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2010 CENSUS PLANNING MEMORANDA SERIES

No. 188

MEMORANDUM FOR The Distribution List

From: Arnold Jackson *[signed]*
Acting Chief, Decennial Management Division

Subject: 2010 Census Local Update of Census Addresses (LUCA) Participant
Survey Evaluation Report

Attached is the 2010 Census Local Update of Census Addresses (LUCA) Participant Survey Evaluation Report. The Quality Process for the 2010 Census Test Evaluations, Experiments, and Assessments was applied to the methodology development and review process. The report is sound and appropriate for completeness and accuracy.

If you have questions about this report, please contact Peggy Sweeney at (301) 763-9088.

Attachment

2010 Census Local Update of Census Addresses Participant Survey

U.S. Census Bureau standards and quality process procedures were applied throughout the creation of this report.

FINAL REPORT

Peggy Sweeney, Matthew Simmont,
Stephan Matheis, Brian Timko

Geography Division

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EXECUTIVE SUMMARY

This document reports on the results of the U.S. Census Bureau's 2010 Census Local Update of Census Addresses Participant Survey. The survey focused on the experiences of participating governments only. Survey data had already been collected from governments that chose not to participate. Questions related to non-participation were out of scope for this survey.

Survey Background

The purpose of this survey is to gain feedback from governmental units that participated¹ in the 2010 Census Local Update of Census Addresses Program. The 2010 Census Local Update of Census Addresses Program was designed to utilize the expertise of tribal, state, and local governments to improve the accuracy and completeness of the U.S. Census Bureau's address list. The Census Bureau will use the survey responses to gather information on what worked well and what needs improvement for the 2020 Census Local Update of Census Addresses Program. The data collected may be beneficial to other partnership programs as well.

Principal Findings

Survey questions were grouped into four main subjects:

- Time allotment and effectiveness of communications,
- Individualization of program participation,
- Tools and materials, and
- Assistance for participants.

Time Allotment and Effectiveness of Communications

The six months' advance notice provided was adequate for local governments to decide whether to participate in the program.

The 120 days allowed for governments to review their Local Update of Census Addresses materials was adequate.

The advance notice to all was the most important factor influencing their decision to participate in the program. Attending a technical training workshop and attending promotional workshops were also important factors in influencing participation.

After governments had agreed to participate and received their Local Update of Census Addresses review materials, the Census Bureau sent two reminder letters about the deadline for returning their submission. Governments participating in this survey found the number of deadline reminder letters (two) adequate.

¹In the context of the LUCA Survey, "participated" means registered for the 2010 LUCA Program and were sent LUCA materials.

The Census Bureau provided three participation options, consisting of different types of review materials, security requirements, and media choices (electronic or paper). About a quarter of the participating governments did not think they fully understood the three participation options. In addition, Local Update of Census Addresses participants could limit their review area and/or coordinate their review with another government or regional agency. Less than half of the responding governments were aware that they had those choices. Larger governments understood their participation options, review limitations, and coordination possibilities more fully than did smaller governments.

Although workshops at professional meetings convinced attendees to participate and helped them understand their participation options, nearly half of survey respondents had not attended the workshops. The Local Update of Census Addresses website had limited use. In addition, the later in the Local Update of Census Addresses process, the less the website was used.

Individualization of Program Participation

Approximately three-quarters of survey respondents thought they had understood the participation options and about three-quarters thought that the option they chose met their needs to a “great extent” or a “good extent.”

Two of the three participation options contained Title 13 data that required governments to keep address lists sent to them confidential. The survey asked participants if they needed to take any of five additional measures to comply with the confidentiality requirements. None of these measures were frequently used; however all of the measures were used by some governments of all sizes. Most of these measures were used more frequently by state governments and larger jurisdictions.

Coordination of address reviews by other levels of governments or regional agencies was another source of flexibility in Local Update of Census Addresses participation, in addition to the participation options. However, less than half of the governments knew about this possibility, about 30 percent actually benefitted from coordination, and about 38 percent would not have participated without coordination.

It was also possible for governments to provide their Boundary and Annexation Survey updates through the Local Update of Census Addresses Program. Only 40 percent of survey respondents did so with the largest percentage being middle-sized jurisdictions. The Boundary and Annexation Survey update opportunity was seen as more advantageous by the largest governments.

Tools and Materials

About 80–89 percent of the participating governments who responded to the survey found the address materials and maps provided by the Census Bureau to be satisfactory. Satisfaction did not differ substantially among different types of materials (maps, address lists, and address count lists), suggesting that the survey respondents may have been reporting general or overall impressions and not specific ratings.

Over 80 percent of respondents who used the Local Update of Census Addresses printed materials (advance mailing material, User Guide, and Quick Reference Guide) found them helpful in understanding the participation options and the review materials.

Although some Local Update of Census Addresses participants took advantage of open-ended questions to describe difficulties in dealing with the “pipe-delimited” format of the address files provided by the Census Bureau, 75 percent of all survey respondents found this format satisfactory. About half of those who did not want pipe-delimited files would have preferred files compatible with Microsoft Office™ products.

To assist local governments that did not have their own geographic information systems, the Census Bureau provided the Master Address File/Topologically Integrated Geographic Encoding and Referencing system Partnership Software. The Master Address File/Topologically Integrated Geographic Encoding and Referencing system Partnership Software was used by 65 percent of responding jurisdictions as part of their review. The largest jurisdictions made the least use of Master Address File/Topologically Integrated Geographic Encoding and Referencing system Partnership Software. More than 75 percent of users would use it again.

Assistance for Participants

The Census Bureau provided support to governments on the decision to participate, selection of option, media selection, and review and submission procedures. The support consisted of printed materials, workshops, conference presentations, a Local Update of Census Addresses website, and telephone assistance provided by Regional Census Centers and a Headquarters Technical Help Desk.

Fifty-four percent of survey respondents attended a technical training workshop conducted by the Census Bureau. The workshops were rated highly by respondents, who found them helpful in deciding whether to participate, in understanding the participation options, and in understanding the materials sent to them for review.

The ratings for the telephone assistance provided by both the Regional Census Centers and the Headquarters Technical Help Desk were about the same, suggesting that survey respondents regarded them together as a single support function. They were rated almost universally (over 90 percent) helpful in preparing the Local Update of Census Addresses submission by their users.

Summary of Recommendations

Based on answers to closed-ended questions and free-response answers to open-ended questions, the survey contractor developed a set of recommendations. These are detailed in Section 6 of the main report. In summary, the recommendations are as follows:

- **Encourage more review by higher-level governments on behalf of small government entities such as minor civil divisions and places (municipalities) with small populations;**
- **Provide materials in standard, off-the-shelf commercial software formats;**
- **Explain participation options more thoroughly, including more details about the staff size, staff experience, and security requirements of each;**
- **Simplify the process for small governments;**
- **Explain the definition and use of addresses and housing units better, so that participants will understand why post office boxes and rural route numbers are not in scope for the Census Bureau's Local Update of Census Addresses Program;**
- **Explain better how the Census Bureau processes and verifies local updates, so that local governments will not think that their efforts are being ignored; and**
- **Schedule the participant survey closer to the end of the decennial Local Update of Census Addresses Program.**

1. INTRODUCTION/BACKGROUND

This report concerns the U.S. Census Bureau's 2010 Census Local Update of Census Addresses (LUCA) Participant Survey.

As part of the 2010 Census, the LUCA Program provided an opportunity for tribal, state, and local governments to review the Census Bureau's list of housing unit addresses and suggest corrections. Participation in the program was voluntary. The Census Bureau conducted a survey of governments about their participation in the LUCA Program. The survey questions were developed by the Census Bureau and reviewed by a contractor, Avar Consulting, Inc., which also tabulated and analyzed the responses and wrote this report.

All 11,492 governments that had reviewed LUCA addresses materials were asked to participate in the survey; 4,719 (41 percent) did so. Most participants responded by completing a questionnaire on a website maintained by the Census Bureau, but governments that had not participated in the LUCA Program electronically were also sent a paper questionnaire, and some of them used that to respond to the survey. The Census Bureau will use the survey responses to gather information on what worked well and what needs improvement for the 2020 Census LUCA Program.

1.1 LUCA History

The confidentiality of census addresses is ensured by Sections 9 and 214 of Title 13, U.S. Code. The Census Address List Improvement Act of 1994 (Public Law 103-430) authorized the Census Bureau to provide individual residential addresses² to officials of tribal, state, and local governments who agreed to conditions of confidentiality. The act strengthened the Census Bureau's partnership capabilities with participating governments by expanding the methods the Census Bureau could use to exchange address information. The resulting LUCA Program was first conducted in 1998 and 1999 for the 2000 Decennial Census. The text of Title 13 and the Census Address List Improvement Act of 1994 are included in Appendix A of this report.

After the Census 2000 LUCA Program, evaluations and participant surveys were conducted by the National Academy of Sciences (NAS), the Department of Commerce Office of the Inspector General, the Office of Management and Budget (OMB), and the Census Bureau. The Census Bureau then made a number of the suggested improvements to the LUCA Program (Pfeiffer and Franz, 2005). Based on these results, the Census Bureau made the following improvements to the 2010 Census LUCA Program:

- Combined the two separate Census 2000 LUCA phases for city-style addresses and for non-city-style addresses into one review cycle for all address types,
- Expanded the review time for participants from 90 days to 120 days,

² A residential address is assigned to an individual housing unit (HU), such as a house, apartment, or mobile home, or is a group quarters (GQ). The combined number of HUs and GQs (HU/GQs) within an entity is the basis for the size categories used in this report.

- Provided more advance notice to governments of the pending LUCA Program,
- Initiated comprehensive program communications with participants,
- Provided participants the opportunity to use the Census Bureau’s mapping application: the Master Address File/Topologically Integrated Geographic Encoding and Referencing system (MAF/TIGER) Partnership Software (MTPS) application,
- Invited states to participate in the program, and
- Provided the choice of one of the following three participation options:
 - Option 1—Title 13 Full Address List Review
 - Signed Title 13 Confidentiality Agreement
 - Received Census Address List and Address Count List to review
 - Could submit updates to Census Address List and/or edit the Address Count List
 - Option 2—Title 13 Local Address List Submission
 - Signed Title 13 Confidentiality Agreement
 - Received Census Address List and Address Count List to review
 - Must submit local address list
 - Option 3—Non-Title 13 Local Address List Submission
 - Did Not Sign Title 13 Confidentiality Agreement
 - Received Census Address Count List to review
 - Must submit local address list
- Allowed LUCA participants to provide their legal boundaries through the Boundary and Annexation Survey (BAS) as part of their LUCA submission.

1.2 Administration of the 2010 LUCA Program

The LUCA Program for the 2010 Census was administered in several distinct stages.

1.2.1 Advance Notification

In January 2007, the Census Bureau mailed an advance notification package (a letter and an information booklet) to the highest elected official in each government eligible for the LUCA Program. Governments in areas where the Census Bureau planned a pre-census address canvassing operation were eligible for the LUCA Program. These included tribal, state, and local governments, the District of Columbia, and Puerto Rico, but did not include the most remote, sparsely populated, and/or resort areas in the states of Alaska and Maine. Governments could also designate representatives, such as regional planning agencies, to conduct their address review. The advance notification package provided governments with sufficient detail to enable them to begin planning to participate in the LUCA Program. Census Bureau Regional Census Centers (RCCs) conducted LUCA promotional workshops from March through June 2007 to emphasize the purpose and importance of the LUCA Program and to describe the LUCA Program schedule, participation options, confidentiality requirements, participant responsibilities, and materials that the Census Bureau planned to supply.

1.2.2 Invitation and Registration

In August 2007, the Census Bureau began mailing the invitation and registration materials to eligible governments, formally inviting them to participate in the LUCA Program. The invitation package included:

- An invitation letter,
- Program registration forms,
- A computer-based training CD-ROM for the LUCA Program, and
- A computer-based training CD-ROM for the MTPS, a geographic information system (GIS) application that combined the LUCA Address List, Address Count List, and digital shapefiles.

To encourage participation, the Census Bureau RCCs made follow-up telephone calls to non-responding governments, and then mailed final reminder letters in November 2007.

1.2.3 Media

Choices of paper or computer-readable materials depended in part on the participant option a government selected. Option 1 participants could choose to receive either paper or computer-readable address materials. Paper address materials were limited to jurisdictions with 6,000 addresses or fewer. Option 2 participants received computer-readable address materials. Option 3 participants received only computer-readable Address Count Lists.

All participants could choose to receive either paper census maps shapefiles for geocoding addresses (geocoding means assigning numeric codes that refer to state, county, census tract, and census blocks). State participants were limited to computer-readable products and were required to submit their address and map updates on a county-by-county basis.

All participants could choose to use the newly developed MTPS, a geographic information system (GIS) application that combined the LUCA Address List, Address Count List, and shapefiles. Using the MTPS allowed participants to update the lists and shapefiles and to import their local address list and shapefiles for comparison with the Census Bureau's data.

1.2.4 LUCA Technical Training Workshops

From August 2007 through January 2008, Census Bureau RCCs, State Data Centers, and regional planning and development agencies offered LUCA technical training workshops that provided participants and governmental staff not yet registered for the program with detailed examples and instructions for undertaking their LUCA review and submitting their address lists to the Census Bureau.

1.2.5 Shipping LUCA Materials

Shipping began in October of 2007, but was not completed until March of 2008 due to delays in two related GEO operations. All participants who received their materials late due to the delays were still allotted 120 days to review their LUCA materials and submit updates.

1.2.6 Initial Review Stage

Once participants received their LUCA materials, they could begin the initial review stage of the LUCA Program. Participants who chose Option 1 and Option 2, who agreed to maintain the confidentiality of the census address list, could compare the Census Bureau Address List with their own. Option 3 participants could compare the Census Bureau's address count for each census block with their own records. All participants had the option of either comparing addresses or address counts over the entire area or limiting their review to specific areas. The Census Bureau allotted 120 days for conducting the review.

Once participants finished the review, they could send updates to the Census Bureau. Option 1 participants could:

- Add addresses to the Census Bureau Address List,
- Make corrections to addresses on the Census Bureau Address List, and
- Challenge block counts on the Census Bureau Address Count List, but could not update addresses *and* challenge the address count in the same block.

Option 2 and 3 participants could send in their local computer-readable address list using a pre-defined Census Bureau format.

The Census Bureau received the final LUCA submission at the end of May 2008. Headquarters processing of participant submissions began in March 2008 and continued until August of that year.

1.2.7 Initial Closeout

In October 2008, participants who received LUCA materials, but did not return updated LUCA address list materials, were sent a LUCA closeout letter requesting the return or destruction of all Title 13 materials. Respondents were asked to indicate their reason or reasons for not returning address updates on a checklist that was included with the letter. One item on this checklist stated that they agreed with the Census Bureau's initial address list and/or address count. Participants who selected that particular reason were considered to have reviewed the address list and/or address count but had no updates to submit. They were therefore, considered eligible for feedback materials and were sent a second letter in January 2009, asking if they wished to receive LUCA feedback materials for their review.

1.2.8 LUCA Feedback

Following the Address Canvassing Operation, which updated the census address list and verified addresses submitted by LUCA participants, the Census Bureau mailed a LUCA Feedback Advance Notice package to participants in August 2009. This package contained a notification letter and a flyer that provided an overview of the feedback and address appeal process. The address appeal process was administered by the LUCA Appeals Staff, an independent, temporary Federal entity set up by OMB to administer the appeals process. The Census Address List Improvement Act of 1994 requires the Administrator of OMB's Office of Information and Regulatory Affairs to develop an appeals process to resolve disagreements that remain after participating governments receive the Census Bureau's LUCA feedback materials.

Feedback materials containing the results of address canvassing were mailed to participants between October and December 2009. Option 1 and Option 2 participants could review these materials and submit appeals to the LUCA Appeals Staff. Participants were instructed to contact the Appeals Staff with questions regarding the address appeals process and to mail their appeals directly to the Appeals Staff. Since Option 3 participants did not receive or review the census address list, they were not eligible to file appeals.

The feedback materials consisted of:

- Full Address List (Option 1 and Option 2)—all of the residential addresses currently recorded in the Census Bureau's MAF/TIGER database (MTdb) for the jurisdiction.
- Full Address Count List (Option 1 and Option 2)—current residential address counts for each census block within the jurisdiction.
- Detailed Feedback Address List (Option 1 and Option 2)—all address record updates submitted by the participant and a processing code identifying a specific action taken by the Census Bureau on that address record. This list also identified any addresses deleted during the Address Canvassing Operation.
- Detailed Feedback Address Count Challenge List (Option 1 and Option 2)—address counts (original, as revised by the local government, and most recent census count) for census blocks that the local government had challenged, if any. The list also included census blocks where address counts decreased as a result of address canvassing.
- Feedback Address Update Summary Report (Option 1, Option 2, and Option 3)—counts of actions taken by the Census Bureau for all of the address updates submitted by the participant. However, since Option 3 participants did not receive the census address list or detailed feedback, Census Bureau policy did not allow them to appeal any addresses.
- Paper maps or shapefiles (Option 1, Option 2, and Option 3)—feature and boundary updates provided by the participant and/or other updates found during Address Canvassing.
- Participants in all three options received the LUCA Address Count List that contained the total number of residential housing units and group quarters addresses on the census address list for each census block within their jurisdiction. All participants had the opportunity to provide map feature and legal boundary updates (including the appropriate attribute information) regardless of the option they selected.

1.2.9 Technical Help Desk

The Census Bureau maintained a Technical Help Desk from April 2007 until September 2010. Technical Help Desk staff assisted participants experiencing difficulties with opening, reviewing, and saving computer-readable address files and shapefiles, and answered MTPS user questions. Occasionally, Technical Help Desk staff also answered general program questions

2. METHODOLOGY

The 2010 Census LUCA Participant Survey was a joint effort of the Census Bureau and its contractor Avar Consulting, Inc. (Avar).

2.1 Development of the Questionnaire

Staff of the GEO, which administers the LUCA Program, with staff from the Field Division (FLD) and the Decennial Management Division (DMD), developed an initial set of questions addressing five general categories of potential improvement:

- Time and Communication,
- Individualizing the Program,
- Tools,
- Assistance, and
- Future Improvements.

The survey questions were numbered from one to 34 (with letters for sub-questions) in the order in which they would be presented to respondents. However, not all questions were relevant to all potential respondents. Some questions referred to activities that were performed only by government entities that had selected one of the three 2010 LUCA participation options described in the Introduction. Appendix C lists the questions by improvement category and specific improvement, as well as by seven conceptual categories.

Avar's survey methodologists reviewed the content, wording, and format of each question, the layout of the questionnaires, and the clarity of the survey instructions with regard to their effect on the validity and reliability of the survey instruments and the survey response rate. After a careful review of all the questions in each of the survey instruments, the Avar team provided recommendations and suggestions to revise the questionnaires based on professional standards of readability, usability, comprehension, neutrality, and respondent burden.

The 34 questions were organized into five lettered "instruments" (i.e., Instruments A, B, C, D, and E) according to method of administration (mode of data collection), option, and nature of participation. For example, Instrument E was designed to be completed on paper by entities that might not be able to respond on-line. If able to respond on-line and preferring to do so, these governments could use Instrument B. Table 2.1-1 shows the seven overall instrument versions by type of LUCA participant, medium of administration (on-line or paper), and the number of questions included. Two of the instruments (C and D) had versions in Spanish for use by Puerto Rico governments; these had the same content as the comparably lettered English versions except for questions 4–7, which were not included in the Spanish versions. The English-language versions of all questions in the questionnaire are shown in Appendix B.

Table 2.1-1 Instrument Version by Option, Medium, and Number of Questions

	Instrument version						
	A	B	C	C Spanish	D	D Spanish	E
Option Type	Option 3 participants	Option 1 participants: paper address list; indication of accessing an online survey	Option 1 and 2 participants: computer-readable address list, paper maps		Option 1 and 2 participants: computer-readable address list, shapefiles		Option 1 participants: paper address list; paper maps; no indication of capability to access an online survey
Medium	On-line	On-line	On-line		On-line		Paper
Total No. of Questions	21	27	30	26	33	29	27
Questions Included	Q1-19 Q33-34	Q1-18 Q20-26 Q33-34	Q1-18 Q20-29 Q33-34	Q1-3 Q8-18 Q20-29 Q33-34	Q1-18 Q20-34	Q1-3 Q8-18 Q20-34	Q1-18 Q20-26 Q33-34

2.2 Survey Universe and Response Rate

The 2010 Census LUCA Participant Survey was not a sample survey. All government entities, ranging from a state to a minor civil division that participated in LUCA through one of the three participation options, were asked to participate in the survey. The survey universe consisted of 11,492 such entities, and of them, 4,719 responded to the survey. Table 2.1-2 indicates the survey universe and survey response rate by size of jurisdiction, level of government, and type of media used in LUCA participation. The size of a jurisdiction is measured by the number of housing units (HUs).

2.3 Survey Operations

The survey operations lasted two months, from mid-April to mid-June 2011. Participants in the LUCA Program who had requested an electronic address list or electronic map files, or who had provided an e-mail address, were sent a letter asking them to take part in the 2010 Census LUCA Participant Survey. The letter included a link to a website with the proper instrument version, and a specific access code to the site for each government entity.

Participants in the LUCA Program who had not requested an electronic list or electronic map files, and for whom Census had no e-mail address, were also sent a letter asking them to participate in the LUCA survey. However, the letter contained both a paper questionnaire with a postage-paid return envelope and a link to a website with the on-line version of that questionnaire.

Two weeks after launching each survey (i.e., online and paper), a follow-up postcard was sent to all LUCA participants to remind them of the survey and encourage their participation. A second reminder postcard was sent to participants who had not responded after six weeks.

Participants who used the link in the initial contact letter accessed the web site designed by the Census Bureau. The first screen asked participants to post the user name and password enclosed in the letter they received. This unique login ID enabled the Avar to:

- Identify and route the participant to the server containing the appropriate version of the survey (each instrument was stored on a separate server), and
- Add additional information needed to interpret the survey results properly (entity size, entity type, participation option, and media option).

Once the participant completed and submitted the survey, the system automatically stored the information in an online database, and survey data were exported to a local database on a weekly basis.

On the paper version of the survey, participants sent the completed surveys directly to Avar using a self-addressed pre-paid envelope provided in the initial mailing.

**Survey Universe and Response Rate by Size of Jurisdiction,
Table 2.1-2 Level of Government, and Type of Media Used in LUCA Participation**

	Survey Universe	Respondents	Response Rate
TOTAL	11,492	4,719	41.0%
Size of Jurisdiction (number of HU/GQs)			
1,000 or fewer	4,278	1,660	38.8%
1,001 to 6,000	3,890	1,608	41.3%
6,001 to 50,000	2,744	1,192	43.4%
50,001 to 100,000	283	137	48.4%
100,001 to 1,000,000	269	115	42.7%
1,000,001 or more	28	7	25.0%
Level of Government			
County	1,596	673	42.2%
Minor Civil Division (Township)	2,753	1,016	36.9%
Place	7,001	3,007	43.0%
State	28	5	17.9%
Federally Recognized Tribal Government	114	18	15.8%
Type of Media			
Electronic address, paper map	3,110	1,235	39.7%
Electronic address, electronic map	4,584	1,867	40.7%
Paper address, paper map	3,599	1,549	43.0%
Paper address, electronic map	199	68	34.2%

2.4 Data Processing and Weighting

Avar received and processed 404 paper survey questionnaires. As a paper questionnaire arrived, Avar immediately stamped the date of receipt on each questionnaire and registered it into a receipt-control system. The unique ID on each questionnaire was the only link between the identifying information and the data collected. The identifying information was kept separate from the survey data file with secured access. The original hard-copy questionnaires were stored in a locked safe while only photocopies were used for data processing.

One of the project analysts reviewed each questionnaire to determine its completion status, differentiate between “Don’t Know,” and “Refusal” answers, and logically impute missing data³. Puzzling responses or issues were identified, discussed, and reported to GEO. Once the review and editing process was completed, Avar entered the survey responses into a designated database together with the entity codes described earlier. A “codebook,” which specifies the variable label, value label, and allowable codes and ranges for each variable, was developed. The ID number of each data entry person was also entered into the database for quality control purposes. As the data entry proceeded, a random sample of the questionnaires was drawn to assess the accuracy of data entry. Errors were analyzed to identify the patterns and sources.

On-line participants accessed the Census Bureau website. Once the participant finished and submitted the survey, the software stored the information in a database. Once a week, the Census Bureau forwarded all new responses to Avar in an Excel spreadsheet.

The paper survey data were then merged with data exported from the online survey system. Further data editing and cleaning involved comparing data against allowable codes, ranges, and logic. A logic-checking program was developed based on the content and skip patterns of the questionnaire, which could be run with a Statistical Package for the Social Sciences (SPSS) data file. If conflicting answers were found, the questionnaire was pulled out to double check with the original responses. If data entry was not the source of error, the project team discussed it and made an informed decision on how to edit the responses. Extreme values were recoded as missing values to prevent them from skewing the mean, while other outliers were imputed with the median.

As the survey did not obtain information from everyone within the universe of interest, it was necessary to differentially weight survey respondents to account for nonresponses. In a survey that achieves less than a 100 percent response rate, there is a risk that the survey results may be biased towards subgroups that have higher response rates, if respondents are systematically different from nonrespondents. Such differences would imply that the respondents should not be regarded as a random subsample of the full survey sample. If the survey data were not adjusted to mitigate these differences, it might be inappropriate to draw inferences about the survey universe from statistics computed from the survey data.

³ For some survey questions, the respondents were given an “Other” response category for additional activities that were not listed in the questionnaire. If they checked the “Other” response category, they could choose to provide more information about it. However, in the paper version of the p, some respondents did not check the “Other” category but continued with a description of the additional activity. In this case, we would impute a positive choice for that “Other” response category.

Since entity size is related to both the complexity of LUCA participation and to the resources available to participate in LUCA, Avar stratified the survey respondents into six size categories and constructed post-stratification weights to ensure that the sum of the weighted survey respondents in each of the following size categories equals the corresponding counts in the survey universe:

- 1,000 or fewer HU/GQs,
- 1,001 to 6,000 HU/GQs,
- 6,001 to 50,000 HU/GQs,
- 50,001 to 100,000 HU/GQs,
- 100,001 to 1,000,000 HU/GQs, and
- 1,000,001 or more HU/GQs.

The weights were calculated using the following formula: $W_h = N_h/n_h$, where:

- W_h refers to the weight for each of the respondents in size category h,
- N_h refers to the total number of government entities in size category h, and
- n_h refers to the number of responding government entities in size category h.

2.5 Data Analysis

Data analyses were conducted to

- Examine the opinions of LUCA participants regarding the changes made in the 2010 LUCA Program,
- Identify the barriers they encountered during the program participation,
- Summarize their suggestions and recommendations for future improvement, and
- Determine the relationship between participants' needs and their background characteristics such as size of jurisdiction, level of government, participation option, and type of media used in the 2010 LUCA Program.

Both quantitative and qualitative techniques were employed to achieve these purposes. Statistical analyses were performed to make estimates for population parameters with regard to the key study measures. Frequency and cross-tabulation analyses were conducted for all the categorical variables such as the utilization of the various participation options and support mechanisms provided by the Census Bureau, their usefulness, and their effect on the entities' decision on program participation. Central tendency analysis (e.g., mean, median) was conducted for interval variables such as the length of time needed for advance notification of program registration, for review of the LUCA initial materials, for review of the feedback materials, and for filing an address appeal.

Content analysis was conducted on qualitative data collected via open-ended questions. Open-ended responses to specific questions were analyzed, listed, and coded into appropriate categories to identify common themes. Frequency analysis, wherever appropriate, was performed to identify the most prominent issues and the most agreed-upon solutions. Quantitative analyses were not done for open-ended responses to general questions. The analysis of these responses is described in Section 5.

3. LIMITATIONS

Because of the time interval of about 14 months between the end of the LUCA program and the follow-up survey, some respondents said that they did not remember the details of their participation; in other cases, the staff responsible for LUCA participation had left. The time interval and staff turnover might have reduced survey participation as well as affected responses by participants.

Conclusions and recommendations are based on the answers/opinions of the survey respondents. It is unknown how those might change if there was a 100% response rate.

4. QUANTITATIVE SURVEY RESULTS

Most of the questions in the 2010 Census LUCA Participant Survey presented a list of answers for survey respondents to choose. The responses to those questions are analyzed in this section. The free-response answers to open-ended questions are discussed in Section 4. This section is organized into four major areas of concern used in developing the questionnaire. These are the first four listed in Appendix C:

- Time allotment and effectiveness of communication,
- Individualization of program participation,
- Tools, and
- Assistance.

4.1 Time Allotment and Effectiveness of Communication

A central purpose of the 2010 Census LUCA Participant Survey was to assess the effectiveness of improvements made to the 2010 LUCA Program based on the lessons learned from the 2000 LUCA survey results. As a result of Census 2000 LUCA evaluations and participant surveys, the 2010 Census LUCA Program:

- Integrated two separate 2000 LUCA phases into one review cycle for all address types,
- Invited states to participate in the program,
- Offered a choice of one of three program options for participation,
- Provided more advance notice of the pending LUCA Program,
- Initiated comprehensive program communications with participants,
- Provided participants the opportunity to use the Census Bureau-supplied MAF/TIGER® Partnership Software (MTPS) application, and
- Expanded the review time for participants to 120 days.

This section presents quantitative survey results regarding participants' feedback on the following topics:

- Increased Advanced Notice,
- Increased Review Time,
- Increased Communication,
- Awareness and Understanding of LUCA,
- Appeal Time,
- Continuous Address Updating, and
- Reminder Letters.

4.1.1 Increased Advanced Notice

Based on Census 2000 LUCA participant survey findings, the 2010 LUCA Program provided more advance notice of the impending LUCA Program than in 2000. The Census Bureau sent notification of the 2010 Census LUCA Program six months in advance of registration to allow governments to consider issues such as budget and staffing needs, confidentiality and security requirements, participation option choices, and LUCA liaison designation. The government entities were asked how much advance notice time they needed before the LUCA Program registration.

As shown in Table 4.1-1, on average, five months was the appropriate amount of time for advance notice. However, the advance notice need varied with the size of the responding government. Larger entities were more likely to need more advance notice than smaller entities. All (100%) entities with over a million HUs needed six months or more for advance notice.

Table 4.1-1 Advance Notice Needed by Entity Size

Time Needed	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
0-1 month	8.3%	4.8%	3.8%	5.0%	0.7%	0.0%	5.7%
2-3 months	31.4%	25.6%	20.9%	22.3%	15.0%	0.0%	26.2%
4-5 months	7.3%	7.9%	7.7%	9.7%	7.1%	0.0%	7.6%
6 months	48.5%	54.3%	56.9%	49.6%	61.4%	85.7%	52.9%
More than 6 months	4.6%	7.4%	10.7%	13.3%	15.7%	14.3%	7.5%
Mean (Months)	4.6	5.1	5.5	5.4	6.1	6.3	5.1
Standard Deviation	2.4	2.4	2.5	2.7	2.6	0.7	2.5

Source: 2010 Census LUCA Participant Survey: Question 1.

