



January 20, 1999

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 3

MEMORANDUM FOR Distribution List

FROM: Carol M. Van Horn *CVH*
 Chief, Decennial Management Division

Subject: Census 2000 Operational Plans

Contact Person: Linda Brudvig, Program Information Branch, Decennial
 Management Division, Room 2002, Bldg. 2, (301-457-3947)

Attached are:

- A three-page summary of the differences between the 1998 Revised Census 2000 Operational Plan (November 1998) and the Census 2000 Operational Plan Using Traditional Census-Taking Methods (January 1999)
- Revised Census 2000 Operational Plan--November 1998 (previously issued in April 1998)
- Census 2000 Operational Plan Using Traditional Census-Taking Methods--January 1999

Please note that you will receive the attachments with a hard copy version of this memorandum.

- Attachments:**
1. Summary of the differences between the 1998 Revised Census 2000 Operational Plan (November 1998) and the Census 2000 Operational Plan Using Traditional Census-Taking Methods (January 1999)
 2. Revised Census 2000 Operational Plan--November 1998
 3. Census 2000 Operational Plan Using Traditional Census-Taking Methods --January 1999



CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 5

MEMORANDUM FOR: Distribution List

FROM: Carol M. Van Horn *CVH*
Chief, Decennial Management Division

Subject: Clarification of Internet Programs for Census 2000

Contact Person: David Coon, DMD, 1422-2 , 457-8089 or Theresa Leslie, DMD,
1422-2 457-4223

The purpose of this memorandum is to inform staff of the two Internet projects that will be conducted in Census 2000.

The Field Infrastructure Branch of Decennial Management Division (DMD) is managing the program area of Internet Questionnaire Assistance and Data Collection for Census 2000.

This program area consists of 2 specific projects:

Internet Questionnaire Assistance (IQA):

This project will provide help similar to help available when callers call the toll-free 800 number for Telephone Questionnaire Assistance (TQA) or walk into a Questionnaire Assistance Center (QAC). Through Internet Questionnaire Assistance, Internet Users will be able to search for specific or general information on how to fill out their census forms.

Internet Data Collection (IDC):

This project will allow respondents, on a limited basis, to fill out an English language short form via a special website on the Internet if they can provide a legitimate short form 22-digit Census ID. From within the Census Bureau computer network, you can review our most recent version of both systems at:

<https://secure.census.gov/bean0001/iqa/iqa.html>

If you have any questions, please contact David Coon on 457-8089 or Theresa Leslie on 457-4223.

cc: Census 2000 Informational Memorandum Distribution List

March 16, 1999

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 7

MEMORANDUM FOR **Distribution List**

FROM: **Kenneth C. Meyer**
 Chief, Census 2000 Publicity Office

Subject: **Paid Advertising Components Under Refined Census Plan**

Contact Person: **Kim Higginbotham, Census 2000 Publicity Office, Room 1210-2,**
 (301-457-3131)

The refined census plan calls for a three-phase paid advertising program. Each phase will be designed with a particular purpose/goal in mind. Therefore, the messages, audiences and media outlets will vary for each phase, yet they will all flow together to form a powerful, unified campaign.

The educational phase will focus on those who are undecided about participating or are "least likely to respond" in Census 2000. Messages during this phase will be informational in nature and will relay the benefits of participating in the census. Advertising for this phase will run from November 1999 to January 2000 on various national and local media.

The motivational phase will be designed to persuade people to participate in Census 2000. Messages will focus on the benefits of completing the census, and will remind the public to "fill it out and mail it in." Because the goal here is to reach everyone, national and local TV, radio, newspapers, magazines, and out of home (billboards, transit ads, etc.) will be used from February through April of 2000.

The follow-up phase will pave the way for cooperation with enumerators during non-response follow up. Messages will make the public aware that enumerators will be knocking on the doors of households that did not respond by mail. These advertisements will begin running in mid-April 2000 on local media in areas with high non-response rates.

4-9-99

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 8

MEMORANDUM FOR Distribution List

From: Susan Miskura (Signed)
Chief, Decennial Management Division

Subject: Procedures for Obtaining a Foreign-Language Questionnaire by
Return of the Advance Letter

Contact Person: Jane Ingold, Content and Products Branch, Decennial Management
Division, Room 1422, Bldg.2, (301-457-4646)

This memorandum outlines the procedures to be used when a respondent requests a foreign- language questionnaire by return of their advance letter. These procedures are for Stateside only. Procedures for Puerto Rico are contained in the Census 2000 Decision Memorandum on Special Requests.

Upon receipt of the advance letter in the mail, the respondent has the option to request a Spanish, Chinese, Vietnamese, Tagalog, or Korean language form rather than complete the English questionnaire when it arrives by mail. The respondent is instructed to mark the box for the foreign-language questionnaire that they want to be sent for the household. The respondent must return the entire advance letter in the enclosed postage-paid envelope, imprinted with the National Processing Center (NPC) address. On the bottom of the back of the advance letter will be imprinted the census identification (ID) bar code that uniquely corresponds to the address of the housing unit.

Upon receipt at the Document Services Branch at NPC, the envelope will be opened, checked-in clerically, and the census ID and language requested keyed into one file. The Document Services Branch will transmit this file to the Processing Systems Staff in the Decennial Systems and Contracts Management Office. This office will take the file and perform the following steps: 1) match the census ID from the file to the census ID on the Decennial Master Address File (DMAF); 2) flag the DMAF for this mailing; 3) change one digit of the 22 character census ID to reflect the foreign-language form requested, and 4) add the address from the DMAF for the new census ID on the file. This label file is then sent back to the NPC where they are responsible for sorting the file based on foreign language and questionnaire type. After sorting the file, NPC will label and address the correct foreign-language questionnaire with the new census ID, and mail the package to the respondent.

June 7, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 9

MEMORANDUM FOR Distribution List

From: Susan Miskura (Signed)
 Chief, Decennial Management Division

Subject: Census 2000 Language Program Master Plan

Contact Person: Carol Briggs, Content and Products Branch, Decennial Management
 Division, Room 1422, Bldg.2, (301-457-8228)

The Census 2000 Language Program Master Plan is attached for your information.

This Program Master Plan was reviewed by Census Managers. Every attempt has been made to document the Language Program Operations and Procedures which will occur during Census 2000. Readers are advised that any major changes to policies, procedures, or operations will be submitted as an addendum to this plan.

Attachments

Census 2000 Language Program Master Plan

I. Summary Description and Purpose of the Operation

The objective of all Census 2000 programs is to raise the response rates, improve the data accuracy, and conduct a cost effective decennial census. The purpose of the Census 2000 language program is to support that goal by providing census information and assistance in languages other than English (languages other than Spanish in Puerto Rico). Census Bureau research indicates that the inability to speak or read English (Spanish in Puerto Rico) well is a barrier to a successful enumeration. The availability of multiple languages helps create a Census 2000 climate that promotes goodwill and cooperation between the Census Bureau, our census partners¹, and respondents throughout the nation. This language program master plan applies to stateside and Puerto Rico (PR) operations.

II. General Design and Work Flow

In Census 2000, as in every census since 1940, a sample of households will be asked to respond to more questions than other households. The majority of households will receive a “short” form which has 7 content questions and takes an average of 10 minutes to complete, but about one in every six households will receive a “long” form which has 52 content questions and takes an average of 38 minutes to complete. Even though the national mail return response rate is expected to approximate 67 percent (51 percent for PR), the Census Bureau plans to take the following additional steps through the language program to motivate individuals to respond nationwide.

A. Questionnaire Special Requests

1. Overview: The original operations plan for Census 2000 was to mail two questionnaires--one English and one other language--to households in selected neighborhoods believed to have a high proportion of linguistically-isolated households². The Census Bureau’s ability to target linguistically-isolated

¹ Census 2000 partners include any group that might help us reach our goal of raising response rates and improving accuracy in the census.

² Linguistically isolated households are those households where the language spoken is other than English and no one over the age of 14 speaks or reads English very well.

households was limited and the operational hurdles associated with implementing a dual mailing during the Census 2000 Dress Rehearsal were greater than anticipated. The revised Census 2000 language plan offers the following alternative: all households receiving an addressed advance letter will have the opportunity to request a questionnaire in Spanish, Chinese, Tagalog, Vietnamese, or Korean. Procedures for obtaining a Foreign-Language Questionnaire by return of the advance letter are included in Attachment A.

The Census Bureau selected the five additional languages listed above by reviewing the ten languages spoken by the largest populations in the United States. These ten language groups were then crossed with the Census Bureau's established "hard to count" index. The resulting largest top five linguistically isolated household populations speaking a language other than English (which have historically been the most difficult to enumerate) spoke Spanish, Chinese, Vietnamese, Tagalog, and Korean.

In Puerto Rico, the largest linguistically isolated household population speaking a language other than Spanish spoke English.

2. Translation, Printing and Distribution: The Census 2000 English mailout/mailback short and long questionnaire will be translated and printed in Spanish, Chinese, Tagalog, Vietnamese, and Korean. These questionnaires will be available upon request to any stateside respondent receiving a Census 2000 advance letter. Respondents are asked to indicate which language questionnaire they would prefer, return their advance letter in an enclosed prepaid envelope, and hold the English questionnaire they will automatically receive through the mail. The advance letter will be imprinted with the Census barcode identifier associated with each specific household. Facsimiles of the advance letter and questionnaires are included in Attachment A. A copy of the printing contracts matrix describing all language forms and quantities is included as Attachment B. In Puerto Rico, the Update/Leave short and long questionnaires will be available in Spanish and English via the Telephone Questionnaire Assistance and Questionnaire Assistance Center procedures.
3. Processing: Specially requested questionnaires in languages other than English will be processed at the Census Bureau's National Processing Center (NPC) in Jeffersonville, IN. The non-English forms will follow all of the processing steps of English forms, and additional translation steps. Spanish language questionnaires are processed identically to English language questionnaires therefore no translation or special handling will be performed (except before coding).

All mailed back questionnaires will be checked in through the laser sorter at the NPC. The sorter will read the barcode on the questionnaire and send all non-English language forms for special handling. A processing ID, necessary for formation of the Decennial Response File (DRF), will be added to all “Be Counted” forms at check-in. Following this procedure, the “Be Counted” forms will follow the same process as the short and long forms. Non-English, non-Spanish language questionnaires will be scanned and the image retained as a back-up prior to sending the questionnaires to a special handling unit.

Clerical staff in the special handling unit will examine the questionnaires to determine whether the write-in responses are completed in English or a non-English language. If the responses are in English, a clerk will transcribe all of the responses on the questionnaire to a corresponding English questionnaire, add an appropriate barcode to identify the form as a replacement, and send the English questionnaire back to complete the processing steps. If the responses are in a non-English (non-Spanish) language, a clerk will log the form out of the questionnaire tracking system and send it to the appropriate sub-contractor for translation and transcription on a corresponding English questionnaire.

All non-English (non-Spanish) questionnaires will be delivered to the translation contractor on a daily basis. The contractor will translate and transcribe the information onto the corresponding English questionnaire and return both questionnaires to the NPC by the following day. Once returned, the new, transcribed English questionnaires will be logged back into the tracking system as replacements and processing will continue as for any other form.

B. Questionnaire Assistance Centers

1. Overview: Questionnaire Assistance Centers (QACs) are facilities designed to assist local residents, including those needing assistance because of language barriers, in completing their census questionnaires. The QAC program increases the emphasis on Census 2000 community-based support efforts which take advantage of regional and local knowledge. The QAC facilities are an opportunity to strengthen the community-based language program given the concerns about functional literacy among some linguistically isolated households and the inaccessibility of telephones in some communities.
2. Questionnaire availability: Foreign language questionnaires will not be available at QACs. The Census Bureau will furnish each QAC with Language

Assistance Guides in more than 40 languages to help respondents complete their official Census 2000 questionnaire. A Census 2000 Language Identification Flashcard also will be available for QAC staff and respondents to identify which language is spoken in the respondent household.

If a respondent is insistent about obtaining a replacement/alternative questionnaire, and a “Be Counted” questionnaire is not appropriate, special requests will be handled in the following manner.

- a. Staff will first ascertain the reason for a special request questionnaire, the mailing address of the requestor, and the Census ID printed on the original Census 2000 questionnaire if possible.
- b. If the requestor **can supply** the Census ID from the original questionnaire, staff will forward the request to the Local Census Office. These requests will be compiled and forwarded to NPC in Jeffersonville, IN. The NPC staff will assemble a new mailing package with an English questionnaire corresponding to the original Census ID type and a language assistance guide of the requestors choice. Staff will generate an address label with the correct address and Census ID barcode, address the new package, and mail to the respondent. Requests from Puerto Rico will be handled in the same manner.
- c. If the requestor **can not supply** the Census ID, staff will provide and/or assist the respondent with a stateside or Puerto Rico “Be Counted” questionnaire.

3. Detailed information: Detailed information on locations, staffing, criteria, deliverables, and so forth can be found in the Questionnaire Assistance Center Program Master Plan.

C. “Be Counted”

1. Overview: The “Be Counted” questionnaire will provide a means for people to be included in Census 2000 who may not have received a census questionnaire or believe they were not included elsewhere. “Be Counted” forms are intended to serve as an accessible alternative for households missed through the mailout or in update/leave and list/enumerate areas. They are not intended for informational purposes or as a substitute for the Census 2000 mailout, update/leave, or enumerator questionnaires. “Be Counted” questionnaires will be printed in English, Spanish, Chinese, Tagalog, Vietnamese, and Korean. The “Be Counted” operation will begin just

before Census Day and will end just before the start of the nonresponse follow-up operation. Facsimiles of the “Be Counted” language questionnaires are included in Attachment C.

2. Detailed Information: Detailed information on translation, location, printing, processing, and so forth can be found in the Be Counted Program Master Plan.

D. Language Guides

1. Overview: Language guides are a positive complement to the Census 2000 language program. Guides will be user-friendly visual aids to assist respondents completing the Census 2000 questionnaires. Separate guides will be developed as reference for the Census 2000 short and long form mailout/mailback questionnaires. Guides are a useful, relatively low cost/low risk addition to the language program.

2. Languages: The Census Bureau developed a list of languages based on the 1990 Decennial Census of Population and Housing data of linguistically isolated households plus the most current immigration figures resulting in projected household populations for Census 2000. (Attachment D)
Using that list as a baseline, the Census Bureau consulted with the Department of Commerce, the Director of Refugee Resettlement at the Department of Health and Human Services, and the Census Race and Ethnicity Advisory Committees to develop a final list of languages for Census 2000.

Language assistance guides will be printed in the following languages.

Albanian	Amharic	Arabic	Armenian	Bengali
Burmese	Cambodian	Chamarro	Chinese	Creole
Croatian	Czech	Dari	Dinka	Dutch
Farsi	French	German	Greek	Hebrew
Hindi	Hmong	Hungarian	Ilocano	Italian
Japanese	Korean	Kurdish	Laotian	Polish
Portuguese	Roma	Romanian	Russian	Samoan
Serbian	Slovak	Somali	Spanish	Swahili
Tagalog	Thai	Tibetan	Tigrean	Tongan
Ukrainian	Urdu	Vietnamese	Yiddish	

The proposed language for language assistance guides in Puerto Rico will be Haitian/Creole.

3. Distribution: The Census Bureau will furnish approximately 18 million language

assistance guides to Questionnaire Assistance Centers, Local and Regional Census Offices, community groups and organization, partnership specialists, and Telephone Questionnaire Assistance staff. Language assistance guides will be distributed to Census partners in advance of Census Day. This will allow for broader dissemination and advertising in conjunction with community events. The current drafts of both the long and short form language assistance guides are included in Attachment E.

4. Translation: The Census Bureau will contract with an outside firm for the translation and validation of the language guides in the languages selected for Census 2000. Also, census regional census centers will work with census partners to translate and reproduce additional guides in languages localized to their specific communities. The Census Bureau also will recruit bilingual enumerators indigenous to the neighborhoods they will enumerate.
5. Printing: Unlike the questionnaires, language assistance guides can be developed and printed by census partners or community organizations in additional languages upon request in a very short time frame. Guides can be reproduced without compromising technical and data capture specifications.

E. Telephone Questionnaire Assistance (TQA)

1. Overview: The Census Bureau has identified potential constraints on the number of languages it can support through TQA. The current objective is to support the same languages for TQA as for “Be Counted” and the mailout/mailback questionnaires. The Bureau awarded the TQA contract to Electronic Data Systems (EDS), Herndon, VA on December 23, 1998. Census is in the process of finalizing specifications and determining whether additional efforts will be necessary to supplement the national program. For Puerto Rico, the TQA will support Spanish and English language calls.
2. Responsibilities: The volume of calls to the toll-free telephone assistance number in 1990 significantly exceeded all expectations. Six of the seven processing offices provided only English and Spanish telephone assistance. The San Diego Processing office also offered telephone assistance for English, Spanish, and six Asian languages. Given the Bureau’s experience during the 1990 census, the decision was made to rely on the professional call-center industry to provide telephone assistance for Census 2000.
3. Questionnaire availability: Foreign language questionnaires will not be available

through TQA. A respondent request for a foreign language questionnaire by telephone will be handled in the following manner.

a. If the requestor **can supply** the Census ID from the original questionnaire, staff will forward the request to NPC in Jeffersonville, IN. The NPC staff will assemble a new mailing package with an English questionnaire corresponding to the original Census ID type and a language assistance guide of the requestor's choice. Staff will generate an address label with the correct address and Census ID barcode, address the new package, and mail to the respondent. Requests from Puerto Rico for English language questionnaires will be handled in the same manner.

b. If the requestor **can not supply** the Census ID, staff will obtain the address of the requestor. For house number/street name addresses, the information will be forwarded to the designated unit at the NPC. The NPC staff will follow a pre-designed 1-in-6 sampling scheme for stateside requests to determine which English form type (short/long) will be assembled with the language assistance guide of choice, and mailed to the requestor. Requests from Puerto Rico will be handled in the same manner. Staff will mail the Puerto Rico (Spanish) Update/Leave questionnaire corresponding to the 1-in-6 sampling scheme pre-designed for Puerto Rico with the language guide of choice or a Puerto Rico (English) Update/Leave questionnaire upon request. For addresses without a house number/street name, staff will conduct a reverse CATI interview that will use the stateside or Puerto Rico "Be Counted" questionnaire. However, this is to be conducted as a last resort procedure. All Puerto Rico telephone calls will be handled directly by a telephone operator.

F. **Education and Outreach**

1. Overview: The Census 2000 education and outreach plan is consistent with the overall Census objective to raise response rates and improve accuracy by increasing awareness of Census 2000 and educating the public. The plan will ensure that the Census Bureau reaches target audiences, especially those who learned a language other than English as their native language, with outreach and education materials in time to support the decennial programs. For each target audience, the plan identifies the group, the required materials, and the most effective means of conveying the decennial message.

Attachment F (Appendix A) includes an overview of all planned education and outreach products and the specific languages into which they will be translated.

2. Educational Materials: The content of Census 2000 educational materials will be determined by a review of the materials produced during the 1990 census, input from the Regional Offices, and other internal and external experts. The specifics of each document such as purpose, size, quantity printed, distribution, and the languages in which these documents are translated is available in the complete external communications plan for Census 2000 Publicity Office (C2PO). The author of each document will, whenever possible, be chosen based on knowledge of the topic area and will work closely with experts within the Census Bureau. The education and outreach materials planned for Census 2000 are broken down into the following four categories.
 - a. Reference Materials: Reference materials include fact sheets, instructional manuals, and reference booklets. Most of these materials will be available in Spanish and many will be available in selected Asian languages for stateside distribution. These documents will be distributed primarily through Census headquarters and the regional offices or when they are aimed at easily accessible groups, they may be mailed directly to those groups or upon request to Census Advisory Committee members. These materials will be developed early in the census process and most will remain valuable after Census Day. Reference materials will be adapted as necessary and translated into Spanish for use in Puerto Rico (PR).
 - b. Drop-in Articles and Newsletters: Drop-in articles will be developed for distribution through general news releases and targeted organizational newsletters and newspapers. The timing of these releases will be designed to support activities that are occurring in the field. These articles will be coordinated with the fact sheets and other publications to enhance each other and posted on the Internet for easy access by census partners. This Internet access enhances the language program availability to many diverse communities by allowing partners and/or the general public to translate census articles into any language of choice. A newsletter, following similar standards, will be developed to keep census partners informed. These materials will be adapted as necessary and translated for use in PR.
 - c. Videos: Videos will be developed to support partnership activities and distributed to regional offices for loan to partners. Videos have a potential for reaching a large audience at a low cost. Current plans are for all videos to be produced in English only, but census partners may choose to copy and adapt videos with voice overs in their language of choice.
 - d. Posters: A few posters will be developed to build awareness and support

activities before the census. However, most posters will be developed to motivate immediate response to Census 2000. A general confidentiality poster to reassure respondents that answering the census is safe will be available in English, Spanish, selected Asian, and American Indian languages for stateside distribution. The posters in this plan are differentiated from posters covered by the ad contract because they will be placed in areas where the Census Bureau will not pay a fee. Posters will be distributed primarily through Census headquarters and the regional offices or when they are aimed at easily accessible groups, they may be mailed directly to those groups. Posters have the potential for reaching audiences that could be missed by traditional means. Posters will be developed that are appropriate for use in Puerto Rico and will be provided in English and Spanish.

