes.

Dr. GROVES. We are going to change some of those procedures, with the aspiration that we reduce the problem that we found in address canvassing, which was a failure to read fingerprints from some people.

I want to remind the committee that the process by which we hire someone involves, first, their submission and verification of IDs that provide a Social Security number, a name, sex, and we submit that to the FBI. No one has worked on the decennial census nor will work on the decennial census without passing that name check. That will remain true.

In 2000 only that check was used, and now we are adding this fingerprinting process.

Mr. MCHENRY. Well, with adding the fingerprinting procedure—and I am sure there are other questions about this procedure, and we will get to that—but will all these folks that are re-hired for non-response followup, will they be re-fingerprinted or will you use their original fingerprint and resubmit it?

Dr. GROVES. It is our current intention for those who had fingerprints read, submitted, accepted by the FBI, we will use those prints. For those who didn't have reads on their fingerprints, we will again go through the fingerprinting process.

Mr. MCHENRY. OK.

Dr. GROVES. Now, I should note that not all of them will be rehired. Many of them have gotten other jobs and so on.

Mr. MCHENRY. Yes.

Dr. GROVES. The exact proportion of rehires versus new hires isn't really known at this point.

Mr. MCHENRY. OK. And the procedure with those that have fingerprints that cannot be read, will they be hired like they were hired in this address change?

Dr. GROVES. That is the standards we are after. I don't know how strongly I can say this, Congressman, but the safety of the U.S. public is of paramount interest to us, and I am committed to doing everything I can to achieve that.

We have been working with the FBI after address canvassing and we have made various changes, and they are, under the guidance of the FBI—you know, what happens is that as you age, as all of us age, our fingerprints get harder to read.

Mr. MCHENRY. True.

Dr. GROVES. The people who didn't have read fingerprints tend to be older and tend to be female, empirically.

Mr. MCHENRY. Yes.

Dr. GROVES. So older women have harder problems in getting fingerprints read.

Mr. MCHENRY. My time is limited. I know this is important, but if you could submit for this committee——

Dr. GROVES. I would be happy to give you a detailed list of things we are doing.

Mr. MCHENRY. Because I think the GAO in their report would like to see that, as well.

Dr. GROVES. I would be happy to do so.

Mr. MCHENRY. I have another additional thing. I read in USA Today yesterday that the expected response rate for mail, the initial form that will be mailed out on census day, is 64 percent. This is, I think, new information. It was 67 percent in 2000. There have been some very substantial changes in that. We are re-mailing, in essence, those that do not respond via mail, which was not done in 2000, so the response rate was supposed to be better than it was in 2000 because of that procedure, alone. Why has this been reduced? The 3 percent would equal over $100 million by the initial cost estimates that we have, so it is real money we are talking about.

Dr. GROVES. Yes.

Mr. MCHENRY. And I want to understand why this wasn't brought to our attention earlier and what your answer is on that, as well.

Dr. GROVES. Yes. First of all, the 64 percent number I didn't approve so I don't know where that number came from. We are actually estimating that number over and over again. That is a number that will be re-estimated over the coming months.

Second, it is important and relevant for the committee to know that the response rates of every major national survey in the United States and every western country is declining. Those response rates are declining each year. The American community survey on the mail return rate is declining at between 0.5 and 1 percentage point a year. We have a population that is tougher to measure than it was in 2000. We have, indeed, put in the design features you talked about that go in the other direction that should push it up, but the big changes in the population is a massive rock to push up the hill and we don't know yet how well these design features will work.

Mr. MCHENRY. I mean, I read the press report that says Census Bureau analysis, which I'd like to know what report——

Dr. GROVES. Well, there are a lot of Census Bureau analyses.

Mr. MCHENRY. Well, I'd like to see what you would submit as in what you think the result would be, because certainly with your history you certainly have specialized knowledge in this. We would like to have that just——

Dr. GROVES. I would be happy to.

Mr. MCHENRY. OK.

Thank you, Mr. Chairman.

Mr. CLAY. Thank you, Mr. McHenry.

Dr. Groves, we know that the accuracy of the master address list relies heavily on close partnership between the Bureau and local governments. Looking to the future, this partnership will again be called upon year after year to help the Bureau produce accurate annual estimates. We know that the Bureau is altering the census challenge methodology. Will the census be working with local government officials like planners in developing the new methodology? And if so, how?

Dr. GROVES. I want to make sure I understand the question, Congressman. Are you talking about the population estimates program?

Mr. CLAY. Yes.

Dr. GROVES. OK. Well, as you know, the population estimates program is undergoing review. We have had outside experts in. I am very interested in this program, to improve it over the coming decade. We are going to have a lot more dialog about how best to do that. It is a set of technical issues about how, in the middle of the decade, you can get the best estimates.

The procedures that have been used to work cooperatively with communities to update those estimates are worth reviewing. There are complaints kind of on both sides that ought to be aired, and I want that to happen, and I can assure you that will be an open process.

Mr. CLAY. Can the new construction program be expanded to include all additional addresses that cities might have missed in the LUCA process?

Dr. GROVES. Well, as you know, the new construction program is limited to those local governments that have access to new construction administrative records, and that is a smaller set than, for example, the State governments aren't used for that purpose.

Right now under the current legislation we are limited to governmental entities providing us those updates, but the world is changing and it is worth talking about the future in various ways.

Mr. CLAY. You know, we are aware that the Census plans to hand-deliver 1.2 million questionnaires to residents in the Gulf region. This is a great start, but my concern is the followup. With the lack of mail receptacles and home telephone service in some of the affected areas, what additional measures will be taken for nonresponse followup?