The advance notice needed also varied with the media type the government received. As shown in Table 4.1-2, on average, entities that reviewed materials in electronic media needed more advance notice than those that used paper addresses and paper maps.

Table 4.1-2 Advance Notice Needed by Media Type

Time Needed	Address and Map Media Type				Total
	Electronic address, paper map	Electronic address, electronic map	Paper address, paper map	Paper address, electronic map	
0-1 month	4.9%	4.4%	8.1%	3.0%	5.7%
2-3 months	27.5%	22.8%	29.0%	25.3%	26.2%
4-5 months	7.2%	8.2%	7.1%	12.0%	7.6%
6 months	52.3%	54.6%	51.6%	50.6%	52.9%
More than 6 months	8.1%	9.9%	4.2%	9.0%	7.5%
Mean (Months)	5.1	5.4	4.7	5.3	5.1
Standard Deviation	2.5	2.5	2.2	3.1	2.5

Source: 2010 Census LUCA Participant Survey: Question 1.

4.1.2 Increased Review Time

Based on the Census 2000 LUCA survey findings, the 2010 LUCA Program gave participants 120 calendar days to review the 2010 Census LUCA review materials. The survey asked respondents how much time they needed for the review of these materials, based on their experience. As shown in Table 4.1-3, although the overall average review time perceived by government entities was 97 calendar days, 120 days was about the right amount of time for the entities to review the 2010 Census LUCA initial review materials. Eleven percent wanted more than 120 days; nearly half supported the 2010 LUCA review period of 120 days. However, the review time varied with entity size:

- For entities with fewer than 6,000 HUs, 90 days were enough;
- For entities with 6,000 to 1,000,000 HUs, 120 days were needed; and
- For entities with more than 1,000,000 HUs, 150 days were necessary. (There were only seven responding entities with over 1,000,000 HUs.)

A majority of the very largest governments, states or large cities or counties with over a million addresses, wanted more than 120 days.

**Time Needed for Review of the 2010 Census
LUCA Review Materials by Entity Size**

Table 4.1-3

Time Needed	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
60 days or less	41.0%	30.3%	18.5%	16.4%	7.2%	0.0%	30.5%
61-119 days	13.6%	14.5%	14.1%	10.5%	9.8%	14.3%	13.8%
120 days	40.7%	45.7%	48.9%	41.5%	54.7%	28.6%	44.7%
More than 120 days	4.8%	9.5%	18.4%	31.6%	28.3%	57.1%	11.0%
Mean (Calendar Days)	84.7	96.6	112	120.7	127.9	150	97.4
Standard Deviation	47	48.6	48.8	47.5	40.5	46.2	49.4

Source: 2010 Census LUCA Participant Survey: Question 2.

As shown in Table 4.1-4 below, time needed for the review of the 2010 Census LUCA initial review materials also varied by the combinations of media type the entity utilized. It took the entities more time to review the initial review materials in electronic media than the materials in paper version. More recipients of electronic address lists and maps wanted more than 120 days for review, compared to recipients of paper address lists and maps, but 82 percent of recipients of *both* electronic address lists and electronic maps found 120 days or less to be sufficient for review.

**Time Needed for Review of the 2010 Census
LUCA Review Materials by Media Type**

Table 4.1-4

Time Needed	Address and Map Media Type				Total
	Electronic address, paper map	Electronic address, electronic map	Paper address, paper map	Paper address, electronic map	
60 days or less	32.7%	23.5%	36.2%	38.5%	30.5%
61-119 days	14.6%	13.3%	14.2%	5.9%	13.8%
120 days	43.9%	45.5%	44.3%	45.6%	44.7%
More than 120 days	8.8%	17.6%	5.4%	10.1%	11.0%
Mean (Calendar Days)	94.2	107.6	88.7	88.7	97.4
Standard Deviation	48.5	51.1	45.9	52.9	49.4

Source: 2010 Census LUCA Participant Survey: Question 2.

4.1.3 Increased Communication

Based on findings from the Census 2000 LUCA participant surveys, the 2010 LUCA Program initiated comprehensive program communications with participants. This section presents survey results regarding participants' feedback on the effectiveness of these communications.

Factors Influencing Decision on LUCA Participation

The survey asked participants in the 2010 LUCA Program to evaluate nine factors that might have influenced their decision to participate. These factors can be classified into two broad categories:

- Communication activities including
 - Advance mailing,
 - Registration information,
 - Promotional workshops,
 - Presentations at professional conferences, and
 - LUCA website;
- Government support and census-related activities including
 - Technical training workshops,
 - Encouragement and resources from other levels of government, and
 - Day-to-day job responsibilities related to the census.

Table 4.1-5 shows participation in these activities and the rates at which they actually did affect participation (or at least that the survey respondents reported that they did) by entity size. It indicates that the advance and registration mailings were the two most frequently used and most frequently cited influential channels of communication between the Census Bureau and the tribal, state, or local governments. Therefore, they had the most effect on the governments' decision to participate in the LUCA Program.

Concerning participation in the communication activities,

- 93 percent of participants had read information in the advance mailing and the registration mailing,
- 68 percent read information about LUCA from the LUCA website,
- 53 percent attended promotional workshops, and
- 36 percent attended presentations at professional conferences.

In addition, 71 percent participated daily in census-related activities as part of their jobs; 62 percent received encouragement from other levels of government; 54 percent attended technical training workshops; and 46 percent obtained resources for LUCA participation from other levels of government or organizations.

Of those that participated in the corresponding activities,

- Over 70 percent reported that reading program information in the advance mailing or registration mailing influenced their decision to participate (74 percent and 72 percent respectively),
- 66 percent responded that attending a promotional workshop helped them in their decision to participate,
- 54 percent found reading the LUCA website a factor that had an effect on their decision to participate,
- 43 percent found presentations at professional conferences an influence on their decision to participate, and
- Over 25 percent felt that the availability of staff or funding support from other levels of government encouraged them to participate.

Those participating in other activities were influenced to participate in LUCA at the following rates:

- Attending a technical training workshop: 68 percent,
- Conducting census-related day-to-day activities: 60 percent, and
- Receiving encouragement from other levels of government or professional groups: 46 percent.

The survey participants were asked whether there were other factors than those listed that influenced their decision to participate in the LUCA program. About six percent of the entities gave answers to this open-ended question, including reasons *not* to participate. Based on content analysis of the answers, other factors encouraging LUCA participation included:

- Desire to have more accurate data,
- Previous participation in LUCA or census-related work,
- Ease of communication and individual support provided to the respondent by the Census Bureau,
- Mandate to respondents from higher levels within their governments, and
- Sense of responsibility to participate in LUCA or to participate for small local governments without capacity.

Other factors that discouraged LUCA participation included:

- Inefficiency in LUCA administration, excessive information about LUCA, or unfunded working hours; and
- Factors specific to different organizational contexts, such as personnel issues or joining the project in the middle of the process.

**Factors That Influenced LUCA Program
Participation by Entity Size***

Table 4.1-5

		Size (Number of HUs)						Total
		1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Reading the Advance Mailing	Yes, influenced decision	74.6%	73.9%	74.2%	70.6%	81.7%	71.4%	74.3%
	Did this activity	92.6%	92.6%	93.5%	91.6%	95.2%	100.0%	92.9%
Attending a Promotional Workshop	Yes, influenced decision	59.6%	68.7%	68.7%	67.0%	73.5%	50.0%	66.0%
	Did this activity	43.8%	54.7%	62.2%	65.7%	66.4%	57.1%	53.0%
Reading the Registration Mailing	Yes, influenced decision	73.6%	70.7%	69.7%	67.3%	76.9%	50.0%	71.5%
	Did this activity	92.0%	92.5%	94.4%	93.0%	95.1%	100.0%	92.9%
Attending a Technical Training Workshop	Yes, influenced decision	62.0%	70.6%	71.9%	68.1%	75.1%	40.0%	68.4%
	Did this activity	43.9%	55.5%	63.5%	68.4%	73.1%	71.4%	54.0%
Presentation at a Professional conference	Yes, influenced decision	38.9%	46.1%	41.8%	41.0%	59.6%	25.0%	42.8%
	Did this activity	31.7%	37.0%	38.6%	45.0%	44.5%	57.1%	35.9%
Encouragement from Other Levels of Government/ Professional Groups	Yes, influenced decision	42.2%	45.5%	47.3%	56.2%	62.4%	40.0%	45.6%
	Did this activity	56.7%	62.6%	66.6%	71.3%	70.3%	71.4%	61.8%
Resources from Other Levels of Government	Yes, influenced decision	22.4%	25.2%	30.9%	28.9%	44.3%	50.0%	26.5%
	Did this activity	41.9%	46.1%	50.5%	52.6%	54.4%	57.1%	46.0%
Participating Daily in Census-Related Activities	Yes, influenced decision	58.9%	57.4%	61.3%	76.3%	78.8%	85.7%	60.2%
	Did this activity	65.4%	71.3%	76.9%	81.4%	83.9%	100.0%	71.1%
Information from the LUCA Website	Yes, influenced decision	49.4%	52.4%	57.9%	59.0%	65.8%	66.7%	53.6%
	Did this activity	58.6%	68.4%	78.8%	81.9%	80.2%	100.0%	68.0%

Source: 2010 Census LUCA Participant Survey: Question 3.

*Influence on decision-making is assessed as a percentage of participants who did this activity.

Table 4.1-6 below further analyzes the influencing factors by level of government. The very high participation rates for reading advance mailings and registration mailings did not vary much across different types of entities except that they were lower for tribal governments. There was variation in participation in the LUCA related activities among the states whose representatives responded to this question. Representatives of county governments were more likely than representatives of minor civil divisions and places to attend promotional workshops and technical training workshops, to receive encouragement and resources from other levels of government, and to use the LUCA website. Tribal governments were more likely to be influenced by the two travel-related activities, attending technical training workshops and seeing presentations at professional conferences; to use resources from other government levels; and to use and benefit from the LUCA website. The lower percentages of governments at the minor civil division and place levels affected by the technical training workshops might be a function of not attending workshops because of small travel budgets.

Activities Influencing LUCA

Table 4.1-6 Participation Decision by Level of Government*

Factors Influenced Decision to Participate in LUCA Program		Level of Government					Total
		County	Minor civil division	Place	State	Tribal Government	
Reading the Advance Mailing	Influenced decision	70.2%	71.9%	75.9%	77.8%	90.3%	74.3%
	Did this activity	90.3%	92.9%	93.5%	100.0%	70.5%	92.9%
Attending a Promotional Workshop	Influenced decision	68.7%	64.7%	65.4%	100.0%	80.0%	65.9%
	Did this activity	64.1%	51.6%	51.2%	55.6%	55.6%	53.0%
Reading the Registration Mailing	Influenced decision	63.7%	70.5%	73.4%	71.4%	85.7%	71.5%
	Did this activity	91.8%	92.8%	93.2%	100.0%	77.8%	92.9%
Attending a Technical Training Workshop	Influenced decision	72.0%	66.4%	68.0%	71.4%	84.4%	68.4%
	Did this activity	63.7%	51.7%	52.5%	77.8%	71.1%	54.0%
Presentation at a Professional Conference	Influenced decision	47.2%	43.7%	40.8%	33.3%	81.5%	42.7%
	Did this activity	42.2%	37.5%	33.8%	33.3%	60.0%	35.9%
Encouragement from Other Levels of Government/ Professional Groups	Influenced decision	53.7%	40.7%	45.2%	0.0%	57.1%	45.6%
	Did this activity	71.3%	61.3%	59.9%	44.4%	77.8%	61.8%
Resources from Other Levels of Government	Influenced decision	32.1%	19.7%	27.3%	50.0%	31.3%	26.5%
	Did this activity	53.1%	44.6%	44.8%	44.4%	71.1%	46.0%
Participating Daily in Census-Related Activities	Influenced decision	61.5%	55.8%	61.0%	100.0%	69.7%	60.2%
	Did this activity	75.3%	67.2%	71.5%	100.0%	76.7%	71.1%
Information from the LUCA Website	Influenced decision	54.4%	46.0%	55.5%	71.4%	73.0%	53.6%
	Did this activity	77.8%	61.9%	67.9%	100.0%	82.2%	68.1%

Source: 2010 Census LUCA Participant Survey: Question 3.

* Influence on decision-making is assessed as a percentage of participants who did this activity.

As to whether participation in an activity influenced the decision to participate in LUCA:

- The most positive factor was the advance mailing, which influenced the decision to participate in LUCA for 70–78 percent of participants from all government levels except for tribal governments (where it was effective at a 90 percent rate).
- Reading the registration mailing paralleled reading the advance mailing, influencing 64–73 percent of the participants except at the tribal governments, where it influenced 86 percent of the participants.
- Attending technical training workshops influenced 66–72 percent, again except for tribal governments (84 percent).
- Promotional workshops and daily participation in census-related activities had slightly less positive influence on LUCA participation, in the range of 56–69 percent for the three most numerous types of entities (counties, minor civil divisions, and places), and 70–80 percent for tribal governments.
- Farther down in influence was information from the LUCA website. Overall, a bare majority (54.4 percent) of those who read the LUCA website said that they had been influenced to participate in LUCA by information from the LUCA website. For the three most common entity types (i.e., county, minor civil division, and place), the range was 46 to 56 percent, but for states and tribal governments it was 71–73 percent.

The least effective of the measures listed in Table 4.1-6 were:

- Encouragement from other levels of government (46 percent),
- Presentations at professional conferences (43 percent), and
- Resources from other levels of government (27 percent).

Tribal governments stand out as indicating more LUCA participation influence than other governments from professional conference presentations, while minor civil divisions were least affected by resources from other levels of government (even taking into account the majority of their survey representatives who said they “did not do this”).

The proportion of the 2010 Census Participant Survey participants rating each of the nine factors as the “most important” in their participation decision is presented in Table 4.1-7. Reading materials included in the advance mailing (23 percent), attending a technical training workshop (19 percent), and attending a promotional workshop (17 percent) were the top three factors.

Table 4.1-7 Most Important Factors in Influencing LUCA Program Participation

Most Important Factor	Percentage*
Reading the Advance Mailing	23.1%
Attending a Technical Training Workshop	18.5%
Attending a Promotional Workshop	16.6%
Participating Daily in Census-Related Activities	14.0%
Reading the Registration Mailing	9.1%
Encouragement from Other Levels of Government/Professional Groups	7.5%
Information from the LUCA Website	3.8%
Presentation at a Professional Conference	3.8%
Resources from Other Levels of Government	3.6%

Source: 2010 Census LUCA Participant Survey: Question 3.

* Percentage based on respondents who did this activity.

As shown in Table 4.1-8, the rating of each of the possible factors as “most important” varied by entity size. Entities with 1,000 or fewer HUs were more likely than larger entities to rate reading the program information in the advance mailing as the most important factor. Entities with over one million HUs were more likely than smaller entities to rank receiving encouragement or resources such as staff and/or funding from other levels of government or professional groups as the most important factors. Larger entities (with 50,001 to 1,000,000 HUs) also identified participating in census-related activities as part of their day-to-day responsibilities as the most important factor more often than smaller entities.

Table 4.1-8 Most Important Factors in Influencing LUCA Program Participation by Entity Size

	Size (Number of HUs)						Total*
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Reading the Advance Mailing	27.6%	22.6%	19.5%	16.4%	18.7%	0.0%	23.1%
Attending a Promotional Workshop	14.5%	19.1%	16.5%	22.4%	8.1%	16.7%	16.6%
Reading the Registration Mailing	12.8%	8.4%	6.3%	5.0%	2.5%	16.7%	9.1%
Attending a Technical Training workshop	17.4%	19.1%	19.6%	15.4%	18.7%	0.0%	18.5%
Presentation at a Professional conference	3.9%	4.3%	3.4%	1.0%	4.5%	0.0%	3.8%
Encouragement from Other Levels of Government/Professional Groups	5.4%	7.3%	10.1%	11.4%	6.1%	16.7%	7.5%
Resources from Other Levels of Government	3.2%	3.4%	3.9%	5.0%	4.5%	16.7%	3.6%
Participating Daily in Census-Related Activities	12.1%	12.4%	15.8%	21.4%	30.8%	16.7%	14.0%
Information from the LUCA Website	3.2%	3.4%	5.0%	2.0%	6.1%	16.7%	3.8%

Source: 2010 Census LUCA Participant Survey: Question 3.

* Percentage based on respondents who did this activity.

Table 4.1-9 shows the influence media type selection:

- On differences in usage rate, and
- On the decision to participate in LUCA.

Entities choosing all-electronic media were more likely than others to:

- Attend a promotional workshop or a technical training workshop,
- Receive information from the LUCA website, and
- Receive encouragement to participate and resources from other levels of government.

In decision-making, entities that received paper address lists with electronic maps rated the influence of technical training workshops and resources from other levels of government lower than other entities.

Activities Helpful in Understanding LUCA Participation Options

As a result of Census 2000 LUCA Program evaluations and participant surveys, the 2010 Census LUCA Program offered a choice of three program options for participation:

- **Option 1-Title 13 Full Address List Review.** A government received the Census Bureau's list of addresses within its jurisdiction and could submit additions, deletions, and corrections of individual addresses; challenges to census block address counts; and updates and corrections to geographic features on paper or electronic maps. Security provisions were required.
- **Option 2-Title 13 Local Address List Submission.** A government received the Census Bureau's list of addresses within its jurisdiction and could submit a list of addresses in a Census-defined format but could not add or delete individual addresses; paper or electronic map corrections could also be submitted. Security provisions were required.
- **Option 3-Non-Title 13 Local Address List Submission.** A government could submit an address list or map revisions but did not receive an address list from the Census Bureau. No security provisions were required.

Table 4.1-9 Activities Influencing LUCA Participation Decision by Media Type*

Factors Influenced Decision to Participate in LUCA Program		Address and Map Media Type				Total
		Electronic address, paper map	Electronic address, electronic map	Paper address, paper map	Paper address, electronic map	
Reading the Advance Mailing	Influenced decision	74.1%	73.7%	75.2%	75.2%	74.3%
	Did this activity	91.0%	92.9%	94.3%	93.7%	92.9%
Attending a Promotional Workshop	Influenced decision	67.8%	66.5%	63.8%	60.5%	65.9%
	Did this activity	48.9%	59.6%	49.0%	47.2%	53.0%
Reading the Registration Mailing	Influenced decision	73.2%	68.1%	74.0%	74.7%	71.5%
	Did this activity	91.8%	93.6%	92.9%	89.6%	92.9%
Attending a Technical Training Workshop	Influenced decision	68.4%	69.3%	67.5%	54.9%	68.4%
	Did this activity	49.3%	61.8%	49.0%	44.1%	54.0%
Presentation at a Professional Conference	Influenced decision	45.3%	43.0%	40.9%	37.3%	42.8%
	Did this activity	32.5%	38.2%	35.8%	36.2%	35.9%
Encouragement from Other Levels of Government/ Professional Groups	Influenced decision	43.7%	50.5%	40.6%	47.5%	45.6%
	Did this activity	59.7%	65.7%	58.9%	61.5%	61.8%
Resources from Other Levels of Government	Influenced decision	27.0%	32.8%	18.6%	9.9%	26.5%
	Did this activity	42.2%	50.0%	44.4%	44.1%	46.0%
Participating Daily in Census-Related Activities	Influenced decision	58.5%	62.7%	58.3%	58.0%	60.2%
	Did this activity	67.9%	75.0%	69.1%	72.7%	71.1%
Information from the LUCA Website	Influenced decision	54.4%	57.5%	46.4%	61.4%	53.6%
	Did this activity	68.1%	77.1%	57.4%	69.9%	68.1%

Source: 2010 Census LUCA Participant Survey: Question 3.

*Influence on decision-making is assessed as a percentage of participants who did this activity.

The survey further asked the governments to report their participation in various census-related activities and whether these activities were helpful in their understanding of the three LUCA participation options. As presented in Table 4.1-10 below, the helpfulness of the communication activities were cited by the participants as follows:

- Advance mailing (80 percent),
- Registration mailing (79 percent),

- Promotional workshops (66 percent), and
- LUCA website (61 percent).

The ratings for other factors are:

- Attending a technical training workshop (71 percent),
- Contacting an RCC (51 percent), and
- Contacting the Technical Help Desk (50 percent).

Table 4.1-10 **Activities Affecting Understanding of the Three Participation Options by Entity Size**

Activity		Size (Number of HUs)						Total
		1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Reading the Advance Mailing	Yes, helped understanding*	80.4%	79.2%	79.2%	85.2%	91.4%	83.3%	80.1%
	Did this activity	92.1%	92.4%	93.3%	87.1%	91.3%	100.0%	92.3%
Attending a Promotional Workshop	Yes, helped understanding*	59.1%	65.3%	71.1%	74.9%	79.9%	80.0%	65.9%
	Did this activity	42.1%	54.3%	62.5%	64.8%	63.1%	71.4%	52.3%
Reading the Registration Mailing	Yes, helped understanding*	79.2%	76.6%	78.1%	85.3%	89.4%	83.3%	78.5%
	Did this activity	90.8%	91.4%	93.1%	93.0%	93.1%	100.0%	91.7%
Attending a Technical Training Workshop	Yes, helped understanding*	62.4%	72.8%	75.5%	76.3%	82.4%	75.0%	70.8%
	Did this activity	43.3%	54.4%	62.2%	65.5%	70.8%	57.1%	52.8%
Contacting RCCs	Yes, helped understanding*	46.9%	49.9%	53.6%	61.4%	56.6%	80.0%	50.5%
	Did this activity	41.8%	47.7%	52.9%	54.3%	55.6%	71.4%	47.2%
Contacting the Technical Help Desk	Yes, helped understanding*	48.3%	50.3%	52.3%	48.4%	50.0%	66.7%	50.2%
	Did this activity	41.7%	46.9%	54.9%	47.8%	47.0%	50.0%	46.9%
Reading LUCA Website	Yes, helped understanding*	56.3%	58.3%	64.7%	74.1%	79.4%	75.0%	60.6%
	Did this activity	53.4%	62.8%	74.7%	73.6%	81.5%	66.7%	62.9%

Source: 2010 Census LUCA Participant Survey: Question 4.

*Helpfulness is assessed as a percentage of participants who did this activity.

The reported helpfulness of the communication activities also varied by entity size. In general, the larger the government entity, the more likely that attending a promotional workshop and/or visiting the LUCA website assisted them in understanding the participation options. However, compared to larger entities, a higher percentage of smaller entities did not attend the promotional workshops. The lower percentages of small government entities affected by promotional workshops may be explained by such factors as small travel budgets for professional or government conferences where the workshops were held, or lack of opportunity for part-time civil servants in small entities to participate in the organizations that hold such conferences.

Table 4.1-11 below shows that nearly a quarter (24 percent) of the participants cited information in the advance mailing as most helpful for understanding the differences among the three LUCA participation options. It was the second most helpful information source after attendance at a technical training workshop, and followed by information in the registration mailing (15 percent), promotional workshops (14 percent), and the LUCA website (6 percent). Entity size did not play a significant role in determining participants selecting which of these activities was most helpful in understanding the participation options.

Table 4.1-11 Activities Most Helpful in Understanding the Differences Among the Three Participation Options by Entity Size

Most Helpful Activity	Size (Number of HUs)						Total*
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Reading the Advance Mailing	29.0%	23.2%	17.5%	20.0%	23.2%	33.3%	23.5%
Attending a Promotional Workshop	10.3%	16.0%	14.4%	18.9%	12.7%	0.0%	13.6%
Reading the Registration Mailing	17.9%	12.8%	14.2%	14.6%	15.5%	16.7%	15.0%
Attending a Technical Training Workshop	28.0%	31.7%	34.8%	29.2%	32.0%	33.3%	31.2%
Contacting RCCs	5.2%	5.9%	6.7%	6.5%	5.0%	0.0%	5.9%
Contacting the Technical Help Desk	4.8%	5.1%	4.4%	4.3%	1.1%	16.7%	4.7%
Reading LUCA Website	4.9%	5.2%	8.0%	6.5%	10.5%	0.0%	6.0%

Source: 2010 Census LUCA Participant Survey: Question 4.

*Helpfulness is assessed as a percentage of participants who did this activity.

Table 4.1-12 provides similar data on the next step after deciding to participate in LUCA: understanding the three participation options.

- About 92 percent of the respondents reported that they had read the advance mailing and the registration mailing,
- Only about two-thirds (63 percent) said in response to the question about influences on the option decision that they had read the LUCA website, and
- About half had attended a technical training workshop (53 percent), attended a promotional workshop (52 percent), or contacted an RCC (47 percent), or the Technical Help Desk (47 percent).

The activities that most frequently helped local LUCA coordinators understand the participation options were:

- Reading the advanced mailing (80 percent of those who did this), followed by
- Reading the registration mailing (79 percent),
- Attending the technical training workshops (71 percent), and
- Attending the promotional workshops (66 percent).

The other possible sources of information were less often reported as helpful in understanding the participation options: reading the LUCA website (61 percent), the RCCs (51 percent), and the Technical Help Desk (50 percent).

As with the decision to participate, tribal governments were more likely to find several of these resources more helpful in understanding the participation options. This was particularly true of the advance mailing, the technical workshops, the RCCs, the Technical Help Desk, and the LUCA website.

Table 4.1-12 Activities Helpful in Understanding Participation Options by Level of Government

Activity		Level of Government					Total
		County	Minor civil division	Place	State	Tribal Government	
Reading the Advance Mailing	Yes, helped understanding*	75.2%	78.9%	81.4%	71.4%	92.1%	80.1%
	Did this activity	89.8%	91.7%	93.1%	100.0%	82.6%	92.3%
Attending a Promotional Workshop	Yes, helped understanding*	72.8%	63.6%	64.9%	71.4%	60.6%	65.9%
	Did this activity	63.1%	49.6%	50.8%	77.8%	71.7%	52.3%
Reading the Registration Mailing	Yes, helped understanding*	71.8%	78.3%	79.8%	71.4%	86.5%	78.5%
	Did this activity	90.3%	91.5%	92.1%	100.0%	82.2%	91.7%
Attending a Technical Training Workshop	Yes, helped understanding*	73.0%	66.8%	71.3%	71.4%	90.9%	70.8%
	Did this activity	61.2%	50.6%	51.6%	77.8%	71.7%	52.8%
Contacting a RCCs	Yes, helped understanding*	53.0%	45.8%	51.3%	50.0%	63.0%	50.5%
	Did this activity	56.0%	45.3%	45.9%	44.4%	60.0%	47.2%
Contacting The Technical Help Desk	Yes, helped understanding*	49.3%	47.5%	51.1%	0.0%	71.4%	50.2%
	Did this activity	54.9%	44.5%	46.0%	28.6%	60.9%	46.9%
Reading LUCA Website	Yes, helped understanding*	65.4%	53.4%	61.5%	60.0%	75.8%	60.6%
	Did this activity	74.9%	55.9%	62.7%	71.4%	71.7%	62.9%

Source: 2010 Census LUCA Participant Survey: Question 4.

*Helpfulness is assessed as a percentage of participants who did this activity.

4.1.4 Awareness and Understanding of LUCA

Based on the results of the Census 2000 evaluations and surveys, the Census 2010 LUCA Program also offered multiple choices for entities to participate in the LUCA update. This section presents survey findings regarding:

- Participants’ evaluation of their understanding of the participation options,
- Awareness of limiting the initial LUCA review,
- Coordinating with other levels of government, and
- Their understanding of the feedback materials.

Understanding of Participation Options

One question the survey asked participants in the 2010 LUCA Program was whether they understood all three participation options at the time of registration. As shown in Table 4.1-13, over three-fourths (77 percent) reported that they understood all three participation options. In addition, larger entities were more likely than smaller entities to indicate that they understood all three participation options, suggesting that a different communication strategy with smaller government entities, especially those with fewer than 6,000 HUs, may be warranted.

Table 4.1-13 Understanding of Participation Options by Entity Size

Understanding of Participation Options	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Understood all three	70.7%	77.5%	83.3%	83.7%	88.7%	100.0%	76.8%
Did not understand all three	29.3%	22.5%	16.7%	16.3%	11.3%	0.0%	23.2%

Source: 2010 Census LUCA Participant Survey: Question 5.

Awareness of Limiting the Initial LUCA Review

Another survey question asked the 2010 LUCA participants whether they were aware that they could limit the initial LUCA review to selected areas within their jurisdiction. Slightly under half (46 percent) of the respondents indicated their awareness. Table 4.1-14 displays response distributions by entity size. Larger governments with more than 100,000 HUs were more aware that they could limit the initial LUCA review to selected areas within their jurisdictions; representatives of smaller governments were more likely to indicate that they were not aware that this option was available.

Table 4.1-14 Awareness of Limiting Initial LUCA Review by Entity Size

Awareness	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Yes, aware	46.0%	45.9%	42.4%	46.2%	58.8%	100.0%	45.5%
No, not aware	54.0%	54.1%	57.6%	53.8%	41.2%	0.0%	54.5%

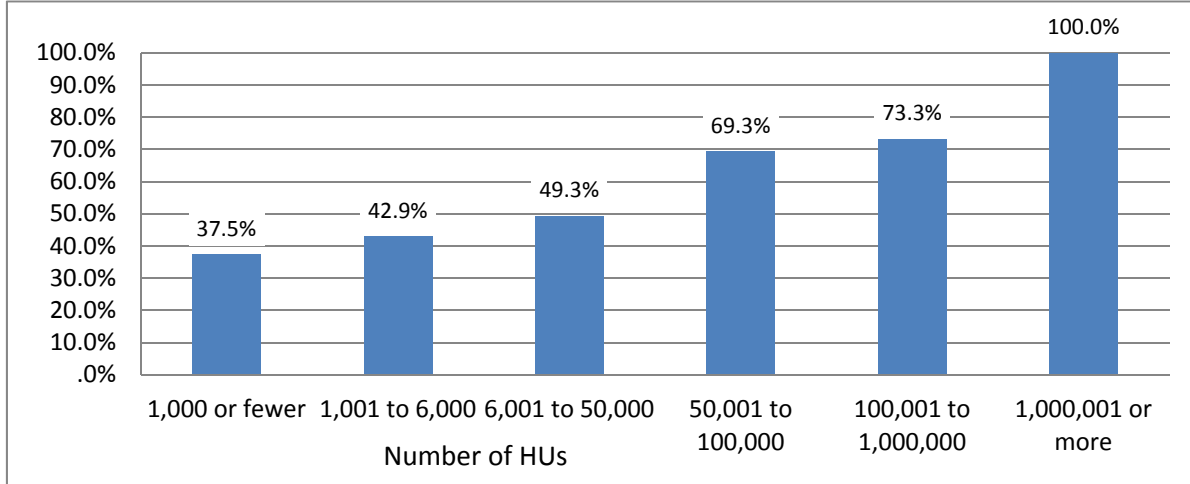
Source: 2010 Census LUCA Participant Survey: Question 9.