3. **Printing and Distribution:** The number of translated, printed copies and their distribution strategy will be different for each document depending on the accessibility of the target audience and resources available. While the messages will be translated somewhat differently for each language group, the objective of increasing awareness of Census 2000 and educating the public about its benefits will be the same in each document. Every document will contain a statement about the benefits of Census 2000 and reassure the reader that participating in the census is safe. Documents which stress the benefits and confidentiality of the census are crucial. The following three major audience groups have been identified for distribution:
 - a. **Census 2000 Partners:** Documents written for our census partners will serve as aids for them to educate their constituencies about Census 2000 or specific instructions on how they can participate in programs. These documents are written for a somewhat more sophisticated audience -- people who already know something about the census and understand its importance. These materials will be distributed early to aide in supporting Census 2000 activities and partners may translate any/all documents at their discretion.
 - b. **General Public:** Materials written for the general public will contain the broadest, most general messages and will be the most widely distributed. Individual documents will answer questions commonly asked about the census or provide instructions on how to participate in Census 2000. The distribution of these materials will be given priority because their content is applicable to the widest variety of constituencies. Some of these materials will be translated into the same languages as the mailout/mailback questionnaires. All materials are created for the general public and may be translated by communities, churches, civic groups, or individuals as they deem necessary.

c. Target Audiences: These materials will address specific issues of interest to target audiences and our census partners working with these audiences. Distribution will vary depending on the size and accessibility of the target groups. Translation of these materials will depend upon the target audiences involved.

Documents and materials for these three audience groups in Puerto Rico will be adapted for use on the island and made available in Spanish as well as in English.

4. Implementation Strategy:

The implementation strategy for the external communications plan will support the goal of increasing response to Census 2000 by carefully laying out the timing of releases, coordinating the development of various materials to enhance related products, and reaching respondents in a variety of different languages.

G. Advertising

1. Overview: Critical to the success of Census 2000 is the communication and marketing strategy, combining public awareness, promotion, and outreach activities. The public awareness campaign must use powerful and effective advertising messages to motivate each household to fill out and return the census questionnaires as soon after receipt as possible. This is especially critical within the "hard to count" populations where languages other than English are predominantly spoken.

In the past, the Census Bureau has used public service messages to inform the public and to motivate people to respond. The 1990 census relied solely on pro-bono public service advertising, which failed to reach many people. Television announcements, for example, were run in time periods, such as very late at night when audiences were small. In addition, the Census Bureau received virtually no prime-time coverage. For Census 2000, the Census Bureau is planning a more targeted approach, using paid advertising placed to have the greatest impact and promotions in languages other than English .

The goal of the advertising campaign is to increase public awareness - thus increasing initial mail returns of census questionnaires nationwide and in Puerto Rico from the general public, targeted audiences, and historically undercounted populations. The advertising contractor must be able to translate materials into

numerous languages (and possibly some dialects) and have the resources to provide conceptual as opposed to literal translations. The creation of powerful and effective themes and messages that can be modified to fit the circumstances of local, regional, and targeted groups is an essential element of the Census 2000 advertising contract.

2. Young and Rubicam Coordination: The Census Bureau announced in October 1997 that it had awarded the Census 2000 paid advertising contract to Young & Rubicam, Inc. (Y&R) and a consortium of four partner agencies. The consortium partner agencies include:

The Bravo Group - a Y&R firm specializing in Hispanic outreach
Mosaica - a Y&R company expert in advertising to Asian audiences
Chislom Mingo - a firm that targets African American audiences
G & G - a Native American company. The development of the advertising plan for Puerto Rico will be the responsibility of Y&R's subsidiary on the island.

An important focus of the Census 2000 advertising plan is outreach to traditionally hard-to-reach audiences. Therefore, the Census Bureau has a strong minority contracting component to reach those audiences. Overall, 28 percent of the total Census 2000 advertising contracting dollars are earmarked for small disadvantaged firms. The Census Bureau is committed to a Census 2000 advertising plan which includes an aggressive buying and placement strategy to reach hard-to-count audiences including linguistically isolated households.

The Census Bureau's "Request for Proposal - Advertising Services for Census 2000 (section C)" is included as Attachment H. This section provides a synopsis of the Census Bureau's advertising campaign needs and expectations with an overview of the following topics and their relationship to the language program needs:

- Objectives
- National Campaign Strategy
- Scope of Work
- Description of Tasks
- Performance Measurement

III. Cost Assumptions

- A. Overview: The revised Census 2000 Language Program is estimated to cost 6.9 million more than originally budgeted, increasing the Language Program budget from \$35.6 million to \$42.5 million. This budget allocation is not a complete reflection of the costs associated with the Census 2000 Language Program. The additional cost burden incurred by other Census 2000 program areas because of components driven by the Language Program (such as TQA, “Be Counted”, Advertising, and Publicity) are reflected in their respective Program Master Plans.
- B. Components (Table/Attachment H)

IV. Schedule/Responsibilities

- A. Overview: Census day is scheduled for April 1, 2000 and is preceded by a multiple mailing and/or respondent contact. Additional operations, including nonresponse will be conducted by bilingual enumerators in communities where Census partners or RCCs identify the need and availability. The complete operations overview is available in the Census 2000 Master Activity Schedule. (relevant language program portions included in Attachment I)
- B. Schedule: The following tentative schedule has been developed for key phases of the Census 2000 Language Program.

Submit Census 2000 Clearance Package to OMB DSCMO/DMD/POP	June 30, 1998 Completed
Finalize Language Business Case Analysis DMD/DIR	July 31, 1998 Completed
Identify Potential Language Translation Contractors DSCMO/DMD	August 1, 1998 Completed
Issue Final TQA RFP DSCMO	August 14, 1998 Completed
Receive OMB Clearance for Census 2000	September 30, 1998 Completed
Start to Develop Procedures for Local Distribution of	November 1998

Language Materials FLD/DMD/DSCMO/C2PO	Started
Award TQA Contract DSCMO	December 23, 1998 Completed
Advertise Language Print Contracts DSCMO/DMD	January 1999 Completed
Award Language Print Contract (Questionnaires) DSCMO	April 1999 Completed
Award Language Print Contract (Language Guides) DMD	March 19, 1999 Completed
Provide Final Print Files to Contractor and Data Capture Program (Questionnaires and Language Guides)	April-August 1999

V. Evaluation Requirements

- A. Plans are currently not established concerning evaluation specifications resulting from the documentation of mail response rates for the Census 2000 Language Program.

VI. Major Differences from the Census 2000 Dress Rehearsal

- A. Dual Language Mailout: During the Census 2000 Dress Rehearsal targeted linguistically-isolated households were mailed both a questionnaire in English and a questionnaire in a second language. This operation was extremely time and cost intensive. In addition, the printing industry could not accommodate our request for an integrated, automated method to produce joint English/other language mailing packages with the correct household identifier on each questionnaire and maintain printing specifications for form tolerances. The creation of dual mailing packages with the same Census barcode identifier on both questionnaires became a manual clerical operation. Within the Census 2000 budget and time frame, operational objectives could not be successfully accomplished under this type of scenario.
- B. Questionnaire Special Requests: To compensate for the shortcomings of the dual language mailout conducted during the Census 2000 Dress Rehearsal, the Census Bureau decided to offer all households which receive an advance letter the opportunity

to request an alternative language questionnaire in one of 5 different languages. This option has the potential to benefit a larger component of the linguistically isolated community than a targeted mailing. The Census Bureau has doubled the number of mailout/mailback language questionnaires available to the public upon request compared to the Dress Rehearsal. Mailout/mailback questionnaires for the Dress Rehearsal were produced in English, Spanish, and Chinese - Census 2000 will have mailout/mailback questionnaires available in English, Spanish, Chinese, Korean, Vietnamese, and Tagalog.

- C. Language Assistance Guides: Providing “Be Counted” forms in multiple languages other than English created an incentive to use these forms as general purpose census “handouts” during the Dress Rehearsal. This would be operationally problematic for the full scale Census 2000. To curtail the use of “Be Counted” forms as questionnaire translations, the Census Bureau will create and distribute approximately 15 million language assistance guides in more than 30 different languages to assist respondents completing their English questionnaires.
- D. QAC Paid Temporary Staff: Local census partners had difficulty identifying volunteers to run some Questionnaire Assistance Centers (QACs) during the Dress Rehearsal. The Census Bureau therefore created 15,000 paid temporary staff positions for Census 2000 to supplement volunteers running QACs in neighborhoods that would benefit most.
- E. Large Household Follow-up: With the introduction of a six person form for Census 2000, plans to conduct a mailout/mailback Large Household Follow-up operation were canceled. Further information can be obtained in the Census 2000 Decision Memorandum Series.
- F. Processing: All “Be Counted” forms and all Asian language questionnaires will be returned to the National Processing Center. They will be scanned in upon receipt, then all information will be translated and transcribed onto the respective English questionnaire prior to image capture. Spanish language questionnaires generated from advance letter requests will be returned to the Pomona Data Capture Center (DCC) for check-in, translation, transcription, and data capture.
- G. TQA Special Mail Requests: Stateside callers requesting questionnaires in languages other than English through TQA will receive the language assistance guide of their choice. In Puerto Rico, callers requesting questionnaires other than the Puerto Rico Spanish form will be offered the option of an English Puerto Rico form or the PR Spanish form with a language guide.

**Translation and Typesetting
of
Language Assistance Guides
for
Census 2000**

FINAL REPORT

**Prepared for:
Carol Briggs
Bureau of the Census**

**Prepared by:
Kelly Jones Dresen
Comprehensive Language Center
February 6, 2000**

The purpose of this report is to provide an overall summary of the translation and typesetting process for 49 Language Assistance Guides (LAGs) in support of Census 2000. It is divided into four sections: Translation Process, Typesetting Process, Problems and Solutions, and Language Specific Information. None of these sections is intended to provide a final compendium of each nuance of each language processed in this endeavor. The Translation and Typesetting sections outline Comprehensive Language Center's approach to the primary tasks for this project. Problems and Solutions outlines some of the items that had a significant impact on the process of the project. Language Specific Information lists some of the particular quirks associated with many of the languages translated for the LAGs. Not every language is represented in that section, nor is every nuance of translation represented for each language.

Project Summary: The basic tasks of the project were to provide translation and typesetting of the material on the Short and Long Language Assistance Guides for Census 2000. In addition, CLCI was tasked with translating and typesetting a Flashcard with the phrase "Mark this box if you read or speak [language]." The original contract award was made on March 22, 1999 for a requirement of 31 languages. An additional language, Croatian, was added soon after contract award. On March 29, five additional languages were added, for a total of 37 languages, which we consider the "original" languages. On May 4, an additional 11 languages were added, and finally, on June 7, a final language brought the total number to 49 languages for translation and typesetting. Only the original 37 languages, plus English, appear on the flashcard.

Translation Process

For each language, we recruited a professional translator and a professional editor. With one exception, each translator and editor was a native speaker of the target language for each form¹. Whenever possible, we used translators and editors familiar with producing translations for use in the United States. Such documents frequently require a more general vocabulary than that used for a document used in a specific region or country.

Professional backgrounds for the more "common" languages (French, Korean, Russian) differed from backgrounds of the less common languages (Dinka, Somali, Amharic, etc.). For less-common languages, we looked for individuals who were native speakers of the language and who also had significant professional and educational experience working with the written form of the language. For less-common languages, translation training or experience in another language were also considered as part of a candidate's qualifications. Finally, the candidate had to be familiar enough with daily life in the U.S. or U.S. territories to be able to accurately translate questions relating to the U.S. school system, housing systems, and work habits. This precluded using translators living outside the U.S. For some languages, such as Dinka and Romani, this considerably narrowed the field of viable candidates.

¹ The Tongan translator was a native English speaker with native-level Tongan capabilities. He is the author of the *Student's English-Tongan/Tongan-English Dictionary* which is used widely throughout the schools in Tonga. The Tongan editor was a native speaker.

Once the translator and editor were identified, each received a packet of materials and background information. Each packet typically contained the following:

- A copy of the English long and short forms template received from Census at project inception;
- A text-only version of the English long and short forms;
- Specific instructions explaining the purpose of the Language Assistance Guides and information on difficult questions such as those on Race and Ethnicity
- The 1990 Language Assistance Guide for each language, if applicable;
- English sentence for the Flashcard, and the 1990 version of flashcard, if applicable;
- Specific instructions on deadline and file format specifications.

Each translator was given the latitude to accept or reject language used in the 1990 guide and flashcard.

Once the translation was complete, the text was given to an editor. The editor for each document had at least the same level, or higher, degree of professional translation experience as the translator. The editor also received all of the packet materials listed above, plus the translation. The editor reviewed the translation, line by line and question by question. The editor checked the accuracy of the translation, and the overall flow of the language in the document. The editor marked his or her comments on the translation (electronically or manually).

Editors comments were returned to the translator, via the Project Management team. The translator had the final determination of which of the editor's changes to incorporate. Translator's were instructed to accept all comments that improved the clarity or flow of a document.

When complete, the translator re-read the translation in full and submitted the document to the PM team. The PMs printed the final text, and performed a series of quality control reviews. The first review was an overall assessment of the acceptance of editorial changes. If necessary, a PM and the translator would discuss editorial comments further to determine the appropriate version for each question. The translated document was then checked again against the English original to ensure that all material was indeed captured by the translation, and to check again for possible transposition of numbers within the text. Finally, repetitive phrases were checked to ensure consistency throughout the document. Throughout the quality control process, the PM team would frequently contact the translator or editor to further discuss the translation and verify accurate changes. Once the text was complete, it was sent to typesetting.

Recruiting for uncommon languages

Some of the required Census languages are languages of limited diffusion, or uncommon languages. Because there tends not to be an established translator community for these languages, when assigning them we need to make use of all of our recruiting resources. We will

typically begin a search by reaching out to our contacts at the Voice of America, the World Bank, and various local international refugee assistance organizations. Our contacts at these agencies may not provide the language we are looking for, but they are in constant contact with trained translators from around the world, and can often put us on the right track to find qualified candidates. In addition to our resources at international organizations, we also have contacts at various universities across the United States, and at many religious organizations. These contacts are often able to put us in touch with a larger community of speakers of the target language. From new contacts in that community, we then seek qualified translators.

A final note on selecting translation teams: We made every effort to identify and recruit the best possible candidates for each language. We identified individuals at universities and government offices throughout the U.S. and U.S. territories. Due to differences in culture and the demands on the time of individuals with translation capabilities in these languages, we often waited weeks or months for responses to our inquiries. On some occasions, we received responses from the best possible candidate only after the work was completed. After determining that we could not continue to wait for a response from our preferred candidate, we then turned to our next best candidate for each language. Each of these candidates met all of the requirements outlined above.

Typesetting Process

The first step in the typesetting process was creation of the English template, which went through a few revisions and was then approved by the Census Bureau. We made two copies of the template: one for left-to-right reading languages, and one for right-to-left reading languages. To maintain consistency, we used roughly the same size font for each. This made some forms have more white space than others. This method did help to save time and money by not re-doing codes on each form.

When the translations were complete, the text files were converted to a Quark-readable file and the text was inserted into the template, item by item. For the majority of the languages, this conversion process went fairly smoothly. For some languages, we ultimately had to re-key the text in a more compatible (but less user-friendly) system to allow the conversion to work.

Once all of the text and graphics were placed, the typesetter did a mechanical proof of each document, to do a final check for placement. The document then went through a thorough proofread by a third native speaker of the target language. This proofreading stage was conducted independent of the English original. Conducting an independent proof allowed us to make a final evaluation of the flow and style of the translation. As a result of the proofread, we occasionally made text changes to the final document. Whenever possible, we brought the original translator in on the revision process.

In addition to a language review, the PM team reviewed each page of each form against the English template to check each line for format, font, and punctuation. This was a painstaking process due primarily to the mix of italic, bold and regular fonts throughout the document, and

to the use of periods on some commands, but not others. Each document generally went through at least two proofing stages before proofs were delivered to the client.

CLCI delivered black and white proofs of each form for each language to the Census Bureau for final review and approval. Any revisions received from Census were then incorporated into the final document. In some cases, with Census approval, we did not incorporate all text changes that we received.

Problems and Solutions

1. One of the most critical issues with the long and short forms was consistency of language. Consistency had to be maintained both between the forms, as well as within the forms themselves. Because style rules in other languages often dictate non-repetitiveness in language, this particular requirement was especially difficult to fulfill in the first translation round. After trying several variations of instructions and explanations on the importance of consistency, we still were having to manually check and re-check each set of repeating phrases such as “Mark ONE box” and “Skip to”.
Solution: Provide the translation and editing teams with two sets of text. The first set, for reference only, is a complete version of the short and long forms (preferably formatted). The second set, from which the translator/editor actually work, contains only one version of each repetitive question/phrase. For example:

What is this person's name?

Print the name of Person 1 from page 2.

Print name below.

Print the name of this person from page 2.

What is person 1's telephone number?

What is this person's telephone number? *We may contact this person if we don't understand an answer.*

Area Code + Number

We incorporated this solution into the very last language translated, and it saved a tremendous amount of time in the proofreading stage.

2. The Race/Ethnicity Question. Many of the terms used in the question are irrelevant in most of the languages translated into. Distinctions between Spanish/Hispanic/Latino had to be basically made up. For the languages used in Africa (Somali, Amharic, Tigrinya, Dinka, Swahili), there is a distinction between someone who is “black” and someone who is “African American”.
Solution: Use as many terms as possible in each language (up to the number used in the English form). Transliterate terms that could be transliterated (i.e. Hispanic)

3. Creating Film and Color-Separated PDF files. Because the print vendor(s) for the project were not chosen until several months into the typesetting phase, we did not have an opportunity to discuss film issues with the printer. Normally items such as line screens and emulsions will be dictated by the printer, not the typesetter. Also, we did not receive specifications on exact colors for the two-color separation on each document. This did not impact film output, but it did mean that we “made-up” our own version of red for purposes of PDF proofs. To re-set each page of each document with the actual red used on the forms would have taken several days at an incredibly high cost. The files we provided to each printer therefore were separated into “black” and “red”, but with no specific red specified. This seemed to cause considerable confusion among some of the smaller print vendors.
Possible solution: Select print vendors at the same time as typesetting vendors.
4. Necessity to translate entire form, without adding explanatory text. The 1990 Guide was probably too vague to provide the maximum level of assistance. By making the 2000 guides look just like the 2000 form, it will be easier for participants to answer all of the questions. For many of the languages chosen for guides, however, the concepts expressed in the form—particularly the long form, require additional explanation.
Possible solution: Provide a supplement to questions on issues such as mortgages and housing, or leave these questions in English.
5. Degree titles, high school diploma, GED. Degrees conferred in other nations often do not correlate exactly with U.S. degrees.
Solution: Each participant will choose the degree most appropriate. When a specific degree has a name (Master’s degree), we used the translation. Otherwise, we transliterated the name of the degree. The initials of each degree were kept in English on each form.
6. Numbering in languages that use a different numbering system.
Solution: Use “English” numbers for each question number, and for the references to question numbers. We also used “English” numbers for references to telephone numbers to call for assistance. For all other numbers within the text, we used the numbering system appropriate to the language.
7. Names. Most countries where the LAG languages are spoken use a different naming system. Some cultures do not have middle names. Some cultures use the family name as a first name, etc. I
Solution: In general, we used the closest correlation possible. Some specific issues are listed in the “Language-Specific Issues” section.