Dr. GROVES. You know, Congressman, I just spent yesterday at our facility that is assembling the packets for the update. We call this update leave. It is really cool. You ought to visit it some time. But there are big plastic bags that contain little plastic bags that have questionnaires and a letter from me inside, so they are protected from the rain. They have little hooks on them so you can hook it inside a screen door if you don't have a mailbox of a house that is clearly inhabitable, thinking of the Gulf Coast areas you were just talking about.

Mr. CLAY. Sure.

Dr. GROVES. So I think we are thinking about the same things, and so far I think we are prepared for that. I can't wait to see how well that works. It is an area that is rapidly changing, as you know.

Mr. CLAY. I know on one of my field visits to the Gulf Coast region I was told by census workers that they, in some areas, they have to take boats into the bayou and other places in order to actually, I guess, verify addresses first, and now I guess they will have to drop those packages off by boat also.

Dr. GROVES. You would not believe the kind of transportation our enumerators are seeking. We also had a request for mules on some Indian reservations, because you literally cannot drive a four wheel drive vehicle up to some of the lodging.

Mr. CLAY. OK.

Dr. GROVES. So we do a lot of efforts that are unusual.

Mr. CLAY. Wow, you are really preparing for this, aren't you? Please detail the update and leave program that is utilized in rural and Gulf Coast areas. Upon recognition of the addresses of hidden housing units, will there be enough time to input these found addresses before non-response followup?

Dr. GROVES. I want to get your question right. Could you repeat that? I want to make sure I understand effectively.

Mr. CLAY. Detail the update leave program.

Dr. GROVES. OK.

Mr. CLAY. That is utilized in rural and Gulf regions.

Dr. GROVES. In the Gulf Coast areas, say take New Orleans, in Orleans, Planquemine, and St. Bernard Parishes, these were almost all mail-out/mail-back in 2000. With the collaboration of local government and civic leaders, we have identified all three of those parishes are going to be entirely update leave, so we will have people on the streets going structure-by-structure. When a structure, according to a set of fixed rules, is defined as habitable, they will put a questionnaire on those structures.

In areas of, say, Tammany Parish, the same thing will happen. So as you get away from the coast things get a little better, and there are certain areas that we will do update leave, but they may be surrounded by areas that are mail-out/mail-back, and all of this is designed to be done in conjunction with local leaders who know what is happening.

This is a rapidly changing thing. People are building houses now in New Orleans especially, and we have to be very current to get it right.

Mr. CLAY. And you did say St. Bernard Parish?

Dr. GROVES. St. Bernard's is fully update leave.

Mr. CLAY. Well, it just causes me to ask the question then: could this technique be applied in hard-to-count urban areas?

Dr. GROVES. It could, indeed, and a thing that is new-—actually this is relevant to Ms. Jacobs' testimony—one thing that is greatly expanded this decade I think is really something that is neat, and that is, for all of the census tracts—these are small geographical areas that were found to be hard to enumerate in 2000—there is a special plan for every tract. We have people who have already driven every street of those hard-to-enumerate tracts, and they have looked at every house on the tract, and they have asked the

question how best to enumerate this area. If it is a mail-out/mail-back area that they are concerned about, they will do separate outreach efforts to encourage response. If there are other things going on, they have the freedom to tailor some of the methods they will use.

I am very hopeful that this kind of customization down to the local level could pay off.

Mr. CLAY. That sounds impressive. Thank you for your response.

We will now go to the gentleman from Georgia for 5 minutes, Mr. Westmoreland.

Mr. WESTMORELAND. Thank you, Mr. Chairman.

First question is for Ms. Jacobs. Ms. Jacobs, in your written testimony here I noted that I guess it was in 2003 your organization identified approximately 4,000 units that were not in the MAF, and this was before Mr. Groves, but with your working with the Census Bureau I think about 75 percent of them or a little over 3,000 of them were included in the MAF. Was this a satisfactory outcome for you?

Ms. JACOBS. Thank you for the question, Mr. Westmoreland. We were, of course, thrilled with that outcome, but that outcome was, first of all, limited to the Los Angeles region and, second of all, it was based on a program that we undertook through our education and outreach program in 2000 and funded research. That was unusual, and it was, I would say, unique. And it has not been otherwise applied by the Census Bureau. We had census outreach workers who were hired by our organization identifying units that we thought had been missed or were highly likely to be missed, and it was only because the L.A. region was willing to cooperate in developing this address listing protocol with us and was willing to then take our 4,000 units back, compare them to the master address file to which we had no access, of course, and then able to add units. But that was not something that had been necessarily approved by headquarters nor has it since been implemented by headquarters nor has it been approved or implemented in any other region, to our knowledge. But I think that is an approach that certainly could be used, and when I referred in my oral testimony to the address listing protocol that is what I meant.

I think that the Bureau has implemented a similar protocol for the targeted non-sheltered outdoor locations, but that is going to be essentially a 1-day operation, and it is primarily to reach the homeless. It will not necessarily reach any of the hardest-to-count populations that we are concerned about.

Mr. WESTMORELAND. I noticed that in Dr. Groves' testimony I believe he said that there was an outreach to approximately 28,000 I guess different governments, whether it is city, county, State, or tribal, or whatever. Only about 14,000 of those had responded to, I believe, being in the program. Are you encouraging some of the local governments where you are at, because I know I read your protocol and what you are talking about, people being familiar with the area and the community being involved in this. Do you see a role for some of these governments to play in it that could help in that?

Ms. JACOBS. Certainly yes, and I think that the Census Bureau has a good partnership program, and CRLA community outreach

workers are a part of that program. We participate on complete count committees in many local jurisdictions, and we encourage local jurisdictions to participate.