Awareness of Coordination with Other Levels of Government

The 2010 Census LUCA Participant Survey also asked participants whether they were aware that they could coordinate with other levels of government or regional agencies to review Census Bureau address materials and prepare a joint or regional LUCA submission. Overall, 44 percent

of the respondents reported awareness of this provision. As shown in Figure 4.1-1, larger entities were more likely than smaller entities to report awareness. Future LUCA Programs may benefit from increased promotion of this provision, especially to entities with fewer than 50,000 HUs.

Figure 4.1-1 Awareness of Coordination with Other Levels of Government by Entity Size



Source: 2010 Census LUCA Participant Survey: Question 10.

Understanding of the Feedback Materials

In addition to understanding participation options, the survey asked 2010 LUCA Program participants when they understood the feedback materials. As shown in Table 4.1-15, more than three-fifths (62 percent) indicated that they understood the feedback materials after reading the supporting documentation, 18 percent understood the feedback materials after getting help. However, approximately one-fifth of the entities (20 percent) reported that they never fully understood the feedback materials—another opportunity for potential improvement in communications efforts. There were relatively minor differences between entity sizes in understanding feedback materials after reading the supporting documentation. However, larger entities were more likely to have understood the feedback materials only after getting help; smaller entities were the group most likely not to have understood them at all.

Table 4.1-15 Understanding of the Feedback Materials by Entity Size

Time of Understanding	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
After reading the supporting documentation	63.2%	61.4%	61.1%	69.3%	61.3%	57.1%	62.2%
After getting help	13.0%	19.0%	23.5%	21.8%	25.2%	28.6%	18.1%
Never fully understood	23.8%	19.5%	15.5%	8.8%	13.5%	14.3%	19.7%

Source: 2010 Census LUCA Participant Survey: Question 24.

4.1.5 Appeal Time

The OMB allotted a maximum of 30 calendar days for 2010 LUCA Program participants to review the feedback materials and to file an address appeal. On average, survey respondents reported needing 39 days. As shown in Table 4.1-16, larger entities needed more time to review the feedback materials and to file an address appeal than smaller entities. The data suggest that the Census Bureau’s current 30 days were enough for 53 percent of the entities and over two-thirds of the entities with fewer than 6,000 HUs. It seems that 40 days were needed for entities with fewer than 6,000 HUs, and 50 days would better meet the needs of larger entities.

Table 4.1-16 Time to Review the Feedback Materials and File an Appeal by Entity Size

Time Needed	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Less than 30 days	18.5%	13.1%	9.4%	9.8%	1.0%	0.0%	13.7%
30 days	58.6%	56.0%	45.5%	38.0%	35.7%	33.3%	53.4%
31-59 days	5.0%	7.6%	9.9%	10.7%	8.2%	0.0%	7.3%
60 days	14.5%	18.0%	27.2%	28.2%	41.8%	16.7%	19.8%
More than 60 days	3.5%	5.4%	8.0%	13.2%	13.3%	50.0%	5.8%
Mean (Calendar days)	34.2	38.4	44.8	47.7	52.4	80.0*	39.1
Standard Deviation	20.5	25.1	30.1	27.1	23.2	52.1	25.6

Source: 2010 Census LUCA Participant Survey: Question 26.

* Only seven respondents fell into this category.

4.1.6 Continuous Address Updating

The 2010 Census LUCA Participant Survey asked about one specific prospective improvement: sharing address list information annually. If this eliminated the need for a complete address canvassing operation in 2019, the format and timing of LUCA would change.

As Table 4.1-17 shows, exactly two-thirds of governments who answered this question thought that a continuous or annual address updating process would “eliminate the need for a 100 percent address canvassing operation” in 2019. These represent about 60 percent of all survey participants (nearly 10 percent did not answer the question). Table 4.1-17 also has a breakdown by participation option. There is not a significant difference between options.

Table 4.1-17 Effect of Annual Address Updating by Participation Option

Effect of Annual Updating on 100 Percent Address Canvassing in 2019	Option 1 - Title 13 Full Address List Review	Option 2 - Title 13 Local Address List Submission	Option 3 - Non-Title 13 Local Address List Submission	Total
Would Eliminate Need	67.6%	64.1%	61.0%	66.7%
Would Not Eliminate Need	32.4%	35.9%	39.0%	33.3%

Source: 2010 Census LUCA Participant Survey: Question 34.

The effect of annual address updates varied slightly by size, as shown in Table 4.1-18. Although there was no consistent trend for the usefulness of annual updates, jurisdictions with more than

one million housing units were substantially less likely to think that annual updates would eliminate the need for complete address canvassing in 2019.

Table 4.1-18 Effect of Annual Address Updating by Entity Size

Effect of Annual Updating on 100 Percent Address Canvassing in 2019	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Would Eliminate Need	69.0%	65.0%	65.7%	67.2%	65.2%	57.1%	66.7%
Would Not Eliminate Need	31.0%	35.0%	34.3%	32.8%	34.8%	42.9%	33.3%

Source: 2010 Census LUCA Participant Survey: Question 34.

4.1.7 Reminder Letters

During the 120-day initial review period, the Census Bureau sent response reminder letters approximately 45 days and 90 days after the initial mailing of LUCA materials to entities. The 2010 Census LUCA Participant Survey asked participants to assess the number of reminder letters that would have best met their needs. As shown in Table 4.1-19, more than half the governments (53 percent) endorsed the existing practice of sending two reminder letters, 38 percent preferred one reminder letter. Only 10 percent identified a need for three reminder letters.

Table 4.1-19 also indicates that two reminder letters were especially preferred by larger governments with over 100,000 HUs, while one-fifth (20 percent) of the entities with 50,001 to 100,000 HUs preferred three reminder letters—about twice the rate for any other size category.

Table 4.1-19 Number of Reminder Letters Needed by Entity Size

Number of Reminder Letters Needed	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
One	42.5%	39.4%	30.6%	26.0%	26.0%	14.3%	37.7%
Two	48.6%	51.8%	57.8%	53.8%	63.4%	85.7%	52.5%
Three	9.0%	8.8%	11.6%	20.2%	10.7%	0.0%	9.8%

Source: 2010 Census LUCA Participant Survey: Question 14.

Table 4.1-20 below shows that state and tribal governments were more likely to prefer two reminder letters whereas governments of minor civil divisions and places tended to prefer only one.

Table 4.1-20 Number of Reminder Letters Needed by Level of Government

Number of Reminder Letters Needed	Level of Government of the Participant					Total
	County	Minor Civil Division	Place	State	Tribal Government	
One	27.7%	43.5%	38.0%	11.1%	20.0%	37.7%
Two	59.2%	48.6%	52.2%	88.9%	62.5%	52.5%
Three	13.1%	7.9%	9.8%	0.0%	17.5%	9.8%

Source: 2010 Census LUCA Participant Survey: Question 14.

4.2 Individualizing Program Participation

In designing the 2010 LUCA Program, GEO built in five different ways by which LUCA could be adapted to the needs and circumstances of participating government entities. These provisions included:

- Three different participation options, each with different kinds of address list materials, maps, and, review possibilities;
- Security requirements for two of the participation options, with one participation option having no security requirements;
- The possibility of limiting the review to selected areas within a jurisdiction;
- The possibility of coordinating reviews across governments through a regional agency, or between different levels of government; and
- Coordination of the LUCA review with another GEO program, the Boundary and Annexation Survey (BAS).

This section examines how well local LUCA coordinators or other survey respondents thought that these provisions served their needs or facilitated their participation in LUCA.

4.2.1 Participation Options

The 2010 Census LUCA program offered three participation options. The survey asked participants whether they understood all three options at the time of their registration and to what extent the option they selected met their needs.

Table 4.1-10 in section 4.1.4 demonstrates how 2010 LUCA participants' understanding of participation options varied by entity size. As shown in Table 4.2-1 below, entities that chose Option 1 (Title 13 full address list review) had a slightly better understanding of the three options than those who chose Option 2 or Option 3.

Table 4.2-1 Understanding of LUCA Participation Options by Option Chosen

Understanding of Participation Options Registration	Option Chosen			Total
	Option 1 - Title 13 Full Address List Review	Option 2 - Title 13 Local Address List Submission	Option 3 - Non-Title 13 Local Address List Submission	
Yes, we understood all three.	77.7%	73.6%	72.2%	76.8%
No, we did not understand all three.	22.3%	26.4%	27.8%	23.2%

Source: 2010 Census LUCA Participant Survey: Question 5.

As indicated in Table 4.2-2 below, 71 percent of all survey participants responded that the participation option they selected met their needs to a “good” or “great” extent.

Table 4.2-2 Extent to Which Participation Options Met Needs

Extent to Which Participation Options Met Needs	Percentage
To a great extent	24.5%
To a good extent	46.4%
To a moderate extent	18.8%
To minimal extent	5.3%
Not at all	5.0%
Total	100.0%

Source: 2010 Census LUCA Participant Survey: Question 6.

As shown in Table 4.2-3 below, more of the larger governments than smaller governments indicated that the option they chose met their needs to a good or great extent.

Table 4.2-3 Extent to Which Participation Options Met Needs by Entity Size

Extent to Which Participation Options Met Needs	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
To a great extent	19.4%	23.8%	30.5%	36.0%	42.7%	28.6%	24.5%
To a good extent	47.2%	48.5%	43.5%	41.5%	36.6%	57.1%	46.4%
To a moderate extent	20.5%	18.2%	17.9%	14.2%	15.3%	14.3%	18.8%
To minimal extent	6.9%	4.9%	3.9%	2.2%	1.9%	0.0%	5.3%
Not at all	6.0%	4.7%	4.1%	6.2%	3.4%	0.0%	5.0%

Source: 2010 Census LUCA Participant Survey: Question 6.

Table 4.2-4 below illustrates the extent to which the option the participants selected met their needs by option type. Entities that chose Option 1 (Title 13 full address list review) indicated that the option met their needs to a greater extent than those who selected Option 2 (Title 13 local address list submission), who in turn were more positive about their option than were those who chose Option 3 (Non-Title 13 local address list submission).

Table 4.2-4 Extent to Which Participation Options Met Needs by Option Type

Extent to Which Participation Options Met Needs	Option Chosen			Total
	Option 1 - Title 13 Full Address List Review	Option 2 - Title 13 Local Address List Submission	Option 3 - Non-Title 13 Local Address List Submission	
To a great extent	26.6%	16.8%	13.5%	24.5%
To a good extent	46.8%	46.8%	41.3%	46.4%
To a moderate extent	17.4%	24.5%	25.0%	18.8%
To minimal extent	4.8%	4.6%	11.7%	5.3%
Not at all	4.3%	7.3%	8.5%	5.0%

Source: 2010 Census LUCA Participant Survey: Question 6.

4.2.2 Title 13 Requirements

The survey also dealt with the confidentiality requirements for Title 13 in relation to the lists of specific addresses supplied for review. One question asked participants if they had to take any from a list of extra measures to comply with these requirements to protect the Census Bureau’s address list.

Measures Taken to Comply with Confidentiality Requirements by Entity Size

Table 4.2-5

Confidentiality Measure	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Additional computer hardware	3.8%	4.4%	10.4%	12.2%	17.2%	33.3%	7.5%
Additional computer software	5.8%	4.3%	6.4%	11.3%	10.8%	16.7%	6.0%
Outside assistance	12.7%	12.2%	12.9%	16.5%	8.9%	33.3%	12.7%
Extra stand-alone computers and/or servers	5.8%	8.8%	14.4%	19.3%	20.5%	16.7%	11.2%
Modification of existing software by other staff or consultants	2.8%	5.5%	10.3%	13.0%	12.1%	57.1%	7.6%

Source: 2010 Census LUCA Participant Survey: Question 27.

As shown in Table 4.2-5:

- 13 percent of the participants had to obtain outside assistance,
- 11 percent procured extra stand-alone computers and/or servers to ensure that Title 13 data were kept separate from their other data,
- Eight percent brought in other staff or consultants at a cost to modify existing hardware and/or software,
- Eight percent obtained additional computer hardware, and
- Six percent obtained additional computer software to protect the Census Bureau’s address list.

As indicated in Table 4.2-6, among the participants who answered this survey question:

- 74 percent indicated that they did not take any of the five extra measures to comply with the Title 13 confidentiality requirements,
- 16 percent undertook one measure,
- Six percent performed two measures,
- Three percent took three measures, and
- Two percent used four or five extra measures to comply with the confidentiality requirements.

Entities with more than one million HUs were more likely than entities of other sizes to take one or more extra measures to comply with Title 13 requirements. The smaller the entity, the fewer measures it took.

Table 4.2-6 **Number of Measures Taken to Comply with Confidentiality Requirements by Entity Size**

Number of Confidentiality Measures Taken	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
0	81.3%	78.1%	69.4%	59.9%	65.1%	33.3%	74.0%
1	13.1%	15.9%	17.9%	22.9%	17.5%	16.7%	16.4%
2	3.4%	3.5%	7.4%	11.0%	9.0%	16.7%	5.5%
3	1.1%	1.8%	3.5%	2.6%	4.2%	33.3%	2.6%
4	0.4%	0.4%	1.0%	1.8%	3.3%	0.0%	0.8%
5	0.7%	0.4%	0.8%	1.8%	0.9%	0.0%	0.7%

Source: 2010 Census LUCA Participant Survey: Question 27.

As demonstrated in Table 4.2-7, the small number of responding states had to obtain outside assistance and make costly hardware or software modifications more often than other levels of government did. However, none of these states had to obtain extra stand-alone computers.

Table 4.2-7 **Measures Taken to Comply with Confidentiality Requirements by Level of Government**

Confidentiality Measure	Level of Government					Total
	County	Minor Civil Division	Place	State	Tribal Government	
Additional computer hardware	10.9%	5.3%	6.7%	28.6%	44.4%	7.5%
Additional computer software	10.1%	6.1%	4.4%	28.6%	29.2%	6.0%
Outside assistance	15.0%	12.5%	11.9%	28.6%	12.0%	12.7%
Extra stand-alone computers and/or servers	16.0%	9.8%	10.0%	0.0%	25.9%	11.2%
Modification of existing software by other staff or consultants	9.4%	8.1%	6.5%	44.4%	32.0%	7.6%

Source: 2010 Census LUCA Participant Survey: Question 27.

Table 4.2-8 shows that the total number of measures taken to comply with the Title 13 requirements varied by the level of government. Among the entities that replied to this question, minor civil divisions were more likely than other levels of government not to take any extra measures to comply with the confidentiality requirements. On average, minor civil divisions and places took the fewest measures. Tribal governments were more likely than other levels of government to take four or five of the measures to comply with the Title 13 requirements.

Table 4.2-8 Number of Measures Taken to Comply with Confidentiality Requirements by Level of Government

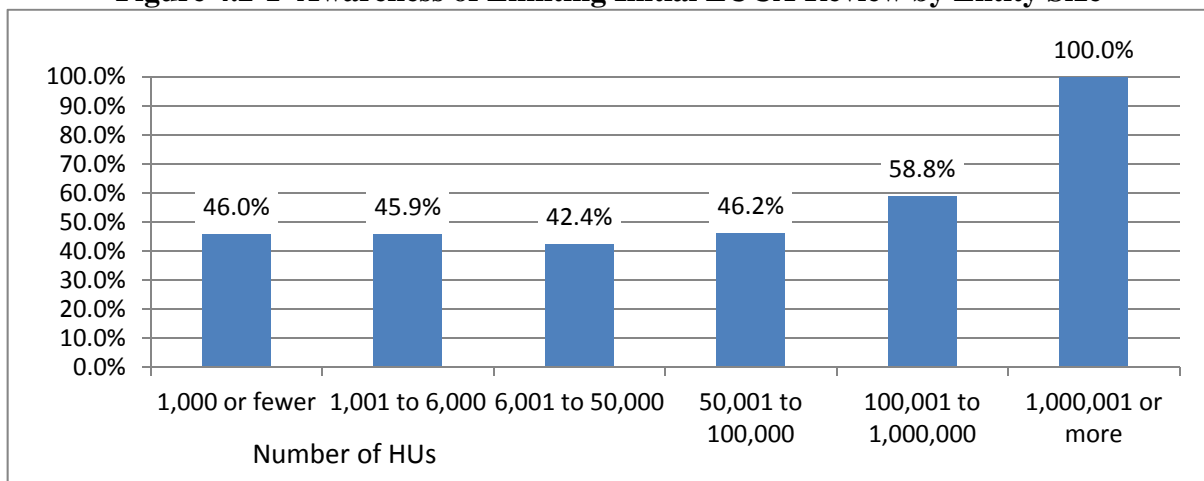
Number of Measures Taken	Level of Government					Total
	County	Minor Civil Division	Place	State	Tribal Government	
0	68.0%	77.3%	75.3%	42.9%	60.0%	74.0%
1	17.3%	14.9%	16.6%	28.6%	0.0%	16.4%
2	7.2%	4.1%	5.2%	0.0%	20.0%	5.5%
3	4.3%	2.4%	2.0%	28.6%	0.0%	2.6%
4	1.5%	0.5%	0.6%	0.0%	8.0%	0.8%
5	1.8%	0.8%	0.2%	0.0%	12.0%	0.7%

Source: 2010 Census LUCA Participant Survey: Question 27.

4.2.3 Limiting Review Area

The 2010 Census LUCA Participant Survey asked whether governments were aware that they could limit their LUCA review to selected areas within their jurisdiction. Figure 4.2-1 shows that entities with 6,001 to 50,000 HUs were least likely to be aware of this while entities with more than 100,000 HUs tended to have a much higher level of awareness than smaller entities.

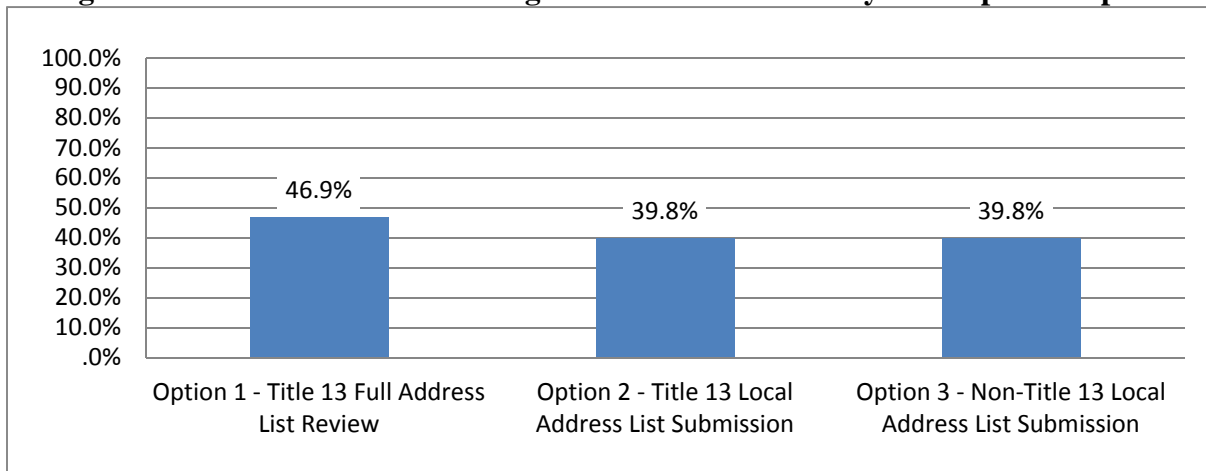
Figure 4.2-1 Awareness of Limiting Initial LUCA Review by Entity Size



Source: 2010 Census LUCA Participant Survey: Question 9.

As demonstrated in Figure 4.2-2 below, entities that chose Option 1 (Title 13 full address list review) were more aware that they could limit the initial LUCA review to selected areas with their jurisdiction than were entities that chose Options 2 or Option 3.

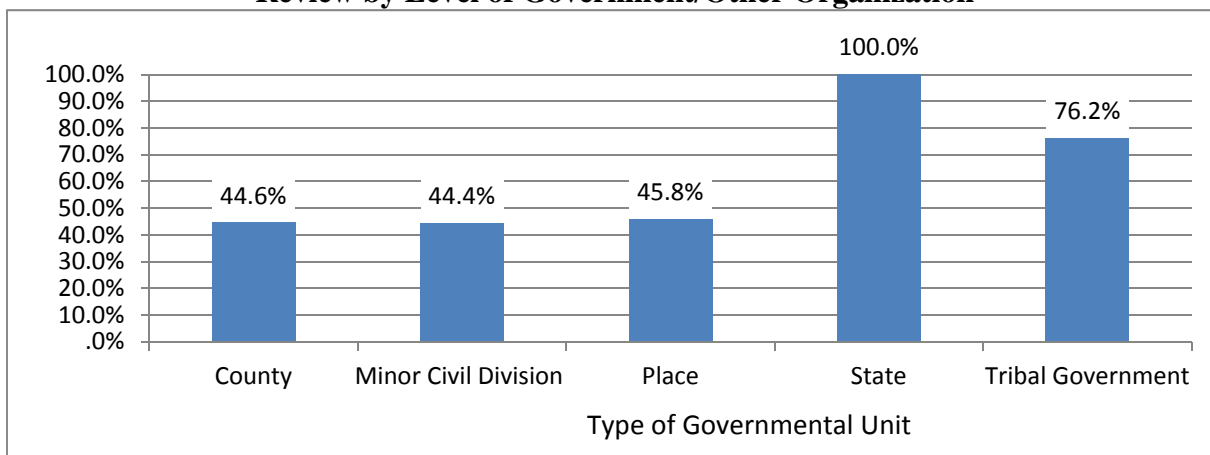
Figure 4.2-2 Awareness of Limiting Initial LUCA Review by Participation Option



Source: 2010 Census LUCA Participant Survey: Question 9.

As shown in Figure 4.2-3, state and tribal governments were more aware that the review could be limited than other levels of government.

Figure 4.2-3 Awareness of Limiting Initial LUCA Review by Level of Government/Other Organization

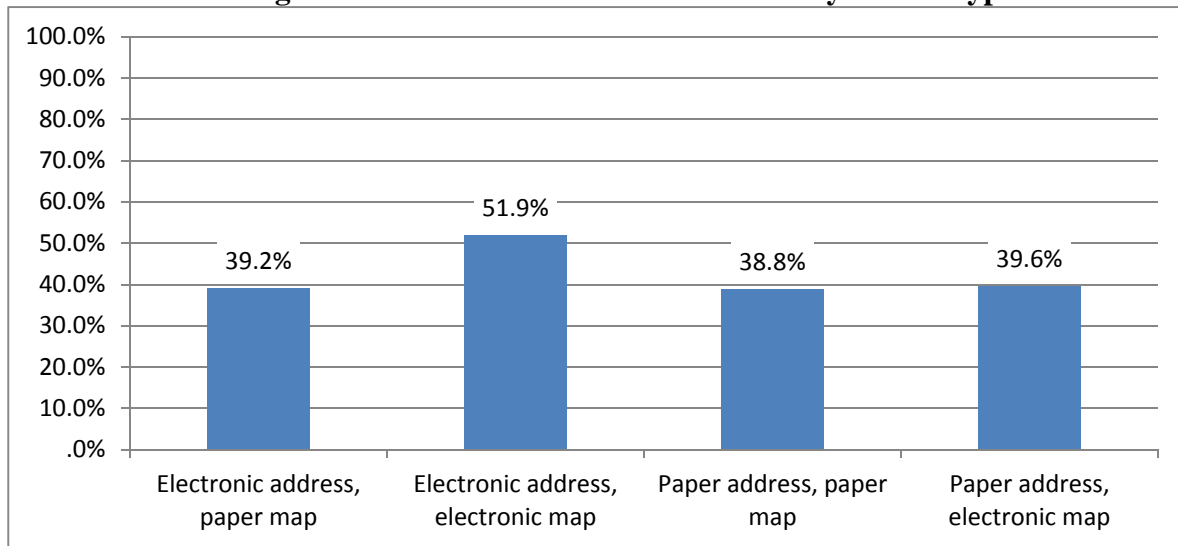


Source: 2010 Census LUCA Participant Survey: Question 9.

4.2.4 Assistance from Other Governments/Organizations

Several survey questions asked respondents about their awareness of, and experience with, coordination with other levels of government or regional agencies to review Census Bureau address materials and prepare a joint or regional LUCA submission. Nearly half (44 percent) indicated that they were aware that the review could be coordinated. As indicated in Figure 4.2-4, entities who received both electronic address lists and maps were more likely to be aware that they could coordinate with other levels of government or regional agencies.

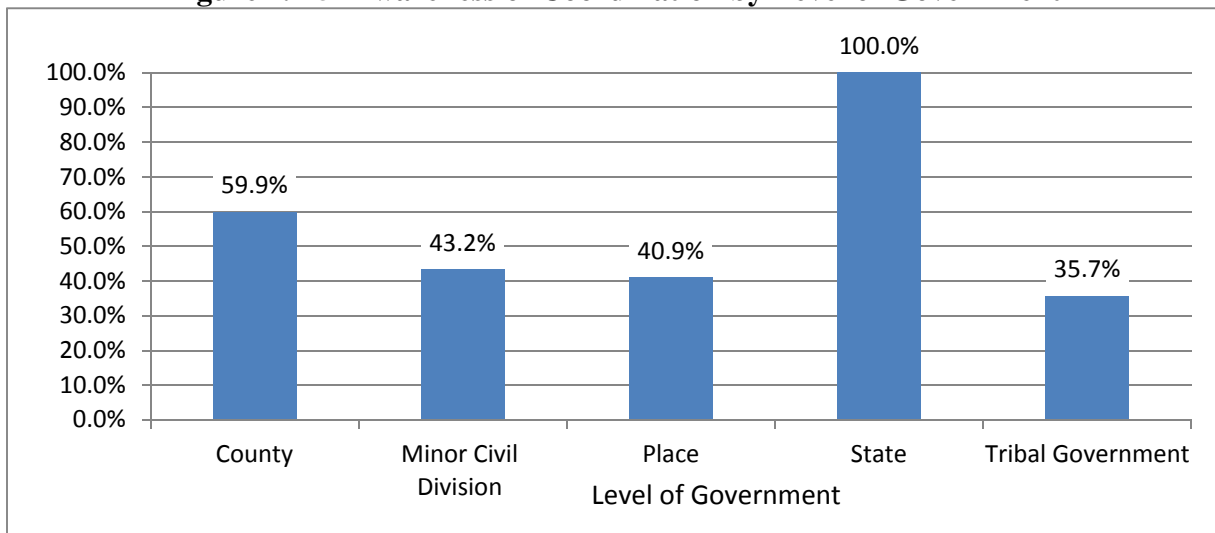
Figure 4.2-4 Awareness of Coordination by Media Type



Source: 2010 Census LUCA Participant Survey: Question 10.

Figure 4.2-5 shows that the awareness of coordination varied by level of government. Tribal governments were less likely to be aware of this opportunity than other levels of government. All of the state LUCA representatives responding to the survey were aware of the coordination.

Figure 4.2-5 Awareness of Coordination by Level of Government



Source: 2010 Census LUCA Participant Survey: Question 10.

Table 4.2-9 shows the proportions of survey participants who coordinated with other levels of government. Of the respondents who were aware of the collaboration option,

- 17 percent indicated that another level reviewed for them,
- 13 percent reported that they reviewed for other levels, and
- 70 percent responded that they did not coordinate with other levels or regional agencies.

Entities with more than 50,000 HUs were more likely than smaller entities to have coordinated with another level of government. Below 50,000 HUs, the smaller the entity, the less likely it was to have participated in coordination, mostly because the smaller the entity, the less likely it was to be in a position to review addresses for other governments.

Table 4.2-9 Coordination with Other Levels of Government/Organization by Entity Size

Coordination with Another Level of Government	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Yes, another level reviewed for us	15.0%	18.0%	19.1%	7.3%	13.7%	14.3%	16.7%
Yes, we reviewed for other levels	4.2%	6.8%	21.0%	47.4%	44.2%	28.6%	13.0%
No, we did not coordinate	80.8%	75.2%	60.0%	45.3%	42.1%	57.1%	70.3%

Source: 2010 Census LUCA Participant Survey: Question 11.

Table 4.2-10 demonstrates that governments aware of the collaboration option who actually did collaborate varied by level of government. Tribal governments were least likely to have coordinated with other levels of government to review Census Bureau address materials and prepare a joint or regional LUCA submission. Places and minor civil divisions rarely (less than seven percent) reviewed for other entities.

Table 4.2-10 Coordination with Other Levels of Government/Organization by Level of Government

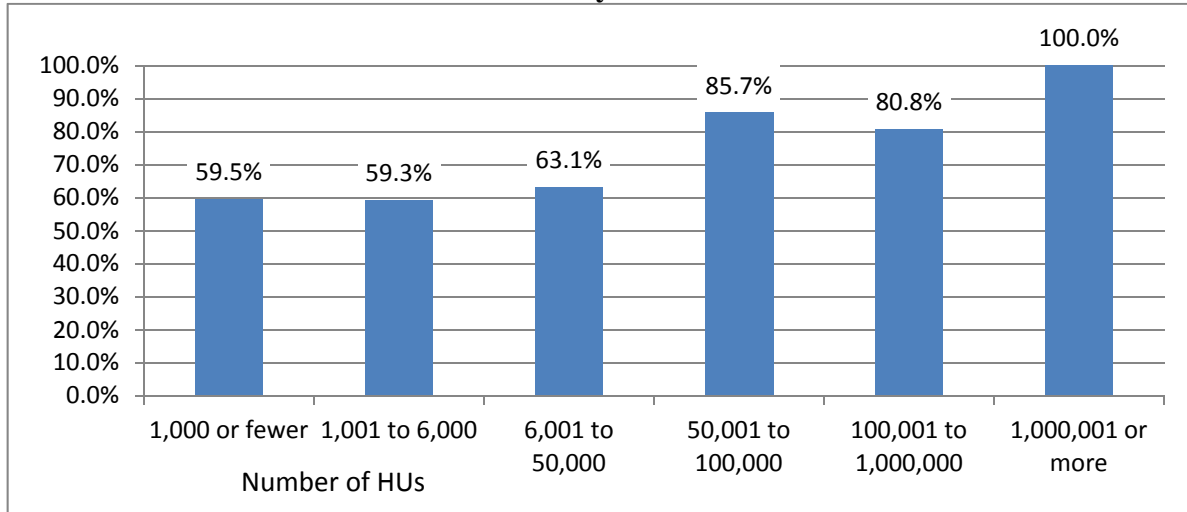
Coordination with Another Level of Government	Level of Government					Total
	County	Minor Civil Division	Place	State	Tribal Government	
Yes, another level reviewed for us	16.4%	20.1%	15.6%	22.2%	20.0%	16.7%
Yes, we reviewed for other levels	40.9%	6.4%	6.8%	22.2%	0.0%	13.0%
No, we did not coordinate	42.7%	73.5%	77.6%	55.6%	80.0%	70.3%

Source: 2010 Census LUCA Participant Survey: Question 11.

In general, of the participants who were aware of the collaboration option and coordinated with other governments or outside organizations, 62 percent said they would have participated anyway, even without this assistance, and 38 percent said they would not have participated without it.

Figure 4.2-6 and Figure 4.2-7 refer to governments that were aware of the coordination possibility and reported that they actually did coordinate their LUCA participation with other levels. Figure 4.2-6 shows that smaller coordinating governments with fewer than 50,000 HUs were less likely to participate without this assistance.