Language-Specific Issues

To the extent we were able to do so, we used the most general form of each language. In some cases, we had to choose a specific regional dialect of a particular language. This section includes information on any regional dialects chosen, as well as any other peculiarities specific to a given language.

Amharic: Does not have a generic word for “person”. The word used is “man”.

Armenian: We used Eastern Armenian. This is the version officially used in Armenia. Armenian punctuation is very different from that used in most languages. The punctuation we used correlates, though it may not appear the same.

Bengali: There is not a generic term for “grandparents”. We included the separate designations for each set.

Burmese: Burmese does not have a designation for middle name. Our translation indicates that the participant should write the first letter of the second, non-family name. Burma is a Socialist State, so the language does not have words for the concepts of a mortgage system, or for estates, sale deeds, trust deeds, etc. We transliterated these items.

Chamorro: Like many of the LAG languages of the Pacific, not all Chamorro linguists agree on the rules of grammar or orthography for this language. Our team attempted to use a widely accepted language, and one that would be understood by both educated and uneducated Chamorros. There are two different words for “no” in Chamorro.

Chinese: We had to use the validated text of the official form for the LAG. We do not believe that the most appropriate language was used in all cases, but we did use the validated language throughout.

Croatian: There are two terms for each gender version of “parent-in-law”, depending on the relationship to husband or wife. All four versions are included on the form.

Dari: Dari is spoken in both Iran and Afghanistan. We used as general a version as possible, but when it was necessary to select one regionalism over another, we chose Irani regionalisms.

Dinka: The Dinka do not think of time in a measure of “week”. Questions referring to LAST WEEK are translated, roughly as “the last seven-day period”. Terms related to money, mortgages, or finance are transliterated or left in English.

German: Does not have a word for “Middle Initial”. We used “first letter of second given name.”

Hindi: There was a concern on the flashcard over the verb “to circle” versus “to mark”. This is due to the word choice we used for “box” throughout both forms and the flashcard. In Hindi,

whenever someone is instructed to fill in shapes, a word that means "rounded shape" is used to describe that thing to be filled in or checked. Square does not sound smooth in this case, and box is a three-dimensional object. The other alternative we considered was "empty space", but that would lead to a higher level of language. It might also lead to further possibilities of misunderstanding. We realize that the actual shape of the area to be marked is square, but we feel that the translation used gives the most readily recognizable and readily understood instruction of "mark the space we provided".

Hmong: Several versions of Hmong are spoken and used. We used a version spoken most frequently in the United States, especially in the Hmong communities of the Northern U.S. Hmong is a dying language and new words have not been created for many new concepts. In these cases, we have used the English terms.

Ilocano: Strong differences exist between Southern and Northern speakers of Ilocano. We used a translator from one region and an editor from another in an attempt to reach the most agreeable mix for both.

Japanese: For stylistic reasons, many of the items phrased as questions in the English form are phrased as statements in the Japanese. For example, "What is Person 1's Name?" roughly translates as "Person 1's name:". Also because of differences in sentence structure, the instructions for many questions are included in parentheses.

Korean: We had to use the validated text of the official form for the LAG. We do not believe that the most appropriate language was used in all cases, but we did use the validated language throughout.

Kurdish: We used an Arabic script, or Suranji. Many Kurds read a roman script (Kromanji) instead. Since the Arabic script is what is generally taught, we believe even Kromanji readers will be able to read the Suranji, but not necessarily vice-versa.

Romani: There are many dialects of Romani. We chose the dialect spoken by the largest population and the one most used in the United States. Culturally, the Romani are very suspicious of census-taking activities. Many people still recall the persecution of the Gypsies under Hitler and view a Census as a method of identifying Gypsies for potentially negative consequences. There is also a question about the spelling of the language. "Romany" (with a y) is the term found in most American dictionaries, but this is not the term most used by Romani-speaking people. "Romani" (with an i) is the spelling recognized by the Roma National Congress, the United Nations, the International Romani Union, and the Encyclopedia of Linguistics. For these reasons, we have used "Romani" wherever the term appears in English.

Romanian: Capitalization rules in Romanian depend on the part of speech for each particular word. So, for example, Coreen (Korean) is sometime capitalized, and sometimes not capitalized.

Samoa: When looking for Samoan candidates, we contacted the offices of congressional representatives for Samoa. We had hoped that contacts in those offices would be able to help us identify qualified, responsible linguists for this project. We made several calls at the beginning of the project, and again once we had entered the proofreading stages. Our calls were not returned. The linguists we did use are both professional translators experienced with government forms and the Census itself. We used native Samoan linguists currently residing in Utah and Hawaii.

Spanish: We used the text from the official Spanish form verbatim. Note: Spanish-speakers in the United States speak a variety of different dialects and for every term on the form, at least one person is certain to take issue.

Tagalog: We used the validated long form text to ensure consistency with the LAG. We did make some corrections to spelling, such as “Koreyano” in the Assistance Guides.

Tibetan: The Tibetan translation did not present any problems. For the typesetting phase, we had to create several composite characters as artwork. This precluded us from being able to create PDF files of the Tibetan.

Tongan: Tonga is a Kingdom and there is not a system of private land-ownership similar that in the U.S. For the mortgage and housing-related terms, we provided an explanatory translation or left the term in English.

Urdu: As a result of attempting to use a modified Arabic font in the original typesetting, we did not produce a good document and had to re-typeset this form, using a newly created Urdu font.

Vietnamese: We had to use the validated text of the official form for the LAG. We do not believe that the most appropriate language was used in all cases, but we did use the validated language throughout.

Yiddish: We used Hasidic Yiddish for the forms. Like Arabic, Yiddish uses diacritical marks to indicate vowel sounds. Texts can be printed with or without these vowel marks in Yiddish. The LAGs do not have the marks.

References

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Bright, William, ed. *International Encyclopedia of Linguistics*. New York, Oxford University Press, 1992.

Katzner, Kenneth, *The Languages of the World*. Guernsey; The Guernsey Press Co. Ltd.. 1995.

May 27, 1999

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 12

MEMORANDUM FOR Distribution List

From: Susan M. Miskura (signed)
 Chief, Decennial Management Division

Subject: Elimination of Outmover Tracing From the Census 2000 Accuracy and Coverage Evaluation (A.C.E.)

Contact Person: Maria Urrutia, DMD, Room 1422-2, (301) 457-4244

This memorandum documents the elimination of outmover tracing from the 2000 Census Accuracy and Coverage Evaluation (A.C.E.).

Background

In the Census 2000 Dress Rehearsal (DR), an evaluation was performed to determine whether tracing ICM households where the entire household moved between Census Day and the ICM interview date resulted in significantly higher quality data than using data collected from proxies at the ICM address.

In ICM production, information was collected about the whole household outmover people from the people who moved into the housing unit since Census Day (inmovers) or other knowledgeable proxies. In the evaluation, outmovers were traced to their new address. The evaluation compared the results using proxy data, which were used in the official DR estimates, with the results using the traced data collected in the evaluation.

Basis for Decision

The recommendation not to undertake mover tracing in the Census 2000 Accuracy and Coverage Evaluation (A.C.E.) is based principally on the 1996 evaluation test and DR findings that mover tracing had no significant effect on the coverage estimates. The DR results concluded that there were no significant differences in the dual system estimates calculated using proxy and traced outmover people for any of the poststrata.

June 10, 1999

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 13

MEMORANDUM FOR Preston Jay Waite
 Assistant Director for Decennial Census

From: Susan M. Miskura (Signed)
 Chief, Decennial Management Division

Subject: Handling Mail-Return Large Households Not Contacted Via
 Telephone

Contact Person: Fay F. Nash, Decennial Management Division, (301) 457-8039

The Census Bureau will attempt to recontact all mail-return households that have more than 6 household members (i.e., large households) in order to obtain person data for those persons not accommodated by the 6-person questionnaire. These cases will be transmitted to centralized telephone facilities for a telephone followup using the Computer-Assisted Telephone Interview (CATI) methodology. The household roster will be reviewed with the respondent and then data will be collected for those persons not included on the 6-person mail-return questionnaire. For those households that did not provide a telephone number on their census questionnaires, we will implement a telephone look-up operation to obtain one. We expect a telephone completion rate of approximately 80 percent. Therefore, given our estimated workload of 1.32 million cases, we expect that about 264,000 cases will not be contacted through this operation. The Census Bureau investigated three options for handling these unresolved cases.

One option was to conduct a personal visit followup to obtain data for these cases. The Census Bureau decided not to implement this option because the gains could not be justified by the costs. Another option was to conduct a continuation questionnaire mailout operation. This option is similar to the procedure implemented during the dress rehearsal. (However, the dress rehearsal used this procedure for **all** large household mail-returns, since there was no telephone followup conducted.) The dress rehearsal mail return rate for the continuation form was 30 percent. If the same rate is realized during Census 2000, 14 percent of the large households would still remain unresolved. The dress rehearsal results also show that the mailout procedure created coverage errors. This option also has substantial operational implications. It requires the design, clearance and printing of a new form, new data capture software (most likely key from paper), modification of the data response file (DRF1) creation process, and possible modification to the primary selection algorithm.

The final option considered and recommended is to use imputation procedures to account for the missing person data for the non-contacted large households. We feel this is the most reasonable approach since the other options have little payoff and will be extremely difficult to implement, given the Census Bureau's limited resources to prepare for a Census Day that is less than a year away. Our imputation methods are statistically sound and have been employed during all the most recent censuses to account for missing data. The only downside is the possible negative perception from a large household that expected a followup contact to obtain the missing person data. The instruction on the questionnaire states that the Census Bureau *may* follow up with them and requests a telephone number. We feel that the Census Bureau has implemented a good faith strategy to reach these households by adding the telephone followup operation.

In summary, the procedure we recommend for large household mail-returns is vastly improved over the data collection strategy implemented during the dress rehearsal. First, we have increased the number of persons accommodated on the mail return questionnaires from five to six persons, thereby reducing the number of households that cannot be accommodated on a single questionnaire. Second, we have implemented a telephone followup expected to handle 80 percent of those households not accommodated by the 6-person form. And, third, we will use proven imputation methods to account for the residual missing data.

Distribution List: Standard

June 10, 1999

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 14

MEMORANDUM FOR Distribution List

FROM: Susan Miskura (Signed)
 Chief, Decennial Management Division

Subject: Summary Materials About The Census 2000 Operational Plan Using
 Traditional Census-Taking Methods

Contact Person: Linda Brudvig, Program Information Branch, Decennial Management
 Division, Room 2000, Bldg. 2, (301-457-8093)

Attached are summary materials about the Census 2000 operational plan using traditional census-taking methods. These materials supplement the Census 2000 Operational Plan Using Traditional Census-Taking Methods that you received with the Census 2000 Informational Memorandum No. 3 dated January 20, 1999. They were distributed to a wide audience in April 1999 and continue to be updated. Updated information will be provided to you in subsequent informational memoranda. The attached documents are:

- Updated Summary: Census 2000 Operational Plan (February 23, 1999) (File: TC1)
- Census 2000 Plan Workflow - Key Operations (March 1999) (File: TC2)
- Census 2000 Operational Plan - Workflow and Schedule (description) (March 17, 1999) (File: TC3)
- - Census 2000 Plan Workflow (March 1999) (this flowchart is available in hard copy only on request)
 - Census 2000 Master Activity Schedule - Extract (File: TC4)
- Census 2000 Plan Workflow - Key Operations (March 1999) (this flowchart is available in hard copy only on request)

Attachments

UPDATED SUMMARY: CENSUS 2000 OPERATIONAL PLAN

Census 2000 will occur next year to determine how many people reside in the United States, precisely where they reside, and their demographic characteristics. Census 2000 is the nation's largest and most complex mobilization, and will include numerous critical phases, such as preparing address lists, mailing questionnaires, performing quality checks and tabulating census results.

The data gathered by Census 2000 will serve several critical purposes for American government and society. The data are used to apportion the U.S. House of Representatives among the states, draw legislative districts within each state, allocate nearly \$200 billion in annual Federal funding, and provide the baseline demographic statistics for planning, implementing and evaluating the provision of Federal, state and local services and private business decisions.

In January, consistent with the Congressional mandate that the Census Bureau plan two separate census tracks, the Census Bureau issued two operational plans for conducting Census 2000. The first track "Census 2000 Operational Plan" is a revised version of the Census Bureau's original plan using statistical sampling methodology for all purposes. The second track "Census 2000 Operational Plan: Using Traditional Census-Taking Methods" is the Census Bureau's plan for conducting the decennial census without using statistical sampling for purposes of apportionment.

After the Bureau completed those plans, important developments occurred. First, the Census Bureau completed more thorough evaluations of the Census 2000 Dress Rehearsals conducted in 1998 in Sacramento, CA, Menominee County, WI, and the 11 counties of and around Columbia SC. In addition, on January 25, 1999, the U.S. Supreme Court ruled that a 1976 amendment to the Census Act bars the use of statistical sampling to correct the decennial data used to apportion seats in the U.S. House of Representatives among the states. However, the Court opinion also acknowledged that the 1976 amendment requires the use of statistical sampling for non-apportionment purposes, if it is feasible to do so.

The Census Bureau is preparing a plan designed to ensure the most accurate decennial census legally possible. The Census Bureau is continuing to refine this plan to be consistent with the decision of the Supreme Court, as well as the lessons from the Dress Rehearsals. In developing this plan, the Census Bureau has determined that it is feasible to conduct and complete the statistical procedures necessary to provide corrected data for all purposes other than apportionment within the legally mandated schedule. The Bureau also believes that such corrected data will be substantially more accurate than the raw data.

This plan includes data collection from 100 percent of households and housing units. In addition, the plan includes an extensive statistical operation to measure and correct overall and differential coverage of U.S. residents in Census 2000. This operation consists of a scientific sample of approximately 300,000 housing units, and will use regional groupings to generate corrected counts.

The Census Bureau will carry out the plan in accordance with a detailed Master Activity Schedule that catalogues the start and finish dates for the multitude of separate but interrelated activities entailed in Census 2000. The Bureau is completing development of this Master Activity Schedule. The major elements of the plan and schedule are outlined below.

A. *Marketing Program*

Census 2000 will include, for the first time, an integrated communications effort to increase awareness of the Decennial census and boost response rates. Because the Census Bureau will need to reach 100 percent of housing units, the marketing program has been expanded to achieve this goal. There are three phases to the marketing program: (1) Prior to Census Day, build awareness of the Census and how it will benefit communities; (2) During the mailout/mailback period, motivate people to return their questionnaire promptly; and (3) During the enumerator follow-up period, encourage cooperation with census enumerators.

The comprehensive marketing program includes five major activities:

- C *Partnerships*: Form partnerships between the Census Bureau and other federal agencies, state, local and tribal governments, and community-based organizations and businesses, to draw on the unique knowledge, experience and expertise of these partners. The Census Bureau has already hired over 300 partnership specialists to manage these relationships and plans to hire more, and has already signed over 10,000 partnership agreements with local, city, and state governments, businesses, and community organizations.

- C *Paid Advertising*: Conduct the first-ever paid advertising campaign, including a national media campaign aimed at increasing mail response, targeted advertising directed at raising mail response among historically undercounted populations, and special advertising messages and campaigns targeted to hard-to-enumerate populations. Advertising will also focus on encouraging cooperation during the non-response follow-up procedures.

- C *Special Methods to Encourage Mail Response:* In addition to the questionnaire, households will receive a letter alerting people to the coming census questionnaire and a reminder postcard urging their response. In addition, all Census mailings, including the questionnaires, envelopes, motivational slogans and logos, are being designed to support and reinforce the marketing plan.
- C *Media Public Relations:* Media specialists will be assigned to the regional census centers to cultivate local press contacts and respond to local media inquiries.
- C *Promotion and Special Events:* A variety of special events, including parades, athletic events and public service television documentaries will be cosponsored by state, local and tribal governments and by community organizations and businesses to motivate people to respond.

B. The Census Questionnaires

In Census 2000, the questionnaire mailout/mailback system will be the primary means of census-taking. Because results of the Dress Rehearsal indicated that the use of a second mailing could contribute serious inaccuracies to the census count, Census will only mail one questionnaire per household. Cities, towns, and suburban areas with city-style addresses (house number and street name), and rural areas where city-style addresses are used for mail delivery will comprise the mailout/mailback areas. In areas where the addresses are predominantly non city-style, census enumerators will deliver addressed questionnaires for respondents to mail back. Every housing unit in the country will receive either the "short" form, or the "long" form.

- C The Census **short form** will be delivered to approximately 83 percent of all housing units. It will allow the respondent to provide complete information for six household members and to list up to 6 additional household members (with follow-up to obtain information on these members). The Census 2000 form will ask for information on only seven subjects (name, sex, age, relationship, Hispanic origin, and race for each household member, as well as whether the home is owned or rented).
- C The Census **long form** will be delivered to a sample - approximately 17 percent - of all housing units. It will also allow respondents to list up to 12 household members. This form will include the short form questions, as well as a number of additional questions on the social, economic, financial, and physical characteristics for up to 6 household members (with follow-up for other members when needed). The Bureau will use a variable rate sampling plan to collect the

long form data. This will allow for more efficient allocation of the sample and will maintain the accuracy and reliability of census data at small geographic levels, while reducing respondent burden.

The questionnaires collect data the nation needs to meet the statutory data requirements of the federal agencies and to administer state, local, and tribal government programs. The process began with an evaluation of the questions used in 1990. All federal agencies were asked to identify programs required by law to use census data. Non-federal requirements were obtained by a survey directed to a broad spectrum of data users, such as state, local, and tribal governments; ethnic and community organizations, the business sector; academic researchers and librarians; religious groups; and the public. Two extensive tests were conducted in 1996 to evaluate the proposed questions, and the Bureau conducted a wide range of focus groups and cognitive research. On March 31, 1997, as required by law, the Bureau submitted to the Congress the list of subjects planned for inclusion in the short and long forms, and on March 30, 1998 submitted to the Congress the actual questions.

In addition to carefully formulating the questions, the Bureau has made a number of other improvements to the forms to increase the mail response in Census 2000, and to improve the accuracy of the information collected:

- C *Respondent-friendly format*: The Bureau worked with private sector designers to design forms that are easier to understand, explain why the question is being asked, and are simple to complete and mail back. Graphic icons, color contrasts, navigational aids, better grouping of questions, and more accessible instructions, are some of the improvements over the forms used in 1990.
- C *Multiple mail contacts*: The Bureau's research has shown that multiple mail contacts with respondents will increase the response rate. In Census 2000 respondents will receive an advance letter alerting them that the form is coming, and a later post card reminding them to mail the questionnaire if they have not done so.
- C *Questionnaires in other languages*: Forms will be mailed in five other languages (Chinese, Korean, Spanish, Tagalog, and Vietnamese) to households who request them in response to the advance letter. In addition, questionnaire assistance booklets will be available in over 30 languages.
- C *Special forms*: Special forms will be used to increase the participation of people who might otherwise go uncounted in Census 2000. For example, there will be a special short form used in the Be Counted program, for people who did not

receive a form in the mail or believe they were not included in a mailback questionnaire. There will also be special forms used to count people in living situations that require special operations, such as dormitories, nursing homes, and military bases.

C. Address List Development

In order to mail out questionnaires and control the collection and tabulation of Census 2000 data, the Census Bureau will identify all living quarters in the country and locate them with respect to the geographic areas for which census data are reported. The Bureau will accomplish this by creating a Master Address File (MAF) that identifies all living quarters and locates those addresses in its geographic database called TIGER (Topologically Integrated Geographic Encoding and Referencing). The building and maintenance of the MAF and TIGER involve partnerships with other federal agencies, state, local, and tribal governments, and regional and metropolitan planning agencies. The Bureau will create and maintain the MAF through a series of operations that are determined by whether the area involved consists predominantly of city-style addresses or non city-style addresses.