One of the limitations of LUCA, however, is that community-based organizations cannot participate. I think it would be an enormous benefit to local governments, as well as to the Census Bureau, to make use of the knowledge of community-based organizations on the ground in those communities that could really provide assistance to very strapped local governments.

Mr. WESTMORELAND. Thank you.

Dr. Groves, it is good to see you again. We do appreciate your filling of your commitment to come in front of us often and let us ask you questions.

One comment I will make, you know, Mr. McHenry mentioned the cost overruns. I will tell you that I have had several people across the country in the real estate business tell me that the Census Bureau in different locations was paying anywhere from $52 to $55 a square foot for office buildings, and at some point if you want to come by the office I will give you some of those locations, because right now typical office space is anywhere from $8 to $10 a foot, so you might want to check some of that out for your cost overrun.

But, Dr. Groves, does the Census Bureau pay any outside groups to add addresses to this master address file? Do you have a contract with anybody, pay anybody to do that?

Dr. GROVES. To add addresses to the file?

Mr. WESTMORELAND. Yes.

Dr. GROVES. The base of the master address file for this decade started with the 2000 census master address file. If you go back into the history of this, we assemble records in that decade from various commercial sources, but we have been updating that now, so to know the origin of actually every address in there is kind of tough at this point. But this operation that we have done over this decade has relied heavily on the Postal Service. I don't know how you count that in your thoughts, but that has been a chief updating source for us.

Mr. WESTMORELAND. OK. And one final question. It will be a short one, I think. How do you think the budget overruns in conducting the address canvassing over the summer will impact your ability to effectively administer the 2010 census?

Dr. GROVES. Those budget overruns are intolerable to me, Congressman, and I believe, as I mentioned previously I think to the committee, that part of it was from a flaw in the cost modeling logic. That logic has been changed. Our big operation going forward, as you know, is the non-response followup operation. We are undergoing two independent cost modeling schemes. One has been partially completed, the other is going on now. I want to compare multiple ways of estimating the cost, because I think that is the way to protect your estimation.

This is a very complicated process. I don't want to imply that it is easy to do. It is very important, though, to get this right.

I am pleased that this operation that we are doing right now called group quarters validation, where we are going out to 2 million addresses, appears to be on time, on budget, and that is a good

thing. We can't tolerate these kind of overruns in our big operation, and it is not going to happen on my watch as long as I am in this position, anyway, I will tell you.

Mr. WESTMORELAND. Thank you, sir.

Mr. CLAY. Thank you, Mr. Westmoreland.

Mr. Zinser, have you had further results or reviews of the paper-based operations control system? If so, please detail some of your findings.

Ms. ZINSER. Sir, we don't have any further results from the review of the paper-based operations control system, but we include that system as a top risk to the census because of the late change to paper-based operations. There are a lot of changes that have to be done to that system, and that has to be a front and center focus item for the census, and we count that as a major factor in trying to determine whether or not the costs are going to be contained.

Mr. CLAY. I see. Dr. Groves, did you want to add anything?

Dr. GROVES. I would be happy to comment. I agree. It is deserving of scrutiny by my two colleagues here and me continuously.

Mr. CLAY. OK.

Dr. GROVES. We have a big test, I want to announce, coming up around Thanksgiving. It is a big deal for us. We have to hit that. We hope to break the system in Thanksgiving in order to make sure it is robust for the real use.

Mr. CLAY. Thank you for that response.

Mr. Zinser, how can the non-response followup operations be made more efficient? Please respond to the question in terms of cost and effectiveness. You do have some history with which to evaluate this, I assume?

Ms. ZINSER. I didn't catch the last part of the question, sir.

Mr. CLAY. I'm asking if you have any history to evaluate the non-response followup, its effectiveness and cost efficiency.

Ms. ZINSER. Yes, sir, I think our plan for evaluating non-response followup is similar to how we handled address canvassing is that we dispatched teams out to the field to actually observe the non-response followup operation, and by putting our folks out in the field and observing how the enumerators are operating, we hope to identify problems early, alert the Census Bureau to those problems, and then they make changes. We did that, for example, with address canvassing when we observed a number of listers in five different regions that we were in not following procedures. They were supposed to go up and knock on the door so they could get a good map spot with the hand-held computer. They weren't doing that. We alerted the Census Bureau and they took corrective action.

I think that is pretty much our strategy for covering non-response followup.

Mr. CLAY. To what degree will the accuracy of the master address file be affected by the Census Bureau's inability to track schedules, costs, and risk management activities of this endeavor? Do you have any figures for this?

Ms. ZINSER. I don't think I have any figures for that, sir, but the construction of the master address file, as we have all testified here this morning, is a key operation, and what our suggestion is is that they do some data analysis of the quality of the master address file right now to include using housing unit estimates and some admin-

istrative records to match against the master address file to try to target those areas where there might be problems with the quality of the file.

Mr. CLAY. What specific risk management activities are behind schedule with regard to the master address file?

Ms. ZINSER. Are behind schedule?

Mr. CLAY. Yes.

Ms. ZINSER. Well, the Census Bureau has identified probably somewhere in the area of 24 high-risk areas, and they are developing contingency plans for probably around 11 of those. One of those is called the Housing Unit Duplicates and Misses. It is a contingency plan that they are working on, but it is not completed, and I don't think they have any scheduled date for completing it, so I would list that as a key area to get some progress on.

Mr. CLAY. I see. Thank you for that response.

Mr. Goldenkoff, is it true that the FBI has continued to express concerns regarding the Bureau's poor paper ink fingerprinting quality? Can the FBI guarantee a quick turn-around of check results following the fingerprint submissions? And if the FBI cannot guarantee a quick turn-around, what is the Bureau's contingency plan?