Figure 4.2-6 Entities That Would Have Participated in LUCA Without Assistance by Entity Size



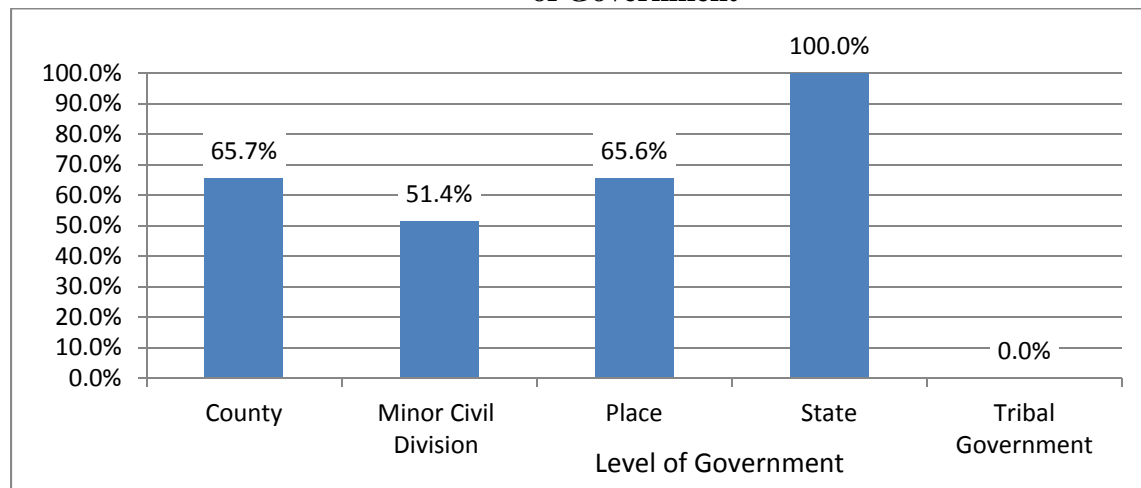
Source: 2010 Census LUCA Participant Survey: Question 12.

As shown in Figure 4.2-7, the proportion of entities that were aware of the collaboration option and coordinated with other governments that would have participated without this assistance varied by level of government.

None of the tribal governments that coordinated with other governments would have participated without it; all needed the assistance they received.

Only slightly more than half (51 percent) of the minor civil divisions that coordinated with other governments would have participated without this help.

Figure 4.2-7 Entities That Would Have Participated in LUCA Without Assistance by Level of Government



Source: 2010 Census LUCA Participant Survey: Question 12.

Of the participants who coordinated with another level of government, 94 percent were satisfied with the review by the other level. As shown in Table 4.2-11, the satisfaction with the review by another level of government varied only slightly with entity size and level of government. Entities with 50,001 to 100,000 HUs and minor civil divisions were least likely to be satisfied with the review by the other levels of government.

Satisfaction with the Review by Entity Size and Level of Government

Table 4.2-11

Entity Size	Percent Satisfied with Review	Level of Government	Percent Satisfied with Review
1,000 or Fewer	91.3%	County	95.1%
1,001 to 6,000	95.9%	Minor Civil Division	90.6%
6,001 to 50,000	95.0%	Place	95.8%
50,001 to 100,000	85.7%	State	100.0%
100,001 to 1,000,000	100.0%	Tribal Government	100.0%
1,000,001 or More	100.0%		
Total	94.2%	Total	94.4%

Source: 2010 Census LUCA Participant Survey: Question 13.

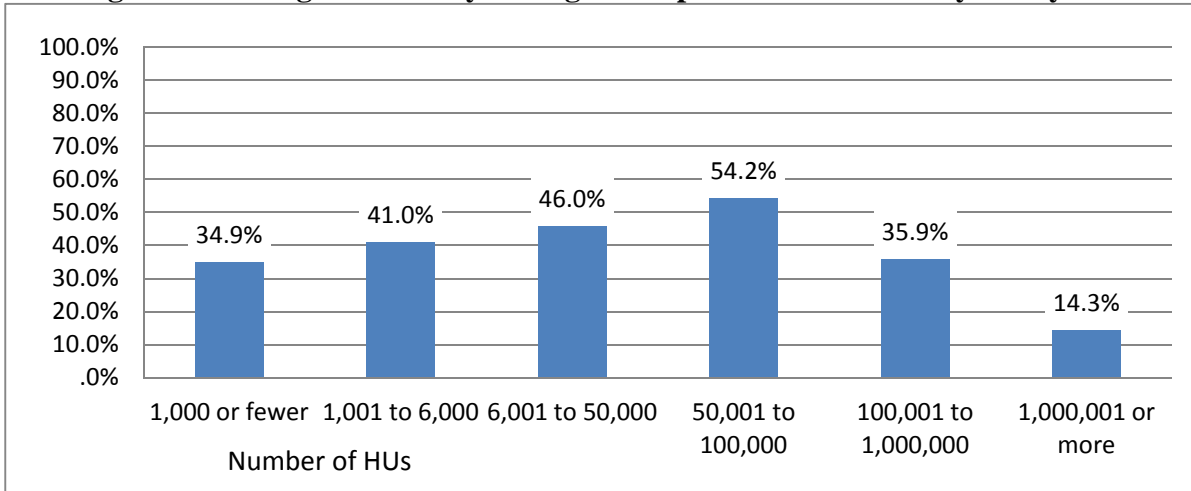
4.2.5 Combining Programs (BAS)

The Census Bureau structured the 2010 Census LUCA Program so that a governmental unit could submit changes or updates to the legal boundary for its jurisdiction as part of LUCA. The survey participants were asked about the advantages and disadvantages of combining the BAS and LUCA Programs.

Legal Boundary Changes or Updates Submission

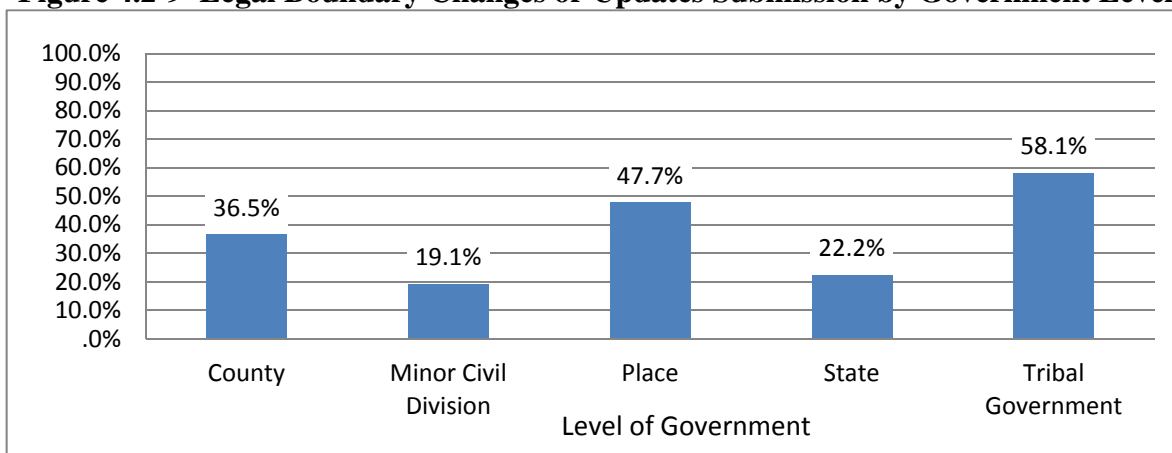
Two-fifths (40 percent) of the entities indicated that they submitted legal boundary changes or updates. Figure 4.2-8 shows that submission of boundary changes increased with increasing entity size up to 50,001 to 100,000 housing units, and then dropped off, with the largest entities submitting boundary changes least frequently. Figure 4.2-9 shows that tribal governments, places, and counties had higher submission rates for legal boundary changes or updates than other levels of government. And finally, Figure 4.2-10 shows that participants who used electronic address and electronic map media had the highest submission of legal boundary changes or updates.

Figure 4.2-8 Legal Boundary Changes or Updates Submission by Entity Size



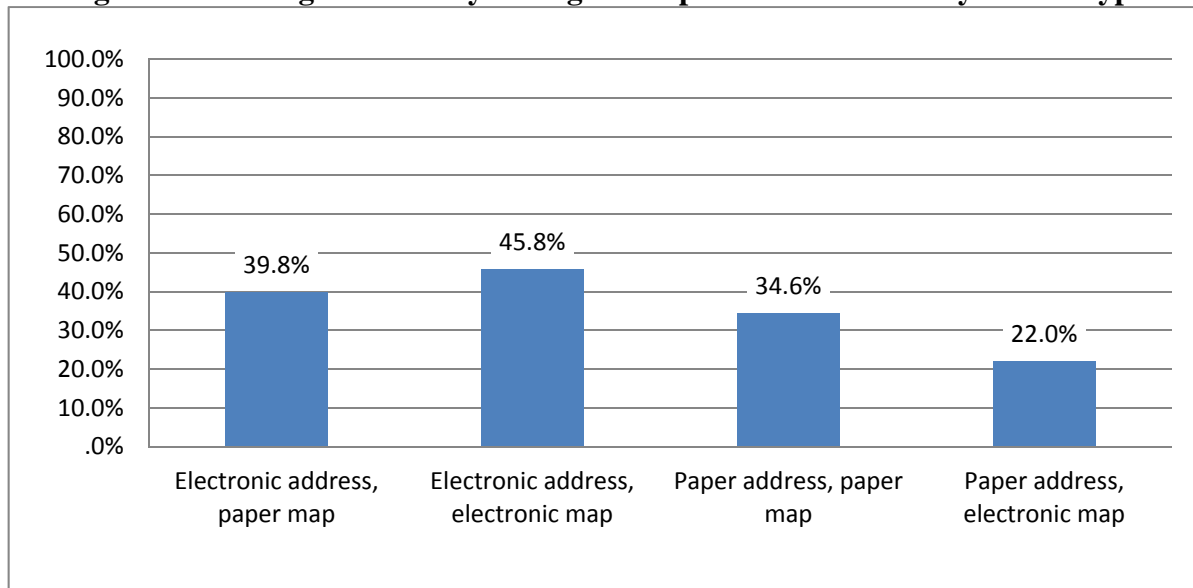
Source: 2010 Census LUCA Participant Survey: Question 17.

Figure 4.2-9 Legal Boundary Changes or Updates Submission by Government Level



Source: 2010 Census LUCA Participant Survey: Question 17.

Figure 4.2-10 Legal Boundary Changes or Updates Submission by Media Type



Source: 2010 Census LUCA Participant Survey: Question 17.

Advantages of Collaboration with BAS Contact

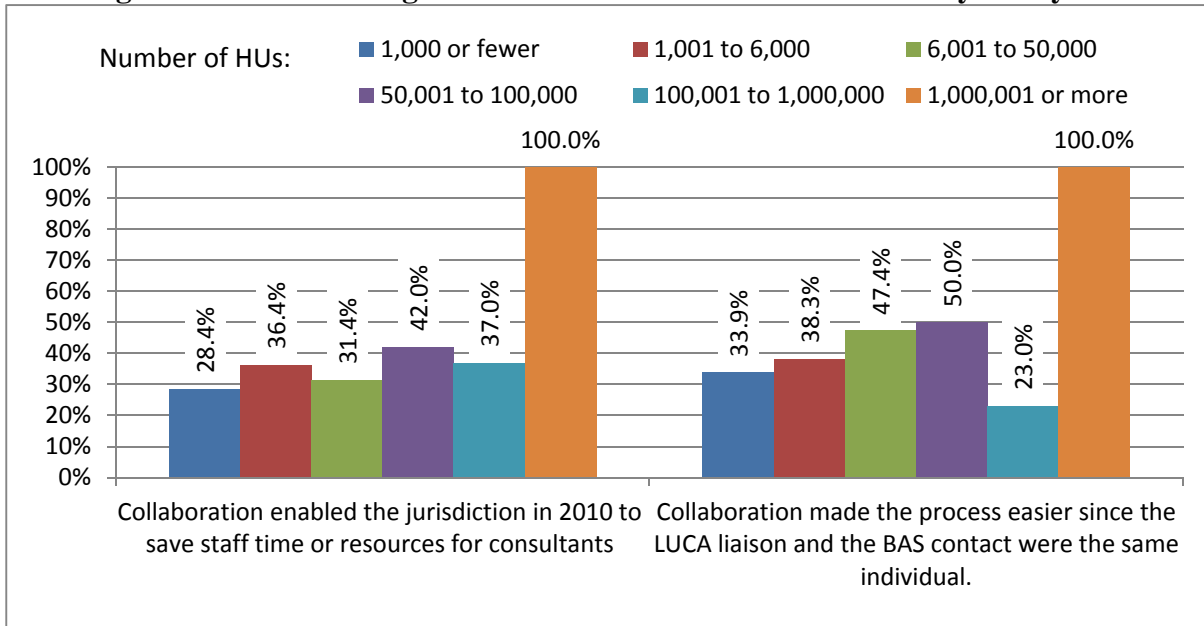
In the survey, 33 percent of the respondents who submitted boundary changes indicated that the collaboration with the BAS contact enabled them to save staff time or resources for consultants by preparing and returning one submission for two programs; 39 percent reported that the collaboration made the process easier since the LUCA liaison and the BAS contact were the same individual; and 3 percent replied that the collaboration helped in another way.

Survey participants who said that collaboration helped in some other way were asked to describe how it helped. Two percent of the participants provided responses, but most of them were not directly related to this question. The relevant ones described the following types of collaborative assistance:

- LUCA and the BAS contacts assisted each other technically,
- The collaboration improved data accuracy by ensuring the accuracy and consistency of both documents or submissions, and
- The collaboration avoided duplication of processing efforts and confusion about other units.

As shown in Figure 4.2-11, the largest entities, with more than one million HUs, all benefited from the collaboration with the BAS contact. Generally, the smaller the entity, the less likely it was to think that collaboration had saved time or resources for consultants or had made the boundary change submission process easier, although the differences were small. The one exception was entities with 100,001 to 1,000,000 HUs, which were the least likely to think that collaboration had made the process easier. These governments could include small states and large counties that collaborated with the many minor civil divisions and places within their boundaries.

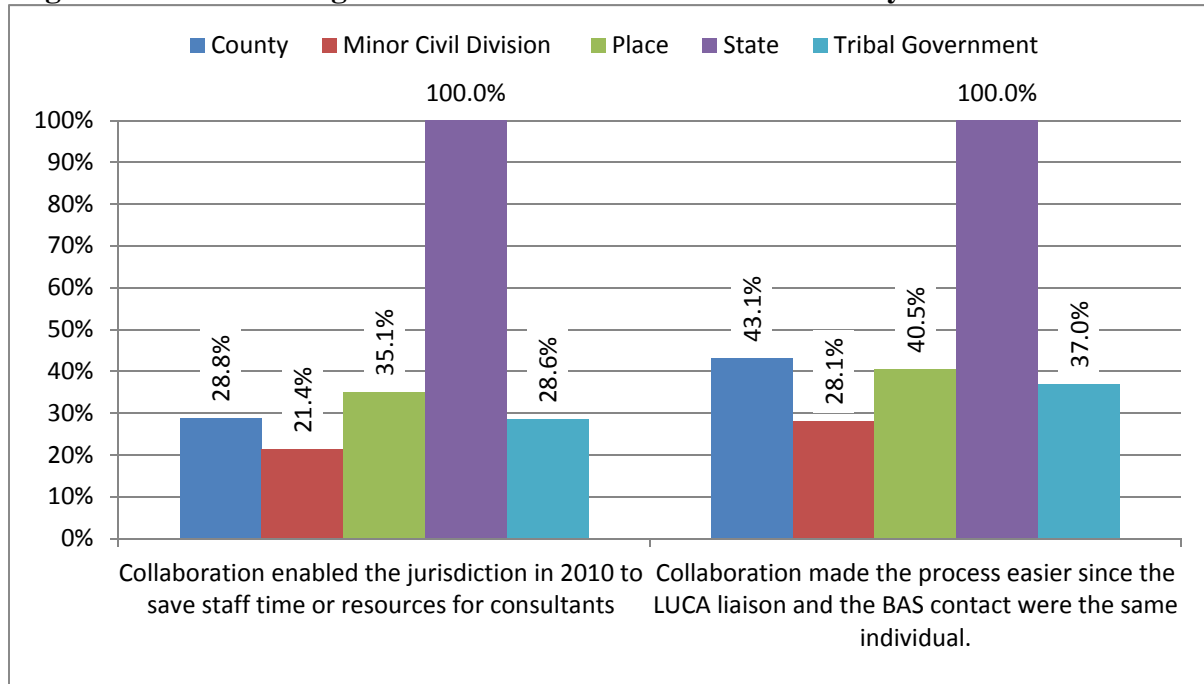
Figure 4.2-11 Advantages of Collaboration with BAS Contact by Entity Size



Source: 2010 Census LUCA Participant Survey: Question 18.

Figure 4.2-12 indicates that states benefited from the collaboration with BAS contact more than other levels of government.

Figure 4.2-12 Advantages of Collaboration with BAS Contact by Level of Government



Source: 2010 Census LUCA Participant Survey: Question 18.

Disadvantages of Collaboration with BAS Contact

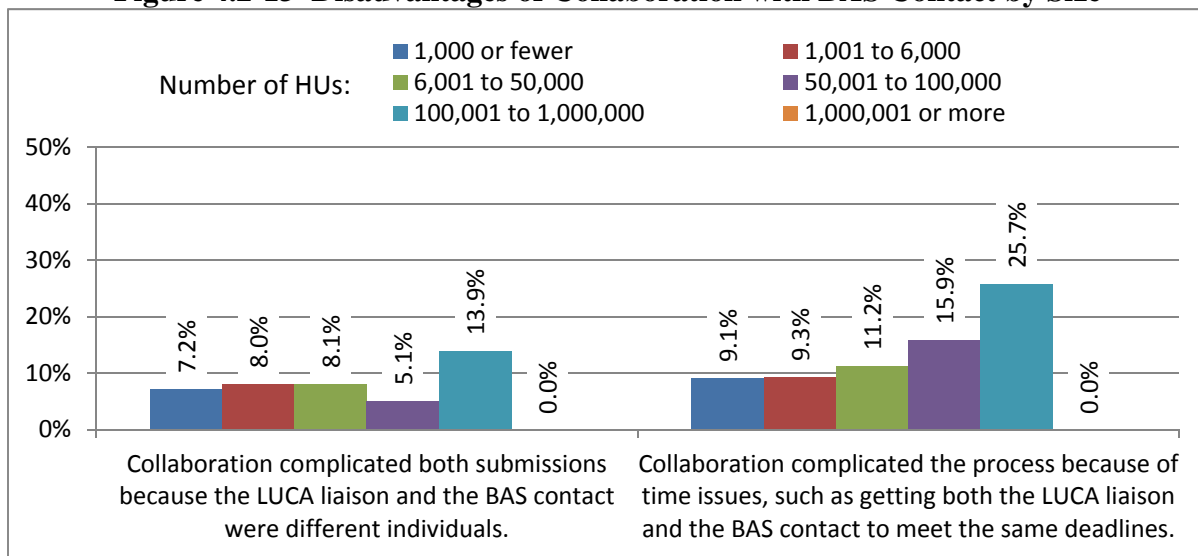
Respondents who had experience with the boundary change submission process could indicate both advantages and disadvantages. For eight percent of the entities, collaboration with the BAS contact complicated both submissions because the LUCA liaison and the BAS contact were different individuals; 10 percent reported that the collaboration complicated the process because of time issues, such as getting both the LUCA liaison and the BAS contacts to meet the same deadlines; and five percent responded that the collaboration caused another problem.

The survey asked participants who said that collaboration caused an “other” problem to describe that problem. Three percent of the entities provided responses, but only a quarter of them actually described LUCA-BAS collaboration problems. These included the following:

- The collaboration led to confusion about the administrative processes,
- The collaboration discouraged the LUCA staff because the changes they made were not incorporated by staff of the collaborating program,
- The collaboration caused duplication of processing work and inconsistencies in work between collaborators,
- The lack of consistency and/or accuracy of source materials made the collaboration challenging,
- The collaboration increased the workload and consumed time, and
- The collaboration led to lack of control of materials because of excessive duplications.

As shown in Figure 4.2-13, the collaboration was most likely to complicate both submissions and the process for entities with 100,001 to 1,000,000 HUs, and in general, to cause fewer complications the smaller the entity was. However, the largest entities, with more than one million HUs, reported no complications in either category.

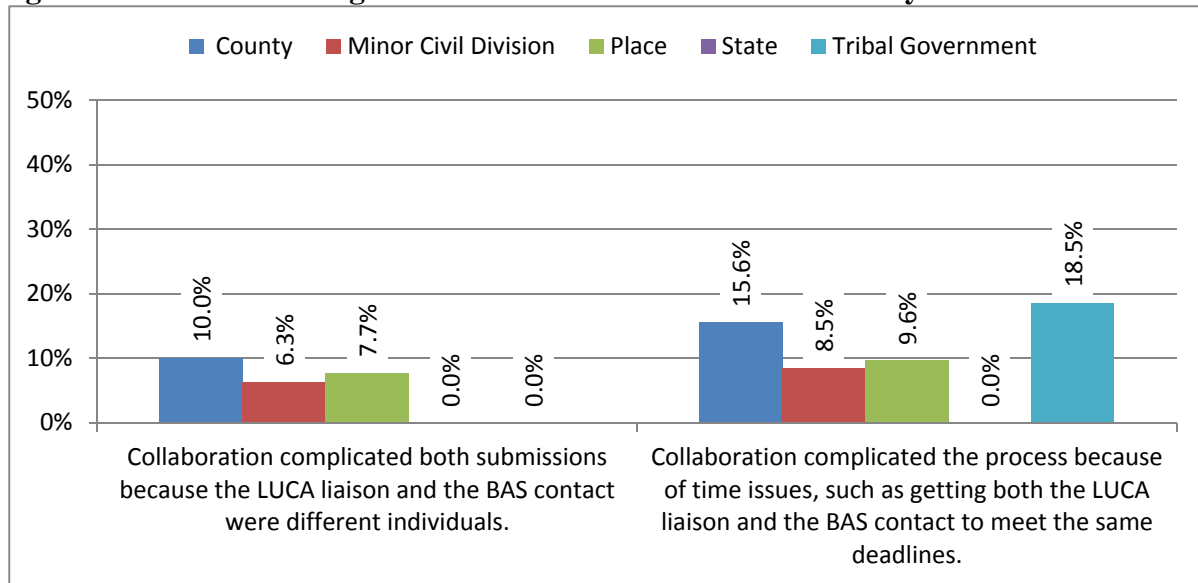
Figure 4.2-13 Disadvantages of Collaboration with BAS Contact by Size



Source: 2010 Census LUCA Participant Survey: Question 18.

As demonstrated in Figure 4.2-14, tribal governments were more likely to report that collaboration complicated the process because of time issues, such as getting both the LUCA liaison and the BAS contact to meet the same deadlines more than other levels of government did.

Figure 4.2-14 Disadvantages of Collaboration with BAS Contact by Level of Government



Source: 2010 Census LUCA Participant Survey: Question 18.

4.3 Tools

Tools and materials for state, tribal, and local government entities to use for their review of Census Bureau addresses within their jurisdictions included the following:

- Initial review materials (Address List, Address Count List, paper maps or electronic shapefiles);
- Materials for the feedback phase (Full Address List, Full Address Count List, Detailed Feedback Address Count Challenge List, Feedback Address Update Summary Report, and possibly revised maps or shapefiles); and
- The MAF/TIGER Partnership Software (MTPS) and instructions.

The questionnaire asked about usage and usefulness of these tools and materials, and about instructions, training, and other support for them. To gain an understanding about how these materials interacted with resources that local governments already had in hand, the survey also included questions about software and format preferences and about what geographic software governments used outside of LUCA.

4.3.1 Initial Review Materials

The survey attempted to measure the value of the initial review materials sent to participants by asking whether the materials were easy to understand and useful. These materials included the Address List, the Address Count List, and paper maps or electronic shapefiles.

As shown in Table 4.3-1, approximately 80 percent of the participants reported that the formats of the Address List, the Address Count List, and maps/shapefiles were easy to understand; and that the content of these three materials was easy to understand. Over 80 percent indicated that these materials were useful. Compared with the Address List, fewer participants indicated that the format and content of the Address Count List were easy to understand and that the material was useful.

Table 4.3-1 Usefulness and Ease of Understanding of Address List, Address Count List and Maps/Shapefiles by Entity Size

Understandability or Usefulness		Size (Number of HUs)						Total
		1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Address List	Format easy to understand?	86.8%	84.7%	80.2%	90.3%	86.3%	71.4%	84.5%
	Content easy to understand?	86.1%	86.0%	84.3%	88.9%	88.6%	71.4%	85.7%
	Material useful?	87.6%	88.9%	89.4%	88.0%	92.0%	85.7%	88.6%
Address Count List	Format easy to understand?	80.5%	78.3%	75.6%	82.3%	83.3%	85.7%	78.7%
	Content easy to understand?	79.3%	79.5%	78.3%	81.3%	79.7%	85.7%	79.2%
	Material useful?	79.5%	80.1%	79.9%	77.7%	78.9%	71.4%	79.7%
Maps/Shapefiles	Format easy to understand?	82.3%	78.1%	79.1%	85.1%	86.0%	71.4%	80.2%
	Content easy to understand?	80.3%	78.4%	79.3%	87.0%	83.2%	71.4%	79.6%
	Material useful?	82.3%	82.4%	83.6%	87.7%	81.1%	71.4%	82.7%

Source: 2010 Census LUCA Participant Survey: Question 20.

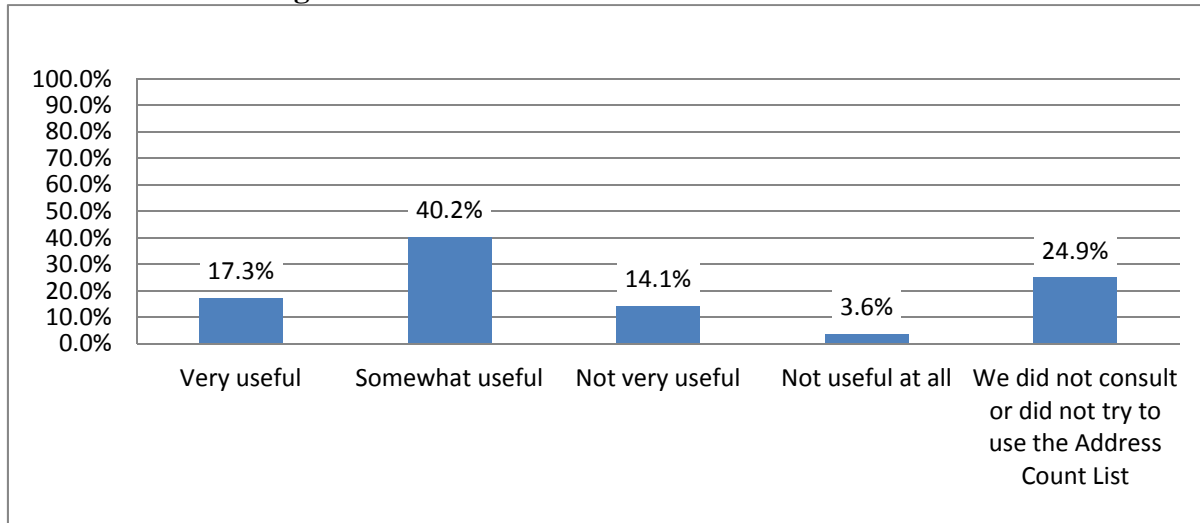
Table 4.3-1 also indicates that the ease of understanding and usefulness of the Address List, the Address Count List, and maps/shapefiles varied by entity size. Regarding the Address List:

- Entities with 50,001 to 100,000 HUs were more likely to report that its format and content were easy to understand than entities of other sizes, and
- Entities with 100,001 to 1,000,000 HUs were more likely to think that the material of the Address List was useful than entities of other sizes did.

Entities with 50,001 to 100,000 HUs were more positive about the format, content, and usefulness of maps or shapefiles than entities of other sizes. A larger proportion of entities with more than one million HUs understood the format and the content of the Address Count List easily than did entities of other sizes. However, they reported that the content of the Address Count List was less useful for them than entities of other sizes.

As illustrated in Figure 4.3-1 below, nearly 60 percent of the participants reported that the Address Count List was very or somewhat useful (17 percent and 40 percent respectively). However, one-quarter (25 percent) of the participants did not consult or did not try to use the Address Count List at all.

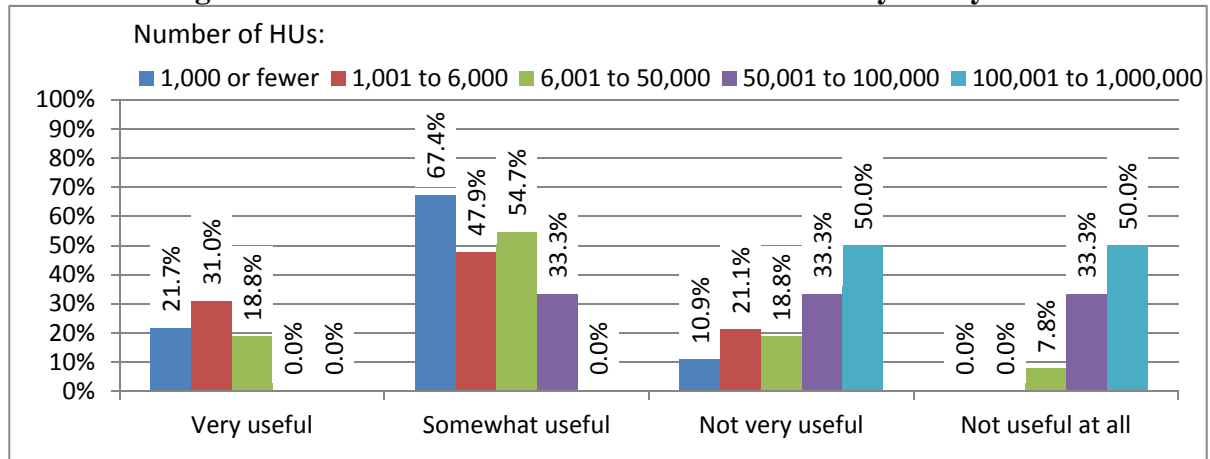
Figure 4.3-1 Usefulness of the Address Count List



Source: 2010 Census LUCA Participants Survey: Question 19.

Figure 4.3-2 shows how the usefulness of Address Count List varied with entity size. Entities with fewer than 6,000 HUs rated the Address Count List as more useful than did larger entities, especially those with more than 50,000 HUs.

Figure 4.3-2 Usefulness of the Address Count List by Entity Size



Source: 2010 Census LUCA Participants Survey: Question 19.

Acceptable Format for Computer-Readable Address Materials

The Census Bureau provided computer-readable address materials during the 2010 Census LUCA Program in pipe-delimited text files. To assess the usefulness of this format, the survey asked participants whether this format was acceptable or they would have preferred a different format.