The MAF for **city-style addresses** is created by combining addresses from the Census Bureau's 1990 Census Address Control File with addresses in the U.S. Postal Service (USPS) Delivery Sequence File. Each address is then located in the TIGER database. If an address cannot be located, the location is researched and resolved through an office or field operation or through assistance from local partners. For Census 2000, two additional operations will be implemented to improve the quality of the MAF for city-style addresses:

- *100 percent block canvass:* The first is a 100 percent block canvass to ensure consistently good address coverage in the MAF and to ensure correct geographic locations for all addresses. Census enumerators will canvass every road and street in areas of city-style addresses looking for every place where people live or could live, and compare the address of each living quarters with the addresses on the Census 2000 address list. As block canvassing is completed, the Bureau will data-capture the address updates in a keying operation and will enter the updated map information into the TIGER database. The MAF will be updated with the results of the block canvassing in time to use the updated address information for delivery of questionnaires.
- *Postal Check:* The Bureau will also add a Postal Check in which USPS letter carriers will be asked to validate the addresses in the MAF, identifying and adding addresses that are missing. This postal validation to be conducted close to Census

Day will help ensure that new construction and previously missed units are added to the MAF. The Bureau is planning an additional procedure that will provide an update of

newly constructed units just prior to Census Day.

The MAF for **non city-style** addresses (for example, a post office box or rural route number), will be created through a door-to-door canvass by Census enumerators who will identify each structure and locate it on census maps. The completed address listings and their map locations will be recorded in digital format and added to the MAF and TIGER databases, respectively. Before conducting the door-to-door canvassing, the Bureau will work with local and tribal government partners to update the streets and roads in the TIGER database, especially for high-growth areas and areas that have new street names. This list will be updated again just prior to Census Day when enumerators deliver questionnaires for households to mail back.

As a result of legislation enacted in 1994, the Census Bureau has for the first time been allowed to have local and tribal governments review the MAF. This is done through the Local Update of Census Addresses (LUCA) program, in which the Bureau sends local or tribal government liaisons the MAF listings and corresponding maps for their areas, and a tally of MAF records for each census block in their jurisdictions. For areas with predominantly city-style addresses, liaisons began reviewing the address lists in May of 1998 because the MAF had been created using addresses obtained from the 1990 census and the USPS. For areas of predominantly non city-style addresses, the address list will not be available for review until 1999, after the Census Bureau completes the address listing operation to create the MAF in these areas, but these areas were able to get an early start by reviewing and updating maps for their communities in early 1998. After verifying information provided by the liaisons, the Bureau will correct the MAF.

While the current LUCA program has already involved local and tribal governments more effectively than the 1990 post census local review in improving the completeness of the address list, the Bureau recognizes the need for additional input to update addresses as close as possible to Census Day. This includes the update of the streets and roads in the TIGER database. The Bureau is also planning a procedure involving local governments in identifying newly constructed housing units.

D. Geographic Database Development - TIGER

The Census Bureau's TIGER (Topologically Integrated Geographic Encoding and Referencing) system provides the geographic structure for the control of the data collection, tabulation, and dissemination operations for Census 2000. The TIGER system links each living quarters to a spatial location, each location to a specific geographic area, and each geographic area to the correct name or number and attributes. The database constantly changes, for example when new streets are built, and the names and address ranges of existing streets change. To ensure that the TIGER database is complete and correct, the Bureau works with other federal agencies, state, local and tribal governments, and other public and private groups to update both its inventory of geographic features and its depiction of the

boundaries, names, and attributes of the various geographic entities for which the bureau tabulates data.

The Bureau obtains updates to the features in the TIGER system, including associated address ranges, from its various address list improvement activities; from partnership efforts like the LUCA program; from digital files provided by some local and tribal governments; and from local and tribal governments in response to a preview of the census map of their jurisdictions.

Updates to the TIGER system's depiction of the boundaries, names, and attributes of geographic entities are obtained through surveys designed to collect an accurate inventory of all functioning governmental units. The Bureau conducted annual boundary surveys in 1998 and 1999, and will conduct an additional survey beginning in November 1999 to help determine the boundaries that will be in effect on January 1, 2000, which will be the official Census 2000 boundaries for functioning governments. The Bureau also relies on other programs to update the TIGER boundaries data, including a program that allows local or tribal officials to review proposed Census 2000 boundaries; a program that allows local and tribal participants the opportunity to delineate Census 2000 participant statistical areas (block groups, census county divisions, census designated places, and census tracts); and additional programs that offer participants the opportunity to identify other areas for which the Census Bureau will tabulate data (for example, traffic analysis zones).

E. Field Offices and Staffing

The Census Bureau will open a national network of temporary offices from which employees will collect and process the data for Census 2000. Establishing the office network will require, for most offices, the leasing of office space, purchasing furniture and equipment, purchasing and installing computer hardware and software, and establishing voice and data line connections. Because the Census Bureau will be conducting 100% follow-up, it expects significant increases in field offices and staffing – as compared to the original Census 2000 Operational Plan – to meet this operational goal. The current plan for the Census 2000 office structure is:

- **12 Regional Census Centers (RCCs)** have been open since March of 1998. Through a network of Census Field Offices, the RCCs will manage all census field data collections operations, address listing, and address list enhancement for city-style address areas; coordinate the LUCA program; produce maps; update TIGER and work with local participants in the Public Law 94-171 Redistricting Data Program; and recruit temporary staff.
- **402 Census Field Offices (CFOs)** were opened in September, 1998. These offices

perform the address listing; conduct local recruiting; and perform clerical review of completed field address listing work.

- **520 Local Census Offices (LCOs)**, many of which are already open, will all be open by November, 1999. These offices will produce enumerator maps and assignments; conduct local recruiting; conduct outreach and promotion; conduct group quarters and service-based enumeration activities; conduct update/leave and list/enumerate operations; conduct non response follow-up, coverage improvement follow-up, and address verifications; and perform the block canvass operations.
- **3 New Data Capture Centers (DCCs)** will be opened by September, 1999. These Centers will check in mail returns; prepare questionnaires; and conduct data capture.
- **1 National Processing Center (NPC)**, which, in addition to performing the functions of a Data Capture Center, will process address listing data; and perform coding of questionnaire data.

To conduct a successful Census 2000, the Bureau will recruit and test hundreds of thousands of applicants for a wide range of positions, such as local census office managers, enumerators, partnership specialists, media specialists, and clerks. This will require an extraordinary recruiting effort throughout the country. Every job applicant will be required to pass a written test and will be screened for criminal history. Applicants selected for employment must take an oath of office and sign an affidavit agreeing not to disclose census information.

Many factors converge to present the Bureau with unprecedented challenges in hiring, retaining, and training the necessary employees for Census 2000. To address this challenge, the Bureau is implementing several new approaches:

- Innovative methods of setting pay and incentives;
- Expanding the potential labor force by working with other federal agencies and state agencies to reduce barriers presented by various income transfer programs, and encourage recipients of these programs to work for the Census Bureau. Consistent with these efforts, the Census Bureau has already hired more welfare-to-work employees than any other federal agency; and
- Earlier and expanded training for enumerators.

F. Data Collection: Basic Enumeration Strategy

To ensure that the Census Bureau obtains a completed questionnaire from every household, or as close to that as possible, the Census Bureau has developed a ten-part, integrated enumeration strategy.

1. The first part of this strategy will ensure that a questionnaire is delivered to every housing unit, by one of three data collection methods:
 - C *Mailout/Mailback*: U.S. Postal Service will deliver questionnaires to every “city-style” housing unit with a street name and house number.
 - C *Update/Leave*: Census enumerators will deliver questionnaires to housing units without street names and house numbers to be mailed back, mainly in rural areas, and correct and update the address list and maps for any additions or errors.
 - C *List/Enumerate*: In remote and sparsely populated areas, enumerators will visit every housing unit and complete the enumeration as delivered.
2. The second part of this strategy will provide people with assistance, as needed, to complete and return their questionnaires.
 - C *Telephone Questionnaire Assistance (TQA)*: The Bureau will operate a toll-free TQA system, in English, Spanish and several other languages, providing automated touch-tone answers to common questions, personal operator answers to those requesting it, special service for the hearing impaired to assist them in completing a short form. Callers also will be able to request a questionnaire.
 - C *Internet*: Respondents will be able to access an Internet website to both receive assistance and, in some cases, submit their responses.
 - C *Questionnaire Assistance Centers*: The Bureau will open Walk-in Questionnaire Assistance Centers in convenient locations to assist respondents with filling out questionnaires in person. As a result of lessons learned in the Dress Rehearsal, bilingual staff will also be available in these centers.
 - C *Questionnaire Assistance Guides*: Questionnaire Assistance Guides will be available in over 30 languages.
3. The third part of this strategy will provide a means for people who believe they have not received a questionnaire or were not included on one, to respond to Census 2000. Part of this operation will be targeted to members of historically-undercounted groups. The major element of this operation is the distribution of “Be Counted Questionnaires.” The Census Bureau will

distribute these questionnaires at public locations such as Walk-In Questionnaire Assistance Centers and some public and private facilities, staffed with bilingual competencies when appropriate. These forms will be available in English, Spanish, Korean, Chinese, Vietnamese and Tagalog.

4. The fourth part of this strategy is designed to enumerate people who do not live in traditional housing units, including group quarters situations such as nursing homes and college dormitories, people living under mobile circumstances such as on boats, people at migrant farm worker camps, people living on military installations, and federal employees living overseas. Dress Rehearsal results indicate that this part of the strategy will have to be expanded because many more people do not live in traditional housing units today, as compared to 1990.

C *Group Quarters Enumeration.* This operation will identify the location of all group living quarters and make advance visits to each group quarters. Census staff will list all residents in April 2000 and distribute questionnaire packets.

C *Transient Night Operation.* Transient Night will enumerate people living a mobile lifestyle by visiting and interviewing people at campgrounds, racetracks, commercial or public campgrounds and those for recreational vehicles, fairs and carnivals, and marinas.

C *Remote Alaska Enumeration.* This operation will send out enumerators to deliver and complete questionnaires for people living in outlying or remote settlements in Alaska.

C *Domestic Military/Maritime Enumeration.* The Bureau in cooperation with the Department of Defense and U.S. Coast Guard will identify living quarters and housing units on military installations and ships assigned to a U.S. home port, and use appropriate enumeration methods.

C *Overseas Enumeration.* The Census Bureau in cooperation with the Department of Defense and other Departments will count federal employees assigned overseas (including members of the Armed Forces) and their dependents, for apportionment purposes.

5. The fifth part of this strategy will target people with no usual residence or address. This operation is conducted at selected service locations such as shelters and soup kitchens and non-sheltered outdoor locations.

6. The sixth part of this strategy will deploy special data collection methods to improve cooperation and enumeration in certain hard-to-enumerate areas.

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- C Regional census centers will use the planning database and their knowledge of local conditions to identify appropriate areas for targeted methods. A team of enumerators will then go to targeted areas, such as areas with high concentrations of multi-unit buildings, safety concerns or low enumerator production rates, and conduct team enumerations.
 - C Mail response rates and maps will be available to local and tribal officials so they can work with Bureau staff to identify low-response areas and implement additional outreach and publicity efforts and targeted enumeration efforts.
 - C In partnership with local and tribal governments and community-based organizations, local census offices will establish Walk-In Questionnaire Assistance Centers in locations such as community centers, and large apartment buildings to provide assistance in English, Spanish and other and foreign languages.
 - C The Be Counted programs will make unaddressed questionnaires available in the Walk-In Assistance Centers and other locations.
 - C Letters will be mailed to managers of large multi-unit structures and gated communities informing them of upcoming census operations.
 - C In pre-identified census blocks, census enumerators will canvass the blocks, update the address list, and deliver and complete census questionnaires for all housing units.
 - C In pre-identified blocks originally classified as "Mailout/Mailback," enumerators will deliver the questionnaires and update the address list (Urban Update Leave).
7. The seventh part of this strategy, coverage-edit and telephone followup, will review completed questionnaires for potentially missing, incomplete or inconsistent data.
- C *Coverage Edit.* The Bureau will check completed questionnaires for discrepancies between the number of persons reported and the number of persons for whom information is provided, forms returned where the population count is blank and the number of persons reported is six, mailed forms with household counts of seven or more, and certain households that contain complex living arrangements.
 - C *Follow-up.* Telephone clerks will contact and re-interview the households with discrepancies identified after mail returns are data captured; field staff will resolve discrepancies found on enumerator returned questionnaires.

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- C *Content Edit.* Computer operations will identify missing or incomplete responses to population or housing questions and use statistical imputation to complete the information.
8. The eighth part of this strategy, non-response followup (NRFU), is the effort to secure a response in Census 2000 from every housing unit and resident. One hundred percent of non-responding households will be followed up.
- C In the initial period, the Bureau will use reminder publicity urging people to return their questionnaires.
 - C Following the period of mail response, non-responding households are identified and listed.
 - C Enumerators will visit all non-responding addresses to obtain a completed questionnaire for each household.
 - C In mailout/mailback areas, enumerators will also follow up 100 percent of housing units identified as nonexistent or vacant by the U.S. Postal Service.
 - C In update/leave areas, enumerators will follow up 100 percent of housing units where the Bureau was unable to deliver questionnaires.
 - C The Bureau will conduct quality assurance checks of Non-Response Followup to ensure the completeness and accuracy of the operations.
9. The ninth part of strategy involves additional operations to improve the coverage of Census 2000.
- C In mailout/mailback areas, enumerators will revisit addresses for which questionnaires were returned in NRFU reporting the housing unit as vacant or delete and which were not initially identified by the U.S. Postal Service as undeliverable as addressed.
 - C In update/leave areas, enumerators will revisit addresses for which a questionnaire was returned as vacant or nonexistent in NRFU, but the questionnaire was not returned as undeliverable during the update/leave operation.
 - C In both areas, mail returns checked in but not data captured will be rechecked and, if necessary, revisited.
10. The tenth part of this strategy is unduplication, which involves reviewing and selecting person information when more than one questionnaire data set is reported for a single address. Dress

Rehearsal results showed that the multiple ways in which people can

respond to the census increases the possibility of more than one response being submitted for a given person or household. Automated matching technologies will allow us to resolve situations where more than one form was received for an address.

G. Special Populations

1. American Indian and Alaska Native Areas and Hawaiian Homelands

The Census Bureau will base its strategy for enumerating the populations in the American Indian, Alaska Native Areas (AIANA) and Hawaiian Homelands on building partnerships for:

- C *Address List Development:* The Census Bureau will use U.S. Postal Service (USPS) Delivery Sequence Files in AIANA and Hawaiian Homelands where there are city style addresses. In other areas, the Census enumerator will use the “update/leave” method where a form is left with the respondent for return by mail. In more remote areas, the census enumerator will actually deliver the form and conduct the census interview all in one visit. Tribal governments will have an opportunity to participate in the LUCA program. The Census Bureau will work with tribal officials to select the appropriate data collection methodology for each area.
- C *Geographic Programs:* There are many programs available to review and define geographic areas.
- C *Marketing:* Census Bureau staff and tribal liaisons will compile lists of available media for paid advertising and promotion. The Census Bureau will also enlist the help of tribal liaisons and locally-established “Complete Count Committees” to assist with promotional activities.
- C *Field Operations:* The Census Bureau will work with tribal governments to assist in all levels of field operations including training local staff in cultural awareness, assisting in recruiting efforts, and identifying locations for census questionnaire assistance centers.
- C *Data Dissemination:* While most data will be processed in the same way as data for the rest of the nation, the Census Bureau will work with tribal governments to meet their data needs.

2. Puerto Rico

The Census 2000 operations in Puerto Rico will be comparable to activities in the 50 states and the

District of Columbia. The Census Bureau is working in partnership with the government of Puerto Rico to ensure that Census 2000 data meet the federal legal requirements.

- C *Build Partnerships at Every Stage of the Process:* The Census Bureau entered a Memorandum of Agreement with the governor of Puerto Rico which outlines mutual roles and responsibilities. In consultation with the government of Puerto Rico, Census questionnaire content was developed to meet the legislative and programmatic needs of Puerto Rico. A separate advertisement and promotion campaign will be conducted in Puerto Rico to build awareness of the Census and boost participation. Address list development will allow Puerto Rico to participate in the LUCA program.
- C *Census Questionnaires:* Census questionnaires and other forms will be readily available in both Spanish and English and will be placed in Walk-in Questionnaire Assistance Centers and other locations identified through consultation with local partners.
- C *Use of Technology:* The Census Bureau will make use of the same technological advances that will be used in the fifty States and the District of Columbia. Many operations performed clerically in 1990 will be automated. A re-engineered method of producing the address list and integrating it with the geographic database will improve the quality of the files. Telephone follow-up and coverage improvements will focus efforts where the potential for coverage improvement is greatest. Data users will have access to Census 2000 data and products through the Internet using the American FactFinder system.
- C *Special Techniques to Improve Coverage:* The “Update/Leave” methodology for census data collection will be used for the first time in Puerto Rico. Census enumerators will be able to update the MAF for Puerto Rico while delivering questionnaires. Respondents have the opportunity to complete the Census questionnaires themselves and return them by mail. Expanding the marketing and promotion program, the telephone assistance program and other enumeration support activities will address lessons learned in 1990.

3. *Island Areas*

The Census 2000 operations in American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands (collectively referred to as the “Island Areas”) will be conducted by the Census Bureau in partnership with the government of each Island Area. These partnerships will ensure that Census 2000 data meet federal legal requirements, as well as the specific needs of each Island Area. The Census 2000 operations in the Island Areas will be built around the following:

- C *Data Collection:* Data collection in the Island Areas will use the list/enumerate method. This decision is based on recommendations from Island representatives and an analysis of the various data collection methodologies. Unlike stateside list/enumerate procedures, the Census Bureau will deliver Advance Census Reports before the list/enumerate operation and ask respondents to complete the form and hold it for the enumerator to pick up.
- C *Build Partnerships at Every Stage of the Process:* The Census Bureau will develop and sign a Memorandum of Agreement with the governor of each Island Area that will outline mutual roles and responsibilities. In consultation with the government of the Island Areas, census questionnaire content was developed to meet the legislative and programmatic needs of each Island Area. A separate advertisement and promotion campaign will be developed for each Island Area to build awareness of the Census and boost participation.
- C *Census Questionnaires:* Census questionnaires and other forms will be readily available to respondents in convenient locations identified through consultation with local partners.
- C *Use of Technology:* The Census Bureau will make greater use of the telephone to provide assistance to respondents with questions about Census 2000. Data users will have access to Census 2000 data and products through the Internet using the American FactFinder system.

H. Telecommunications Support and Automated Data Processing

- C Using dedicated links and other secure lines, the Census 2000 telecommunications network will link all census offices including, under current plans: Census Headquarters in Suitland, MD, the 520 Local Census Offices (LCOs), the 12 Regional Census Offices (ROO), the 12 Regional Census Centers (RCCs), the Puerto Rico Area Office, the Maryland Computer Center in Bowie, the National Processing Center (NPC) in Jeffersonville, Indiana and the three contracted Data Capture Centers (DCC) in Phoenix, AZ, Pomona, CA, and Essex, MD. The Census Bureau will also establish communications links with planned commercial telephone centers to assist with Telephone Questionnaire Assistance and coverage edit follow-up.
- C The use of electronic imaging will reduce the logistical and staffing requirements of handling large volumes of paper questionnaires. Some components of data capture will be better performed by private-sector partners. Census will also use commercially available advanced hardware and software rather than limiting itself to creating in-house

solutions.

- C The most significant features of the Data Capture System include: 1) work divided among four centers; 2) full electronic imaging and processing of questionnaires;
- 3) automated sorting of mailed responses; 4) optical mark recognition for check-box data; 5) optical character recognition for write-in data with automated processes to resolve difficult cases; and 6) quality assurance checks.

I. Dissemination and Products

Census 2000 data will be disseminated mainly using a new data retrieval system called the **American FactFinder**, which will provide an interactive system that enables data users to access prepackaged data products, data documentation, and online help, as well as build custom data products online and offline. The first version of American FactFinder will be available for limited use in early 1999. Census 2000 data products will be available beginning January 2001. American FactFinder will be accessible to the widest possible array of users through the Internet, Intranet, and all available intermediaries, including the nearly 1,800 State Data Centers and affiliates, the 1,400 Federal Depository Libraries, universities, and private organizations.