Mr. GOLDENKOFF. I'm not aware of any contingency plan that the Bureau would have if there is no quick turn-around. These operations are very short-lived and very often the people are hired and will be hired during non-response followup, during the operation or right before it is to begin, so it is just really a very short window that the Bureau would have in order to conduct these fingerprints and get the results back.

Mr. CLAY. How can best practices be utilized to ensure the Bureau provides a more reliable cost estimate for additional endeavors such as non-response followup, especially in light of the 25 percent over budget for address canvassing?

Mr. GOLDENKOFF. Well, certainly the Bureau does need to rely on best practices and employ them. GAO has put out a guide to best practices for cost estimation. This has been a longstanding weakness with the Bureau. What we have seen is that the Bureau's cost estimates have lacked detailed documentation. The sources and assumptions that they have made were very weak or lacking. They were not comprehensive in the sense that all costs weren't included. And one of the things I would just like to bring up right now, you know, we have heard talk, Dr. Groves had mentioned about they are revisiting the mail response rate. Well, that has a huge impact for the final cost of the census. A 1-percentage point change in response rate, by the way, can have tens of millions of dollars worth of implication for the final cost of the census. So that would be something, right off the bat, that, you know, it is great that the Bureau is looking at that, but the question I would have is to what extent is that being reflected in their cost estimates.

Mr. CLAY. Thank you.

Mr. Chaffetz, 5 minutes.

Mr. CHAFFETZ. Thank you, Mr. Chairman.

Again, thank you all. I know you all believe that the integrity in the process is paramount to successful completion and confidence by the American people.

Director Groves, I would like you to get as specific as you can about the policy and procedures—hopefully they are written—as to the criteria what would exclude somebody from joining on and joining the census. We hear reports about criminals being hired to conduct the census. That is concerning to a lot of people, including myself. But what point, at what threshold do you say this person is not qualified, and to what degree are people qualified even though they might have a criminal background?

Dr. GROVES. I can supply that information. As you might guess, Congressman, publishing that information would provide a set of people information that would allow them to gain that system in a way that might be harmful to the safety of the U.S. public. I can tell you how we go about this.

We receive from the FBI, on those names or fingerprints that generate a criminal history, the nature of the offenses. As you know, the FBI database doesn't completely give the disposition of all those offenses. So we review this, we give a chance to the applicant to provide counter information, and there are a set of crimes that are basically more serious than others where the applicant would fall out.

I can tell you in the fingerprinting side that about 58 percent, I believe, of those that had a criminal history come back from the FBI based on fingerprints were eliminated from the group; 42 percent stayed in because these were crimes that were judged not to threaten the safety of the U.S. public.

Mr. CHAFFETZ. I mean, at least according to what I'm reading on page 13 of the GAO report, midway through the first complete paragraph, of the 1,800 workers with criminal records, approximately 750, or 42 percent, were terminated. So it would be the other way around; 58 percent were actually allowed to stay. The number 58 would be consistent. Why? How do we allow somebody with a criminal record to participate in the enumeration process of the U.S. census? I can't think of any threshold that I would have any confidence in allowing somebody to go knock on Grandma's door and invite themselves in to further discuss very pertinent personal information. I don't understand what threshold of criminal activity is acceptable by the census.

Dr. GROVES. I would be happy to go through this process if you would like.

Mr. CHAFFETZ. Yes. That is why I am asking the question.

Dr. GROVES. The list of crimes that I talked about before are things that—the process by which we make these judgments is totally driven by our concerns about the safety of the U.S. public.

Mr. CHAFFETZ. So why not exclude all of them?

Dr. GROVES. Because in the judgment of the process going on, these don't harm the safety of the American public. They can.

Mr. CHAFFETZ. And that is a subjective point of view that you are just personally making on some—I mean, who is making these decisions?

Dr. GROVES. I would be happy to review this with you whenever you want, Congressman.

Mr. CHAFFETZ. Right now would be ideal.

Dr. GROVES. I don't have the list of the offenses in front of me, but I could——

Mr. CHAFFETZ. I am concerned that it is a subjective criteria; it is not an objective criteria. I think if you are going in and you are asking for personal, sensitive information about their names, their addresses, about what my 8-year-old daughter's birthday is, I can't find anybody with a criminal record that I would be comfortable giving that information to. Meanwhile, we have literally millions and millions and millions of good, hard-working, honest Americans without criminal backgrounds that are just dying to get an appointment. I can find no excuse for allowing somebody to deal with that sensitive information in the American people's homes.

Based on the information I am seeing, Mr. Chairman, we have over 1,000 of them, at least, and that number is probably much, much greater than that. I have a deep, deep concern. GAO points out that crimes such as rape, manslaughter, child abuse are being dismissed. I appreciate that, but there are a whole lot of other crimes that I wouldn't express confidence in, either.

Mr. Chairman, I see that my time has expired. For the record, I would like to exercise my right to have 5 minutes for each member of the panel, but I want to be sensitive.

Mr. CLAY. We will have another round of questions.

Mr. CHAFFETZ. Fair enough. I yield back my time. Thank you.

Mr. CLAY. Thank you.

Mr. CHAFFETZ. My expired time.

Mr. CLAY. Ms. Watson, you are recognized.

Ms. WATSON. Thank you, Mr. Chairman. I really want to thank you for having this hearing today. I can't think of a more significant and crucial hearing when it relates to the Census Bureau's ongoing compilation of the master address file. And, based on the time-tested theory that the quality of output can only be as good as the quality of input, the MAF is key to what we can expect to learn about the United States and the changes its population has gone in the last decade.