As shown in Table 4.3-2, 75 percent of the entities thought the pipe-delimited text file for the computer-readable address materials provided by the Census Bureau during the 2010 Census LUCA Program was acceptable, while the other 25 percent preferred a different format.

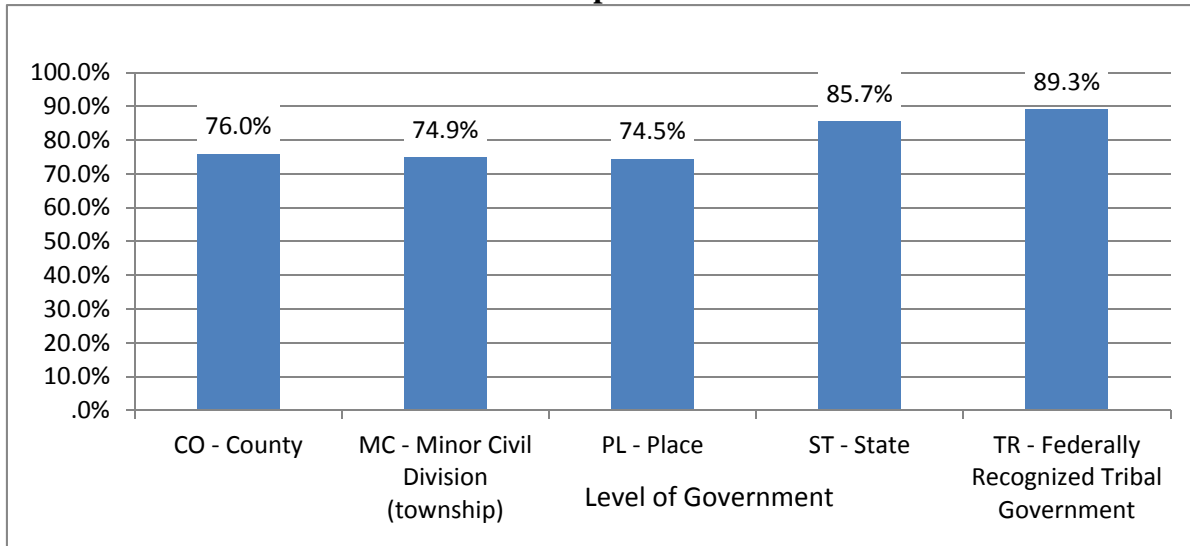
Table 4.3-2 Acceptability of the Computer-Readable Address Format by Entity Size

Acceptability of Pipe-Delimited Files	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Acceptable	70.6%	76.5%	74.6%	74.4%	86.2%	100.0%	75.0%
Different format preferred	29.4%	23.5%	25.4%	25.6%	13.8%	0.0%	25.0%

Source: 2010 Census LUCA Participants Survey: Question 29.

Large entities with over 100,000 HUs were more likely to find the pipe-delimited format acceptable than smaller entities. In terms of type of government, however, more tribal and state governments found the pipe-delimited text format acceptable than did other types of government (see Figure 4.3-3).

Figure 4.3-3 The Computer-Readable Address Materials in Pipe-delimited Text Files was Acceptable



Source: 2010 Census LUCA Participants Survey: Question 29.

The media type selected for the LUCA Program also affected the format preference. As indicated in Table 4.3-3, address materials in pipe-delimited text files were acceptable more often to entities that used electronic maps than to those who requested paper maps, even among those that combined paper maps with electronic address materials.

Table 4.3-3 Acceptability of the Computer-Readable Address Format by Media Type

Acceptability of Pipe-Delimited Files	Address and Map Media Type		Total
	Electronic address, paper map	Electronic address, electronic map	
Acceptable	68.0%	79.3%	75.0%
Different format preferred	32.0%	20.7%	25.0%

Source: 2010 Census LUCA Participants Survey: Question 29.

About nine percent of the entities gave answers to the open-ended question, which asked the participants who would have preferred a format other than the pipe-delimited text file to describe their preferences. However, 34 percent of the comments were not relevant to this question. Based on content analysis of the relevant answers, the full range of other formats was as follows:

- Microsoft Office (Excel, Word, Access, etc.) or any delimited files;
- Comma delimited (CSV) or other delimited;
- ArcGIS, Arcview, shapefiles, or geodatabase;
- Paper or hard copy;
- Data base format (.dbf); and
- Combination of different formats.

4.3.2 Materials in the Feedback Phase

In the Feedback Phase of the LUCA Program, the Census Bureau provided program participants with six types of address materials: Full Address List, Detailed Feedback Address List, Full Address Count List, Detailed Feedback Address Count Challenge List, Feedback Address Update Summary Report, and maps/shapefiles. The survey solicited opinions about the effectiveness of these materials in terms of whether their format and content were easy to understand and whether the materials were helpful.

Ease of Understanding and Usefulness of Address Materials

The survey asked participants to assess the six different address review materials to see if they found the format and content “easy to understand” and “useful.” Table 4.3-4 below shows the percentage of agreement to each of the three measures regarding the six types of materials across all participants and broken down by entity size.

Table 4.3-4 Ease of Understanding and Usefulness of Address Materials by Entity Size

Ease and Usefulness		Entity Size (Number of HUs)						Total
		1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Full Address List	Format easy to understand?	88.2%	86.7%	82.5%	87.0%	85.7%	71.4%	86.2%
	Content easy to understand?	88.7%	87.8%	86.4%	87.0%	88.4%	71.4%	87.7%
	Material useful?	88.8%	89.4%	89.0%	86.0%	85.6%	85.7%	88.9%
Detailed Feedback Address List	Format easy to understand?	81.5%	80.4%	78.1%	84.0%	81.8%	71.4%	80.4%
	Content easy to understand?	82.2%	81.5%	81.4%	84.0%	77.6%	57.1%	81.6%
	Material useful?	81.9%	82.4%	84.8%	84.7%	82.8%	85.7%	82.9%
Full Address Count List	Format easy to understand?	82.1%	80.7%	78.0%	84.3%	85.7%	100.0%	80.8%
	Content easy to understand?	83.4%	81.3%	80.3%	86.3%	83.7%	100.0%	82.0%
	Material useful?	81.9%	80.9%	79.5%	81.9%	75.6%	83.3%	80.8%
Detailed Feedback Address Count Challenge List	Format easy to understand?	75.0%	76.9%	73.4%	81.6%	77.6%	100.0%	75.6%
	Content easy to understand?	75.8%	76.4%	75.3%	81.3%	72.0%	100.0%	76.0%
	Material useful?	73.0%	77.2%	79.1%	79.7%	70.0%	83.3%	76.1%
Feedback Address Update Summary Report	Format easy to understand?	79.0%	80.0%	77.8%	83.7%	85.6%	85.7%	79.3%
	Content easy to understand?	79.9%	79.8%	79.5%	85.3%	82.2%	85.7%	80.0%
	Material useful?	77.4%	79.7%	81.9%	84.9%	83.5%	100.0%	79.7%
Maps/Shapefiles	Format easy to understand?	81.7%	80.4%	79.6%	83.7%	88.3%	71.4%	80.9%
	Content easy to understand?	81.7%	80.2%	80.0%	86.4%	88.6%	71.4%	81.0%
	Material useful?	81.5%	81.0%	81.9%	85.2%	79.9%	71.4%	81.4%

Source: 2010 Census LUCA Participants Survey: question 22.

- Full Address List.** A large majority (86 percent) of the participants considered the format of the Full Address List easy to understand, 88 percent found its content easy to understand, and 89 percent viewed the material as useful. Smaller entities were more likely to find the format and content of the Full Address List easy to understand than entities with one million or more housing units. There were no substantial differences among the entities of different sizes in their opinions regarding the usefulness of the material.
- Detail Feedback Address List.** Eighty percent of the participants indicated that the format of the Detailed Feedback Address List was easy to understand while 82 percent found its content easy to understand and 83 percent found the material useful. Again, large entities with one million or more housing units seemed to have more difficulty understanding the format and content of the Detailed Feedback Address List. There were no substantial

differences among the entities of different sizes in their opinions regarding the usefulness of the material.

- **Full Address Count List.** Over 80 percent of the participants found the format and content of the Full Address Count List easy to understand (81 percent and 82 percent respectively) and the material useful (81 percent). All of the few entities with over one million housing units found the Full Address Count List format and content easy to understand, and only one of six did not think it useful.
- **Detailed Feedback Address Count Challenge List.** Approximately three-quarters (76 percent) of the participants felt that the format and content of this list were easy to understand and that the material was useful. Views among very large entities (over one million HUs) were the same as for the Full Address Count List—unanimity on easy of understanding, five of six positive on usefulness.
- **Feedback Address Update Summary Report.** Approximately four-fifths of the program participants found the format and content of the report easy to understand (79 percent and 80 percent respectively) and the report useful (80 percent). Again, entities with more than one million HUs were more likely to feel so than smaller entities.
- **Maps/Shapefiles.** Eighty-one percent of the program participants reported that the format and content of the maps and shapefiles were easy to understand and that the materials were useful. However, contrary to the patterns with the Full Address Count List, Detailed Feedback Address Count Challenge List, and Feedback Address Update Summary Report, large entities with over one million HUs seemed to find the format and content of the maps and shapefiles more difficult to understand and the materials less useful than smaller entities.

With one exception, the rating of the Detailed Feedback Address List by entities with more than one million HUs, the apparent consistency between the ratings of the format and content might suggest that most participants were not differentiating between “format” and “content,” but giving each type of material a single rating for “ease of understanding.”

Since all of the materials got high rankings, usually 75 percent or more agreeing that each item had useful and easy-to-understand content, it is probable but not certain that many respondents were just making an overall ranking of the *entire set* of materials. Two years after they had used and then discarded these materials, many local LUCA coordinators might have had difficulty remembering which was which by their Census Bureau names.

Timing of Understanding the Feedback Materials

As shown in Table 4.3-5, nearly two-thirds (62 percent) of the participants understood the feedback materials after reading the supporting documentation. Another 18 percent did not understand them until after they had gotten help. The remaining 20 percent never fully understood them. The timing of understanding the feedback materials varied by media type. The participants who received both paper address lists and maps were more likely to understand the feedback materials after reading the supporting documentation. Entities that received a combination of electronic address files and a paper map or paper address with an electronic map were more likely to report that they had never fully understood the feedback materials. It

seemed that the combination of electronic and paper media made it more difficult for participants to understand the feedback materials.

Table 4.3-5 Timing of Understanding of the Feedback Materials by Media Type

When feedback material understood	Address and Map Media Type				Total
	Electronic address, paper map	Electronic address, electronic map	Paper address, paper map	Paper address, electronic map	
After reading supporting documentation	54.1%	60.7%	69.2%	56.8%	62.2%
After getting help	19.8%	22.3%	12.4%	21.6%	18.1%
Never fully understood	26.1%	17.0%	18.5%	21.6%	19.7%

Source: 2010 Census LUCA Participants Survey: Question 24.

Resources Helpful in Understanding Feedback Materials and Procedures

As indicated in Table 4.3-6, the User Guide and the Quick Reference Guide were by far the two most popular resources, each used by 87 percent of the program participants. These were followed by the LUCA Website (46 percent), the RCCs (42 percent), and the Technical Help Desk (41 percent). Of those who used the User Guide and the Quick Reference Guide, 89 percent found each of them helpful in understanding the feedback materials and procedures. Meanwhile, nearly three-quarters of the participants who used the Technical Help Desk, the RCCs, and the LUCA Website viewed these resources as helpful (75 percent, 74 percent, and 71 percent respectively).

Table 4.3-6 Resources Helpful in Understanding the Feedback Materials and Procedures by Media Type

Resources	Helpful in Understanding the Feedback Materials and Procedures	Address and Map Media Type				Total
		Electronic address, paper map	Electronic address, electronic map	Paper address, paper map	Paper address, electronic map	
Quick Reference Guide	Helpful	85.8%	86.3%	92.6%	84.4%	88.5%
	Used	84.1%	87.3%	87.1%	92.2%	86.6%
User Guide	Helpful	85.6%	88.0%	91.5%	84.5%	88.7%
	Used	85.2%	88.9%	87.2%	85.4%	87.4%
RCCs	Helpful	71.6%	75.6%	72.1%	71.0%	73.6%
	Used	40.4%	49.9%	34.7%	47.3%	42.2%
Technical Help Desk	Helpful	75.8%	76.6%	70.4%	76.4%	74.7%
	Used	43.7%	48.9%	31.5%	37.4%	41.3%
LUCA website	Helpful	67.8%	75.0%	66.2%	64.5%	70.8%
	Used	48.6%	57.4%	32.7%	53.1%	46.4%

Source: 2010 Census LUCA Participants Survey: Question 25.

Table 4.3-6 also shows that the helpfulness of the resources in understanding the feedback materials and procedures varied with media type. Participants who received both paper address lists and maps were more likely to find the Quick Reference Guide and User Guide helpful than recipients of other media combinations. These LUCA participants were less likely to try the other types of resources. It appears that LUCA coordinators who were comfortable enough with computerized resources to request electronic address lists and maps were able to use the website more easily, visiting it at a higher rate and finding it more helpful than recipients of any other media combination.

4.3.3 MAF/TIGER Partnership Software

Based on the evaluations of the Census 2000 LUCA Program and participant survey findings, the 2010 LUCA Program provided participants the opportunity to use the Census Bureau supplied MAF/TIGER Partnership Software (MTPS) application to facilitate the address update. The survey asked the 2010 program participants whether they used MTPS in any part of their review, and their views on its user instructions, demonstrations, and the computer-based training.

Nearly two-thirds (65 percent) of the government entities used the MTPS as part of their review. As shown in Table 4.3-7, small entities with 50,000 or fewer HUs were more likely to use MTPS than larger entities.

Use of the MAF/TIGER Partnership Software (MTPS) by Entity Size

Table 4.3-7

Use of MTPS	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Yes	62.4%	68.2%	65.0%	58.7%	56.5%	57.1%	64.6%
No	37.6%	31.8%	35.0%	41.3%	43.5%	42.9%	35.4%

Source: 2010 Census LUCA Participants Survey: Question 30.

Table 4.3-8 indicates that the use of MTPS was also related to the type of government. Minor civil divisions, places, and counties were more likely to use MTPS than state and tribal governments. Minor civil divisions used MTPS the most (69 percent), followed by places (65 percent), counties (62 percent), and states and tribal governments (56 percent respectively).

Usage of the MAF/TIGER Partnership Software (MTPS) by Level of Government

Table 4.3-8

Use of MTPS	Level of Government					Total
	County	Minor civil division	Place	State	Tribal Government	
Yes	61.6%	69.0%	65.1%	55.6%	55.6%	64.6%
No	38.4%	31.0%	34.9%	44.4%	44.4%	35.4%

Source: 2010 Census LUCA Participants Survey: Question 30.

Table 4.3-9 shows both the utilization rate of various types of MTPS-related technical assistance and the favorable ratings of them by the users. The utilization rates were as follows:

- User instructions: 98 percent,
- Computer-based training built into MTPS: 89 percent, and
- Demonstrations at technical training workshops: 67 percent.

Of entities that read the user instructions, 78 percent thought they were clear and understandable. Larger entities considered them clear and understandable more often than entities with 1,000 or fewer HUs.

Of participants who attended the demonstration at the technical training workshops, 74 percent reported that these demonstrations were sufficient to help them use MTPS. However, the level of perceived sufficiency varied with entity size. Medium-sized entities with 50,001 to 100,000 HUs were more likely to find the demonstrations sufficient than entities in other size categories. The smallest entities had both the lowest attendance rate (57 percent) and the lowest sufficiency rate (67 percent of those attending). No entity with more than one million HUs found the demonstrations at the technical training workshops sufficient. However, since there were only four users of this size in the 2010 Census LUCA Participant Survey, this result should not indicate that the demonstrations at the technical training workshops were not sufficient at all for entities of this size.

Table 4.3-9 Effectiveness of MAF/TIGER Partnership Software (MTPS) by Entity Size

Measures		Entity Size (Number of HUs)						Total
		1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
User instructions clear and understandable?	Yes	70.8%	78.9%	78.7%	78.7%	81.7%	100.0%	78.1%
	Did this	99.0%	98.5%	97.4%	98.6%	95.8%	100.0%	97.9%
Demonstrations at technical training workshop sufficient?	Yes	66.5%	75.7%	74.2%	81.4%	65.9%	0.0%	73.5%
	Did this	57.4%	69.3%	67.1%	74.5%	74.6%	50.0%	67.2%
Computer-Based Training built into the MTPS sufficient?	Yes	67.8%	78.3%	76.0%	74.6%	74.1%	75.0%	75.5%
	Did this	87.6%	89.6%	89.1%	89.7%	88.5%	100.0%	89.2%
Would use the MTPS again?	Yes	78.2%	82.7%	82.0%	81.1%	75.7%	100.0%	81.5%
	Did this	98.3%	97.8%	97.4%	97.1%	95.8%	100.0%	97.5%

Source: 2010 Census LUCA Participant Survey: Question 30.

Overall, 76 percent of the users of the computer-based training built into MTPS found it sufficient. The perceived sufficiency of the training also varied with entity size. Although their use rate was as high as for larger governments, entities with 1,000 or fewer HUs were less likely to consider this type of training sufficient than the larger ones. It seems that the computer-based training built into the MTPS needs to accommodate the needs of these very small entities. In

general, 82 percent of the users said that they would use the MTPS again. There were no significant differences in the likelihood of using the MTPS again among entities of different sizes.

4.3.4 Local Software and Computer Interface

This survey also asked the 2010 LUCA Program participants about their preferences for the following software functions and related computer interfaces:

- Primary software for reviewing and editing the computer-readable address list,
- Acceptable format for computer-readable address materials,
- Primary software for making boundary and/or feature updates, and
- Software/method for geocoding the addresses to Census tracts or blocks.

Primary Software for Reviewing and Editing Computer-Readable Address Lists

As indicated in Table 4.3-10, the most commonly used primary software programs for reviewing and editing computer-readable address lists were:

- The Census Bureau's MTPS (46 percent),
- A spreadsheet program such as Excel and Quattro Pro (36 percent),
- A text editor such as WordPad, Microsoft Word, and WordPerfect (8 percent),
- A database editor such as Access and Paradox (5 percent), or
- Other types of software programs (5 percent).

Four percent of the entities provided answers to the open-ended question, which asked them to describe other types of software programs they would prefer. However, almost half of the answers were not directly relevant to this question. According to a content analysis of the other half of the descriptions, the types of "other" software preferred for reviewing and editing computer-readable address lists included mainly the following:

- Esri ArcGIS/Arcmap/GIS/ArcSDE,
- Combinations of different software (ArcGIS, Access, Excel, MTPS, etc.),
- Community viewer/own software, and
- SQL (Structured Query Language) or other.

Table 4.3-10 Primary Software for Reviewing and Editing Computer-Readable Address Lists by Entity Size

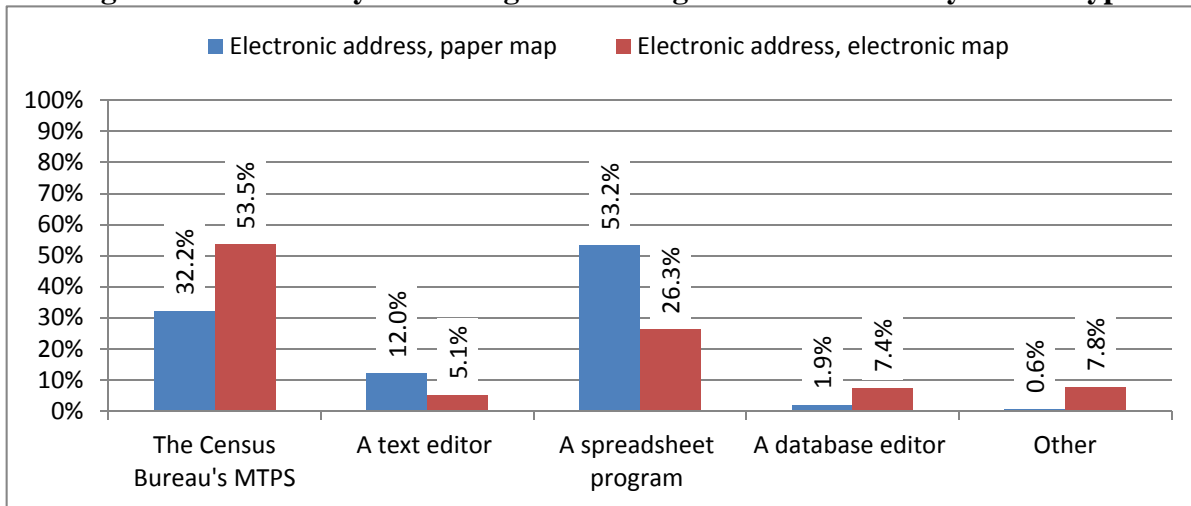
Primary Software	Size (Number of housing units)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
MTPS	45.0%	47.9%	45.6%	37.3%	39.5%	28.6%	45.6%
Text Editor	14.8%	9.9%	3.7%	2.5%	0.0%	0.0%	7.6%
Spreadsheet Program	37.2%	37.8%	37.0%	27.0%	21.4%	28.6%	36.2%
Database	2.8%	2.6%	6.7%	11.9%	20.0%	14.3%	5.3%
Other	0.3%	1.8%	7.1%	21.3%	19.1%	28.6%	5.2%

Source: 2010 Census LUCA Participants Survey: Question 28.

Table 4.3-10 also reveals that smaller entities with 50,000 or fewer HUs tended to use MTPS or spreadsheet programs more as their primary reviewing and editing software than those with over 50,000 HUs while the latter used the database type of software programs more often than the former. The smaller the entity was, the more likely it would use a text editor to process its address list.

As illustrated in Figure 4.3-4, entities that received and used electronic maps were more likely to use the Census Bureau’s MTPS than those that utilized paper maps. Entities that received paper maps were more likely to use spreadsheet programs than those that used electronic maps.

Figure 4.3-4 Primary Reviewing and Editing Software Choice by Media Type



Source: 2010 Census LUCA Participants Survey: Question 28.

Primary Software/Method for Making Boundary and/or Feature Updates

The survey also asked participants to indicate their primary software for making boundary and/or geographic feature updates. As indicated in Table 4.3-11, ArcGIS was the most popular software used to update boundaries and/or features. Nearly two-thirds (65 percent) of the program participants used it. MTPS was the second most popular software for this function, with one-quarter (26 percent) of the governments using it. Medium-sized and large entities (with more than 6,000 HUs) were more likely to use ArcGIS than smaller entities; the smaller governments (with less than 50,000 HUs) were more likely to use MTPS. Among entities with

more than 6,000 HUs, users of ArcGIS ranged from 73 percent to 100 percent while among entities with fewer than 6,000 HUs, users of MTPS ranged from 35 percent to 56 percent.

Table 4.3-11 Software/Method for Boundary and/or Feature Updates by Entity Size

Primary Software	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
ArcGIS	17.9%	53.2%	72.5%	89.0%	88.1%	100.0%	64.6%
MapInfo	14.4%	4.8%	1.7%	1.8%	1.0%	0.0%	3.7%
Autodesk	1.6%	3.6%	2.5%	0.0%	0.0%	0.0%	2.3%
MTPS	56.4%	34.6%	20.1%	7.5%	10.8%	0.0%	25.6%
Other	9.7%	3.8%	3.3%	1.8%	0.0%	0.0%	3.7%

Source: 2010 Census LUCA Participants Survey: Question 31.

Only four percent of the respondents described “other” software for making boundary and/or feature updates. However, three-quarters of these answers were not directly relevant to this question. A content analysis of the remaining one percent identified the following as the most frequently cited other software used for boundary and/or feature updates:

- Paper maps/by hand,
- GeoMedia, and
- Community viewer.

Table 4.3-12 reveals that even though ArcGIS was the most popular software, used by all levels of government, it was least likely to be used by minor civil divisions. Less than half (46 percent) of them reported using ArcGIS compared with 61–100 percent among other types of governments. MTPS was the most popular software among minor civil divisions with 40 percent of them using it. In addition, ArcGIS was the only software used by the responding state governments for making boundary and/or feature updates.

Table 4.3-12 Boundary and/or Feature Updating Software by Level of Government

Primary Software	Level of Government					Total
	County	Minor civil division	Place	State	Tribal Government	
ArcGIS	77.6%	45.5%	61.3%	100.0%	80.0%	64.6%
MapInfo	2.7%	8.3%	3.4%	0.0%	0.0%	3.7%
Autodesk	1.3%	1.5%	3.0%	0.0%	0.0%	2.4%
MTPS	15.8%	40.3%	28.0%	0.0%	20.0%	25.6%
Other	2.5%	4.3%	4.2%	0.0%	0.0%	3.7%

Source: 2010 Census LUCA Participant Survey: Question 31.

With regard to participation options, Table 4.3-13 below indicates that:

- ArcGIS was more likely to be used by entities that chose Title 13 Local Address List Submission (Option 2, 79 percent) than by governments that chose Title 13 Full Address List Review (Option 1, 61 percent);
- MTPS was more likely used by the entities that chose Title 13 Full Address List Review (Option 1, 30 percent) than those that selected Title 13 Local Address List Submission (Option 2, 11 percent); and
- MapInfo, Autodesk, and other software (not listed by name in the questionnaire) were each used for boundary or feature updates by less than four percent of all responding entities.

Table 4.3-13 Boundary and/or Feature Updating Software by Participation Option

Primary Software	LUCA Participation Option		Total
	Option 1 - Title 13 Full Address List Review	Option 2 - Title 13 Local Address List Submission	
ArcGIS	60.5%	79.0%	64.6%
MapInfo	3.5%	4.6%	3.7%
Autodesk	2.5%	1.7%	2.3%
MTPS	29.9%	10.5%	25.6%
Other	3.6%	4.2%	3.7%

Source: 2010 Census LUCA Participant Survey: Question 31.

Software/Method for Geocoding Addresses to Census Tracts or Blocks

To help streamline geocoding activities in future operations, the survey asked participants to report how they geocoded their addresses to Census tracts or blocks. As shown in Table 4.3-14,

- MTPS was the most commonly used method for geocoding addresses (47 percent), followed by
- Address ranges using Census Bureau's shapefiles (28 percent),
- Point-to-polygon using the Census Bureau's shapefiles (15 percent), and
- Other methods (10 percent) such as local address point shapefiles, address point layers, county GIS, Arc Editor, Google, Geomedia, printed materials, or by hand or site visits.

Table 4.3-14 Geocoding Software/Method by Entity Size

Geocoding Method	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
MTPS	71.8%	59.9%	42.9%	22.5%	25.8%	0.0%	47.2%
Address ranges using Census Bureau's shapefiles	22.6%	27.2%	29.4%	27.0%	21.2%	57.1%	27.7%
Point-to-polygon using Census Bureau's shapefiles	3.1%	8.2%	16.5%	26.1%	32.8%	14.3%	14.7%
Other	2.5%	4.7%	11.2%	24.3%	20.2%	28.6%	10.4%

Source: 2010 Census LUCA Participants Survey: Question 32.

In general, the smaller the entities, the more likely they used MTPS for geocoding their addresses. A size of 50,000 HUs seemed to be the shift point.

- Among entities with 50,000 HUs or fewer, 43–72 percent used MTPS; but
- Among entities with over 50,000 HUs, 0–26 percent used MTPS.

The smallest entities used the point-to-polygon with Census Bureau shapefiles method the least. As the entity size grew, so did the percentage using this method, until the entity size reached one million HUs. Then the percentage using this method decreased.

Table 4.3-15 below shows that entities that chose Title 13 Option 1 for full address list review were more likely to use MTPS to geocode their addresses to Census tracts or blocks than were Option 2 participants.

Entities that chose Title 13 Local Address List Submission (Option 2) were more likely to geocode to address ranges using the Census Bureau's shapefiles than were Option 1 participants.

Table 4.3-15 Geocoding Software/Method by Participation Option

Geocoding Method	LUCA Participation Option		Total
	Option 1 - Title 13 Full Address List Review	Option 2 - Title 13 Local Address List Submission	
MTPS	53.0%	26.5%	47.2%
Address ranges with Census Bureau's shapefiles	25.3%	36.3%	27.7%
Point-to-polygon with Census Bureau's shapefiles	13.0%	20.8%	14.7%
Other	8.7%	16.3%	10.4%

Source: 2010 Census LUCA Participants Survey: Question 32.

4.4 Assistance

To understand what worked and what did not work during the 2010 LUCA operation, participants in the 2010 Census LUCA Participant Survey were asked to report their views on the effectiveness of four sources of assistance:

- Technical training workshop,
- Documentation,
- The Technical Help Desk and RCCs, and
- The LUCA Website.

This subsection presents participants' opinions on the assistance they received.

4.4.1 Technical Training Workshops

Regarding the effectiveness of the technical training workshops, the survey asked participants to answer the following three questions:

- Did a technical training workshop influence their decision to participate in the LUCA Program?
- Did attending a technical training workshop help them understand the differences among the three participation options?
- Was attending a technical training workshop helpful in understanding the initial LUCA materials and procedures.

Entities were also asked to indicate whether a technical training workshop was the most important or most helpful activity or resource for them.

As shown in Table 4.4-1, attending a technical training workshop was the most helpful activity to understand the differences among the three participation options, for nearly one-third (31 percent) of the participants.

Table 4.4-1 Most Helpful Activity for Understanding Participation Options

Activity	Percentage*
Attending a Technical Training Workshop	31.2%
Reading the Advance Mailing	23.5%
Reading the Registration Mailing	15.0%
Attending a Promotional Workshop	13.6%
Reading LUCA Website	6.0%
Contacting an RCC	5.9%
Contacting the Technical Help Desk	4.7%

Source: 2010 Census LUCA Participant Survey: Question 4.

*Percentages based on respondents who did this activity.

As mentioned in Section 4.1.3 (Table 4.1-7), attending a technical training workshop was the second most influential factor in an entities' decision to participate in the LUCA Program, rated as most important by 19 percent of the participants. Table 4.4-2 lists the proportion of respondents rating each of the resources as "the most helpful" in their understanding of the initial LUCA materials and procedures. Again, attending a technical training workshop was ranked as the second most helpful resource in this regard (37 percent).

Table 4.4-2 Most Helpful Resource in Understanding Initial LUCA Materials

Resource	Percentage*
Reading the User Guide	43.0%
Attending a Technical Training Workshop	37.4%
Contacting an RCC	7.8%
Contacting the Technical Help Desk	6.1%
Reading the LUCA website	5.7%

Source: 2010 Census LUCA Participant Survey: Question 8.

*Percentages based on respondents who did this activity.