The Bureau has solicited the advice and recommendations of data users throughout the planning, design, and testing stages of the American FactFinder, and will continue to do so to address issues such as the types of data to be predefined in the American FactFinder and included in various data products.

The P.L. 94-171 Redistricting Data Program will assure that the Bureau meets its statutory obligation to provide redistricting data to the states within one year after Census Day. This program will consist of:

- *Phase 1, The Block Boundary Suggestion Project*, which offers state redistricting officials the opportunity to suggest visible features to use as Census 2000 block boundaries.
- *Phase 2, The Voting District Project*, in which state officials may suggest the boundaries of voting districts and state legislative districts using whole census blocks.
- *Phase 3, Release of Census 2000 Redistricting Data*, in which the Bureau works with state officials to follow up on Phase 1 and Phase 2 before releasing the data to the governor and majority and minority legislative leaders in each state.

The Census Bureau will also provide **geographic data products** for data users. The products planned for Census 2000 are maps in digital and hard copy form, and TIGER extracts in digital form.

J. Testing, Dress Rehearsal, Evaluation and Research

Census 2000 has incorporated ambitious testing, evaluation and research operations to ensure the most accurate results possible. Virtually all potential operations and procedures included in census 2000 have been subject to extensive testing, research and evaluation, beginning even before the 1990 Census and continuing through the present period. At mid-decade, the 1995 Census test provided an additional opportunity to test many features proven successful in earlier tests and research. In addition, the census 2000 Dress rehearsals tested the various operations, procedures and questions for Census 2000 under as near census-like conditions as possible.

In addition, the plan for Census 2000 includes several other operations to ensure the most accurate results. The most important of these elements will be the *Accuracy and Coverage Evaluation (ACE)*. The Census Bureau will conduct an extensive ACE, corresponding to the Post Enumeration Survey (PES) in past censuses and the Integrated Coverage Measurement in the original Census 2000 plan, to measure and correct the overall and differential coverage of the U.S. resident population in Census 2000. The ACE sample will consist of approximately 300,000 housing units, and like the PES in prior censuses will use regional groupings to generate corrected counts. Before the census, the Bureau will conduct an independent listing of the housing units in the blocks chosen for the ACE sample. These housing units will be matched to census housing units for the same blocks. The resulting final list will be used to interview people at each households. The list of people enumerated from the interviews will be matched to the Census 2000 results and the differences will be reconciled. The differences will provide a detailed evaluation of the completeness of Census 2000. The ACE will not be used to adjust the census figures for reapportionment purposes; however, it will be made available to federal agencies and state and local governments for other purposes.

Other operations included in the Census 2000 plan to ensure more accurate results are:

- C *Quality Assurance (QA) Activities:* The Bureau will detect and correct performance errors that can affect coverage and data quality.
- C *Demographic Analysis:* The Bureau will use independent estimates to evaluate the completeness of coverage, ensure the demographic consistency of the census data., and validate the ACE results.
- C *Evaluation Program:* The Bureau will evaluate the quality of Census 2000 data to

help planning for future censuses. Evaluation results will be released in the Report Card on Census 2000 by March 31, 2001.

- C *Research and Experimentation Program:* The census Bureau will conduct a program of research and experimentation during Census 2000 to provide information for planning the 2010 Census.

- C *Administrative Records:* The Bureau will explore the feasibility of using administrative records to supplement existing data collection methods in future censuses.

- C *2010 Census Planning:* The Bureau will conduct long-range planning and design activities for the 2010 Census.

Census 2000 Plan Workflow - Key Operations

March, 1999

Mail Delivery

The Census Bureau will use the United States Postal Service to deliver questionnaires first class to the vast majority of housing units that have city style addresses (house number and street name). The mail delivery strategy includes an advance letter, questionnaire mailout, and a reminder card for nonrespondents.

Start Date: 03/06/00

Finish Date: 03/22/00

Update/Leave (U/L)

This is conducted in areas with predominately non city-style addresses. Census workers will deliver the questionnaires to housing units and at the same time update their list of addresses of the units in their assignment area. Housing units not already on the list will be added and questionnaires will be left at these places. Units that are no longer serving as housing units, either because they have been destroyed or converted to some other use, will not receive questionnaires. People living at housing units are expected to fill out the questionnaire and mail return it to the Census Bureau.

Start Date: 03/03/00

Finish Date: 03/30/00

List/Enumeration (Including remote Alaska)

A census operation where enumerators will visit each household in very remote or very sparsely populated areas (e.g. remote Alaska). At each HU, they will list the address/location of the housing unit, update the census maps and conduct the census interview. The enumerators return the resulting questionnaires to their local census office.

Start Date: 01/31/00

Finish Date: 05/01/00

Cut for Nonresponse Followup (NFRU)

Determine universe of addresses consisting of questionnaires not returned by mail. This is the workload for NFRU.

Start Date: 04/11/00

Finish Date: 04/16/00

Census 2000 Plan Workflow - Key Operations

March, 1999

100% Nonresponse Followup (NRFU)

NRFU is the census operation designed to enumerate 100% of the housing units that do not return their questionnaires by mail.

Start Date: 04/27/00

Finish Date: 07/07/00

Coverage Edit Followup

Coverage edits are performed to review questionnaires for potential missing people. Census questionnaires flagged as a result of this edit will be sent to a centralized facility for telephone followup. Households will be contacted and interviewed to determine the correct number of persons that should be included in the census information.

Start Date: 04/05/00

Finish Date: 06/19/00

Coverage Improvement Followup

The objective of this census operation is to improve coverage of persons in housing units classified in error during NRFU as vacant or to be deleted from the housing unit universe (e.g. uninhabitable addresses). Census staff will re-visit each address, determine the status of the address as of Census Day, and enumerate as appropriate. Both long and short form data will be collected.

Start Date: 07/27/00

Finish Date: 08/15/00

Data Capture

The operation to convert the responses on the census questionnaires into computer processed data. The operation is based on an optical scanning system which utilizes intelligent character and optical mark recognition software. Information that cannot be recognized by the software is sent to a clerical data operation. This operation is conducted in four large sites—three supported by contractors and one at the Census Bureau's National Processing Center in Jeffersonville, Indiana.

Start Date: 03/07/00

Finish Date: 08/24/00

Census 2000 Plan Workflow - Key Operations

March, 1999

Unduplication

A computer operation which uses a algorithm to resolve multiple responses.

Start Date: 08/17/00

Finish Date: 09/18/00

Census Unedited File (CUF) Creation

The CUF is a file composed of unedited or “raw” data. It contains all the records that will be included in the Census. It is created after the unduplication operation. Data on this file maybe further edited prior to inclusion in the census tabulations.

Start Date: 09/11/00

Finish Date: 10/03/00

Production and Review of Apportionment Data

The tabulation and review of the state level counts that will be used to reapportion the U.S. House of Representatives.

Start Date: 09/25/00

Finish Date: 10/24/00

Delivery of Apportionment Data

By legal mandate, apportionment data will be delivered to the President of the United States on December 31, 2000.

Start Date: 12/31/00

Finish Date: 12/31/00

Content Edit and Imputation

A census operation where computer checks are performed on the questionnaire to determine how complete the data for each person are. These edits locate questionnaire items with missing data and use statistical techniques to “impute” values based on characteristics of similar households.

Start Date: 09/22/00

Finish Date: 11/14/00

Census 2000 Plan Workflow - Key Operations

March, 1999

Accuracy and Coverage Evaluation (ACE)

The Census Bureau will conduct an Accuracy and Coverage Evaluation (ACE) survey to measure the overall and differential coverage of the U. S. population in Census 2000. The ACE survey will not be used to adjust the census figures for reapportionment purposes, but will be incorporated into all other data products.

Accuracy and Coverage Evaluation (ACE) - Telephone Interviewing

The ACE person interviewing operation starts with telephoning those households in the ACE sample, which have mailed back Census 2000 questionnaires. Interviewers will call from their homes using laptop computers.

Start Date: 05/08/00

Finish Date: 06/13/00

Accuracy and Coverage Evaluation (ACE) - Person Interviewing

The personal visit phase of the person interviewing operation starts upon completion of NRFU. Interviewers conduct computer-assisted personal interviews at all sample households not included in the telephone phase.

Start Date: 06/19/00

Finish Date: 09/01/00

Accuracy and Coverage Evaluation (ACE) - Matching/Followup

Persons in the ACE survey are matched to Census results and differences are reconciled by an additional interview.

Start Date: 10/02/00

Finish Date: 11/30/00

Accuracy and Coverage Evaluation (ACE) - Processing and Production of Dual System Estimate (DSE) Coverage Factors

Data from the matching/followup operation are processed through several steps. The final process produces the dual system estimates of person coverage. These estimates provide coverage factors describing the accuracy of certain population groups.

Start Date: 12/01/00

Census 2000 Plan Workflow - Key Operations March, 1999

Finish Date: 02/10/01

Production, Review, and Release of Redistricting Data

The DSE coverage factors are applied to the Census data in order to generate the redistricting data. The adjusted redistricting data (based on the results of ACE) will be released to the states on a flow basis, with all states completed by March 30, 2001.

Start Date: 02/12/01

Finish Date: 03/30/01

Telephone Questionnaire Assistance (TQA)

A toll-free touch tone service that will be provided by a commercial phone center to provide respondents assistance in the completion of their Census 2000 questionnaire. Assistance will be available in several languages.

Start Date: 03/03/00

Finish Date: 07/07/00

Be Counted Questionnaire National Campaign

The Be Counted Program is designed to provide a means for people to be counted who may not have received a census questionnaire or believe they were not included in the census. Be Counted questionnaires are designed in many languages. Be Counted forms are made available at locations determined through partnership efforts between Census Day and the start of NRFU.

Start Date: 03/31/00

Finish Date: 04/11/00

Field Verification

A census operation where field staff will verify address data from the TQA and Be Counted operations for addresses not matched to the census address list. Addresses confirmed as housing units not already on the census address list will be added and their data included in the Census.

Start Date: 07/06/00

Finish Date: 07/26/00

Census 2000 Plan Workflow - Key Operations

March, 1999

Partnerships

The Census Bureau is forming partnerships with other Federal agencies, state, local and tribal governments, community based organizations, and businesses. These partners will bring their unique local knowledge, experience, and expertise to help assist in address list development activities and Census 2000 promotional activities with a goal toward increasing respondent participation.

Start Date: 07/01/96

Finish Date: 07/07/00

Paid Advertising - Educational Message

An educational message targeted for hard-to-enumerate areas on how responding to the census benefits their community. The intent of the educational message is to change attitudes of population groups who have historically refused to participate in the decennial census process.

Start Date: 10/01/99

Finish Date: 02/28/00

Paid Advertising - Primary Motivational Message

A message to emphasize the importance of participating in the Census and to motivate people to respond by mailing back their census questionnaires.

Start Date: 03/11/00

Finish Date: 04/05/00

Paid Advertising - NRFU Message

A message to increase the public awareness of the nonresponse operation and the importance of cooperating with enumerators.

Start Date: 04/27/00

Finish Date: 07/07/00

Census 2000 Plan Workflow - Key Operations March, 1999

Promotions

A variety of special events, such as parades, athletic events, and public service television documentaries, will be co-sponsored by state, local, and tribal governments and by community organizations and businesses.

Start Date: 10/01/99

Finish Date: 03/31/00

Census 2000 Operational Plan - Workflow and Schedule

U. S. Census Bureau

March 17, 1999

The Bureau had completed its planning process for taking a census using only traditional census-taking methods and released this plan in January 1999. Subsequent to this release, the Supreme Court ruled, in Department of Commerce v. United States House of Representatives, that Section 195 of Title 13, United States Code, prohibits the Census Bureau from using statistical sampling in the decennial census to determine the population for congressional apportionment purposes. Since that time, the Bureau has engaged in a detailed analysis of its operational requirements and schedule, and has now developed a plan that will meet its goals of 1) delivering apportionment counts derived without the use of expanded statistical techniques by December 31, 2000, and 2) delivering more accurate block-level redistricting data by March 30, 2001.

The attached documents describe the detailed plan for conducting the Census 2000 as currently designed to meet the goals stated above. The first is a workflow diagram and the second is a schedule of the major program components.

Workflow

The first document is a chart that depicts the workflow of the major program components. It provides the reader with a road map of how the programs interface with one another, and provides an easy reference as to the time frames in which these operations will be conducted. Missing from the workflow chart are details related to all the preparatory work that is required for every program component. It also does not show all dependencies among all components.

Schedule

The second document is an extract of the Census 2000 Master Activity Schedule, which indicates precisely when all the major program activities occur. In effect, it is the detail behind the workflow diagram. The Master Activity Schedule is organized into major program areas. Those program areas that contain activities occurring before Census Day are displayed first, followed by those program areas that occur later in the process. Within each major program area are the operational components. The program area and operational component descriptions are displayed as headings, i.e., shaded lines. The unshaded lines are the individual activities and have planned dates displayed.

Other information displayed on the schedule are the activity ID, which identifies the Master Activity Schedule line number, and two sets of dates - planned dates and actual dates. Actual dates will only be displayed for an activity if applicable.

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
01	<i>GENERAL PLANNING</i>				
01.06	Design (includes PR/IA)				
01-06C9020	CENSUS DAY		04/01/00		
03	<i>CONTENT</i>				
03.05	Questionnaire Content				
03.05.04	Question Wording-Short and Long Forms				
03-05C4260	DOC Submits Package to OMB for clearance	07/22/98	07/23/98	08/05/98	08/05/98
03-05C4270	OMB reviews and clears entire package	08/06/98	10/08/98	08/10/98	10/01/98
03.08	Data Review and Certification (includes PR)				
03-08C0070	Implement Data Review & Certif.. (CUF)	09/25/00	10/24/00		
03-08C0080	Implement Data Review & Certif.. (CEF)	10/25/00	12/07/00		
03-08C0100	Prepare & send apportionment results to DOC	12/19/00	12/28/00		
03-08C0110	Implement Data Review & Certification (CEF-S)	03/15/01	09/30/01		
04	<i>FORMS DESIGN, PRODUCTION, DISTRIBUTION</i>				
04.03	Forms Contracts				
04.03.01	Short Form				
04-03C0160	Award print contracts-SF	12/18/98	03/01/99	12/18/98	12/18/98
04.03.02	Long Form				
04-03C0250	Award print contracts-LF	12/30/98	03/01/99	12/30/98	12/30/98

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
04.03.03	Other Forms/PUFs (ICR, MCR, BC, etc.)				
04-03C0350	Award print contracts-other	12/29/98	06/28/99	12/29/98	
04.04	Forms Production				
04.04.01	Short and Long Form Packages				
04-04C0105	Print/add/asse/ship init M/O pckg. Matr. to USPS	10/14/99	03/11/00		
04-04C0106	Print/add/asse/ship U/L packg/matrs to FLD IDs	10/01/99	01/08/00		
04-04C0110	Print/add/asse/ship UU/L packg/matrs to FLD IDs	10/01/99	01/08/00		
04.04.02	Other Forms/PUFs (ICR, MCR, BC, etc.)				
04-04C0300	Print/asse/ship Census 2000 mater.-other	04/27/99	09/01/99		
04-04C0310	Print/add/asse/ship M/O adv. Letter to USPS	10/01/99	03/03/99		
04-04C0320	Print/add/asse/ship M/O reminder cards to USPS	10/01/99	03/17/00		
04-04C0340	Print/add/asse/ship U/L reminder cards to USPS ZIPS	11/01/99	03/21/00		
04.05	Forms Distribution				
04.05.01	Short and Long Form Packages				
04-05C0165	USPS delivers initial & late M/O package	03/13/00	03/15/00		
04-05C0175	USPS delivers late-late M/O pckg	03/29/00	03/31/00		
04.05.02	Other Forms/PUFs (ICR, MCR, BC, etc.)				
04-05C0160	USPS delivers M/O Adv. Letter	03/06/00	03/08/00		
04-05C0190	USPS delivers U/L reminder cards to USPS ZIPS	03/27/00	03/30/00		

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
04-05C0195	USPS delivers M/O reminder cards	03/20/00	03/22/00		
04-05C0310	Contractor ships forms/PUFs to NPC-other	05/21/99	09/01/99		
04.06	Puerto Rico Forms Design/Prod./Distribution				
04.06.03	Forms Production				
04.06.03.01	Short and Long Form Packages				
04-06C0490	Print/approve/QA U/L pckg mats-PR	08/16/99	11/05/99		
04-06C0500	Print/approve/QA unadd pckg mats-PR	08/16/99	11/05/99		
04.06.06.02	Other Forms/PUFs (ICR, MCR, BC, etc.)				
04-06C0670	Print/approve/QA-PR other				
04.06.04	Forms Distribution				
04.06.04.01	Short and Long Form Packages				
04-06C0740	USPS delivers U/L adv letter to ZIPS-PR	02/24/00	02/28/00		
04-06C0750	USPS delivers U/L reminder cards to ZIPS-PR	03/27/00	03/30/00		
04.07	Island Areas Forms Design/Prod./Distribution				
04.07.07	Long Form Distribution				
04-07C0730	USPS delivers IA LE pkg. Mat to ZIPS-IA	03/27/00	03/31/00		
04-07C0732	Contr. Ship adv. Notice letters to USPS-IA other	03/13/00	03/23/00		
04-07C0740	USPS delivers adv. not. Let to ZIPS - IA other	03/24/00	03/27/00		
04.07.08	Other Forms/PUFs Distrib. (ICR, MCR, BC, etc.)				