I think everyone knows I come from the largest State in the Union, California, and 38 million people, and we get 2,000 immigrating into our State on a daily basis, and they surprisingly don't all come from over the border, they come from across the Pacific, and so we are the first State in the Union that is a majority of minorities, and that brings a whole lot of different qualities to the count.

I am sorry I missed the first part of the panel, because I know you have given us very vital information, and so I would like to know what challenges must be met to ensure a one-to-one match between the residents of the Nation and the Census Bureau's address book, and who we know is likely to be left out or under-counted, misunderstood, or intimidated into concealment if the Federal Government's message, methods, or motives lack transparency.

Now, once every 10 years I bring someone from the census into my office, and I say, "Let me tell you, if you are going to get an accurate count in my District you are going to go upstairs over the liquor store, you are going to come out on Sunday without your clip board and you are going to go to the playground at the school or

at the church or at the park, because that is where you are going to find a lot of people coming out of those cramped apartments with their children."

So much depends on getting a picture of who we are in America and how we go about counting them. And so, if I can, Dr. Groves—and if you have already addressed this, then I will take the record as my information—but an amendment has been proposed in the Senate's appropriation bill for fiscal year 2010 that would require the 2010 census to ask about citizenship, and how do you believe this would affect the Bureau's ability to perform a full and accurate count?

Dr. GROVES. Thank you for that question. As you may know, we have printed over 400 million forms already. I visited one of our facilities that had seven stacks of pallets in 400,000 square feet filled with printed forms already stuffed, ready to be delivered. The most serious problem of changing the census now——

Mr. MCHENRY. Dr. Groves, I think staff has a photograph of the very scene you are saying. I don't intend to take your time, and I ask, Mr. Chairman, if you would make her time whole, but there is a picture that you are referencing of those printed forms. I thought it would be a useful visual for those here today.

Dr. GROVES. It is an impressive picture, I believe.

Mr. CLAY. Go ahead. You may proceed, Ms. Watson.

Ms. WATSON. Dr. Groves was responding.

Mr. CLAY. OK.

Dr. GROVES. So the Census Bureau, before I got there, followed the regulations on how we should behave, and in 2007 the topics of the questionnaire were submitted to the Hill for comment, for addition. That was a moment to add a topic. And then in the middle of 2008 we delivered to the Hill, according to regulations, the exact questions to be asked, and at that time there were no added questions asked.

I can say with absolute confidence that if we add a question to this census questionnaire at this point we will not deliver the reapportionment counts on December 31, 2010. We will not provide the data for redistricting. We don't have enough time to make these changes.

Ms. WATSON. So what you are saying is that you have not considered immigration on this form?

Dr. GROVES. I am saying that the addition of a question about——

Ms. WATSON. You have not—I just want to know, is there any indication, any question relative to immigration on the form? Yes, no?

Dr. GROVES. Not at all. Not at all.

Ms. WATSON. OK. All right. Now, I am also concerned about home foreclosure and the number of people who have been forced out of their homes and on the streets, and the rising jobless rates means more Americans are leaving their homes and living in a constant shifting and non-traditional arrangements such as in their cars, in tent cities, and on the couches of various friends and family members, and all the while increased financial hardships may make some Americans less willing to cooperate with the census workers. What challenges has the economic and housing fore-

closure crisis posed to the collection of a complete master address file?

Dr. GROVES. There are two things I am worried about. I am worried less about the master address file than the actual enumeration. The foreclosed homes—I was in L.A. 2 days ago—are largely empty now. Some are not habitable now. We are going to spend money on those houses by knocking on the door after we mail a questionnaire to those houses, so there is a cost implication of foreclosures.

I am also worried about the doubling up problem of homes that are the result of that foreclosure. There, we are redoubling our efforts to make sure people get the message if you have some family members living with you in that state, to include them where they live with you, even though you may not think of them as part of your home permanently. Because they don't have another residence, they need to be counted where they are.

And then the other thing you mentioned is——

Ms. WATSON. What about those living in their cars?

Dr. GROVES. Yes. In L.A. I rode street after street where there are RVs parked one after the other and they stay there for 3 days and then they move to another neighborhood because of the parking regulations. There are people living in these RVs. These are people who were well off enough to have an RV 2 years ago, but that is all they have now.

This is a challenge for us in what Ms. Jacobs talked about, this 3-day period where we measure these non-traditional living situations. It is a new challenge for us. Our local regional folks are all over this problem, but it is going to be a challenge.

Ms. WATSON. I will agree with you. I represent Los Angeles, Culver City, Hollywood. I see them on the streets every day. An undercount has been constant in various areas. Every decade there is an under-count. Therefore, the representation is off a little bit, the resources that would flow in that would follow the numbers in various categories we lose. So it is really important.

I think that even numerators who have been incarcerated can be rehabilitated and can be very helpful in some areas of the community where they recognize these people and they feel more comfortable giving up the information about how many live in a particular house and so on. I mean, I have apartments in my District where they hot bed. There might be a dozen people in a one-bedroom apartment. Somebody whose face might be familiar, somebody who has the charisma and so on, non-threatening type could probably give us a more accurate number. So I am all for your figuring out ways to count these people.

I think my time might be up, but anyway let me go on to Mr. Zinser. If it is up, Mr. Chairman——

Mr. CLAY. It is up, and we will have a second round of questions.

Ms. WATSON. All right. I will yield back and I will wait.

Mr. CLAY. I thank the gentlewoman.

Mr. McHenry, you are recognized for your second round of questions.

Mr. MCHENRY. Thank you, Mr. Chairman.