Figure 4.4-1 illustrates the effects of the technical training workshops on the various government entities with regard to

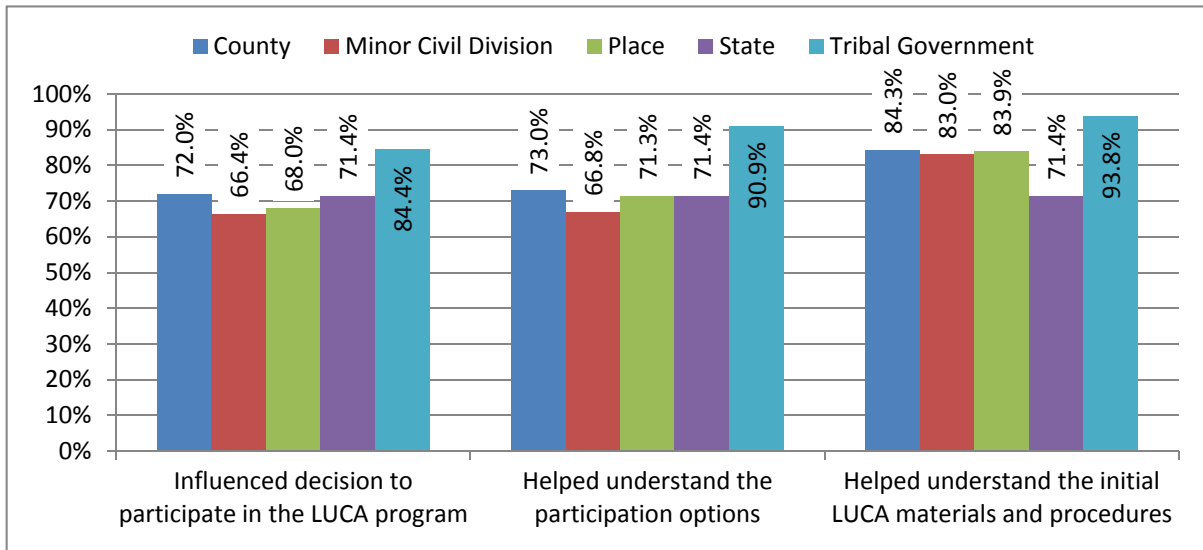
- Influencing their LUCA Program participation decisions,
- Helping them to understand the participation option differences, and
- Helping them to understand the initial LUCA materials and procedures.

The figure demonstrates that the technical training workshops were more effective with the attending tribal governments than with other levels of attending governments:

- Attending technical training workshops influenced 84 percent of tribal governments to participate, but influenced only 66–72 percent of other governments,
- Attending technical training workshops helped 91 percent of tribal governments understand the participation options, but helped only 67–73 percent of other governments, and
- Attending technical training workshops helped 94 percent of tribal governments understand the initial materials and procedures, but helped only 71–84 percent of other governments.

In addition, the technical training workshops seemed to be more effective in helping the entities understand the initial LUCA materials and procedures than influencing their LUCA Program participation decision or understanding the participation option differences.

Figure 4.4-1 Effects of Technical Training Workshop by Level of Government



Source: 2010 Census LUCA Participant Survey: Questions 3, 4, and 8.

Table 4.4-3 presents the differences in usage rates and helpfulness of various activities in understanding the initial LUCA materials by media type for address lists and maps.

Table 4.4-3 Use and Helpfulness in Understanding the Initial LUCA Materials and Procedures by Media Type

Resource		Address and Map Media Type				Total
		Electronic address, paper map	Electronic address, electronic map	Paper address, paper map	Paper address, electronic map	
Attending a Technical Workshop	Yes, helpful*	84.7%	84.8%	82.1%	68.8%	83.8%
	Did this	48.3%	62.5%	49.5%	41.0%	54.1%
Reading the User Guide	Yes, helpful*	87.8%	88.1%	90.7%	84.6%	88.9%
	Did this	91.9%	95.4%	94.5%	96.6%	94.2%
Contacting an RCC	Yes, helpful*	60.5%	64.2%	61.4%	68.1%	62.5%
	Did this	44.6%	52.4%	39.2%	46.3%	45.9%
Contacting the Technical Help Desk	Yes, helpful*	66.1%	63.7%	54.7%	50.0%	61.7%
	Did this	45.3%	52.1%	36.5%	41.0%	44.9%
Reading the LUCA Website	Yes, helpful*	64.2%	71.0%	60.7%	66.3%	66.5%
	Did this	59.3%	71.3%	47.0%	66.0%	60.0%

Source: 2010 Census LUCA Participant Survey: Question 8.

*Percentage based on respondents who did this activity.

Recipients of electronic address lists and maps were more likely to report attending a technical training workshop or reading the LUCA website. However, entities receiving paper address lists and electronic maps were less likely to find technical training workshops helpful for understanding initial materials than were other entities. Entities receiving paper address lists,

regardless of the type of media for maps, were less likely than other entities to consider the Technical Help Desk to be helpful.

As shown in Table 4.4-4, the technical training workshops were more likely to be helpful to entities that chose Option 1 (Title 13 Full Address List Review) and Option 2 (Title 13 Local Address List Submission) than to governments that selected Option 3 (Non-Title 13 Local Address List Submission).

Table 4.4-4 Effects of Technical Training Workshops by Participation Option*

Effects of Technical Training Workshops	LUCA participation option			Total
	Option 1 - Title 14 Full Address List Review	Option 2 - Title 13 Local Address List Submission	Option 3 - Non-Title 13 Local Address List Submission	
Influenced LUCA Program participation decision	69.1%	66.0%	64.3%	68.4%
Helped understand the participation options	70.9%	74.0%	62.5%	70.8%
Helped understand the initial LUCA materials and procedures	84.0%	84.3%	79.3%	83.8%

Source: 2010 Census LUCA Participant Survey: Questions 3, 4, and 8.

*Percentage based on respondents who did this activity.

4.4.2 Documentation

Documentation was part of the comprehensive program communications with participants that the Census Bureau made to improve the 2010 Census LUCA Program. To assess the effectiveness of the documentation, the survey asked participants about their opinions on:

- The helpfulness of the User Guide in their understanding of the initial and feedback LUCA materials and procedures,
- The helpfulness of the Quick Reference Guide and User Guide in their understanding of the feedback materials and procedures, and
- The helpfulness of the LUCA Computer-Based Training CD-ROM in their participation.

Effectiveness of User Guide and Quick Reference Guide

Table 4.4-5 shows the use and usefulness of resources for understanding the initial LUCA materials and procedures by level of government.

- 94 percent claimed to have read the LUCA User Guide,
- 60 percent used the LUCA website,
- 54 percent attended a technical workshop,
- 46 percent contacted an RCC for help with the initial procedures, and

- 45 percent contacted the Technical Help Desk.

Tribal governments were the least likely to use the User Guide but the most likely to contact an RCC or the Technical Help Desk, or to read the LUCA website.

Table 4.4-5 Use and Helpfulness in Understanding the Initial LUCA Materials and Procedures by Level of Government

Resource		Level of Government					Total
		County	Minor Civil Division	Place	State	Tribal Government	
Attending a Technical Workshop	Yes, helpful*	84.3%	83.0%	83.9%	71.4%	93.8%	83.8%
	Did this	64.9%	52.0%	52.3%	77.8%	76.2%	54.1%
Reading the User Guide	Yes, helpful*	83.2%	88.9%	90.2%	77.8%	62.9%	88.9%
	Did this	93.3%	92.5%	95.0%	100.0%	81.4%	94.2%
Contacting a RCCs	Yes, helpful*	64.5%	55.1%	64.2%	100.0%	63.0%	62.5%
	Did this	56.9%	42.3%	44.6%	44.4%	64.3%	45.9%
Contacting the Technical Help Desk	Yes, helpful*	61.9%	57.3%	63.1%	0.0%	70.8%	61.7%
	Did this	53.4%	42.7%	43.8%	28.6%	57.1%	44.9%
Reading the LUCA Website	Yes, helpful*	66.9%	58.7%	68.6%	60.0%	78.1%	66.5%
	Did this	72.4%	52.4%	59.7%	71.4%	76.2%	60.0%

Source: 2010 Census LUCA Participant Survey: Question 8.

*Percentage based on respondents who did this activity.

Overall, the most helpful resource for understanding the initial materials and procedures was the User Guide, cited as helpful by 89 percent of the participants. However, tribal government personnel were less likely to find the User Guide helpful.

The effectiveness of the User Guide and the Quick Reference Guide also varied by level of government and media type. As shown in Table 4.4-6, overall, 89 percent of the entities that used LUCA documentation reported that the User Guide and the Quick Reference Guide were helpful for their understanding of the LUCA feedback materials and procedures. The User Guide was chosen as the most helpful of five resources by 42 percent of government entities; the Quick Reference Guide was chosen as the most helpful by 27 percent.

**Helpfulness of Documentation for Understanding
Table 4.4-6 Feedback Materials and Procedures by Level of Government**

Documentation		Level of Government					Total
		County	Minor Civil Division	Place	State	Tribal Government	
Quick Reference Guide	Helped understanding*	82.8%	88.8%	89.6%	57.1%	91.7%	88.5%
	Was the “most helpful” resource	19.7%	31.1%	26.9%	0.0%	15.4%	26.6%
User Guide	Helped understanding*	85.1%	88.6%	89.5%	66.7%	92.6%	88.7%
	Was the “most helpful” resource	41.2%	47.5%	41.0%	100.0%	23.1%	42.2%

Source: 2010 Census LUCA Participant Survey: Question 25.

*Percentage based on respondents who used the resources.

State governments were less likely than others to find the Quick Reference Guide and the User Guide helpful in understanding the feedback materials and procedures. Tribal governments were the least likely to rate the User Guide as the most useful resource in helping their understanding of the feedback LUCA materials and procedures.

In summary, as indicated in Table 4.4-7, over 40 percent of the LUCA participants rated the User Guide as the “most helpful” resource in understanding both the initial and feedback materials and procedures (43 percent and 42 percent respectively), which was the highest among the rankings of all the relevant resources. The Quick Reference Guide was the second most helpful resource in understanding the feedback materials and procedures (27 percent).

**Most Helpful Resources for Understanding
Table 4.4-7 Initial and Feedback Materials and Procedures***

Resource/Activity	Helping in Understanding Initial Materials/ Procedures	Helping in Understanding Feedback Materials/ Procedures
User Guide	43.0%	42.2%
Attending a Technical Training Workshop	37.4%	n.a**
Quick Reference Guide	n.a**	26.6%
Contacting RCCs	7.8%	12.8%
Contacting the Technical Help Desk	6.1%	12.7%
Information from the LUCA Website	5.7%	5.7%

Source: 2010 Census LUCA Participant Survey: Questions 8 and 25.

*Percentages based on respondents who did this activity.

** n.a.- Not applicable.

Helpfulness of LUCA Computer-Based Training CD-ROM

During the 2010 LUCA Program, the Census Bureau provided the participants with a LUCA Computer-Based Training CD-ROM. The survey asked respondents to rate how helpful they thought the training was in their participation.

As shown in Table 4.4-8,

- 24 percent viewed the training as very helpful,
- 60 percent thought it was somewhat helpful, and
- 16 percent said it was not helpful.

The helpfulness of the LUCA Computer-Based Training CD-ROM varied with the level of government. It was most helpful for state and tribal governments, least helpful for minor civil divisions (by a small margin over counties and places).

Table 4.4-8 Helpfulness of LUCA Computer-Based Training CD-ROM by Level of Government*

	Level of Government					Total
	County	Minor Civil Division	Place	State	Tribal Government	
Very helpful	25.8%	22.3%	23.9%	22.2%	40.0%	23.9%
Somewhat helpful	57.6%	59.0%	60.9%	77.8%	60.0%	60.1%
Not helpful	16.6%	18.7%	15.2%	0.0%	0.0%	16.0%

Source: 2010 Census LUCA Participant Survey: Question 15.

*Percentages based on respondents who viewed the CD.

The helpfulness of the CD-ROM also varied with the media type the government used and with entity size. As shown in Table 4.4-9, the LUCA Computer-Based Training CD-ROM was most helpful overall for entities that used electronic address lists and maps; however, entities using paper address lists and electronic maps were least likely to find the CD-ROM not helpful at all.

Table 4.4-9 Helpfulness of LUCA Computer-Based Training CD-ROM by Media Type*

	Address and Map Media Type				Total
	Electronic address, paper map	Electronic address, electronic map	Paper address, paper map	Paper address, electronic map	
Very helpful	20.5%	28.5%	19.5%	16.8%	23.9%
Somewhat helpful	61.9%	57.0%	63.2%	72.0%	60.1%
Not helpful	17.6%	14.5%	17.3%	11.2%	16.0%

Source: 2010 Census LUCA Participant Survey: Question 15.

*Percentages based on respondents who viewed the CD.

Table 4.4-10 shows that the LUCA Computer-Based Training CD-ROM was more helpful for large entities with more than one million HUs but less helpful for small entities with 1,000 or fewer HUs.

Helpfulness of LUCA Computer-Based Training CD-ROM by Entity Size*

Table 4.4-10

	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Very helpful	19.1%	25.8%	26.6%	23.6%	24.7%	33.3%	23.9%
Somewhat helpful	60.4%	60.6%	58.4%	65.0%	61.6%	66.7%	60.1%
Not helpful	20.4%	13.6%	15.0%	11.4%	13.7%	0.0%	16.0%

Source: 2010 Census LUCA Participant Survey: Question 15.

*Percentages based on respondents who viewed the CD.

4.4.3 Technical Help Desk and RCCs

During the 2010 LUCA Program operations, the Census Bureau provided two ways for participants to obtain assistance and ask questions on how to prepare and conduct a local review of addresses, geographic features, and legal boundaries:

- A LUCA Technical Help Desk, and
- Their RCCs.

To assess the effectiveness of the Technical Help Desk, and the RCCs, the survey asked participants whether the Technical Help Desk and/or RCCs helped them:

- Understand the differences among the three participation options available to them,
- Understand the initial LUCA materials and procedures,
- Prepare and ship their LUCA submission, and
- Understand the feedback materials and procedures.

As shown in Table 4.4-11, 38–47 percent of the entities used the Technical Help Desk for various purposes, and 50–92 percent of these users found the responses they received useful, especially in helping them prepare and ship their submissions and helping them understand feedback materials and procedures. Similarly, 39–47 percent of the entities contacted their RCCs and 51– 93 percent of them found the RCCs helpful with LUCA-related needs in general and helpful with submissions and feedback materials in particular.

Table 4.4-11 Usage and Helpfulness of Technical Help Desk and RCCs to Prepare and Ship LUCA Submission

Resource		Understanding Participation Options	Understanding Initial Materials/ Procedures	Preparing and Shipping Submission	Understanding Feedback Materials/ Procedures
Technical Help Desk	Helpful*	50.2%	61.7%	92.0%	74.7%
	Did This Activity	46.9%	44.9%	37.5%	41.3%
RCCs	Helpful*	50.5%	62.5%	92.6%	73.6%
	Did This Activity	47.2%	45.9%	39.1%	42.2%

Source: 2010 Census LUCA Participant Survey: Questions 4, 8, 16, and 25.

*Percentages based on respondents who did this activity.

As shown in Table 4.4-12, use of the Technical Help Desk varied slightly by entity size. In general, the larger the entity, the more likely it was to use the Technical Help Desk for information about how to prepare and ship its LUCA submissions. Small entities with 1,000 or fewer HUs were less likely to contact the Technical Help Desk than larger entities. Less than one-third (29 percent) of the smallest entities used the Technical Help Desk for LUCA submission, whereas over half of the large entities with more than 100,000 HUs used it for this purpose.

Table 4.4-12 Usage of Technical Help Desk by Entity Size

Usage of Technical Help Desk	Size (Number of HUs)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
To Understand the Three Participation Options	41.7%	46.9%	54.9%	47.8%	47.0%	50.0%	46.9%
To Understand the Initial LUCA Materials and Procedures	38.3%	45.0%	53.7%	52.8%	50.0%	50.0%	44.9%
To Understand the Feedback Materials and Procedures	34.4%	41.4%	48.2%	53.3%	58.8%	50.0%	41.3%
To Help with LUCA Submission	28.5%	38.2%	47.7%	46.2%	54.8%	71.4%	37.5%

Source: 2010 Census LUCA Participant Survey: Questions 4, 8, 16, and 25.

As illustrated in Table 4.4-13, the usage of RCCs also varied by entity size. Larger entities were more likely than smaller ones to contact their RCCs for assistance.

Table 4.4-13 Usage of RCCs by Entity Size

Usage of RCCs	Size (Number of housing units)						Total
	1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
To Understand the Three Participation Options	41.8%	47.7%	52.9%	54.3%	55.6%	71.4%	47.2%
To Understand the Initial LUCA Materials and Procedures	38.8%	45.2%	55.1%	57.6%	52.8%	71.4%	45.9%
To Understand the Feedback Materials and Procedures	34.3%	41.4%	51.3%	57.4%	62.9%	71.4%	42.2%
To Help with LUCA Submission	29.4%	37.9%	51.2%	57.0%	59.9%	71.4%	39.1%

Source: 2010 Census LUCA Participant Survey: Questions 4, 8, 16, and 25.

There were differences in the usage of the Technical Help Desk and RCCs among governments of different levels. As shown in Table 4.4-14, tribal governments were the most frequent users of the Technical Help Desk for understanding the participation options and the initial materials and procedures. Minor civil divisions and places had the lowest usage of the Technical Help Desk for LUCA submission.

Table 4.4-14 Usage of Technical Help Desk by Level of Government

Usage of Technical Help Desk	Level of Government					Total
	County	Minor Civil Division	Place	State	Tribal Government	
To understand the Participation Options	54.9%	44.5%	46.0%	28.6%	60.9%	46.9%
To Understand the Initial LUCA Materials and Procedures	53.4%	42.7%	43.8%	28.6%	57.1%	44.9%
To Understand the Feedback Materials and Procedures	52.5%	36.5%	40.4%	42.9%	53.1%	41.3%
To Help with LUCA Submission	46.1%	34.5%	36.7%	75.0%	46.5%	37.5%

Source: 2010 Census LUCA Participant Survey: Questions 4, 8, 16, and 25.

The use of RCCs also differed with levels of government. As shown in Table 4.4-15, tribal governments had the highest contact rate with RCCs for questions involving:

- The initial materials and procedures (64 percent),
- The participation options (60 percent), and
- Feedback materials and procedures (59 percent).

Minor civil divisions were less likely than other entities to use their RCCs for understanding the feedback materials and procedures and for help with LUCA submission.

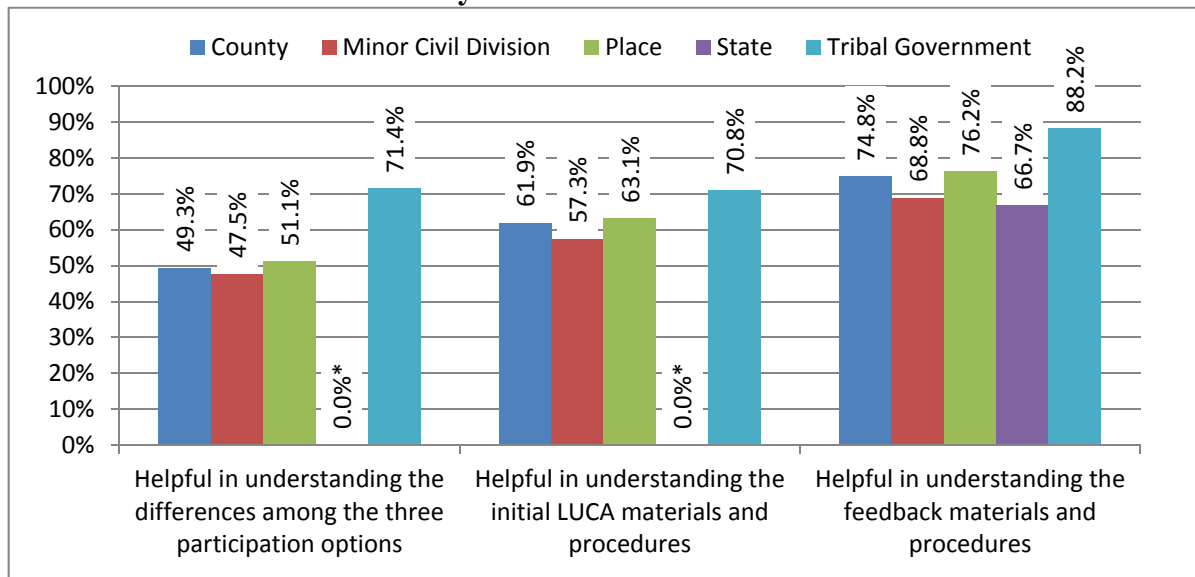
Table 4.4-15 Usage of RCCs by Level of Government

Usage of RCCs	Level of Government					Total
	County	Minor Civil Division	Place	State	Tribal Government	
To Understand the Participation Options	56.0%	45.3%	45.9%	44.4%	60.0%	47.2%
To Understand the Initial LUCA Materials and Procedures	56.9%	42.3%	44.6%	44.4%	64.3%	45.9%
To Understand the Feedback Materials and Procedures	55.3%	36.7%	41.0%	55.6%	59.4%	42.2%
To Help with LUCA Submission	52.4%	33.0%	38.2%	77.8%	55.0%	39.1%

Source: 2010 Census LUCA Participant Survey: Questions 4, 8, 16, and 25.

Figure 4.4-2 and Table 4.4-16 below show that the helpfulness of the Technical Help Desk varied by level of government.

Figure 4.4-2 Helpfulness of Technical Help Desk in Understanding LUCA by Level of Government



Source: 2010 Census LUCA Participant Survey: Questions 4, 8, and 25.

Percentages of respondents who used the Technical Help Desk for each activity.

* Only 1 state contacted the Technical Help Desk for this.

Overall, a higher percentage of the tribal governments than of other levels of government reported that the help desk was helpful in their understanding of the differences among the three participation options and the initial and feedback materials and procedures, and helped them prepare and ship their LUCA submission. The RCCs were generally less helpful for minor civil divisions than for other governments in preparing and shipping LUCA submissions.

**Helpfulness for Preparing and Shipping
LUCA Submission by Level of Government**

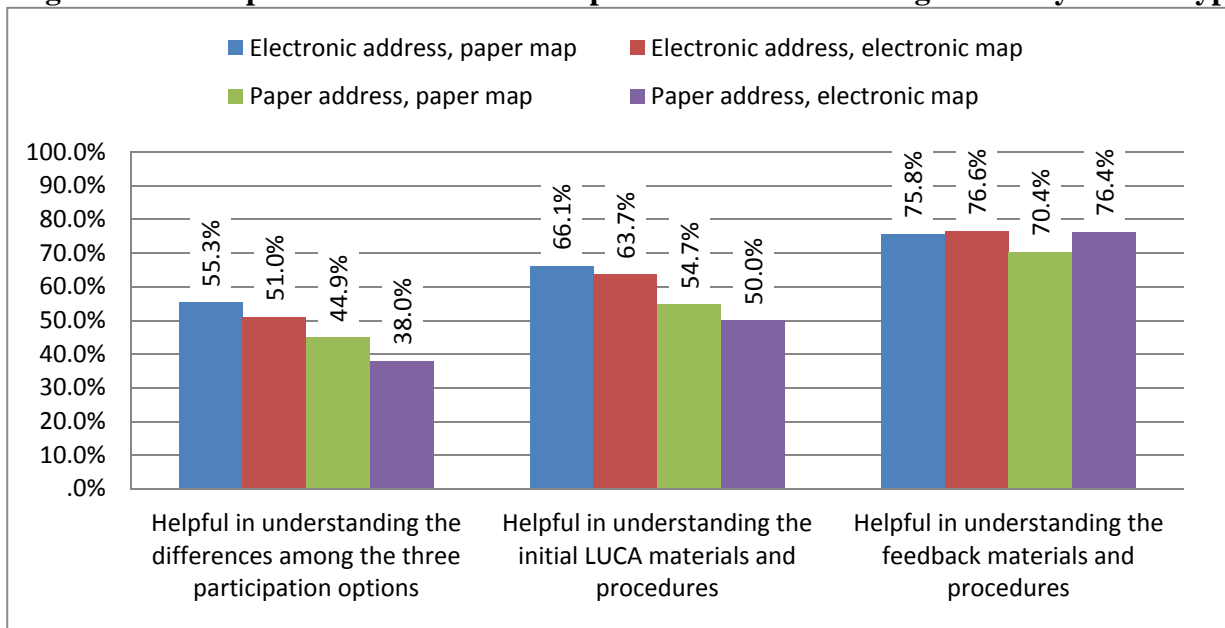
Table 4.4-16

Resource	Level of Government					Total
	County	Minor Civil Division	Place	State	Tribal Government	
Technical Help Desk	90.4%	89.1%	93.4%	50.0%	100.0%	92.0%
RCCs	93.3%	88.6%	93.5%	100.0%	90.9%	92.6%

Source: 2010 Census LUCA Participant Survey: Question 16.
Percentage based on respondents who did this activity.

The helpfulness of the Technical Help Desk also varied with the media type the entities used. As shown in Figure 4.4-3 the Technical Help Desk was most effective in helping entities that used electronic address lists and paper maps to understand the differences among the three participation options available to them and the initial LUCA materials and procedures.

Figure 4.4-3 Helpfulness of Technical Help Desk in Understanding LUCA by Media Type

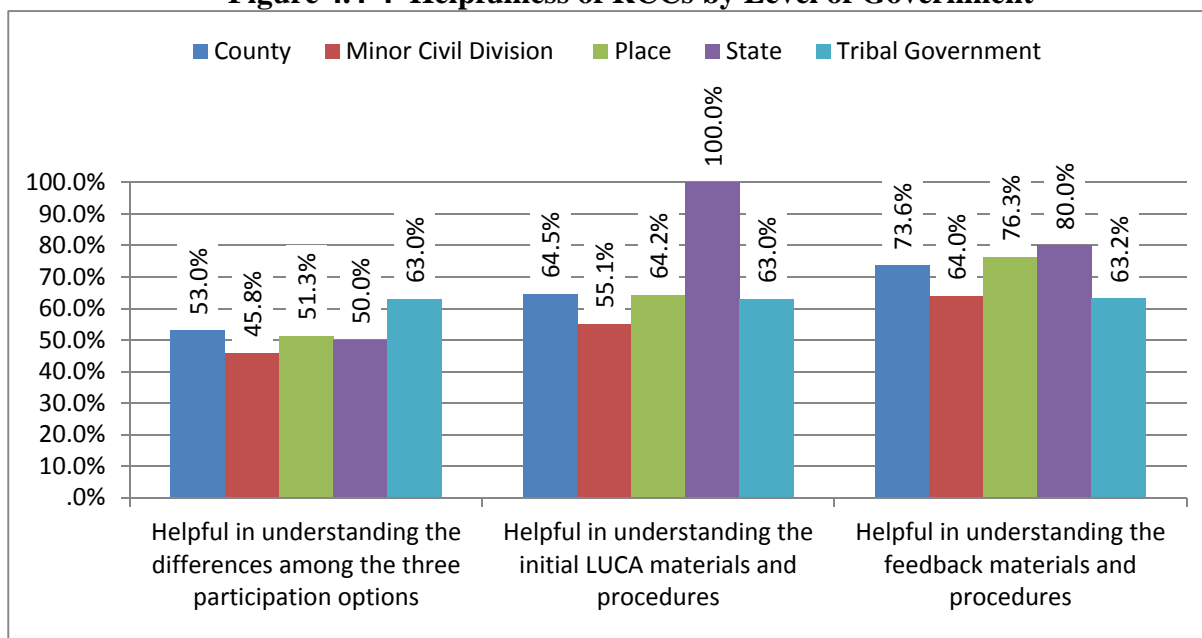


Source: 2010 Census LUCA Participant Survey: Questions 4, 8, and 25.

As shown in Figure 4.4-4, the helpfulness of RCCs also varied by level of government. Overall, a lower percentage of the minor civil divisions than of other levels of government reported that their RCCs were helpful in:

- Understanding the differences among the three participation options,
- Understanding the initial materials and procedures, and
- Understanding the feedback materials and procedures.

Figure 4.4-4 Helpfulness of RCCs by Level of Government



Source: 2010 Census LUCA Participant Survey: Questions 4, 8, and 25. Percentages of respondents who did this activity.

As demonstrated in Table 4.4-17, there was no substantial variation in using the Technical Help Desk and RCCs for help with preparing and shipping LUCA submission among the entities that used different combinations of address and map media.

Helpfulness of Technical Help Desk and RCCs for LUCA Submission by Media Type

Table 4.4-17

Resource	Address and Map Media Type				Total
	Electronic address, paper map	Electronic address, electronic map	Paper address, paper map	Paper address, electronic map	
Technical Help Desk	91.9%	90.6%	95.4%	95.1%	92.0%
RCCs	90.3%	91.8%	96.3%	90.4%	92.6%

Source: 2010 Census LUCA Participant Survey: Question 16.

4.4.4 LUCA Website

The LUCA website functioned not only as a channel to encourage the government entities to participate in the program and help them understand the participation options, but also the initial review documents and procedures, and the feedback materials. As indicated in Table 4.4-18, 54–71 percent of the participants found the website helpful in achieving these objectives.

Table 4.4-18 LUCA Participants' Rating of the LUCA Website

Objective	Helpful	Most Important/Helpful
Influence on Decision to Participate in LUCA	53.6%	3.8%
Help with Understanding of the LUCA Participation Options	61.6%	6.0%
Help with Understanding of the LUCA Initial Materials and Procedures	66.5%	5.7%
Help with Understanding of the LUCA Feedback Materials	70.8%	5.7%

Source: 2010 Census LUCA Participant Survey: Questions 3, 4, 8, and 25.
 Percentage based on respondents who did this activity.

However, the LUCA website appeared to have only a supportive role among the range of promotional efforts. Among those who participated in at least one activity, only four percent of the respondents indicated that LUCA website was the *most important factor* for their LUCA Program participation and six percent for their understanding of the participation options, the initial LUCA materials and procedures, or the feedback materials.

As shown in Table 4.4-19, larger entities were more likely than smaller entities to report that the LUCA website helped them. However, the response patterns of smaller entities indicate that fewer small entities visited the LUCA website compared to larger entities, thus limiting the effect of this informational resource.