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
04-07C0735	Contr. assemble/ship PUFs/other mat. to NPC-IA	11/08/99	12/15/99		
05	<i>MARKETING, PARTNERSHIPS, STAKEHOLDER COMM</i>				
05.01	Paid Advertising (includes PR/IA)				
05.01.01	Paid Advertising Contract				
05-01C0190	Implement Motivational Phase of Campaign	03/11/00	04/05/00		
05-01C0195	Implement Educational Phase of Campaign	10/01/99	02/28/00		
05-01C0210	Implement NRFU Phase of Campaign	04/27/00	07/07/00		
05.06	Regional Partnerships (includes PR)				
05-06A0020	Begin implementing regional partnerships program	07/08/96		07/08/96	
05-06A0070	Train Wave 1 partnership specialists	10/15/96	11/01/96	10/15/96	11/01/96
05-06A0210	Train Wave 2 partnership specialists	02/17/98	03/31/98	02/17/98	03/31/98
05-06C0189	Train Wave 3 partnership specialists	06/15/98	08/14/98	06/15/98	08/14/98
05-06C0215	Train Wave 4 partnership specialists	11/16/98	01/03/00	11/16/98	
05-06C0220	Conduct debriefings for partnership supvs.	05/01/00	05/19/00		
05.07	Tribal Governments Liaison Program (TGLP)				
05-07A0161	Conduct TGL training (train the trainers)	07/06/99	07/09/99		
05-07A0180	Conduct TGL training	07/15/99	08/30/99		
05-07A0183	Conduct site visits/follow-up to training	07/01/99	07/27/99		

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
05-07A0210	Conduct evaluation for TGLP	11/22/00	01/03/01		
06	<i>MAF DEVELOPMENT</i>				
06.01	Initial MAF for City-Style Address Areas				
06.01.01	Build MAF				
06-01C0220	Implement initial load (match ACF/DSF) for US	12/03/96	09/01/98	12/03/96	08/08/98
06.03	MAF Improvement for City-Style Address Areas				
06.03.03	Targeted Map Updates				
06-03C3230	Conduct Targeted Map Update	02/20/98	12/09/99	02/20/98	
06.03.04	100% Block Canvass				
06-03C6170	Conduct FOS Admin Training - Wave 1	10/21/98	01/13/99	10/19/98	01/15/99
06-03C6270	Conduct FOS Operational Training - Wave 1	12/07/98	01/13/99	12/07/98	01/15/99
06-03C6280	Conduct Crew Leader Training - Wave 1	01/04/99	01/15/99	01/04/99	01/15/99
06-03C6290	Conduct Lister Training - Wave 1	01/13/99	01/20/99	01/13/99	01/21/99
06-03C6300	Conduct Block Canvassing - Wave 1	01/16/99	03/05/99	01/16/99	03/01/99
06-03C6310	Conduct Replacement Lister Training - Wave 1	01/20/99	02/26/99	01/19/99	02/24/99
06-03C6340	Update MAF - Wave 1	03/16/99	05/12/99		
06-03C6660	Conduct FOS Admin Training - Wave 2	11/17/98	02/26/99	11/17/98	02/26/99
06-03C6750	Conduct FOS Operational Training - Wave 2	01/11/99	02/26/99	01/11/99	02/26/99
06-03C6760	Conduct Crew Leader Training - Wave 2	02/08/99	02/26/99	02/08/99	02/26/99

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
06-03C6770	Conduct Lister Training - Wave 2	02/24/99	02/26/99	02/19/99	03/03/99
06-03C6780	Conduct Block Canvassing - Wave 2	03/01/99	04/09/99	02/16/99	
06-03C6790	Conduct Replacement Lister Training - Wave 2	03/03/99	04/09/99	03/03/99	
06-03C6802	Update MAF - Wave 2	04/14/99	06/18/99		
06-03C6870	Conduct FOS Admin Training - Wave 3	01/11/99	03/19/99	01/11/99	
06-03C6940	Conduct FOS Operational Training - Wave 3	02/22/99	03/24/99	02/22/99	
06-03C6950	Conduct Crew Leader Training - Wave 3	03/22/99	03/26/99	03/01/99	
06-03C6955	Conduct Lister Training - Wave 3	04/07/99	04/09/99		
06-03C6960	Conduct Block Canvassing - Wave 3	04/12/99	05/21/99		
06-03C6965	Conduct Replacement Lister Training - Wave 3	04/14/99	04/16/99		
06-03C6981	Update MAF - Wave 3	05/26/99	07/24/99		
06.03.05	Postal Validation Check				
06-03C2120	USPS conducts casing	01/18/00	02/07/00		
06.04	Create MAF for Non-City Style Address Areas				
06.04.01	Implement Address Listing (includes PR)				
06-04C1090	Conduct FOS Admin Training - Wave 1	04/20/98	04/22/98	04/20/98	05/22/98
06-04C1110	Conduct FOS Operational Training - Wave 1	06/23/98	07/01/98	06/23/98	07/01/98
06-04C1120	Conduct Crew Leader Training - Wave 1	07/06/98	08/07/98	07/06/98	07/31/98
06-04C1130	Conduct Address Lister Training - Wave 1	07/27/98	08/12/98	07/20/98	07/30/98

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
06-04C1140	Conduct Address Listing - Wave 1	07/30/98	09/30/98	07/20/98	09/30/98
06-04C1150	Conduct Replacement Training - Wave 1	08/03/98	09/18/98	08/03/98	09/11/98
06-04C1160	Conduct Dependent QA/sample block- Wave 1	08/06/98	09/28/98	07/27/98	09/28/98
06-04C1170	Conduct recanvass for Dependent QA fails - Wave 1	08/07/98	09/29/98	07/28/98	09/29/98
06-04C1180	Conduct Office review of completed work - Wave 1	08/10/98	10/02/98	07/28/98	10/02/98
06-04C1200	Conduct repair of office review fails - Wave 1	08/11/98	10/05/98	08/11/98	10/02/98
06-04C1240	AL- Add addresses to MAF - Wave 1	12/09/98	03/05/99	12/10/98	
06-04C2090	Conduct FOS Admin Training - Wave 2	06/22/98	09/09/98	06/22/98	09/09/98
06-04C2110	Conduct FOS Operational Training - Wave 2	08/25/98	09/18/98	08/25/98	08/27/98
06-04C2130	Conduct Address Lister Training - Wave 2	10/13/98	10/15/98	10/13/98	10/15/98
06-04C2140	Conduct Address Listing - Wave 2	10/08/98	12/30/98	10/08/98	12/30/98
06-04C2150	Conduct Replacement Training - Wave 2	10/14/98	12/09/98	10/14/98	12/09/98
06-04C2160	Conduct Dependent QA/sample block- Wave 2	10/15/98	12/30/98	10/15/98	12/30/98
06-04C2170	Conduct recanvass for Dependent QA fails - Wave 2	10/16/98	12/30/98	10/16/98	12/30/98
06-04C2180	Conduct Office review of completed work - Wave 2	10/19/98	12/30/98	10/19/98	12/30/98
06-04C2200	Conduct repair of office review fails - Wave 2	10/19/98	12/30/98	10/19/98	12/30/98
06-04C2240	AL- Add addresses to MAF - Wave 2	02/10/99	03/19/99	02/09/99	
06-04C3020	Conduct FOS Admin Training - Wave 3	07/27/98	09/11/98	07/27/98	09/11/98
06-04C3110	Conduct FOS Operational Training - Wave 3	09/29/98	10/16/98	09/29/98	10/16/98

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
06-04C3120	Conduct Crew Leader Training - Wave 3	10/14/98	10/30/98	10/14/98	10/30/98
06-04C3130	Conduct Address Lister Training - Wave 3	11/02/98	11/04/98	11/02/98	11/04/98
06-04C3140	Conduct Address Listing - Wave 3	11/05/98	02/03/99	11/05/98	02/03/99
06-04C3150	Conduct Dependent QA/sample block- Wave 3	11/16/98	02/05/99	11/16/98	02/05/99
06-04C3160	Conduct Replacement Training - Wave 3	11/16/98	01/08/99	11/16/98	01/08/99
06-04C3180	Conduct recanvass for Dependent QA fails - Wave 3	11/17/98	02/05/99	11/17/98	02/05/99
06-04C3190	Conduct Office review of completed work - Wave 3	11/18/98	02/05/99	11/18/98	02/05/99
06-04C3200	Conduct repair of office review fails - Wave 3	11/18/98	02/05/99	11/18/98	02/05/99
06-04C3240	AL- Add addresses to MAF - Wave 3	02/22/99	03/08/99	02/24/99	
06-04C4120	Conduct Add. Listing for converted B/C W1 areas	02/22/99	05/21/99	03/04/99	
06-04C4270	Conduct Add. Listing for converted AAs - B/C W2	03/24/99	05/21/99		
06-04C4420	Conduct Add. Listing for converted AAs - B/C W3	05/03/99	05/21/99		
06.05	TIGER/MAF/DMAF Linkages/Transactions (incl. PR)				
06-05C0480	Deliver Census 2000 MAF for DMAF creation	07/01/99	07/31/99		
06-05C0530	Provide final MAF extract	06/22/00	07/21/00		
06.06	Address List Review Program (ALR) (includes PR)				
06.06.01	Design Address List Review Programs				
06-06C1010	Prep/publish appeals process standards	10/01/97	06/04/99	10/01/97	
06.06.03	1998 Address List Review Program				

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
06-06C3110	Local governments conduct review	05/20/98	04/19/99	05/11/98	
06-06C3350	Conduct field verification training - Wave 1	05/27/99	07/02/99		
06-06C3355	Conduct field verification of disputed addresses - W1	05/29/99	07/27/99		
06-06C3450	Conduct field verification training - Wave 2	06/28/99	08/06/99		
06-06C3455	Conduct field verification of disputed addresses - W2	06/30/99	09/04/99		
06-06C3550	Conduct field verification training - Wave 3	08/09/99	09/08/99		
06-06C3555	Conduct field verification of disputed addresses - W3	08/11/99	10/02/99		
06.06.04	1999 Address List Review Program (includes PR)				
06-06C4070	Local governments conduct review - W1	01/22/99	04/15/99	01/22/99	
06-06C4210	Conduct recanvassing training - Wave 1	03/25/99	04/23/99		
06-06C4220	Conduct recanvassing - Wave 1	03/27/99	05/28/99		
06-06C4350	Local governments conduct review - W2	02/12/99	04/22/99	02/10/99	
06-06C4490	Conduct recanvassing training - Wave 2	04/19/99	05/14/99		
06-06C4500	Conduct recanvassing - Wave 2	04/21/99	06/04/99		
06-06C4630	Local governments conduct review - W3	03/08/99	05/05/99		
06-06C4770	Conduct recanvassing training - Wave 3	05/06/99	06/04/99		
06-06C4780	Conduct recanvassing - Wave 3	05/10/99	06/19/99		
06.07	Special Place/Group Quarters Inventory (incl. PR)				
06-07C1050	CATI facility conducts FQ updates	11/02/98	11/30/99	11/02/98	

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
06-97C1540	Conduct FQPV operation - Wave 1	04/19/99	08/31/99		
06-97C1550	Conduct FQPV operation - Wave 2	05/24/99	08/31/99		
06-97C1560	Conduct FQPV operation - Wave 3	06/22/99	08/31/99		
06-97C1570	Conduct FQPV operation - Wave 4	07/21/99	11/30/99		
06-97C1580	Conduct FQPV operation - Wave 5	08/24/99	11/30/99		
06-97C1610	Conduct FQPV operation - Wave 6	10/26/99	11/30/99		
06-97C1900	Conduct Local Knowledge Update	02/01/00	03/17/00		
06.08	Quality Improvement Program (QIP)				
06.08.03	QIP Listing				
06-08C3110	Begin train QIP listers - all waves	03/25/98		03/25/98	
06-08C3150	Conduct QIP independent listing - Wave 1	04/06/98	05/15/98	04/06/98	05/15/98
06-08C3160	Conduct QIP independent listing - Wave 2	05/04/98	06/12/98	05/04/98	06/12/98
06-08C3170	Conduct QIP independent listing - Wave 3	06/01/98	06/26/98	06/01/98	06/26/98
06-08C3180	Conduct QA, office and field checks - Wave 1	04/15/98	05/20/98	04/15/98	05/20/98
06-08C3190	Conduct QA, office and field checks - Wave 2	05/13/98	06/18/98	05/13/98	06/18/98
06-08C3200	Conduct QA, office and field checks - Wave 3	06/10/98	07/22/98	06/10/98	07/13/98
06.08.04	Data Capture				
06-08C4010	Conduct integrated system test	04/28/98	04/29/98	04/24/98	04/27/98
06.08.05	Computer Matching				

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
06-08C5060	Conduct computer match, output nonmatches - Wave 1	06/30/98	07/15/98	07/01/98	07/16/98
06-08C5070	Conduct computer match, output nonmatches - Wave 2	07/16/98	07/30/98	07/23/98	07/28/98
06-08C5080	Conduct computer match, output nonmatches - Wave 3	08/18/98	08/24/98	07/28/98	08/04/98
06.08.06	HU Followup/Clerical Matching				
06-08C6050	Conduct HU Before FU clerical match - Wave 1	08/05/98	08/26/98	08/05/98	08/28/98
06-08C6060	Conduct HU Before FU clerical match - Waves 2/3	08/19/98	02/24/99	08/12/98	12/21/98
06-08C6080	Conduct Field FU on nonmatches - wave 1	08/04/98	09/18/98	08/04/98	09/28/98
06-08C6090	Conduct Field FU on nonmatches - waves 2/3	08/25/98	02/05/99	08/25/98	02/05/99
06-08C6110	Conduct HU After FU clerical match - wave 1	08/13/98	10/02/98	08/19/98	09/30/98
06-08C6120	Conduct HU After FU clerical match - waves 2/3	09/08/98	02/19/99	09/01/98	02/19/99
08	<i>DATA COLLECTION</i>				
08.01	Decennial Field Interface (DFI)				
08.01.05	Automation Training & Support				
08-01C3132	Conduct DFI Automation Help Desk	10/05/99		11/02/98	
08.03	PAMS/ADAMS				
08-03A0230	Prepare for and Conduct Team Training	04/29/96	05/03/96	04/29/96	05/03/96
08-03A0290	Prepare and Conduct Team Training	06/10/96	06/21/96	06/10/96	06/21/96
08.04	Decennial Applicant Name Check (DANC)				
08-04A0110	Conduct Systems Tests	11/18/96	01/15/97	11/18/96	01/15/97

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
08.05	Automation Infrastructure- Temporary Offices				
08-05C1100	Conduct ACE ASAP process	03/02/98	04/05/99	03/02/98	
08.06	Recruiting and Selection Procedures				
08.06.01	Recruiting Strategy for Census 2000				
08-06C0060	Recruit for LCO operations	10/16/99	08/08/00		
08.07	Space Acquisition, Supplies & Logistics				
08.07.01	Space Acquisition				
08-07A0060	Open Regional Census Centers	10/01/97	04/07/98	11/10/97	03/30/98
08-07C0080	Open Census 2000 Local Census Offices	07/01/99	10/29/99		
08-07C0090	Open Census 2000 Early Opening LCOs	10/01/98	12/09/98	10/01/98	12/09/98
08-07C0100	Close Census 2000 LCOs/Early Opening LCOs		11/30/00		
08.09	Update/Leave				
08-09C0210	Conduct Update/Leave	03/03/00	03/03/00		
08.10	Be Counted/Questionnaire Assistance Centers				
08-10C0230	Conduct Be Counted Drop Off/Pickup	03/31/00	04/11/00		
08-10C0240	Conduct QAC Operations	03/08/00	04/27/00		
08.11	List/Enumerate				
08-11C0210	LE - Train Enumerators	03/06/00	03/10/00		
08-11C0220	Conduct List/Enumerate, QA, and Merge	03/13/00	05/01/00		

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
08-11C0250	LE - Conduct Field Followup	05/02/00	05/31/00		
08.12	Field Address Verification				
08-12C0030	Conduct field address verification	07/06/00	07/26/00		
08.13	Nonresponse Followup				
08-13C0210	NRFU - Train Enumerators	04/24/00	04/29/00		
08-13C0230	Conduct Nonresponse Followup & QA	04/27/00	07/07/00		
08.15	Coverage Edit Followup				
08-15C3080	Conduct CEFU CATI Systems Test	11/16/99	12/03/99		
08-15C3085	Conduct CEFU CATI Systems Integration Test	12/15/99	12/21/99		
08-15C3100	Conduct CEFU CATI Final Systems Integration Test	01/18/00	01/21/00		
08-15C3130	Train CEFU Interviewers	03/20/00	03/22/00		
08-15C3210	Conduct Coverage Edit CATI Follow-up	04/05/00	06/19/00		
08.16	Telephone Questionnaire Assistance (TQA)				
08-16C0630	Conduct TQA/CATI Systems Tests	11/18/99	12/01/99		
08-16C0652	Conduct Telecom Systems Tests	12/13/99	12/23/99		
08-16C0660	Conduct Systems Integration Tests	01/03/00	01/07/00		
08-16C0690	Conduct Final Systems Integration Test	01/24/00	01/28/00		
08-16C0700	Train TQA/rev CATI Staff	02/23/00	02/25/00		
08-16C0711	Conduct Telephone Quest. Assist.	03/03/00	07/07/00		

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
08.17	CATI Data Collection				
08-17C0011	Conduct Telephone Interviews (reverse CATI)	03/03/00	06/08/00		
08.18	Internet Quest. Assistance & Data Collection				
08-18C0080	Conduct IQA & IDC	03/03/00	04/10/00		
08.20	Congressional Enumeration (Census 2000 Only)				
08-20C0150	Geocode Addresses and conduct MAF Matching/Flag	05/06/99	05/27/99		
08-20C0160	Conduct Field Address Verification & Update MAF	06/01/99	06/29/99		
08-20C0190	Conduct Personal Interviews as Necessary	03/06/00	04/21/00		
08.21	Overseas Enumeration (Census 2000 Only)				
08-21C0020	Conduct Overseas Enumeration	02/11/00	07/10/00		
08.23	Group Quarters Enumeration				
08-23C0150	GQE - Train Staff to Conduct SP Advance Visits	12/30/99	01/06/00		
08-23C0155	GQE - Conduct SP Advance Visits	01/25/00	03/03/00		
08-23C0210	GQE - Train Enumerators (incl. T-Night)	03/30/00	03/31/00		
08-23C0230	Conduct GQ/Special Place Enumeration	04/01/00	05/06/00		
08-23C0233	Conduct IA SBE	03/30/00	04/01/00		
08-23C0710	Conduct T-Night Enumeration	03/31/00	03/31/00		
08.24	Service-Based Enumeration				
08-24C0210	SBE - Train Enumerators	03/27/00	03/29/00		

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
08-24C0230	Conduct SBE Enumeration	03/27/00	03/29/00		
08.25	Military/Maritime Enumeration				
08-25C0260	MAR - Conduct Maritime Enumeration	04/01/00	05/30/00		
08.26	Island Areas Data Collection				
08-26C0214	Train Island Areas L/E staff	03/06/00	03/30/00		
08-26C0216	Conduct Island Areas L/E	03/31/00	05/06/00		
08-26C0228	Train staff/conduct adv. Visits - IA GQ enum.	03/06/00	03/10/00		
08-26C0229	Conduct IA GQ enumeration	03/11/00	03/31/00		
08-26C0232	Train staff - IA service based enumeration	03/23/00	03/29/00		
08-26C0236	Train personnel/conduct IA military enumeration	04/03/00	05/03/00		
08-26C0240	Conduct office review of Island Areas forms	04/05/00	05/16/00		
08-26C0242	Conduct Island Areas telephone and FFU	04/05/00	05/19/00		
08-26C0245	Conduct Island Areas search/match and merge	05/23/00	06/06/00		
08-26C0246	Conduct Island Areas block splits	06/07/00	06/27/00		
08.27	Remote Alaska Data Collection				
08-27A0070	AK - Conduct FOS Training for Test	01/02/98	01/07/98	01/09/98	01/12/98
08-27A0080	AK - Conduct Team Leader Training for Test	02/26/98	02/28/98	02/26/98	02/28/98
08-27A0150	AK - Conduct Enumerator Training for Test	02/26/98	02/28/98	02/26/98	02/28/98
08-27A0160	AK - Conduct Remote enumeration for Test	03/02/98	03/27/98	03/02/98	03/11/98

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
08-27C0120	AK - Conduct FOS Training	12/01/99	12/05/99		
08-27C0130	AK - Conduct Wave 1 team leader training	01/24/00	01/28/00		
08-27C0140	AK - Conduct Wave 2 team leader training	02/14/00	02/18/00		
08-27C0145	AK - Conduct Wave 3 team leader training	03/06/00	03/10/00		
08-27C0150	AK - Conduct Wave 1 enumerator OJT training	01/31/00	04/14/00		
08-27C0155	AK - Conduct Wave 2 enumerator OJT training	02/22/00	04/14/00		
08-27C0160	AK - Conduct Wave 3 enumerator OJT training	03/13/00	04/14/00		
08-27C0210	AK - Conduct Wave 1 Remote Enumeration	01/31/00	04/21/00		
08-27C0215	AK - Conduct Wave 2 Remote Enumeration	02/22/00	04/21/00		
08-27C0220	AK - Conduct Wave 3 Remote Enumeration	03/13/00	04/21/00		
08.28	Rural Update/Enumerate				
08-28C0190	Rural U/E - Train Enumerators	03/13/00	03/17/00		
08-28C0200	Conduct Rural Update/Enumerate	03/20/00	05/30/00		
08.29	Urban Update/Leave				
08-29C0220	UU/L - Train Enumerators	02/28/00	03/02/00		
08-29C0230	Conduct Urban Update/Leave	03/03/00	03/30/00		
08.30	Coverage Improvement Followup				
08-30C0210	CIFU - Train Enumerators	07/24/00	07/26/00		
08-30C0230	Conduct Coverage Improvement Followup & QA	07/27/00	08/15/00		

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
09	<i>ACCURACY & COVERAGE EVALUATION (ACE) OPERATIONS</i>				
09.02	ACE Listing				
09.02.03	Computer Processing				
09-02C0330	Conduct relisting keying	03/27/00	05/30/00		
09.02.05	Field Procedures and Listing				
09-02C0560	Conduct listing	09/07/99	12/08/99		
09-02C0565	Conduct relisting	03/08/00	04/28/00		
09.02.07	QA Procedures and Training				
09-02C0710	Conduct relisting operation QA	03/11/00	05/05/00		
09-02C0740	Conduct ACE sample cluster reduction	12/29/99	01/12/00		
09.03	Housing Unit Matching				
09.03.02	Processing Procedures and Training				
09-03C0270	Conduct HU BFU clerical match	02/07/00	03/10/00		
09.03.03	Computer Processing				
09-03C0340	Conduct HU computer match	01/31/00	02/28/00		
09.04	Housing Unit Followup				
09.04.05	Field Procedures and Training				
09-04C0560	Conduct HU Followup	02/22/00	04/04/00		