Mr. Goldenkoff, I want to start with you. I actually reviewed your Senate report and testimony, and you have added quite a bit

to your testimony today, but the one essential part that is largely the same, I believe, is dealing with the cost; is that true?

Mr. GOLDENKOFF. That is correct.

Mr. MCHENRY. So forgive me if I am referencing the Senate section here, but you report, for example, the Bureau had planned for 25 percent of new hires to quit before, during, or soon after training; however, the national average was 16 percent.

Mr. GOLDENKOFF. Yes.

Mr. MCHENRY. Bureau officials said that not having to replace listers with inexperienced staff accelerated the pace of operation. The way you write that, it is basically a report from the Bureau. Did you find that was true, based on your analysis?

Mr. GOLDENKOFF. Well, we did not independently confirm the numbers, but based on our knowledge of the census and census operations we could see how that could be both a cost savings and also make the operation more efficient. Basically, among other things, it saves you training, for example. The people work all the way through. They are also more experienced, they know their jobs better, there is not that learning curve, so it would certainly make sense that would improve the pace of the operation.

Mr. MCHENRY. OK. So it is kind of interesting that perhaps that lesson, alone, to know that because of perhaps the economic situation that we are in that people are sticking through the job, right?

Mr. GOLDENKOFF. That is correct.

Mr. MCHENRY. And the applicants are stronger to begin with.

Mr. GOLDENKOFF. That is correct.

Mr. MCHENRY. All right. So therefore we see perhaps a better result from our non-response followup coming up, based on that experience?

Mr. GOLDENKOFF. It is possible. That is correct. You can make the argument that there is a better work force going into non-response followup in the sense that they have employment history, they have a work ethic. In the past the Census Bureau has relied on for the 2000 census a part-time part-time strategy, basically part-time employees, under-employed people. But to the extent that you have a very skilled work force now that is looking for work, those people tend to be better employees and more responsible.

Mr. MCHENRY. Additionally, what was the key cost overrun? What was the largest failure of the Bureau with this cost overrun?

Mr. GOLDENKOFF. There was actually several reasons for it.

Mr. MCHENRY. I know in your report——

Mr. GOLDENKOFF. A big reason was they under-estimated the workload, the address canvassing workload. There were I think around 11 million additional addresses that they hadn't counted on. Some of those came from LUCA. Some of those came from other sources. Each one of those addresses had to be verified in the field, and that is labor intensive and costly.

Mr. MCHENRY. Sure. And you mentioned 11 million, which it says in your report that 11 million addresses were included that were not in their original 2009 budget; is that true?

Mr. GOLDENKOFF. That is correct.

Mr. MCHENRY. And that was one of the largest dollar amount increases?

Mr. GOLDENKOFF. I believe so. That, and the fact that they hired more listers than they needed to because they didn't stick to their staffing model.

Mr. MCHENRY. OK. Dr. Groves, in light of this, what are you doing to make sure that you don't have a massive cost overrun for all the processes that we have going forward?

Dr. GROVES. Yes.

Mr. MCHENRY. I mean, a 25 percent cost overrun is extraordinary.

Dr. GROVES. I think you could classify the things we are doing under two categories. I view this as a combination of top-down cost modeling where you take the 2000 estimates, you update them by what has changed, and then you derive a new cost estimate, versus a bottom-up approach where you get the components of the activities, you cost each one, and you aggregate it up.

The typical Bureau approach is to do a top-down cost model. Those have been updated based on address canvassing results, the new hiring and attrition rates, and we have changed the staffing model going forward, so it took advantage of the information properly done. That is a good thing to do, but I don't think it is sufficient, and so we are also building a model from the bottom up, getting activity level cost and then aggregating it up, and I want to compare those two aggregate cost estimates.

Mr. MCHENRY. My time has expired, but in closing, you know, you were here when address canvassing had ended. That was about the approximate time you testified, and you didn't want to discuss the cost of this in that hearing. With the 25 percent cost overrun, it seems to me unfathomable that you did not know that there would be significant cost overruns. What I have said in every meeting with you personally, in public, and what the chairman has said as well, and I think just about every member of this committee, is that we want to be of assistance here.

If you keep us in the dark about challenges or problems, you know, including $88 million that was not budgeted for, it seems to me that you were not keeping us apprised of this, and that is rather disappointing, and I would hope that whoever is counseling you to hold back on that information, that you don't listen to that counsel; that you come forward and let us know as soon as problems occur, because we do want to be of assistance. We want to make sure that everything is there for you so you can have the best, most accurate counts. I know that is what the Bureau wants. I know that is what you personally want. But you need to keep us informed on this.

I can understand if you didn't know a 3 percent cost overrun, but 25 percent, for heaven's sake, that seems to me unfathomable that you didn't know that. And so I would encourage you to come forward as soon as you know there are any problems or challenges, and we do want to be of assistance.

Thank you.

Mr. CLAY. Thank you, Mr. McHenry.

Ms. Jacobs, you mentioned in your testimony that many housing units of migrant and seasonal farm workers are not in the master address file because they are actively concealed. What do you mean by actively concealed?

Ms. JACOBS. Well, I think there are several reasons for active concealment. What I mean about that is that, ranging from the owners and operators of that housing not wanting it to be seen and therefore disguising it or hiding it as best they can, to the occupants of that housing not wanting to be discovered because they are living in what would be considered illegal units or living where they think they are not supposed to. For example, they are hidden under tarps and lean-tos in the canyons in San Diego County, or in L.A. County in onion fields. They are living in between trees, under tarps. These are circumstances where they are trying not to be seen because they will be dislocated from the housing. They might be evicted. They might be threatened if they remain there.