Table 4.4-19 Usage and Helpfulness of LUCA Website by Entity Size

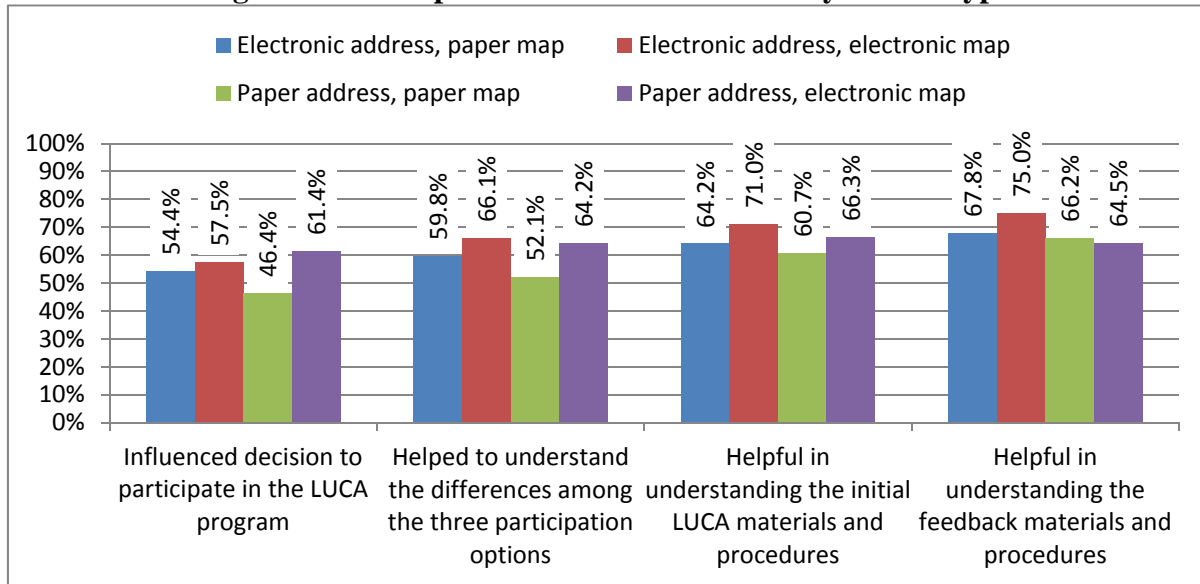
Function or Activity	Effect	Size (Number of HUs)						Total
		1,000 or fewer	1,001 to 6,000	6,001 to 50,000	50,001 to 100,000	100,001 to 1,000,000	1,000,001 or more	
Decision to participate in the LUCA program	Yes, influenced decision*	49.4%	52.4%	57.9%	59.0%	65.8%	66.7%	53.6%
	Did this activity	58.6%	68.4%	78.8%	81.9%	80.2%	100.0%	68.0%
Understanding of the three participation options	Yes, helped understanding*	56.3%	58.3%	64.7%	74.1%	79.4%	75.0%	60.6%
	Did this activity	53.4%	62.8%	74.7%	73.6%	81.5%	66.7%	62.9%
Understanding the Initial LUCA Materials and Procedures	Yes, helped understanding*	62.4%	65.1%	69.7%	81.3%	74.9%	75.0%	66.5%
	Did this activity	49.5%	59.3%	73.5%	76.5%	75.8%	66.7%	60.5%
Understanding the feedback materials and procedures	Yes, helped understanding*	65.7%	69.6%	74.9%	80.3%	78.3%	100.0%	70.8%
	Did this activity	37.6%	44.9%	58.6%	64.5%	59.4%	50.0%	46.5%

Source: 2010 Census LUCA Participant Survey: Questions 3, 4, 8, and 25.

*Percentages based on respondents who did this activity.

The helpfulness of the LUCA website also varied with the media type chosen by entities. Figure 4.4-5 shows the LUCA website was more helpful to those entities that used electronic media compared to those that chose paper address lists and paper maps.

Figure 4.4-5 Helpfulness of LUCA Website by Media Type



Source: 2010 Census LUCA Participant Survey: Questions 3, 4, 8, and 25. Percentages based on respondents who did this activity.

5. QUALITATIVE SURVEY RESULTS

The 2010 Census LUCA Participant Survey questionnaire offered opportunities for respondents to provide open-ended comments about the LUCA Program.

5.1 Introduction

Although only one question in the questionnaire solicited general remarks about LUCA and about participation in the decennial census by local governments, respondents took advantage of the presence of text boxes for “other” responses to three other questions to make general observations in addition to the kinds of comments for which those text boxes had been intended. Therefore, we analyzed these open-ended questions together. A number of additional questions included opportunities for respondents to create their own answers, usually to specify an “other” response in addition to one of those listed. The responses to these questions were short and focused. They have been coded into main themes. Questions that included this type of open-ended response included questions 3, 18 (two open-ended sub-questions), 28, 29, 31, and 32.

The four questions containing large numbers of open-ended responses that are analyzed in this section were the following:

- Q.7:** What changes to any of the three participation options would you recommend?
- Q.21:** Please list any suggestions you have in regard to the Initial Review materials.
- Q.23:** Please list any suggestions you have in regard to the feedback materials.
- Q.33:** Please list any suggestions you would make regarding a future LUCA Program.

The survey had a total of 3,777 responses to these four questions. Avar removed 1,300 comments such as:

- No comment,
- Not applicable,
- Respondent couldn’t remember,
- Respondent didn’t know because someone else had done the LUCA work, and
- Complaints that the survey was conducted too long after LUCA.

That left 2,477 comments. Those 2,477 comments included some identical comments in more than one text box or on more than one questionnaire. Therefore, the 2,477 comments comprised only 2,450 *unique* comments, including differences only in punctuation, capitalization, or spelling. Thus, the eight instances of “Standardize unit numbers and street names” (with initial capital and no period at the end) count as *one* response but “arc shape files” and “arc shapefiles” count as *two different* responses.

A numerical tabulation would not give a good quantitative idea of how prevalent any one opinion or experience was because other respondents might have had the same opinion or experience but not entered it. This may be because they gave higher priority to other issues, or because they did not want to take the time to write an extended or even a brief text of their own. A general tendency for the dissatisfied to respond more frequently and at greater length to the opportunities provided by open-ended questions also reduces the accuracy of any estimates of the proportion of respondents providing a particular type of response.

Although the comments do not provide good quantitative estimates of the prevalence of specific problems and issues with LUCA, they do provide some very specific descriptions of problems and issues not addressed by the closed-ended questions. The contractor's staff read all of the open-ended responses to questions 7, 21, 23, and 33 and developed a set of general categories into which most of them fell. There was sufficient repetition to provide an impression of which problems occurred most frequently. The discussion below is based on this qualitative analysis.

Avar furnished a full set of open-ended responses to the Census Bureau. The contractor analyst also marked 699 of the 2,450 different comments for Census Bureau review, including 33 marked as especially informative. These comments generally provided detailed suggestions for improvements or examples of specific problems.

Given the diversity of local governments, ranging from small municipalities with less than 200 residents to large cities and counties and whole states, some of the recommendations made within the open-ended responses are contradictory.

5.2 Discussion of Qualitative Data

The following fourth-level sections describe the general themes found in the 2,450 different comments. In some cases a single comment contained more than one of these themes.

5.2.1 Explanation of the Participation Options

Besides general calls for better explanation of the participation options, there were indications that some jurisdictions would have chosen different options if they had understood fully what the different choices involved. Some jurisdictions did not understand that their choice of participation option would preclude correcting errors in the address lists they received later. Regardless of how this was indicated in the early materials, it clearly was not understood by all local governments.

5.2.2 Workshops and General Training

While some respondents indicated that the workshops and training they received were helpful, others were frustrated that there was no training nearby. For example, a municipality might have a policy of not sending staff to any training more than a certain distance away or out of state. In other cases, the people responsible for reviewing and correcting local addresses did not find out

about the training, or were not even assigned responsibility for LUCA until, as far as they knew, the training opportunities had passed. Comments included calls for more hands-on and on-site (in the local government office on its equipment) training, requests for more on-line training, and complaints that trainers were not well prepared.

5.2.3 Software Preferences

There was a great deal of diversity in how respondents viewed the software requirements of LUCA for the 2010 Census and in what they recommended. Software that is suitable for larger governments, who use GIS software, may not be suitable for small governments with potentially just part-time staff. Although many respondents said they used the Census Bureau's MAF/TIGER Partnership Software (MTPS) as their primary software or as part of their review and would use it again, those who wrote open-ended comments were frequently sharply critical of it. Some of these respondents recommended sticking to the most widely used commercial GIS software, referred to as Esri for its developer or by name as ArcGIS. These were evidently governments with enough technical staff to have GIS specialists.

Another set of respondents, presumably those from small entities that do not have GIS programs and users familiar with them, suggested using Microsoft products, providing address lists in Excel or Access. Despite their acceptability to three-quarters of the respondents, "pipe-delimited" files were deprecated by many of the open-ended respondents, who found them unusable and time-consuming to convert to usable formats.

Some local officials did not suggest specific software but suggested that it should be up to the Census Bureau to deal with or adapt to the formats of their lists rather than up to them to learn the Bureau's software and formats. They generally wanted procedures, software, and formats that would be simpler for them to use and that would not require special training.

5.2.4 Reliance on Local Knowledge

A large volume of comments cast doubt on the accuracy of the final maps and address lists used for the 2010 Census. These comments described specific problems that local governments encountered or suggested other ways to use their knowledge of their communities to ensure accurate address lists.

A very common complaint was that the Census Bureau's initial address lists omitted habitable or inhabited housing units, and that the Census Bureau rejected or ignored the efforts of local governments to add these units. These efforts were sometimes accompanied by specific numbers or other evidence. These included units that may have existed for decades, and on occasion, even the respondent's own address. Especially in the case of smaller entities, respondents complained that they knew their communities better than the Census Bureau and that the Census Bureau should not override their corrections for unspecified reasons. Local officials regarded assertions that HUs well known to them did not exist as absurd. This compromised the subsequent census counts in the eyes of these officials. In some cases, the Census Bureau

seemed to rely on its local canvassers, who simply did not find and list all of the housing units in a community. There were also reports of Census acceptance of non-existent housing unit addresses despite the attempts of local officials to have these addresses removed. According to the reports of local officials, Census refused to remove non-existent units, or to add actual housing units, because of the format in which local officials submitted corrections. Since many of the respondents to the LUCA survey were not aware of any final counts reported to their communities at the time of the LUCA survey, they did not know what happened to these units, but feared that the census was unreliable for their communities.

Officials also commented on visits by the Census Bureau's canvassers, who asked about how to find addresses that local LUCA liaisons had already reported as non-existent. The Census Bureau does not notify canvassers of LUCA deletions by local governments to prevent canvassers from accepting local-government corrections without confirming them on the ground. However, even if the LUCA corrections had been recorded by the Census Bureau, the fact that they were not passed on to canvassers created an impression that local LUCA work had been ignored or rejected, and therefore done in vain. Some officials who encountered this problem suggested that the Census Bureau hire long-time residents as canvassers; they, too, would know that these addresses did not exist, and busy village and township clerks would not have to repeat their address corrections to outsiders.

Respondents who believed that they knew their communities intimately expressed frustration that the Census Bureau would not accept their advice and corrections. Sometimes they seemed to feel insulted. In other cases, they expressed frustration that their work had seemingly gone for naught.

In addition to problems with street addresses, local officials also complained about the Census Bureau rejection of information about the presence of multiple housing units at a single street number, through subdivision of a single-family residence into apartments.

Respondents also complained of difficulty getting the Census Bureau to accept their corrections to shapefiles, including layers for boundaries, hydrography, and other features. As with the perceived disregard of address list corrections by the Census Bureau, this apparent difficulty in getting shapefile corrections accepted compromised the credibility of the decennial census count with local officials.

These comments record what LUCA looked like to local officials. In some cases, an unclear notification by the Census Bureau that corrections submitted by a local government had already been made on the basis of other sources might have seemed like a rejection.

LUCA survey respondents reported submitting corrections and then receiving new lists that still contained addresses they had tried to delete, and did not contain addresses that they had tried to add.

5.2.5 Acceptance of Local Address Lists

A frustration for officials in areas without home mail delivery was the refusal of the Census Bureau to accept post office boxes as “addresses.” To officials in small entities, post office boxes identify and account for their households; they may not understand that box holders can move and that the Census Bureau must count people where they reside, not where they receive their mail. In towns without home delivery, residences might be described with street numbering schemes, such as those used by the local 911 administrators, but mailed census forms could not be delivered to them. Some small-town officials reported that their local post office returned mailed census forms, either because they lacked post office box numbers or because they had both box numbers and streets with house numbers. These officials doubted that the ultimate census counts for their towns included all of their residents, or they believed that the Census Bureau had required much more local canvassing than necessary because they had rejected post office boxes as addresses.

Another complaint about addresses was that local 911 administrators, or other local administrators such as tax assessors, had detailed and complete address lists that were more accurate than what the Census Bureau sent to local governments. LUCA survey respondents were frustrated that they had to collate their own lists, which they regarded as superior, with the Census Bureau list, and then submit additions and deletions, without being able to submit their own complete lists directly, which would have required much less effort.

5.2.6 Address Sort on Paper Listings

Respondents provided various suggestions about the preferred or most efficient arrangement for address data. Officials whose address listings were arranged alphabetically by street name and then numerically within each street were either confused by the splitting of addresses on opposite sides of the street or just exasperated at having to re-sort by name and number to compare to their own lists; they would have preferred a strictly numerical order within each street name.

5.2.7 Simpler Tools for Smaller Entities

A frequent complaint on the part of respondents from smaller communities was that they needed less complicated tools than the Census Bureau provided in the 2010 LUCA. Limited staff, lack of local GIS systems, and lack of time to learn the Census Bureau’s software and terminology complicated address review in small communities with small and relatively stable housing stocks.

5.2.8 Wasteful Mailings and Delivery Methods

Some survey respondents complained about the number of mailings they received, which they considered to be repetitive. They commonly recalled receiving three identical copies of some materials, and sometimes multiple sets of maps (or multiple copies of a single map). Some commented on duplicate mailings to the highest elected official (HEO) and to the designated

LUCA liaison, with the HEO copy passed on to the liaison. However, many of the officials complaining about multiple mailings did not mention duplication between the HEO and LUCA liaison. There were also complaints that mailings to HEOs in larger entities took a long time to get passed down through the administration to the civil servants who could act on them, cutting down on the time they had available to carry out their reviews or appeals.

Another complaint from participants involved the Census Bureau's use of FedEx Corporation for delivery of LUCA materials. They considered use of a courier service expensive and wasteful compared to the United States Postal Service (USPS). The Census Bureau chose FedEx because it cost significantly less than business reply service from the USPS. The FedEx rate included tracking, which the Census Bureau considered critical to the LUCA Program. Using the tracking service provided by the USPS would have required the use of registered mail, at a much higher cost than the FedEx rate, but that was not apparent to these respondents.

In addition to the perceived wastefulness of FedEx, not sending material by first class mail posed other challenges for officials in small government units. The necessity of signing for the delivery was a problem where the government office was not staffed full-time. At least one respondent reported that FedEx did not comply with the signature requirement. A few respondents from small towns complained that they had no local FedEx drop-off point, and thus had to make a time-consuming trip to send material to the Census Bureau.

5.2.9 Excessive Address List Security

The address security requirements of Title 13 were criticized by respondents as excessive and sometimes absurd. Respondents pointed out that their address lists are available to the public and widely shared among different public and private agencies such as utilities, and that private information companies such as USPS, Google, and providers of GPS mapping systems have information on addresses that they share freely. Local officials could not find anything secret or confidential about addresses, as opposed to the names and characteristics of the people who live at them. Therefore, security requirements for address lists were viewed as not only pointless, but burdensome. The requirements limited or even precluded participation in LUCA, or made officials vow not to participate in the future, without protecting any information that local officials thought was truly confidential.

The requirement that address list corrections be provided only to the Census Bureau and be destroyed after completion of LUCA upset local officials. They went to some trouble to compile correct address lists. If they found addresses that they had not previously known about, or if they created a comprehensive list that they had not previously had, they could not use the results of the work they had done to benefit those who had paid for it—their local taxpayers.

5.2.10 Changes in Due Dates or Deadlines

Some respondents commented on the difficulties caused by changing deadlines or inaccurate letters from the Census Bureau. Some scrambled to meet an inconvenient deadline only to find

that it had been extended. Others had to take time explaining the situation to supervisors who had received letters that a response was past due when in fact it was not because the response deadline had been extended.

5.2.11 Reimbursement for LUCA

The LUCA Program does not include funding for local-government participation. Some local officials expressed a willingness to make extensive efforts for LUCA, at the expense of their own taxpayers or through unpaid overtime from their staff, because they wanted to make sure that their communities were counted properly. However, other officials regarded LUCA as an “unfunded mandate.” They apparently felt obligated or required to participate, but did not see a benefit to themselves or their communities, or at least not one commensurate with the time, cost, and energy involved. LUCA survey respondents suggested that if the Census Bureau, or the federal government in general, wants local governments to undertake local address updating and correction for the benefit of the decennial census, the local governments who do it should be compensated financially. Two village or township clerks mentioned paid work weeks of 6 hours and 15 hours; even a small LUCA effort would have been relatively large in comparison.

Along the same lines, some respondents said that they had satisfactory local address lists already (for assessment or utility billing), but if the Census Bureau does not trust these lists, or find them satisfactory, the Census Bureau should correct or recompile them on its own—at its own expense—without burdening local governments.

5.2.12 Non-LUCA Comments

In addition to comments about the actual administration of LUCA, respondents used the presence of text boxes on the on-line and paper questionnaires to comment on other matters that they considered relevant.

Some of the comments were not about the LUCA Program as such but about the lateness of this survey. Respondents explained that too much time had passed since their LUCA participation for them to remember the details that the survey asked about. At best, they could give a general impression that LUCA had gone smoothly or that it had posed a problem. Some pointed out that, as required by their participation agreements, they had returned or destroyed all LUCA materials, and therefore had no records or documents that they could refer to. Comments also included explanations that the respondent could not answer many or all of the survey questions because someone else had done the LUCA work but no longer was on the staff of the government. Occasionally, the original LUCA respondent, such as a village or town clerk, had been replaced at an intervening election; in other cases, the person who received the survey questionnaire was a successor or replacement of a retiree or someone who had left the government staff for other reasons.

A complaint that was not specifically about LUCA, but might have been thought to be, was that the Census Bureau sent promotional items like hats to local governments that did not know what

to do with them and did not have any use for them. This was regarded as a waste of public funds. Local officials who mentioned this either did not understand the difference between LUCA and promotional efforts for other aspects of the decennial census, or they took the opportunity of the LUCA survey to voice general opinions about the 2010 Census as a whole.

6. CONCLUSIONS AND RECOMMENDATIONS

This section includes a general summary of the detailed patterns reported in Sections 4 and 5, overall conclusions, and recommendations for the next LUCA Program.

6.1 Time and Communications

Timing and good communication are indispensable aspects of a local review of Census Bureau address files in time to be useful for a decennial census. Some aspects of timing and communication in the 2010 LUCA worked well and do not need modification; others could benefit from changes.

6.1.1 Advance Notice

Governments do not need more than a six month advanced notice about LUCA Program registration. A majority of governments wanted six months, and nearly all the rest thought less would be adequate. This was true regardless of size or type of government entity.

6.1.2 Review Time

According to local governments, the review time of 120 days for the initial review materials was about right. Nearly half of the respondents supported the 2010 LUCA review period of 120 days, only a minority said that anything less would be sufficient, and only 11 percent wanted more than 120 days. A majority of the very largest governments, with over a million addresses, wanted more than 120 days. Approximately 82 percent of recipients of *both* electronic address lists and electronic maps found 120 days or less to be sufficient for review. More recipients of electronic address lists and maps wanted more than 120 days for review as compared to recipients of paper address lists and maps.

6.1.3 Influences on Participation Decisions

The advance mailing was the most influential communication as far as the decision to participate in LUCA was concerned. It had been read by 93 percent of survey respondents, influenced nearly 75 percent of them to participate in LUCA, and was the information source cited most often as the *single* most influential. The difference between those who read the advanced mailing and those who were influenced by the mailing varied little. Though the advanced mailing was used most often by state and large governments and least by tribal governments, the tribal governments were influenced the most by the mailing.

The registration was as widely read as the advance mailing, and was only slightly less often a factor in convincing governments to participate in LUCA, but it was cited as the *single* most important influence on participation much less often than the advance mailing. Technical training workshops and promotional workshops were also highly effective, ranking second and third as the single most important influences, influencing about two-thirds of those who attended them, and attended by a majority of survey respondents. While more participants visited the LUCA website than participated in workshops, the workshops influenced more participants than the website. Multiplying participation by influence leads to about the same proportion of net

influence for the workshops and the website. Therefore, the website was a valuable supplement to the workshops.

Encouragement and resources from other levels of government, while they did have some positive influence, played a relatively small role in convincing those who participated in both LUCA and the survey to make a LUCA participation decision.

Although there were some differences among governments according to size and level, they were not important except that smaller governments (whether measured by number of HUs or by “level”) had less involvement with potential participation influences except for the two mailings. Therefore, the mailings were especially important in promoting LUCA among the smaller entities.

6.1.4 Understanding LUCA Participation Options

Influences on understanding of the three LUCA participation options largely paralleled influences on the basic decision to participate at all. The mailings were read by over 90 percent of LUCA participants and helped around 80 percent understand the options. However, although the technical training workshops and promotional workshops had less participation and were less often considered helpful, the technical training workshops were most often considered to be the *single* most helpful source of understanding of the participation options. Opportunities for personal interaction with Census Bureau representatives at the technical training workshops might have been decisive. Other opportunities for individual consultation with Census Bureau staff—the RCCs and LUCA Technical Help Desk—were used slightly less and were less often considered helpful than the technical training workshops. As with the decision to participate, the mailings were more important to smaller governments than to larger ones.

About three-quarters of all governments responding to the survey claimed that they understood the participation options. Smaller governments with fewer housing units were less likely to understand the participation options than were larger governments.

Smaller governments were also less likely to be aware that they could limit their address reviews to selected areas and that they could coordinate their reviews with other levels of government. Overall, a minority of government representatives claimed that they had been aware of this possibility.

The supporting documentation was sufficient for understanding the feedback materials for 62 percent of the entities. Another 18 percent were able to understand the feedback materials after getting help; the remaining 20 percent admitted that they never fully understood them. Smaller entities were more likely never to have understood the feedback materials; larger entities were more likely to have understood them with help.

6.1.5 Appeal Time

The 30 days allowed to file an appeal of Census Bureau changes (or lack of changes) to the original address lists was adequate for a majority of governments and nearly two-thirds of small

ones, but 40 days would have accommodated smaller governments with 6,000 or fewer HUs better, and 50 days would have been better for governments with more HUs.

6.1.6 Continuous Address Updating

Option 1 users were most often of the opinion that annual address updating would obviate the need for another address canvassing operation in 2019–20 in preparation for the 2020 Census, followed by Option 2 users. Governments that took advantage of Option 3 were slightly more likely to believe that another address canvassing operation would be necessary even if they could update addresses annually. However, smaller governments were more likely than the largest governments to think that annual address updating would make address canvassing unnecessary. Overall, two-thirds of local governments thought that a complete address canvassing operation would not be needed prior to the 2020 Census if the Census Bureau shared its housing-unit address research on a continuous (annual) basis.

6.1.7 Reminder Letters

Two reminder letters about the deadline for initial local government address review are adequate for all types of governments. There was no substantial call for three, and most governments admitted that one would not be enough.

6.2 Local Options

The different participation options offered to local governments by the 2010 LUCA Program provided flexibility but also imposed burdens related to Title 13 compliance. Participation options involved not only the materials received by local governments and how they could respond, but also coordination with other governments and with another Census Bureau compilation of data on local governments, the BAS.

6.2.1 Participation Options

About three-quarters of the responding governments claimed to have understood the participation options. About the same proportion thought that the option they chose met their needs to a great extent or a good extent; only one in twenty did not think their option met their needs at all. Larger governments were more satisfied with their choices than smaller governments.

6.2.2 Title 13

Two of the three participation options contained Title 13 data that required governments to keep address lists sent to them confidential. The survey asked participants if they needed to take any of five additional measures to comply with the confidentiality requirements. Of the five possible security measures taken by participants none were used extensively; however all of the measures were used by some governments regardless of size. The security requirements placed the biggest burden on state-level participants. Smaller governments had to take security measures less frequently, probably because many worked with paper address materials which were considerably easier to keep secure or selected Option 3, which did not involve Title 13 materials.

6.2.3 Coordination with Other Governments or Agencies

Coordination between governments and regional agencies was productive when it occurred, but a relatively small percentage/number of the respondents chose to coordinate their review. Most of the smaller governments said they were not aware of the option. The actual figures are:

- 44 percent (2,076) of the survey respondents knew they could coordinate with other governments;
- 17 percent of this total (347, or about 7 percent of the survey respondents) benefited from coordinating with other governments; and
- 38 percent of the benefiting governments (132 or about 3 percent of the survey respondents) said they would not have participated without coordination.

Applying this three percent to the entire survey universe (respondents plus non-respondents equals 11,492) indicates that the availability of coordination increased participation by about 320 governments. This assumes that respondents to the survey are representative of the non-respondents to the survey.

A greater effort to publicize coordination possibilities among smaller and lower-level governments (minor civil divisions and places) could result in greater participation and more detailed review. Almost all (nearly 95 percent) of the governments that had their addresses reviewed by another government were satisfied with their coordination. The governments that did the reviewing for other governments were not asked whether they were satisfied with the arrangement.

6.2.4 LUCA and BAS

Coordination between LUCA and BAS was highest among middle-sized governments. Since county and state boundaries rarely change, the 37 percent of counties and 22 percent of states that reported submitting boundary changes may have been doing so mostly (counties) or exclusively (states) for lower-level governments rather than for themselves. Coordination between LUCA and BAS was most advantageous for the larger governments. Although attempting to coordinate LUCA and BAS did cause problems for local governments, they were much less frequent than the advantages.

6.3 Review Materials

Although there were complaints among the responses to open-ended questions about address lists and maps provided to governments participating in LUCA, meaningful open-ended responses were relatively rare and about 80–85 percent of all survey respondents found the material satisfactory. Although we asked about different materials and about format and content, the consistency of ratings suggests that most LUCA liaisons or other survey respondents did not keep the Census Bureau's distinctions in mind or remember them a year and a half after their LUCA participation. Despite the relatively high rate of satisfaction with the understandability and usefulness of the main LUCA materials—which did not vary much by jurisdictional characteristics—if the 15–20 percent of survey respondents who did *not* find the principal

materials “easy to understand” or “useful” applies to all participating jurisdictions, then they posed problems for around 2,000 (1,700–2,300) government units of all sizes. This provides a large scope for improvement. The free-essay responses to various “open-ended” questions provide some clues about what could be changed, and are discussed in Section 5 of this report. Some of those recommendations are contradictory and it might not be possible for a 2020 LUCA to provide completely satisfactory materials to all of the diverse population that tribal, state, county, and local governments constitute.

Although there were specific complaints among the open-ended responses about “pipe-delimited” address lists, they had about the same approval rate (75 percent) from electronic address lists recipients as other initial review materials. They might be obsolete by 2020. If they are not, the Census Bureau might still seek more acceptable formats or distribution of address files to everyone in as many different formats as are feasible. In 2011, nearly half of the respondents who did not want pipe-delimited text files for address lists preferred files that would have worked with Microsoft Office™ products.

MTPS was used less frequently than the address feedback materials, by slightly less than two-thirds of responding governments for any part of their review, by less than half for editing computer-readable address lists, and by about a quarter for boundary and geographic feature updates. This usage rate was lower among the largest governments, especially state governments, which were mostly likely to have technical personnel who could use their own alternatives. Those who did use MTPS found its instructions, demonstrations, and computer-based training effective by about 3 to 1 (about 75 percent) and would use it again by a 4 to 1 margin (over 80 percent). These approval ratings may exclude governments that tried it and found it too difficult to use. The survey did not ask about failed or frustrated attempts to use MTPS. MTPS was used much more frequently by the smallest governments, probably because many of them did not already have an alternative with which they were experienced, such as an Esri product, for GIS functions.

6.4 Assistance to Participating Governments

Governments had to decide to participate, and once they had done so, still had to understand the three participation options, the materials they received during the initial review and feedback phases, and the feedback procedures. The Census Bureau provided assistance on these aspects of LUCA through printed material that was sent to governments before and after registration to participate, through workshops and presentations, through RCCs and the Technical Help Desk, and through a dedicated LUCA Web site. The effectiveness of these sources of assistance can be judged by whether those who used or participated in them considered them influential, or helpful. However, frequency or extent of use must also be considered: a resource might be very helpful to those who used it, but not have been used very widely, thus limiting its effect on LUCA participation and the ability of governments to provide accurate information to the Census Bureau with reasonable efforts.

6.4.1 Technical training workshops

The technical training workshops were:

- The most helpful resource (of seven we asked the participating governments about) for understanding the participation options,
- The second most helpful resource (of nine) in helping governments decide to participate in LUCA,
- The second most helpful resource (of five) in helping governments understand the initial LUCA materials,
- More effective in helping understand the initial materials than in influencing program participation or understanding the participation options, and
- More effective for tribal governments than for other types of governments.

6.4.2 Documentation

Overall, the most helpful resource for understanding the initial materials and procedures was the User Guide: 94 percent of survey respondents claimed to have read it, 89 percent of them considered it helpful, and it was the most helpful resource for understanding both the initial and the feedback materials. However, it was less helpful to state and tribal governments than to other types. The Quick Reference Guide was considered to be helpful as often by its users as the User Guide, but it was used less often.

The LUCA Computer-Based CD-ROM was rated in a different way than the two printed guides. Only 16 percent of survey respondents who used it did not think it was helpful, but all state or tribal government users found it helpful. Overall, it was most helpful to entities using electronic address lists and electronic maps and for larger governments with more HUs. These governments probably had more LUCA staff that were conversant with computers and comfortable using CD-ROM based training.

6.4.3 Technical Help Desk and RCCs

The survey asked separately about usage and helpfulness of the RCCs and the LUCA Technical Help Desk in understanding various aspects of LUCA or carrying out LUCA procedures. The similarity of reported usage and ratings suggests that many respondents had difficulty differentiating between them, at least at the time of the survey (over a year after their LUCA participation) if not during LUCA. Since the telephone numbers were different, local LUCA liaisons must have deliberately called one or the other, but even during LUCA they might just have called the one whose telephone number was handiest. A year and a half later, they might only have remembered that they “called somebody at Census” without recalling who they called for one problem or issue, who they called for another, who was helpful, and who was not.

Both the Technical Help Desk and the RCCs were rated almost universally (over 90 percent) as helpful in preparing the LUCA submission by the minority of respondents who said they had contacted them.

Tribal governments found the Technical Help Desk helpful more often than did other types of governments, but found the RCCs helpful less often than did other governments.

The Technical Help Desk and RCCs were less helpful than technical workshops or the User Guide in understanding LUCA materials. The Technical Help Desk was the second least helpful resource for understanding participation options, initial materials, and feedback materials, but an overall majority of governments did not use it for most of these functions.

6.5.8 Schedule Earlier Post-LUCA Survey

The LUCA website got moderate ratings in terms of helpfulness and few respondents considered it the most important or helpful resource at various stages of the LUCA process. Therefore, it seems to have played only a supporting role among the range of informational resources provided to governments cooperating with LUCA. Understandably, it was least often helpful to entities using paper address lists and maps.

6.5 Recommendations

The recommendations in this section are based partly on the responses to the closed-ended questions but principally on the responses to the four open-ended questions described in Section 5.

6.5.1 Encourage Higher-Level Review

LUCA would be less burdensome on small local governments, and the Census Bureau might get more useful participation, if LUCA were moved to higher levels of government. Although the Census Bureau cannot compel states to carry out LUCA for small counties or compel counties to carry out LUCA for townships and villages with small populations and therefore small staffs, the Census Bureau should explore with states and counties how to limit LUCA to governments with staffs large enough to absorb the extra work that LUCA entails and personnel conversant with GIS and other data processing systems that the Census Bureau can use efficiently. Some populous places and minor civil divisions are capable of performing their own review and might prefer to do so over allowing it to be done by their county or state governments, and some small governments might prefer to work overtime or on an unpaid basis to preserve local perspective and participation.