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
09.05	Housing Unit After Follow-up Matching				
09.05.02	Processing Procedures and Training				
09-05C0220	Conduct AFU HU match	03/06/00	04/18/00		
09.06	ACE CAPI Interviewing				
09.06.03	Computer Processing				
09-06C0450	Create and subsample enhanced list	03/22/00	05/05/00		
09.06.05	Field Procedures and Training				
09-06C0521	Conduct ACE CAPI telephoning	05/08/00	06/13/00		
09-06C0525	Conduct ACE person interviewing	06/19/00	08/18/00		
09-06C0526	Conduct ACE Target Extended Search Interview	06/19/00	09/01/00		
09-06C0528	Conduct nonresponse conversion	07/27/00	09/01/00		
09-06C0569	Conduct PAPI mover tracing/interviewing	06/28/00	08/24/00		
09-06C0572	Conduct PAPI mover keying	07/24/00	09/02/00		
09-06C0525	Conduct CATI mover tracing/interviewing	06/21/00	09/01/00		
09.06.08	QA Procedures and Training				
09-06C0840	Conduct ACE QA interviewing (telephone & PV)	05/11/00	09/01/00		
09.07	CAPI Data Review				
09.07.03	Computer & Clerical Processing				
09-07C0310	Conduct CAPI data review (CDR)	07/05/00	09/15/00		

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
09.08	Person Matching				
09.08.02	Processing Procedures and Training				
09-08C0270	Conduct person BFU clerical match	10/13/00	11/06/00		
09.08.03	Computer Processing				
09-08C0330	Conduct person computer match	10/02/00	10/24/00		
09.09	Person Follow-up Interview				
09.09.05	Field Procedures and Training				
09-09C0550	Conduct person followup interview	10/23/00	11/21/00		
09.09.09	QA Procedures and Training				
09-09C0800	Conduct person followup interview QA	10/27/00	11/21/00		
09.10	Person After Follow-up Coding				
09.10.02	Processing Procedures and Training				
09-10C0220	Conduct person AFU matching	11/06/00	11/30/00		
10	DATA CAPTURE				
10.01	Data Capture System (DCS2000)				
10.01.01	Ready Requisition				
10-01A0010	Prepare/Conduct Vendor Conference #1	02/17/95	04/24/95	02/17/95	04/24/95
10-01A0050	Prepare/Conduct Vendor Conference #2	09/29/95	12/04/95	09/29/95	12/04/95
10.01.02	Contract Leadtime				

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
10-01A0100	Conduct Oral Presentations & Discussions	11/12/96	12/06/96	11/12/96	12/06/96
10-01A0110	Conduct Additional Demonstrations & Discussions	01/16/97	01/23/97	01/16/97	01/23/97
10-01A0150	Conduct Source Selection (SEB & SSO)	03/10/97	03/14/97	03/10/97	03/14/97
10-01A0440	Conduct Cost/Tech Tradeoffs	03/10/97	03/14/97	03/10/97	03/14/97
10.02	Data Capture Services Contract (DCSC)				
10-02C0360	Conduct Evaluations	09/22/97	01/22/98	09/22/97	01/15/98
10.02.02	Baltimore DCC (#1)				
10-02C0690	Baltimore DCC opens	04/01/99	04/01/99		
10-02C0999	Close Baltimore DCC	12/31/00	12/31/00		
10.02.03	NPC DCC (#2)				
10-02C1030	NPC DCC Opens	06/01/99	06/01/99		
10-02C1290	NPC - Conduct Island Areas Data Capture	09/16/00	11/30/00		
10-02C1480	Close NPC-DCC	12/31/00	12/31/00		
10.02.04	Pomona DCC (#3)				
10-02C4030	Pomona DCC Opens	07/15/99	07/15/99		
10-02C4490	Close Pomona DCC	12/31/00	12/31/00		
10.02.05	Phoenix DCC (#4)				
10-02C5030	Phoenix DCC Opens	09/01/99	09/01/99		
10-02C5490	Close Phoenix DDC	12/31/00	12/31/00		

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
10.02.06	Data Capture Summary				
10-02C0870	Conduct U/L & UU/L Data Capture	03/07/00	05/27/00		
10-02C0880	Conduct Mailout Form Data Capture	03/17/00	05/27/00		
10-02C1350	Conduct UAA Check-in/Capture	03/20/00	05/27/00		
10-02C1355	Conduct TQA Data Capture	03/28/00	05/27/00		
10-02C1360	Conduct BC Data Capture	04/05/00	05/27/00		
10-02C1370	Conduct Late-Late Form Data Capture	04/03/00	05/20/00		
10-02C1380	Conduct L/E & R-U/E Data Capture	04/11/00	07/29/00		
10-02C1390	Conduct Remote AK Forms Data Capture	04/10/00	07/01/00		
10-02C1410	Conduct GQ Data Capture	04/27/00	06/17/00		
10-02C1420	Conduct NRFU Data Capture	05/05/00	07/29/00		
10-02C1430	Conduct CIFU Data Capture	08/04/00	08/24/00		
11	<i>HQ DATA PROCESSING</i>				
11.01	HQ Precensus Data Processing				
11.01.01	DMAF Processing				
11.01.01.03	DMAF Extracts and Deliverables				
11-01C3303	Create/Provide M/O Address Files for Vendor	08/27/99	10/13/99		
11-01C3363	Create/Provide address file (late) for Vendor	12/27/99	02/04/00		
11.02	HQ Census Data Processing				

Activity ID	Activity Description	Planned Start	Planned Finish	Actual Start	Actual Finish
11.02.04	HQ Followup Controls				
11-02C7303	Implement NRFU Universe Determination	04/11/00	04/16/00		
11.03	HQ Postresponse Data Processing				
11.03.01	Census Unedited File (CUF) Processing				
11-03C0303	Implement Primary Selection Algorithm Processing	08/17/00	09/18/00		
11-03C0603	Create Census Unedited File (CUF)	09/11/00	10/03/00		
11.03.02	Census Edited File (CEF) Processing				
11-03C1703	Implement 100% Edit & Imputation Programs	09/22/00	11/14/00		
11.03.03	HEDF/SEDF Processing				
11.03.03.02	ACE Estimation Processing				
11-03C4133	Create ACE coverage factors	01/08/01	02/10/01		
11.03.06	Variance Processing				
11-03C8383	Conduct DSE poststrata variances	01/10/01	02/13/01		
11.04	HQ ACE Data Processing				
11.04.01	ACE Sample Processing				
11-04C1403	Implement Block Sampling	04/12/99	07/09/99		
11.05	Census Coding Operations				
11.05.01	General Coding Systems Processing				
11-05C1703	Conduct Expert 100% General Coding	05/15/00	12/18/00		

June 11, 1999

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 15

MEMORANDUM FOR: Distribution List

FROM: Susan M. Miskura (Signed)
Chief, Decennial Management Division

Subject: Decision Not to Conduct a Local Update of Census Addresses
Program in List/Enumerate Areas

Contact Person: Kathleen Halterman, DMD, 1422-2, 301-457-8230

The purpose of this memorandum is to document the decision not to conduct a Local Update of Census Addresses (LUCA) program in areas of states where the List/Enumerate (L/E) methodology is used to conduct the Census 2000.

Justification for Decision

The decision not to conduct a LUCA in L/E areas was based on the rationale that the LUCA program was designed as a precensus activity, in compliance with P.L. 103-430. The Census Bureau developed the LUCA program to improve the quality and accuracy of the address list before Census Day, so that addresses and map corrections identified by participants can be included in the census process. To do so requires participant review and OMB Appeal decisions by January 14, 2000.

Due to the design of enumeration and address list development in areas where the Census Bureau will use the L/E methodology, we will not have a completed address list and updated maps until several months after Census Day. As a result, we do not have an address list for local and tribal governments to review during the time period in which we are conducting the LUCA program in other areas of the country.

We estimate that the L/E area workload will involve approximately 365,000 housing units within 281,529 census blocks within 1,215 entities in part or all of 186 counties in 19 states.

Background

The Census Bureau established the LUCA program to comply with the provisions of the Census Address List Improvement Act of 1994 (Public Law 103-430). P.L. 103-430 requires that the

Census Bureau allow local and tribal governments to review its precensus address list, so that they can help improve the completeness and accuracy of the address list used to conduct Census 2000. The Census Bureau responds to each recommendation made by a program participant concerning the accuracy of address information, including the determination of the Bureau regarding whether each new recommendation will be included in the address list. P.L. 103-430 provides for an Appeal Process whereby local and tribal governments can appeal the Bureau's determination. Appeals must be resolved by January 14, 2000.

The L/E methodology is conducted in areas of very low density that often are difficult to access, and that have predominately non-city style addresses used for mail delivery. L/E is an operation in which enumerators visit housing units within a specified assignment area and list the address and/or physical location descriptions for each housing unit; map spot the location of each housing unit on the block map; and conduct an interview for each household using a Simplified Enumerator Questionnaire. A four part quality assurance (QA) program will be conducted to ensure the accuracy and completeness of the L/E operation. The QA program will consist of the following operations: reinterview; questionnaire review; dependent listing check; and office review of the Address Registers and Block Maps. A field follow-up operation also is planned. During this operation, enumerators will follow-up any missing cases identified during Merge, resampled addresses from assignment areas that have failed the Sample Tolerance Check, and Vacants.

The questionnaires will be sent to the Data Capture Centers on a flow basis. Address Registers and maps will be sent to the National Processing Center (NPC), where the maps will be scanned and the map spots digitized. The Address Register information will be keyed after the L/E field follow-up operation has been completed. The L/E operation is scheduled to be conducted from March 2000 through May 2000. Data capture of the address information and maps is planned for June 2000 through August 2000.

June 21, 1999

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 18

MEMORANDUM FOR Distribution List

From: Susan Miskura (Signed)
Chief, Decennial Management Division

Subject: Process Used to Select Languages
for Census 2000 Language Assistance Guides

Contact Person: Jane Ingold, Content and Products Branch, Decennial Management
Division, Room 1422, Bldg.2, (301-457-4646)

This memorandum outlines the process used to select the languages available in the form of Census 2000 Language Assistance Guides. Since the goal of the Census 2000 Language Program is to provide census information and assistance in languages other than English, the availability of multiple language translations to aide respondents completing their Census 2000 questionnaire helps create a Census 2000 climate that promotes goodwill and cooperation between the Census Bureau, our census partners, and respondents.

Historical Background

The 1990 Census offered Language Assistance Guides in the following 32 languages.

Arabic, Armenian, Cambodian, Chinese, Creole, Croatian, Czech, Farsi, French, German, Greek, Hindi, Hungarian, Italian, Japanese, Korean, Lao, Latvian, Lithuanian, Polish, Portuguese, Romanian, Russian, Samoan, Serbo-Croatian, Slovak, Slovene, Tagalog, Thai, Ukranian, Vietnamese, and Yiddish.

A 1990 Language Guide in Spanish was not produced since both the 1990 Census (short and long) forms were printed for distribution in Spanish.

The 1990 guides were black and white textual translations of the 1990 Census long form questionnaire and ranged in length from 16 (Yiddish) to 48 (Lao) printed pages. Some of these textual translations were manually scripted documents (not typeset) transferred directly to print negatives. The Census Bureau printed 300,000 copies of each language guide providing for a total distribution of approximately 9,600,000.

Language Selection Resources

The Census Bureau utilized multiple resources to determine which languages would be appropriate for Census 2000.

- ! The General Accounting Office and Office of the Inspector General commented on the Census Bureaus need to revise the 1990 list of languages to reach linguistically isolated households in Census 2000.
- ! The Census Bureau contracted with Advanced Resource Technologies, Inc. (ARTI) to conduct a Benefit/Cost analysis of the use of languages in Census 2000. ARTI issued the completed analysis report to the Census Bureau in January 1998.
- ! The Census Bureau conducted a “Design Review” and identified issues associated with the Language Program in January 1998.
- ! A Census in-house working group was formed under the direction of Brad Huther, Deputy Director and Chief Operating Officer to research and compile a business case analysis on the Census 2000 Language Program. The results of this business case analysis were released in memorandum to Robert Shapiro, Under Secretary for Economic Affairs at the Department of Commerce on August 12, 1998.
- ! The Census 2000 Dress Rehearsal identified major operational hurdles in the printing, assembly, and processing of Language Program components by September 1998.
- ! The Decennial Management Division established an inter-divisional Census 2000 Language Working Group in November 1998. The working group members were responsible for contributing input from the following divisions.
 - Administrative and Customer Services Division (ACSD)
 - Census 2000 Publicity Office (C2PO)
 - Decennial Systems and Contracts Management Office (DSCMO)
 - Decennial Management Division (DMD)
 - Field Division (FLD)
 - Population Division (POP)
- ! The Race and Ethnicity Advisory Committees (REAC) received a list of proposed Census 2000 languages accompanied by a request for comments and additional languages at the November 1998 meeting.
- ! The Field Division contacted the Census Regional Offices with a request for comments on the proposed Census 2000 languages in November/ December 1998.

Final Language Selection Process

Beginning in January 1999, the Language Working Group assembled the available background

materials, documentation, reports, analysis, and feed-back from all the previously mentioned resources and established criteria for the languages to be offered to linguistically isolated households as Census 2000 Language Assistance Guides. The group also used as selection criteria input compiled from the Census Bureau FLD Partnership Program, the 1990 Census Special Tabulation Data on Linguistically Isolated Households, the Immigration and Naturalization Services statistics currently available over the Internet, the Census Bureau

Public Information Office News Releases and comments, the Census Population Division Targeted Planning Database, a Memorandum request from the Office of Refugee Resettlement at the Department of Health and Human Services, and U.S. Congressional recommendations and prospective legislation.

The Census Bureau awarded a contract for the translation, certified translation validation, typesetting, graphic design layout, and final print media for the Census 2000 Language Assistance Guides and the Language Identification Flashcard on March 19, 1999. Comprehensive Language Center, Inc. located in the Washington D.C. Metropolitan Area

is the contractor responsible for providing all translations and final deliverables. The Census Bureau Statement of Work, Procurement Contract, and Additional Contract Modifications provide for the following Census 2000 deliverables.

- ! Visual Aides: Language Assistance Guides are visual aides to assist respondents completing the Census 2000 mailout/mailback questionnaires.
- ! Layout: There are two separate language guide layouts for Census 2000.
- ! Short Form Layout: a two page/two color guide corresponding to the official Census 2000 short form questionnaire.
- ! Long Form Layout: a twelve page/two color guide corresponding to the official Census 2000 long form questionnaire.
- ! Languages: Census 2000 Language Assistance Guides will be translated and printed in the following 37 languages.

Arabic	Armenian	Bengali	Cambodian	Chamorro
Chinese	Creole	Croatian	Czech	Dutch
Farsi	French	German	Greek	Hindi
Hmong	Hungarian	Ilocano	Italian	Japanese
Korean	Laotian	Polish	Portuguese	Romanian
Russian	Samoan	Serbian	Slovak	Spanish
Tagalog	Thai	Tongan	Ukrainian	Urdu
Vietnamese	Yiddish			

- ! Flashcard: All Census Bureau enumerator kits will contain a Census 2000 Language Identification Flashcard. The card will help respondents identify which one of the above 37 languages are spoken in a household.
- ! Additional Languages: Census 2000 Language Assistance Guides also will be translated and printed in the following additional languages for requested targeted distribution.

Albanian	Amharic	Burmese	Dari	Dinka
Hebrew	Kurdish	Roma	Somali	Swahili
Tibetan	Tigrean			

- ! Print Quantities: The Census Bureau will print a combined total of over 17 million Census 2000 Language Assistance Guides and nearly 2 million Language Identification Flashcards.

The deadline for additional languages to be included in the Language Assistance Guide translation to print process and the national Census 2000 kit preparation has passed.

However, the Census Bureau will continue to respond to emerging requests by furnishing an English version of the Census 2000 Language Assistance Guide for individual translation and printing/copying by partners, community groups, religious organizations, and others for localized or targeted distribution.

September 15, 1999

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 22

MEMORANDUM FOR Distribution List

FROM: Susan M. Miskura
 Chief, Decennial Management Division

Subject: Coverage Edit Followup (CEFU) Cases Not Contacted Via Telephone

Contact Person: Fay F. Nash, Decennial Management Division, (301) 457-8039

The Coverage Edit Followup (CEFU) program involves contacting mostly mail-return households that may be likely to have one or more persons omitted. Cases identified for this followup are telephoned from centralized facilities using a Computer-Assisted Telephone Interview (CATI) methodology. The household roster is reviewed with the respondent and additional questions are asked to identify persons erroneously omitted from the questionnaire. Any additional persons identified as household members are then added to the household, and census data about those persons are obtained. The CEFU program will also collect data for persons in large households that were not accommodated by the 6-person mail-return questionnaire. We do not plan to follow up CEFU cases that could not be contacted by telephone, nor will we impute any "missed" persons for these households.

The Census Bureau explored the possibility of conducting a personal visit followup to those cases that the CATI facilities are unable to contact in order to realize the maximum coverage improvement from the CEFU program. Given the CEFU workload is estimated to be 4.5 million¹ households with a completion rate of 80 percent, approximately 900,000 households would be eligible for such a field followup.

Unfortunately, we cannot estimate the expected coverage improvement from the CEFU since we have not tested the effectiveness of the probe questions in a census environment. In the 1990 Census, when we revisited a large number of housing units during the Vacant/Delete/Movers Check, we added roughly one person for every seven housing units. That program was designed to identify and add whole households that were initially missed. We expect considerably fewer gains from the CEFU since it is designed to identify only partial household misses; that is, individuals erroneously omitted from households that responded to the census.

¹ Subsequent to the analysis performed for this proposal, the CEFU universe workload was reduced. The information stated herein reflects the original estimates.

Substantial effort would be required to implement a field followup of CEFU CATI recycles. In order to maximize the potential within household coverage gains, it is necessary that the basic CEFU approach be replicated. That is, enumerators must conduct dependent interviews with respondents to verify the household roster, and then ask the additional CEFU probe questions to identify omitted persons. To accommodate the dependent interview methodology, software would need to be developed to extract and transmit roster data to the field, and to print the information onto paper questionnaires. In addition, a new form would have to be developed to accommodate the roster verification questions and the additional probes. This is a significantly complicated process requiring form design, usability testing, form clearance and printing activities. Field implementation then requires instructions and training for enumerators, supervisory staff and office staff. And finally, software would need to be developed to process completed forms.

Besides the headquarters resources that would have to be expended to implement a personal visit followup, there are other drawbacks to this proposal. If we were to implement a personal visit followup for CEFU, it would occur during the same time frame as the Coverage Improvement Followup program. Because there are different procedures and forms required by the two programs, we would conduct these followup activities as distinct programs. Thus field offices would have to manage two programs concurrently, maintaining separate assignment preparation processes, enumerator training sessions, and office control systems. The cost of implementing a personal visit followup is also significant. The field work alone is estimated to cost approximately \$29 million.

Given the small benefit to be derived by conducting a field followup of CEFU CATI recycles, the negative impact on our limited headquarters resources, and the steep costs, we will continue our current plan and not adopt this option.

September 20, 1999

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 23

MEMORANDUM FOR Michael J. Longini
Chief, Decennial Systems and Contracts Management Office

From: Susan M. Miskura (Signed)
Chief, Decennial Management Division

Subject: Requirements for Providing Images of the Census Questionnaires for
the Census 2000 Accuracy and Coverage Evaluation (A.C.E.)

Contact Person: Maria Urrutia, DMD, Room 1422-2, (301) 457-4244
Genny Burns, DMD, Room 1422-2, (301) 457-8222

This memorandum documents the requirements for images of the Census 2000 questionnaires that are in the Accuracy and Coverage Evaluation (A.C.E.) sample.