When the owners of the property or the owners of the illegal housing units believe that they will be either prosecuted or sued, for example, by CRLA for maintaining uninhabitable dwellings for their workers, they will try to actively conceal those units, so that can be difficult for the Census Bureau. But I don't think active concealment is the biggest problem that we have.

Mr. CLAY. Well, how can the Census Bureau get a better count of these populations?

Ms. JACOBS. Well, I think the example that we gave in our written testimony, which was also cited in 2003 by the GAO report on the address listing protocol that we used, is the best example. We have trusted faces in the community. We have reliable community outreach workers that work for local community-based organizations who know where this housing is located who can work in partnership with the Census Bureau to assist both in address listing and in enumeration of these locations. They know where they are. They are trusted by the occupants. They can go a long way to opening doors, so to speak, for the Census Bureau.

Mr. CLAY. You know, the deplorable conditions for housing for immigrant workers are not confined to migrant farm workers. Recent immigrants to this country have the same living conditions in cities, just as Ms. Watson pointed out. What are some examples of low-visibility units in cities that do not have postal addresses, and how are they reached by Census workers?

Ms. JACOBS. I think that the problems in isolated rural areas and the types of housing in which migrant and seasonal farm workers live are very similar to the small towns in agricultural communities, as well as many of the inner city areas where there are illegal units that are being rented out, there are illegal garages that are being rented out. Underneath someone's porch is being rented out as a "habitable" dwelling. Again, there is local knowledge of where these units are and, more importantly, I think that the Census Bureau's own hard-to-count database can be improved, enhanced, and utilized to target special enumeration procedures in areas that have a high concentration of hidden housing units. I think that can be used in rural areas, as well as in inner city urban areas, and it should be done regardless of whether those areas are considered mail-out/mail-back areas. They still need to be targeted for enumeration that is not done by mail, or we will miss not only entire housing units but we will continue to have people omitted from households.

Mr. CLAY. You know, speaking of omissions, in 1990 it was estimated that 48 to 52 percent of the migrant seasonal farm workers were under-counted. A large part of the under-count was attributed to total household omissions. What is the extent of these problems heading into the 2010 decennial? What do you see them as?

Ms. JACOBS. I believe that 2010 will have very similar problems. I give the Census Bureau credit for developing improved job aids and improved instructions and training to their address listers and enumerators, but I think that a lot more needs to be done in order to ensure that the locations are identified for the Census Bureau so that addresses can be added to the address file at any time through non-response followup, as well as during the decade, and so that again these areas can be targeted for special enumeration procedures.

Mr. CLAY. What suggestion do you have for collaboration between the Bureau and groups like yours to get these addresses in the file?

Ms. JACOBS. Well, we certainly take advantage of the partnership opportunities that the Census Bureau offers and we encourage and we train other community-based organizations to do the same. I think, however, that the Census Bureau could make better and more use of local knowledge and community-based organizations in its LUCA process, as well as in address canvassing and by using the special protocol that we described in our written testimony.

Mr. CLAY. Thank you so much for your response.

The gentleman from Utah is recognized.

Mr. CHAFFETZ. Thank you, Mr. Chairman.

Mr. Goldenkoff, I would like to go back to the questioning we were doing with Director Groves, talking specifically about the criminal element that seems to be acceptable to Census Bureau. Can you give me your perspective on that situation? Are there criteria? Are they objective? Subjective? How many people are we talking about here?

Mr. GOLDENKOFF. I don't know. We have not seen the actual list. I mean, obviously some crimes are less severe than others, but which ones would allow you census jobs and which ones will not, we don't know because we haven't seen the list.

Mr. CHAFFETZ. Is there any written criteria for this, or is this just something that is just done on the fly and very subjective?

Mr. GOLDENKOFF. We have not looked into that, so I do not know.

Ms. ZINSER. Sir, can I address that?

Mr. CHAFFETZ. Yes. Yes, please.

Ms. ZINSER. I became the IG at Commerce in late December 2007/January 2008. By Federal of 2008 we were alerting the Department and the Census Bureau that they had to get on this fingerprint issue.

Mr. CHAFFETZ. Yes.

Ms. ZINSER. And they weren't prepared for it, and it took them 6 to 8 months to get ready for fingerprinting, and the original estimates for fingerprinting were up in the $600 million and $700 million. Our office worked with them for 6 or 7 months, working on their cost estimate.

There is criteria, and there is criteria in other Federal jobs, also. My most recent experience before Commerce was at transportation and transportation security. There are common lists of offenses that the Federal Government refers to in terms of whether somebody is qualified or disqualified. One of the things we recommended for the Census Bureau was, in the past they would let local or regional offices make determinations on which crimes are disqualifying and which crimes aren't. We recommended that they centralize that in an office called CHECK. I can't tell you what that exactly stands for, but there is an office in Census headquarters that has centralized these kind of determinations, and we think that is a good practice.

Mr. CHAFFETZ. Is there written criteria?

Ms. ZINSER. Yes, there is. I think that doesn't eliminate all subjectivity. I think you do have to make some judgments. For example, how long ago the offense occurred? Is it a misdemeanor? Is it a felony? Is it a violent crime, non-violent crime?

And I also know that the Census Bureau has been consulting with the FBI on those types of issues.

Mr. CHAFFETZ. My concern is that we just are somewhat in the dark on this. Again, it is giving the confidence of the integrity of the process and the people that are going to be knocking on their door, because, unlike most other Federal jobs, they are actually going to be going up and approaching somebody in their home and asking for sensitive information that can lead to other nefarious types of activities, and thus the concern.