The Census Bureau has several years to work with national and state associations of governments at various levels to determine the most appropriate and efficient level of government to conduct LUCA for the 2020 Decennial Census. A survey of local governments several years out, to find out which ones think they can do LUCA on their own and would prefer to do so, and which need help from higher levels, would support this process and enable planning for individual situations and for the state and local levels. It might be possible to have such a survey actually conducted by the appropriate national association, such as the National Association of Counties, the National Association of Towns and Townships (whose nine state affiliates do not include all state township associations), or by their state affiliates, perhaps with Census Bureau financial support. Endorsement of a Census Bureau survey would be another way to involve the appropriate associations and increase responses to such a survey.

Adding such a complete canvass as a preliminary step of the LUCA “registration” process might be another way to adapt LUCA to the variations in local capabilities, if involvement of local government associations does not appear to be fruitful or the Census Bureau prefers to act on its own.

6.5.2 Use Standard Software

For LUCA, the Census Bureau should consider maximum use of the most widely adopted commercial software. Although personnel conversant with commercial GIS software might have been able to learn MTPS readily, it did require extra time, and it seems to have baffled some government personnel, especially less specialized personnel of smaller governments. Even users of less common programs often know something about the dominant software, or at least can convert its files, because they have to deal with files received from others. Thus, survey respondents recommended using ArcGIS or other GIS software from Esri, and address lists in Microsoft Word or Excel. Even governments that use QuattroPro, for example, are likely to know how to convert Excel files because they get them from citizens, contractors, and other governments. Using the most common GIS, word processing, and spreadsheet programs would reduce the learning curve for local LUCA liaisons and allow them to concentrate the time they have available for LUCA participation on address review rather than learning a new software system.

6.5.3 Explain Participation Options Better

Some of the problems described by small governments might have come from a misunderstanding of the requirements of the different participation options. A frank description of these requirements, in terms of learning and security, and recommendations concerning the appropriate option by staff size and experience (for instance, is there anyone on the staff familiar with any GIS software?), might prevent governments from abandoning their review entirely when they realize that they have chosen too ambitious an option, and reduce complaints about the burdens of LUCA.

6.5.4 Simplify Process for Smaller Governments

Large, well-staffed governments—states and populous cities and counties in particular—were able to handle the demands of LUCA participation, including not only the address review itself but also attendance at conferences and dedicated training sessions, and use of LUCA training materials (reading manuals, viewing interactive CDs). A small village or town, however, might have no travel budget and be staffed entirely by one part-time employee. There, even a few hours of training, preparation, and address review was a relatively large additional burden. When such governments have to participate in LUCA on their own, the Census Bureau should explore ways to tap local expertise and knowledge of their people and housing stock without the burden even of the 2010 Option 3. Some possibilities are:

- Allow small governments to submit to the Census Bureau a list of all known addresses in whatever form they have it or find most convenient to produce, and

- Send the local government a list limited to changes for the feedback rather than ask them to go through the full list.

Encouraging higher levels of government to coordinate whenever possible would also reduce the burden on very small governments.

6.5.5 Explain Addresses and Housing Units Better

There is also confusion among local officials over the Census Bureau's need to use addresses to identify housing units by:

- Mailing address (postal delivery of a form is much less expensive than sending out an enumerator), or
- Location address
 - So that an enumerator can locate housing units that don't mail back forms, and
 - So that the Census Bureau can geocode all housing units to a specific block for redistricting.

Unfortunately, many addresses only do one or the other. Post Office Box numbers and Rural Routes are mailable addresses but they cannot be geocoded. Many E-911 addresses are locatable but the Post office does not recognize them. Many housing units, such as those in trailer parks, pick up their mail at a central location in a different census block from where they live. Many housing units have two or more addresses.

The best address for a housing unit is a city-style address (house number-street name) that the Census Bureau can both mail to and locate physically. This is what the Census Bureau wanted in the LUCA Program. The Census Bureau did not accept non-city style addresses, but did accept city-style E-911 addresses.

The confusion resulting from the Census Bureau's multiple addressing needs frustrated many local officials. A better explanation of what the Census Bureau needs and why, mentioned in the recruitment materials and described prominently with the initial review materials, might reduce the misunderstandings that local government representatives described in some of the responses to open-ended questions.

6.5.6 Describe Census Bureau Use of Local Updates Better

It appeared to some local governments that the Census Bureau was overriding or ignoring their updates. False impressions, and unnecessary local-government exasperation with the Census Bureau, might be avoided by more accurate and detailed acknowledgement of what the Census Bureau does with updates. If deletions by local governments are recorded for comparison to field-canvassing results, but field canvassers are not informed of these deletions and still assigned to look for the deleted addresses, local governments should be informed of this procedure.

It might be helpful, at least for relations with local governments, to tell canvassers that local governments might not have records for some of their addresses, either because the housing units in question are illegal and therefore unrecorded in local tax assessment and other records, or because they are phantoms that do not really exist. Canvassers need not be told of specific local-government deletions, to avoid biasing their searches and reports.

6.5.7 Support Local-Government Participation in the Census

Some local governments accept the argument that they benefit from a complete and accurate count of their residents, through proper apportionment of legislative representation and general and program-specific funding from the federal and state governments. However, other local governments either do not understand the connection or do not believe the costs of LUCA participation are worth the potential benefits.

Moving LUCA participation up from the local government levels where it is most burdensome to higher levels such as the county or state is only one way to ensure complete LUCA coverage. Another is to provide enough assistance so that perceived costs to local governments do not exceed perceived benefits. Direct financial assistance to pay overtime or outside experts is one possibility. Another is a corps of aides who could visit local governments, obtain their housing-unit records, compare them to the Census Bureau's list of housing units on site, and ask questions about discrepancies.

Local-assistance programs would have to be carefully drawn for the Census Bureau to avoid assuming financial and technical responsibilities that could reasonably be carried out by local governments. Maximum size standards, in terms of population, budget, or staff, might be required.

6.5.8 Schedule Earlier Post-LUCA Survey

Conducting a LUCA evaluation survey shortly after the conclusion of the program would have at least two benefits.

- Local LUCA liaisons would be able to recall better their decision-making process and the problems they encountered. Some respondents to the 2011 survey said they could not answer certain questions or the whole survey because of the time that had passed since their work on LUCA. They could not evaluate the participation options because they had forgotten the features of the options they had not chosen.
- There would be fewer turnovers among local officials. At some governments, the staff that had carried out LUCA had been replaced by the time the survey was conducted. Their replacements did not know anything about their governments' LUCA participation.

Since LUCA in general is an extra burden on local government staffs, it would probably not be good inter-government relations to conduct the survey immediately after the final deadline. However, an interval of around six months might give LUCA liaisons time to "recover" from LUCA but not to forget everything about it or be replaced.

Planning for a post-LUCA survey of local governments should begin *during* LUCA. The 2010 LUCA survey conducted in 2011 could be used as a basis for a questionnaire about the 2020 LUCA.

7. RELATED ASSESSMENTS

- Initial Draft Report LUCA Assessment
- The Survey Results of Non-Participating Governments Eligible for the 2010 Census Local Update of Census Addresses (LUCA) Program
- The 2010 Census New Construction (NC) Program Assessment

8. REFERENCE

Pfeiffer, Alfred, "2010 Local Update of Census Addresses (LUCA) Proposal," Version 2.7, June 10, 2005.

ACRONYMS AND ABBREVIATIONS

<u>Acronym or Abbreviation</u>	<u>Explanation</u>
BAS	Boundary and Annexation Survey
CR	Computer-Readable
DMD	Decennial Management Division, U.S. Census Bureau
FLD	Field Division, U.S. Census Bureau
GEO	Geography Division, U.S. Census Bureau
GIS	Geographic Information System
GQ	Group Quarters
HU	Housing Unit
LUCA	Local Update of Census Addresses
MAF	Master Address File
MAF/TIGER	Master Address File/Topologically Integrated Geographic Encoding and Referencing system
MCD	Minor Civil Division
MTAIP	MAF/TIGER Accuracy Improvement Process
MTdb	MAF/TIGER Database
MTPS	MAF/TIGER Partnership Software
NAS	National Academy of Sciences
OMB	Office of Management and Budget
RCC	Regional Census Center
SPSS	Statistical Package for the Social Sciences
USPS	United States Postal Service

APPENDICES

Appendix A

Title 13 - Protection of Confidential Information

Sections 9 and 214 of Title 13

Sec. 9. Information as confidential; exception

(a) Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, or local government census liaison may, except as provided in section 8 or 16 or chapter 10 of this title or section 210 of the Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations Act, 1998.⁽¹⁾

1. Use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or
2. Make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or
3. Permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports. No department, bureau, agency, officer, or employee of the Government, except the Secretary in carrying out the purposes of this title, shall require, for any reason, copies of census reports which have been retained by any such establishment or individual. Copies of census reports, which have been so retained, shall be immune from legal process, and shall not, without the consent of the individual or establishment concerned, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

(b) The provisions of subsection (a) of this section relating to the confidential treatment of data for particular individuals and establishments, shall not apply to the censuses of governments provided for by subchapter III of chapter 5 of this title, nor to interim current data provided for by subchapter IV of chapter 5 of this title as to the subjects covered by censuses of governments, with respect to any information obtained therefore that is compiled from, or customarily provided in, public records.

Sec. 214. Wrongful disclosure of information

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter 1 of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of this title, or whoever, being or having been a census liaison within the meaning of section 16⁽²⁾ of this title, publishes or communicates any information, the disclosure of which is prohibited under the provisions of section 9 of this title, and which comes into his possession by reason of his being employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than 5 years, or both.

1. The Census Address List Improvement Act of 1994, P.L. 103-430 amends section 9(a) by inserting "or local government census liaison" and adding references to section 16. P.L. 105-119, the Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations Act, 1998, adds the reference to section 210.

2. The Census Address List Improvement Act of 1994 (P.L. 103-430) amends section 214 making references to section 16 and "census liaisons."

The Census Address List Improvement Act of 1994 (P.L. 103-430)

The Census Address List Improvement Act of 1994 (Public Law 103-430), approved on October 31, 1994, changed the Census Bureau's decennial census address list development procedures. The Act expanded the methods the Census Bureau could use to exchange information with tribal, state, and local governments in order to support its overall residential address list development and improvement efforts. The Act was primarily designed to improve the accuracy of address lists for the censuses conducted by the Census Bureau and household surveys through this partnership, and as such, the Act's provisions are directed to several areas:

1. The publication by the Secretary of Commerce regarding standards for content and structure of address information by which tribal, state, and local governments might submit for developing a national address list;
2. Rules governing tribal, state, and local governments access to census address information for the purpose of verifying accuracy of the information for census purposes;
3. Development of an appeals process, and;
4. An amendment to existing law that specifies that the Postal Service shall provide to the Secretary of Commerce for use by the Census Bureau such address information, as may be determined by the Secretary to be appropriate for any census or survey.

The Act authorized the Census Bureau to share residential individual addresses with officials of tribal, state, and local governments who agreed to pledges and conditions of confidentiality. Prior to the Census 2000, the Census Bureau was limited to providing block summary totals of addresses to tribal and local governments. The Census 2000 marked the first decennial where residential address lists could be shared with tribal and local governments, provided they signed the required confidentiality agreement.

You can find more information about P.L. 103-430 via the Internet at the following websites:

[Library of Congress](#) detailed information on H.R. 5084, which later became P.L. 103-430 (under "Find more legislation" select "Public Laws," select "103" for the Congress, select the range "103-401 - 103-450", scroll down to "430".)

[Census Bureau overview](#) of the changes to Title 13 as a result of P.L. 103-430

Appendix B

LUCA Survey Instruments and Questions

Survey Instrument Breakdown

Respondents will complete the survey either online or on paper. Participants who requested an electronic address list or electronic maps or provided an email address will be sent a letter containing a link to participate in an online survey. All others will be sent a paper version of the survey with a link to participate online if they choose.

There are a total of 34 survey questions. However, no participant will be sent a survey containing all 34 questions. Each participant will be sent or directed online to one of five survey instruments based on the participation option and the media type they selected when registering for the 2010 Census LUCA Program. Instruments for Puerto Rico participants will be in Spanish. The Survey instruments are comprised as follows:

Instrument	Target participants	Online or paper	Questions included	Total questions
A	Option 3 participants	online	1-19 33-34	21
B	Option 1 participants who used a paper address list and where an indication exists that they possess the capability of accessing an online survey	online	1-18 20-26 33-34	27
C	Option 1 and Option 2 participants who used a computer-readable address list and paper maps	online	1-18 20-29 33-34	30
C-Spanish	Puerto Rico participants who used a computer-readable address list and paper maps (Option 1 was their only choice)	online	1-3 8-18 20-29 33-34	26
D	Option 1 and Option 2 participants who used a computer-readable address list and digital map files	online	1-18 20-34	33
D-Spanish	Puerto Rico participants who used a computer-readable address list and digital map files (Option 1 was their only choice)	online	1-3 8-18 20-34	29
E	Option 1 participants who used a paper address list and paper maps and where no indication exists that they possess the capability of accessing an online survey	paper	1-18 20- 26 33-34	27

*Instruments B and E have the same questions – B is online and E is paper based.

Survey Questions

- 1) The Census Bureau sent notification of the 2010 Census LUCA Program six months in advance of registration to allow governments to consider issues such as budget and staffing needs, confidentiality and security requirements, participation option choices, and LUCA liaison designation. Based on your experience, how much advance notice time did you need before the LUCA program registration? *(Please indicate the number of months)* _____

- 2) The Census Bureau allowed 120 calendar days to review the 2010 Census LUCA INITIAL review materials. Based on your experience, how much time did you need for the review of these materials? *(Please indicate the number of calendar days)* _____

- 3) Did any of the following factors listed below influence your decision to participate in the LUCA program?

	<i>Yes</i>	<i>No</i>	<i>Did not do this</i>	<i>Mark ONE box only</i>
3a) Reading the program information in the advance mailing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>This was the MOST important factor.</i> 3aa) <input type="checkbox"/>
3b) Attending a Promotional Workshop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3bb) <input type="checkbox"/>
3c) Reading the program information in the registration mailing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3cc) <input type="checkbox"/>
3d) Attending a Technical Training Workshop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3dd) <input type="checkbox"/>
3e) Attending a Census Bureau presentation at a professional conference(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3ee) <input type="checkbox"/>
3f) Receiving encouragement from other levels of government or professional groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3ff) <input type="checkbox"/>
3g) Receiving resources such as staff or funding provided by other levels of government or other organizations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3gg) <input type="checkbox"/>
3h) Participating in Census related activities as part of my day-to-day responsibilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3hh) <input type="checkbox"/>
3i) Reading information from the LUCA website	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3ii) <input type="checkbox"/>
3j) Other (Please describe) _____ _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4) The 2010 Census LUCA Program offered three participation options:

- Option 1-Title13 Full Address List Review
- Option 2-Title 13 Local Address List Submission
- Option 3-Non-Title 13 Local Address List Submission.

Did any of the following activities help you to understand the differences among the three participation options available to you?

	Yes	No	Did not do this	<i>This was the MOST helpful activity. Mark ONE box only</i>
4a) Reading the program information in the advance mailing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4aa) <input type="checkbox"/>
4b) Attending a Promotional Workshop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4bb) <input type="checkbox"/>
4c) Reading the program information in the registration mailing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4cc) <input type="checkbox"/>
4d) Attending a Technical Training Workshop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4dd) <input type="checkbox"/>
4e) Contacting a Regional Census Center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4ee) <input type="checkbox"/>
4f) Contacting the Technical Help Desk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4ff) <input type="checkbox"/>
4g) Reading information from the LUCA website	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4gg) <input type="checkbox"/>

5) At the time of your registration for the 2010 Census LUCA Program, did you understand all three participation options?

- Yes, we understood all three.
- No, we did not understand all three.

6) To what extent did the option you selected meet your needs? *(Please choose one)*

- To a great extent
- To a good extent
- To a moderate extent
- To a minimal extent
- Not at all

7) What changes to any of the three options would you recommend? *(Please describe)*

8) Were any of the following resources helpful in understanding the INITIAL LUCA materials and procedures?

	Yes	No	Did not use this	<i>This was the MOST helpful resource. Mark ONE box only</i>
8a) Attending a Technical Workshop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8aa) <input type="checkbox"/>
8b) Reading the Users Guide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8bb) <input type="checkbox"/>
8c) Contacting a Regional Census Center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8cc) <input type="checkbox"/>
8d) Contacting the Technical Help Desk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8dd) <input type="checkbox"/>
8e) Reading information from the LUCA website	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8ee) <input type="checkbox"/>

9) Were you aware that you could limit the INITIAL LUCA review to selected areas within your jurisdiction?

- Yes, we were aware that the review could be limited.
- No, we were not aware that the review could be limited.

10) Were you aware that you could coordinate with other **levels** of government or regional agencies to review Census Bureau address materials and prepare a joint or regional LUCA submission?

- Yes, we were aware that the review could be coordinated. *(Continue to question 11)*
- No, we were not aware that the review could be coordinated. *(Skip to question 14)*

11) Did you coordinate with any other levels of government?

- Yes, another level reviewed for us. *(Continue to question 12)*
- Yes, we reviewed for other levels. *(Skip to question 14)*
- No, we did not coordinate with other levels or regional agencies. *(Skip to question 14)*

12) Would you have participated in LUCA without this assistance?

- Yes
- No

13) Were you satisfied with the review by a different level of government?

- Yes
- No

14) During the 120-day INITIAL review period, the Census Bureau sent reminder letters approximately 45 days and 90 days after your receipt of the materials. What number of reminder letters would have best met your needs?

- One
- Two
- Three

15) The Census Bureau provided participants with a LUCA Computer Based Training CD-ROM How helpful do you think the training was in your participation?

- Very helpful
- Somewhat helpful
- Not helpful
- Did not view the training CD-ROM

16) The Census Bureau provided two ways for participants to obtain assistance and ask questions on how to prepare and conduct a local review of addresses, features, and legal boundaries:

a) a Technical Help Desk and b) your Regional Census Center. Please tell us which of these you used, if any, and whether the response you received helped you prepare and ship your LUCA submission.

	Did you use this assistance?		Was the response helpful or not?	
	<i>No</i>	<i>Yes</i>	<i>Helpful</i>	<i>Not helpful</i>
Technical Help Desk	16a) <input type="checkbox"/> ↓	<input type="checkbox"/> →	16aa) <input type="checkbox"/>	<input type="checkbox"/>
Your Regional Census Center (RCC)	16b) <input type="checkbox"/> ↓	<input type="checkbox"/> →	16bb) <input type="checkbox"/>	<input type="checkbox"/>

17) For the 2010 Census LUCA Program the Census Bureau structured the work in such a way that a governmental unit could submit changes or updates to the legal boundary for their jurisdiction as part of LUCA by collaborating with the Census Bureau’s Boundary and Annexation Survey (BAS) contact.

Did you submit any legal boundary changes or updates as part of the LUCA program?

- Yes, we submitted legal boundary changes or updates. *(Continue to question 18)*
- No, we did not submit legal boundary changes or updates. *(Skip to question 20)*

When you submitted legal boundary updates, please tell us whether any of the following were true for you or your jurisdiction in 2010. *(Choose all that apply)*

Advantages of collaboration with BAS contact

- 18a) Collaboration enabled us to save staff time or resources for consultants by preparing and returning one submission for two programs.
- 18b) Collaboration made the process easier since the LUCA liaison and the BAS contact were the same individual.
- 18c) Collaboration helped in another way. 18d) *(Please describe)*
-
-

Disadvantages of collaboration with BAS contact

- 18aa) Collaboration complicated both submissions because the LUCA liaison and the BAS contact were different individuals.
- 18bb) Collaboration complicated the process because of time issues, such as getting both the LUCA liaison and the BAS contact to meet the same deadlines.
- 18cc) Collaboration caused another problem. 18dd) *(Please describe)*
-
-

19) During the INITIAL review phase of the 2010 Census LUCA Program, how useful was the Address Count List? *(Please choose one)*

- Very useful
- Somewhat useful
- Not very useful
- Not useful at all
- We did not consult or did not try to use the Address Count List

20) During the INITIAL review phase of the 2010 Census LUCA Program, indicate whether the following materials were easy to understand and useful. Please choose “yes” or “no” for each item.

	Was the format easy to understand?		Was the content easy to understand?		Was the material useful ?	
	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>No</i>
Address List	20a) <input type="checkbox"/>	<input type="checkbox"/>	20aa) <input type="checkbox"/>	<input type="checkbox"/>	20aaa) <input type="checkbox"/>	<input type="checkbox"/>
Address Count List	20b) <input type="checkbox"/>	<input type="checkbox"/>	20bb) <input type="checkbox"/>	<input type="checkbox"/>	20bbb) <input type="checkbox"/>	<input type="checkbox"/>
Maps/Shapefiles	20c) <input type="checkbox"/>	<input type="checkbox"/>	20cc) <input type="checkbox"/>	<input type="checkbox"/>	20ccc) <input type="checkbox"/>	<input type="checkbox"/>

21) Please list any suggestions you have in regard to the INITIAL review materials. _____

22) During the FEEDBACK phase of the 2010 LUCA Program, indicate whether the following address materials were easy to understand and useful. Please choose “yes” or “no” for each item.

	Was the format easy to understand?		Was the content easy to understand?		Was the material useful ?	
	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>No</i>
Full Address List	22a) <input type="checkbox"/>	<input type="checkbox"/>	22aa) <input type="checkbox"/>	<input type="checkbox"/>	22aaa) <input type="checkbox"/>	<input type="checkbox"/>
Detailed Feedback Address List	22b) <input type="checkbox"/>	<input type="checkbox"/>	22bb) <input type="checkbox"/>	<input type="checkbox"/>	22bbb) <input type="checkbox"/>	<input type="checkbox"/>
Full Address Count List	22c) <input type="checkbox"/>	<input type="checkbox"/>	22cc) <input type="checkbox"/>	<input type="checkbox"/>	22ccc) <input type="checkbox"/>	<input type="checkbox"/>
Detailed Feedback Address Count Challenge List	22d) <input type="checkbox"/>	<input type="checkbox"/>	22dd) <input type="checkbox"/>	<input type="checkbox"/>	22ddd) <input type="checkbox"/>	<input type="checkbox"/>
Feedback Address Update Summary Report	22e) <input type="checkbox"/>	<input type="checkbox"/>	22ee) <input type="checkbox"/>	<input type="checkbox"/>	22eee) <input type="checkbox"/>	<input type="checkbox"/>
Maps/Shapefiles	22f) <input type="checkbox"/>	<input type="checkbox"/>	22ff) <input type="checkbox"/>	<input type="checkbox"/>	22fff) <input type="checkbox"/>	<input type="checkbox"/>

23) Please list any suggestions you have in regard to the FEEDBACK materials. _____

24) When did you understand the FEEDBACK materials? *(Please choose one)*

- We understood the FEEDBACK materials after reading the supporting documentation.
- We understood the FEEDBACK materials after getting help.
- We never fully understood the FEEDBACK materials.

25) Were any of the following resources helpful in understanding the FEEDBACK materials and procedures?

	<i>Yes</i>	<i>No</i>	<i>Did not use this</i>	<i>This was the MOST helpful resource.</i>
				<i>Mark ONE box only.</i>
Quick reference guide	25a) <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	25aa) <input type="checkbox"/>
Users Guide	25b) <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	25bb) <input type="checkbox"/>
Regional Census Center	25c) <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	25cc) <input type="checkbox"/>
Technical Help Desk	25d) <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	25dd) <input type="checkbox"/>
LUCA website	25e) <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	25ee) <input type="checkbox"/>

26) The Census Bureau allotted a maximum of 30 calendar days to review the FEEDBACK materials and to file an address appeal. Based on your experience, how much time did you need for review of the FEEDBACK materials, and where applicable, to file an appeal? *(Please indicate the number of calendar days)*

27) Please indicate whether you had to take any of the following measures to comply with the confidentiality requirements (Title 13, U.S. Code) to protect the Census Bureau's address list.

	<i>Yes</i>	<i>No</i>
Obtain additional computer hardware	27a) <input type="checkbox"/>	<input type="checkbox"/>
Obtain additional computer software	27b) <input type="checkbox"/>	<input type="checkbox"/>
Obtain outside assistance	27c) <input type="checkbox"/>	<input type="checkbox"/>
Procure extra stand-alone computers and/or servers to ensure that Title 13 data were kept separate from our other data	27d) <input type="checkbox"/>	<input type="checkbox"/>
Bring in other staff or consultants at a cost to modify existing hardware and/or software	27e) <input type="checkbox"/>	<input type="checkbox"/>

28) What was your primary software for reviewing and editing the computer-readable address list? *(Please choose one)*

- The Census Bureau's MAF/TIGER Partnership Software (MTPS)
- A text editor (for example, WordPad, MS Word, WordPerfect)
- A spreadsheet program (for example, Excel, Quattro Pro)
- A database editor (for example, Access, Paradox)
- Other 28b) *(Please identify/describe)* _____

29) The Census Bureau provided computer-readable address materials during the 2010 Census LUCA Program in pipe-delimited text files. Was this format acceptable, or would you have preferred a different format?

- The pipe-delimited text file was acceptable.
- We would have preferred a different format. 29a) *(Please identify/describe)*

30) Did you use the MAF/TIGER Partnership Software (MTPS) in any part of your review?

- Yes *(answer questions below, then continue to question 31)*
- No *(go to question 31)*

	<i>Yes</i>	<i>No</i>	<i>Did not use this</i>
30a) Were the user instructions clear and understandable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30b) Were the demonstrations at the Technical Training Workshop sufficient?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30c) Was the Computer-Based Training built into the MTPS sufficient?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30d) Would you use the MTPS Computer-Based Training again?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

31) What was your primary software for making boundary and/or feature updates?

- Arc GIS
- MapInfo
- Autodesk
- MTPS
- Other 31a) *(Please identify/describe)* _____

32) How did you geocode your addresses to census tracts or blocks?

- We used the MTPS
 - We geocoded to address ranges using the Census Bureau's shapefiles
 - We geocoded point-to- polygon using the Census Bureau's shapefiles.
 - Other 32a) *(Please identify/describe)* _____
-

33) Please list any suggestions you have regarding a future LUCA program.

34) As you may know, your LUCA submission was verified during the Census Bureau's Address Canvassing Operation. The Census Bureau provided you with the results during the LUCA FEEDBACK phase. In the future, if the Census Bureau shared its address list information for you to update on an annual basis, do you think this would eliminate the need for a 100 percent address canvassing operation in the year prior to the 2020 Decennial Census?

- Yes
- No

APPENDIX C

LUCA Survey Questions by Content Area and Program Improvement

Content Area	Program Improvement	Survey Questions
Time and Communication	Increased advance notice	1
	Increased review time	2
	Increased communication	3, 14
	Awareness and understanding	3, 5, 9, 10, 24
	Promotional sessions	3, 4
	Web site	3, 4, 8, 25
	Registration information	3, 4
	Appeal time	26
Individualizing program	Extra options	5, 6
	Title 13 requirements	27
	Limiting review area	9
	Assistance from other governments/organizations	10, 11, 12, 13
	Combining programs (BAS)	17, 18
Tools	Review materials	19, 20, 29
	Feedback materials	22, 24, 25, 29
	MTPS	30
	Local software interface	28, 29, 31, 32
Assistance	Technical training	4, 8
	Documentation	4, 8, 15, 25
	Help desk	4, 8, 16, 25
	Regional Census Center	4, 8, 16, 25
Future Improvements	Time and communication	33, 34
	Individualizing program	7, 33
	Tools	21, 23, 33
	Assistance	33
	On-going address review	34
Conceptual categories	Understanding of LUCA materials	5–7, 20–24
	Effectiveness/helpfulness of LUCA materials and training	3, 5, 8, 15, 16, 19, 25
	LUCA collaboration with BAS contact on legal boundary updates	17, 18
	LUCA coordination with other levels of government	9–13
	Time needed for LUCA operation	1, 2, 14, 26
	Software preference, MTPS, hardware readiness	27–32
	Suggestions for future LUCA	33–34

Appendix D

D-1663(LG)
(1-2007)



UNITED STATES DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. Census Bureau
Washington, DC 20233-0001
OFFICE OF THE DIRECTOR

Every ten years, the U.S. Census Bureau conducts a census of the population and housing of the United States. Census data drive reapportionment and redistricting decisions and directly affect the distribution of more than \$200 billion in federal funds each year. The census is based on an up-to-date address list compiled from many sources. We need your help to ensure that the Census Bureau address list is as accurate as possible for your jurisdiction.

In July 2007, your government will receive a formal invitation to participate in the 2010 Census Local Update of Census Addresses (LUCA) Program. The LUCA Program, mandated by the Census Address List Improvement Act of 1994 (Public Law 103-430), provides state, local, and tribal governments with the opportunity to review and update the Census Bureau's address list.

By your participation in the 2010 Census LUCA Program, you can help improve the count for your jurisdiction. If you participate in the program, you will be able to:

- Review and update the Census Bureau's address list or submit your local address list to the Census Bureau in a specified format.
- Review and update the legal boundaries and features on the Census Bureau maps.

The enclosed *2010 Census Local Update of Census Addresses (LUCA) Program - Local Government Information Booklet* provides an overview of the 2010 Census LUCA Program. The booklet answers questions that may assist your government in deciding whether to participate in the program once you receive the official invitation letter in July 2007.

Also enclosed is a *Contact Information Update Form* that lists local contacts that we presently have on file for your jurisdiction. Please have a member of your staff review and correct the information printed for each contact person. Return the completed form to the Census Bureau in the enclosed preaddressed, postage-paid envelope or fax it to _____ within two weeks. Thank you for taking the time to review and correct the *Contact Information Update Form*. Accurate contact names and addresses are essential if the Census Bureau is to convey timely information to your jurisdiction regarding opportunities to participate in Census Bureau programs.

If you have any questions regarding the 2010 Census LUCA Program after reviewing the enclosed booklet, please contact your Census Bureau Regional Office by telephone at 1-866-511-LUCA or via e-mail at _____.

Please continue with letter on reverse.

Avar Consulting, Inc.

Your Census Bureau Regional Office will soon invite you to attend a 2010 Census LUCA Program workshop, which provides background information on program goals, participation options, program materials, and security guidelines. In July 2007, the Census Bureau will send the 2010 Census LUCA Program invitation letter and registration materials, and we hope you will use the time between now and July 2007 to decide on your jurisdiction's participation option and begin any necessary preparations.

Sincerely,



Charles Louis Kincannon
Director

Enclosures

cc:

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DRAFT #1 (04/14/2011)

REMINDER – THANK YOU

Within the last two weeks, we sent a letter requesting your views about the U.S. Census Bureau's 2010 Local Update of Census Addresses (LUCA) Program. The letter contained a link to an online survey and/or a paper survey. Your response will help the Census Bureau improve future address updating programs. If you have already completed and returned the survey, we thank you for participating. If you did not complete the survey as yet, we would appreciate your response. If the letter or survey has been misplaced, a replacement can be obtained by calling 301-763-8630.

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DRAFT #2 (04/20/2011)

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D-1787 (4-2011)



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