There are certainly a number of other types of Government jobs that somebody with a criminal background can participate in, whether it is the Department of Transportation or Member of Congress, whatever it might be, right? But in terms of the census, I think there is a great deal of sensitivity.

Going back to Director Groves, how many people are we talking about, because, at least the way I read and interpret the numbers from the GAO report, we are talking over a thousand people. It is not a small, "Hey, we have a handful here or there." I recognize the totality of the effort that is going on, but this seems like a rather large—and I sense a degree of secrecy that you want to keep from this committee in allowing us to understand so they can't "game the system" that I just find wholly unacceptable. I think there is a great deal of fear that will be created probably on the other end of it by being so secretive about what is acceptable and what is not acceptable.

Dr. GROVES. I can say, Congressman, that everything we do is in compliance with OPM guidelines that are, indeed, published. I don't have those with me, but I can supply those. So we are following that as well as we can.

I think the other thing to note, just to make sure that I am communicating the facts correctly, is that the existence of a record in the FBI doesn't imply conviction of a crime.

Mr. CHAFFETZ. So if somebody has been charged with a crime but not convicted, are they allowed to be an enumerator?

Dr. GROVES. What happens then is that the applicant is required by us to provide court certified documentation on the outcome of the case.

Mr. CHAFFETZ. If they have——

Dr. GROVES. That is following the OPM guidelines.

Mr. CHAFFETZ. And we are talking about tens of thousands of people here who have not completed the background process; that is, they have not had their fingerprinting processed by the FBI. Are those people allowed to start work, even though they haven't completed that process? Because it looks like, based on what has been going on in surveying and going out to all the neighborhoods and trying to figure out the maps and all that, that those people have actually been employed and working, despite what ultimately concluded was unacceptable, nefarious behavior.

Dr. GROVES. This group has universally passed the FBI name check that is based on name, date of birth, Social Security, and found——

Mr. CHAFFETZ. Do you use e-verify?

Dr. GROVES. We do use e-verify as part of the employment process. In addition to that, then we do the FBI name check. So everyone has passed that.

Mr. CHAFFETZ. So all of those names have gone through the e-verify process?

Dr. GROVES. All of those names, to my knowledge, have gone through the e-verify process.

Mr. CLAY. The gentleman from Utah's time has expired.

Mr. CHAFFETZ. Understood. Thank you, Mr. Chairman.

Mr. CLAY. The gentleman from North Carolina?

Mr. MCHENRY. Thank you, Mr. Chairman. Just briefly.

Dr. Groves, does the Bureau have a set of internal procedures and policies on what is a disqualifier in terms of criminal records?

Dr. GROVES. Yes.

Mr. MCHENRY. OK. Mr. Goldenkoff, has that been verified by GAO?

Mr. GOLDENKOFF. Yes.

Mr. MCHENRY. Yes.

Mr. GOLDENKOFF. They do.

Mr. MCHENRY. OK. Mr. Zinser.

Ms. ZINSER. Yes, sir, I have seen them.

Mr. MCHENRY. All right. Mr. Groves, are you confident that there are no violent criminals that work for the Census Bureau?

Dr. GROVES. I am confident that the people employed by the Census Bureau have gone through this process and have been judged as not having a criminal history under the process.

Mr. MCHENRY. Sure. And would the three of you agree to follow-up with Mr. Chaffetz and his staff in regards to his line of questioning?

Dr. GROVES. I would be happy to.

Mr. GOLDENKOFF. Yes, sir.

Ms. ZINSER. Yes.

Mr. MCHENRY. OK. Thank you all for that, and thank you for your testimony today.

Mr. CHAFFETZ. Would the gentleman yield?

Mr. MCHENRY. Sure.

Mr. CHAFFETZ. Thank you. I won't keep everybody all day, I promise.

Mr. CLAY. The gentleman is recognized.

Mr. MCHENRY. I asked the chairman for 1 minute, so I think you have a——

Mr. CHAFFETZ. OK. Thank you.

What percentage of the people going through the process go through the fingerprinting process? It is 100 percent; is that correct?

Dr. GROVES. We don't hire anyone who doesn't pass the name check. All the people who pass the name check then are submitted to the fingerprinting—who we wish to hire, are submitted.

Mr. CHAFFETZ. And how long does it take? You know, they fill out their application, and then—I mean, the FBI, are they taking——

Dr. GROVES. This is done on the first day of training. There are two cards made.

Mr. CHAFFETZ. Right.

Dr. GROVES. By two different fingerprinters. Those cards are FedExed to our national processing center and then electronically transmitted to the FBI. The turn-around time on the FBI in the last operation was about 22 hours. That process seems to be working. We beefed up the electronic pipeline to that, and we are doing a big load test of that. We are going to simulate a million hires through the FBI's submission process, just to make sure we can do that volume when we have to.

Mr. CHAFFETZ. What is the biggest concern that you have at this moment? All things considered, what is your biggest concern?

Dr. GROVES. About what? About the entire 2010 census?

Mr. CHAFFETZ. The entire totality of the process. When you wake up in the morning and say, "Oh, my goodness, this is my biggest concern," what would it be?

Dr. GROVES. I'm most worried about the behavior of the American public, whether they will return this questionnaire at the rates we hope they will, and that the leadership of this country ignites and energizes themselves to encourage that participation. We need you at this moment.

Mr. CHAFFETZ. Thank you.

Thank you, Mr. Chairman. I appreciate your indulgence.

Mr. CLAY. Thank you, Mr. Chaffetz.

The Director couldn't summarize it better. I want to thank the panel for your testimony today.

That concludes the hearing. Hearing adjourned.

[Whereupon, at 4:17 p.m., the subcommittee was adjourned.]

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