The image retrieval workload of A.C.E. cases for 2000 requires images for approximately 915,000 housing units. This universe consists of census IDs that are within the A.C.E. clusters retained in sample after the cluster reduction operation, but before the large block subsampling is performed. The 915,000 forms for A.C.E. are just one part of the 3.5 million forms for which Lockheed Martin (LM) will provide images to the Census Bureau. Specifications for identifying the remainder of the images for the DSSD QA operations, PRED evaluations, possibly CPS/Census Match, and all other needs will be forthcoming in a separate memorandum. However, the input files to LM will be combined to contain the IDs for the entire 3.5 million forms and the output files created by LM will contain the images for all of the forms.

By October 1, 1999, DSCMO needs all of the image requirements identified, including the sources and needs for images. By December 1, 1999, DSSD will provide DSCMO with the location on the MAF/DMAF that DSCMO should access to obtain the A.C.E. IDs after sample reduction.

I. Requirements for Images

A. Input to Lockheed Martin from DSCMO

On January 21, 2000, the A.C.E. sample reduction is scheduled to be approved. Images for A.C.E. are required for all Census housing units in the sample reduction areas. On February 1, 2000, DSCMO will provide LM with an electronic copy of the input file containing the list of cases sorted by the 14-digit MAF/DMAF census ID within each DCC (Baltimore, Jeffersonville, Phoenix, and Pomona), along with the input file layout and the specifics of the transfer of the input and output file processes. LM

will provide one copy of the software to each DCC for identifying, selecting, retrieving, and for creating CD ROMs for the appropriate images to be incorporated into each DCCs DCS 2000 system.

B. Output from Lockheed Martin

LM is responsible for preparing the CD ROMs at each DCC. The CD ROMs will contain 1) an Oracle database file, and 2) all referenced images. These CD ROMs will contain intermediate and T13 data.

The database containing the field file table will be structured as below.

1. Field name
2. Census ID (22 character)
3. Date
4. Batch and image name (name of batch and image in which the field is present)
5. Image size
6. OCR data - field data captured after OCR
7. OMR data - field data captured after OMR
8. CTX data - field data captured after context
9. Keying data - field data captured after keying
10. T13 data - final field data
11. Mode of capture (PRODN/TRAIN)
12. Cluster (1018)
13. Site

LM will prepare approximately 9 CD ROMs per day per site. Each disk will contain an Oracle database and approximately 500 MB of image files. Three copies of the CD ROMs will be prepared for distribution as follows:

1. One copy for DSCMO in Suitland
2. One copy for A.C.E. personnel at N.P.C. in Jeffersonville
3. One DCC file copy.

LM will provide all necessary information on the format of the CD ROMs. The long form is 40 images, i.e. one image per page and needs to be defined. The census records that LM will provide will contain the 22-digit ID and the 15th digit will identify the type of form, i.e. long or short form. Volume will be labeled internally and externally. Each CD ROM will have an external interface control document describing the contents of the CD ROM. LM will provide a tracking control system for the CD

ROMs with daily and cumulative reports of CD ROMs produced by site.

LM will provide all necessary documentation on the variables and formats of both the Oracle database and the CD ROMs by September 20, 1999.

II. Testing

In order to conduct integrated testing of subsequent operations, DSSD will provide Lockheed with Census forms from the Dress Rehearsal. These will be Census 2000 forms with data transcribed from the Dress Rehearsal forms in selected A.C.E. areas. The purpose of the integrated testing is to be able to retrieve an image from a specific return. It is understood that the contents of the Oracle databases pertaining to these images may be different from the T13 data provided during the Dress Rehearsal.

These forms will need to be scanned, imaged, and processed as in real-time. CD ROMs should be provided to DSSD as in real-time to allow for testing and training.

III. Timing

Relevant activities with dates for imaging and matching processes are as follow:

1. DSSD will provide DSCMO with all A.C.E. requirements - October 1, 1999
2. DSSD will provide DSCMO with MAF/DMAF locations - December 1, 1999
3. DSCMO will complete the A.C.E. sample reduction - January 21, 2000
4. DSCMO will provide LM with the input files - February 1, 2000
5. LM begins data capture - March 6, 2000
6. LM begin delivery of the first imaging CD ROMs - March 7, 2000
7. Census Data Capture - end date of - August 24, 2000
8. Delivery of last imaging CD ROM - August 26, 2000
9. A.C.E. before follow-up person matching: - 10/13/00-11/06/00

September 17, 1999

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 24

MEMORANDUM FOR Susan M. Miskura
Chief, Decennial Management Division

Robert W. Marx
Chief, Geography Division

Michael J. Longini
Chief, Decennial Systems and Contracts Management Office

From: Howard Hogan (Signed)
Chief, Decennial Statistical Studies Division

Subject: Requirements for Measures of Size to Assign Long Form Sampling Rates

Contact Person: Philip M. Gbur, DSSD, Rm. 2402A-2, (301) 457-4206

I. INTRODUCTION

Long form sampling rates, which will be used in selecting which addresses will receive a long form questionnaire, are assigned based on long form sampling entity or census tract measures of size. The components of the measures of size were selected with the objective of providing the best measures to ensure the long form sample design will support reliable estimates.

This memorandum provides a general description of the measures of size that will be used in determining the long form sampling rates and their components. This is not intended as a specification, but rather to document our plans for general information. A separate memorandum will provide the detailed specifications. The following sections provide: 1) an overview of the long form sampling methodology; 2) a description of the address counts used in the measures of size; and 3) a description of the specific measures of size that will be used.

II. OVERVIEW OF SAMPLING METHODOLOGY

Approximately 17 percent of the population will be designated to receive a long form as part of Census 2000. The data received from the long form sample is used to estimate various

demographic and socioeconomic characteristics for the U.S. population and for lower levels of geography.

The list of addresses that will receive the long form questionnaire will generally be chosen by taking a systematic, variable rate sample of addresses. Sampling rates will be applied to each census block. Determination of the sampling rate for a block is based on the measure of size for the long form sampling entity (LFSE) or census tract that the block is in. The target sampling rates that will be used are 1-in-2, 1-in-4, 1-in-6, and 1-in-8.

The sampling strata and their initial cutoff points are:

- C 1-in-2 for LFSEs < 800 addresses;
- C 1-in-4 for LFSEs between 800 and 1,200 addresses; and if not 1-in-2 or 1-in-4; then
- C 1-in-6 for census tracts < 2,000 addresses; and
- C 1-in-8 for census tracts \geq 2,000 addresses.

During review of the sampling results for an initial set of states, we will evaluate the appropriateness of the above cutoffs. This review may result in a revision of the cutoffs to ensure the desired overall sampling rate.

For blocks that fall into more than one sampling stratum, we will apply the higher sampling rate.

The following are treated as LFSEs for sampling purposes: states, counties, cities, school districts, incorporated places, Minor Civil Divisions (selected states only), American Indian Reservations (AIRs), Tribal Jurisdiction Statistical Areas (TJSAs), Alaska Native Village Statistical Areas (ANVSAs), and census designated places (Hawaii only). Trust Lands will follow the designation of their associated reservation.

Census tracts are the interim census tracts defined for Census 2000 data collection purposes.

For operational convenience, neighboring blocks may be combined to create Assignment Areas in Update/Leave, Update/Enumerate, and List/Enumerate areas. In Assignment Areas that have blocks with different sampling rates, adds obtained through the field updating will be sampled at the higher rate. Due to operational constraints, List/Enumerate Assignment Areas initially assigned 1-in-6 or 1-in-8 sampling rates will be sampled at a 1-in-6 rate while those initially assigned 1-in-2 or 1-in-4 rates will be sampled at a 1-in-2 rate.

III. ADDRESS COUNT

The basis for all measures of size is an address count. For most areas, this will be based on a count of the addresses in the July 1999 Master Address File (MAF) extract. For areas that do not

have current counts available, 1990 housing unit counts will be used. These include the List/Enumerate and Remote Alaska types of enumeration areas.

It is believed that counts from the MAF extract based on the Decennial MAF deliverability criteria should be the most reliable measure available at the time of long form sampling. (See DSSD Census 2000 Procedures and Operations Memorandum Series #D-1, "Specification of the Decennial Master Address File Deliverability Criteria for Census 2000.") Some Update/Leave and Update/Enumerate Assignment Areas will be withheld from the initial MAF extract because of late Local Update of Census Addresses processing. This will reduce the count for some LFSEs and census tracts and may result in an increase in the long form sampling rate for these areas. However, since the effect is to increase the sampling rate (if there is any effect) and since it is expected that this will affect a small number of entities, this is not considered a serious problem. Note that the withheld areas will be provided in subsequent MAF extract deliveries and the addresses will be sampled based on the initially determined sampling rate.

The MAF extract counts will directly support the long form sampling since the sampling is based on collection blocks and the MAF extract counts will be obtainable by collection block. The 1990 counts for the List/Enumerate and Remote Alaska areas are available at the tabulation block level and the count will be allocated to collection blocks based on the methodology documented in the Accuracy and Coverage Evaluation universe file creation specifications. (See DSSD Census 2000 Procedures and Operations Memorandum Series #R-5, "Accuracy and Coverage Evaluation (ACE) Survey: Universe File and Block Cluster Sampling Parameter File Specification.")

To determine the count for a LFSE, the counts for the component collection blocks will be summed together. However, the LFSE boundaries may split some collection blocks. In these situations, we will use one half the count of the block in the LFSE count. Although a block may be split among more than two entities, this occurrence is expected to be rare. Thus, this approach is being used to simplify implementation since any impact from this approach is expected to be minimal. Hence, if a block has an address count of 24 and is partially in a LFSE, then the block will contribute 12 addresses to the LFSE count. This methodology will result in some counts being slight overestimates and some being slight underestimates, but there should be no overall bias in any one direction.

IV. MEASURES OF SIZE

Although address counts are a good starting basis for measures of size they cannot be used directly for a couple reasons. Since the primary interest for long form estimation is the reliability of person level estimates, we would ideally like to use population counts as our measure of size. However, unlike address counts, updated population counts are not available. Therefore, we use the address counts as a proxy for the population count. A risk associated with this approach is that if an area has a high vacancy rate, it may be assigned a lower sampling rate than it would were the size based on the

population size. To compensate for this, we will apply the proportion of 1990 occupied housing units to the MAF extract counts in determining the measure of size for an area.

One goal of the long form sample design is to support reliable Native American estimates for selected Native American areas (AIRs, TJSAs, and ANVSAs). However, many Native American areas have a population consisting of non-Native Americans as well as Native Americans so that even an occupied housing unit count may not be truly reflective of the Native American population. Thus, for the AIRs, TJSAs and ANVSAs, we will apply the proportion of 1990 Native American population to the estimated occupied housing unit count. In this way the design will support reliable estimates for the Native American population.

As described above, we will use two 1990 based proportions: 1) the 1990 proportion of housing units which are occupied (based on the 1990 occupied and total housing unit counts), and 2) the 1990 proportion of population which is Native American (based on the 1990 Native American and total population counts). The counts upon which these proportions are based will be assigned to blocks using the methodology documented in the Accuracy and Coverage Evaluation universe file creation specifications. (See DSSD Census 2000 Procedures and Operations Memorandum Series #R-5, "Accuracy and Coverage Evaluation (ACE) Survey: Universe File and Block Cluster Sampling Parameter File Specification.").

Based on the above discussion, the following are the measures of size that will be used by type of area.

1. Census Tracts and LFSEs in Mailout/Mailback, Update/Leave, or Update/Enumerate Areas (except American Indian Reservations/Tribal Jurisdiction Statistical Areas/Alaska Native Village Statistical Areas):
 - 1990 Proportion Occupied Housing Units X MAF Extract Address Count
2. Census Tracts and LFSEs in List/Enumerate Areas (except American Indian Reservations/Tribal Jurisdiction Statistical Areas/Alaska Native Village Statistical Areas):
 - 1990 Occupied Housing Unit Count
3. American Indian Reservations/Tribal Jurisdiction Statistical Areas/Alaska Native Village Statistical Areas in Mailout/Mailback, Update/Leave, or Update/Enumerate Areas
 - 1990 Proportion Native American X 1990 Proportion Occupied Housing Units X MAF Extract Address Count
4. American Indian Reservations/Tribal Jurisdiction Statistical Areas/Alaska Native Village Statistical Areas in List/Enumerate Areas
 - 1990 Proportion Native American X 1990 Occupied Housing Unit Count

October 26, 1999

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 29

MEMORANDUM FOR Distribution List

From: Susan M. Miskura (Signed)
 Chief, Decennial Management Division

Subject: Census 2000 Mailing and Questionnaire Delivery
 Strategy and Dates

Contact Person: Jane H. Ingold
 Chief, Content and Data Products Branch
 Room 1422, FOB 2, (301) 457-4646

This memorandum documents the volumes for the components of the questionnaire delivery strategy for the Census 2000, including the questionnaire mailout dates, and supersedes Census 2000 Decision Memorandum No. 76: "Census 2000 Mailing and Questionnaire Delivery Strategy and Dates", (March 2, 1999), with respect to volumes. The volumes in this memorandum are based on the address file as delivered to the questionnaire vendors for the *initial* contracts for approximately 120,000,000 addressed packages. The USPS considers the MO/MB and U/L volume estimates as *initial* target volumes for delivery and an *initial* base for the respondents' business return reply to the Census 2000 data capture centers, with the exceptions as noted in the text of this memorandum.

The dates that were agreed upon for the United States Postal Service (USPS) delivery and the scope of the mailout/mailback (MO/MB) letter, questionnaire, and reminder card are as follows:

Mail Piece	Begin - End	Scope
Deliver MO/MB Advance Letter	03/06/00 - 03/08/00	USPS Deliverable Addresses
Deliver MO/MB Questionnaire	03/13/00 - 03/15/00	USPS Deliverable Addresses
Deliver MO/MB Reminder Card	03/20/00 - 03/22/00	USPS Deliverable Addresses

In addition, we have provided an assessment of volume to the USPS. The volume of advance letters, questionnaires and reminder cards for the MO/MB delivery strategy is 97,914,996 pieces for each mailing. The MO/MB questionnaire total volume includes 83,117,928 short forms and

14,797,068 long forms.

The dates for the USPS delivery of the Update/Leave (U/L) advance letters and reminder cards, enumerator distribution of the U/L questionnaire, and the scope of these activities are as follows:

Mail Piece	Begin - End	Scope
Deliver U/L Advance Letter	03/01/00 - 03/03/00	USPS Deliverable Addresses
Distribute U/L Questionnaire	03/03/00 - 03/30/00	N/A
Deliver U/L Reminder Card	03/27/00 - 03/30/00	Whole ZIP code-Postal Patron

The volume for the USPS delivery of the stateside U/L advance letters is 17,870,000 pieces for the mailing. The total stateside volume of 21,453,860 enumerator-distributed (e.g., U/L) questionnaires, includes 15,906,695 short forms and 5,547,165 long forms. The count on the U/L reminder card is not yet available.

cc: Standard
Statistical Design Team Leaders
Long Form Sample Design and Estimation Team Distribution List
M. Hudson (DSSD)
R. Feldpausch "

October 28, 1999

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 30

MEMORANDUM FOR Distribution List

From: Susan Miskura
 Chief, Decennial Management Division

Subject: Conducting the Local Update of Census Addresses of Special Places
 (LUCA SP) Program

Contact Person: Kathleen Halterman, DMD, Room 1422-2, 301-457-8230

This memorandum documents the plan for conducting the Local Update of Census Addresses of Special Places (LUCA SP) Program. The LUCA program is an integral part of the preparatory activities for Census 2000. The Census Bureau established the LUCA program to comply with the provisions of the Census Address List Improvement Act of 1994 (Public Law 103-430). P.L. 103-430 requires the Census Bureau to allow local and tribal governments to review its precensus address list. LUCA 1998 and 1999 program participants were told that the Census Bureau would conduct a LUCA SP subsequent to these programs, to give participants an opportunity to review the Census Bureau's SP list to improve its accuracy and completeness. The purpose of the LUCA SP program is to identify each SP, its physical location, mailing address, and other related information and assign each SP to the 2000 collection block in which it is located.

The LUCA SP will be conducted in conjunction with the Special Place Local Knowledge Update (LKU) Operation scheduled to be conducted from January 2000 through February 2000. The Census Bureau will invite those governmental units that have returned a signed Confidentiality Agreement form to the Census Bureau in either the LUCA 1998 or 1999 programs, to participate in the LUCA SP program, regardless of whether they actually participated in these programs. Program participants will be provided with a SP Address List and census maps. Participants will be given up to four weeks to review the listings and return the listings/maps to the regional census centers (RCCs) with their changes. The RCCs will review the map updates and, if approved, the updates will be digitized and entered into TIGER. The RCCs will forward the annotated listings and SP add pages to special place staff in the corresponding Local Census Office (LCO). The LCO staff will review the submissions using procedures adapted from the LKU operation. Valid SP adds will undergo a Facility Questionnaire interview. Once a Facility Questionnaire interview has been completed for a SP add, it is still considered a provisional add and will be incorporated into the SP advance visit workload in preparation for enumeration.

SPECIAL PLACE LUCA PLAN

The objective for the LUCA Special Place (SP) program is to involve local and tribal government partners with helping the Census Bureau identify each special place, its physical location, mailing address, and other related information, and to assign each SP to the 2000 collection block in which it is located. LUCA 1998 and 1999 participants had been told that we would conduct a review of special places at a later date.

Due to constraints of the Facility Questionnaire Operation and staff/resource operation conflicts, the following methodology/schedule for conducting the LUCA SP has been agreed to. The most feasible method of accomplishing our goal will be to combine LUCA SP with the Special Place Local Knowledge Update (LKU) Operation, that is, the Local Census Office (LCO) staff will verify the special place adds, deletes, and changes submitted by the local and tribal governments. LKU is the first special place operation conducted in the LCOs and is scheduled from 01/27/00 through 02/17/00.

In LKU, special place staff will review the SP/GQ Master List to determine whether all known special places within the LCO boundaries are included on the list. Through the LKU Operation, special places and group quarters will be added, deleted, or corrections made to the records containing the corresponding data.

LUCA Special Place Program Requirements

- The program will only be offered to those governmental units that have returned a signed Confidentiality Agreement form to the Census Bureau in the LUCA 1998 or 1999 Programs.
- Program participants must follow the procedures per the LUCA SP Participant Guide, to be prepared by GEO/ALRB, when conducting a review of their special places.
- Program participants will be provided with a SP Address List produced by GEO (derived from DSCMO's SP/GQ Master List) and census maps from the regional census centers (RCCs):

N Special Place Address Lists:

R It was decided that we would only ask participants to review our list of special places. Group quarters will be excluded from this review, because the list of GQs will not be completely defined when we extract the records for the LUCA SP listings from the SP/GQ Master List and GQs are

enumeration entities used by the Census Bureau only. Group quarters are not necessarily a facility with a recognizable name or attribute to anyone outside the Census Bureau. Group quarters are generally an enumeration concept defined by the Census Bureau.

- R The SP Address List is a combination of both house number street name addresses and non-house number street name addresses.
- R The SP Address List will be “sanitized” by DSCMO according to specifications provided by the POP and FLD, so that special places considered sensitive (e.g., Domestic Abuse Shelters) are deleted from the file prior to delivery to GEO.

N Census Maps:

- R LUCA SP participants who returned their LUCA ‘98 or ‘99 materials on time, will receive Detailed Feedback Maps which they will be instructed to use for the LUCA SP program.
- R LUCA SP participants who did not return either LUCA ‘98 or ‘99 materials, will be issued a new set of maps.

- LUCA SP participants will have four weeks to review their list of special places.
- The LUCA SP program will not require an appeals process. All updates to special places submitted by participants to the Census Bureau will be included in the Special Place/Group Quarters (GQ) census process. The SP/GQ census process includes the Facility Questionnaire operation, Advance Visit operation, then enumeration. Since we are accepting all special places supplied by participants, there is no need for an appeals process.

Methodology for Conducting a LUCA SP

- **September 1999**

The GEO will design/prepare an invitation letter and Participation Guide. The invitation letter will invite local and tribal governments to participate in the program and provide potential participants with the purpose of the special place review. A Participation/Registration Form also will be included in this package. If government officials would like to participate in the LUCA SP program, they will be given two weeks from the receipt of the invitation letter, to

sign and return the Participation/Registration Form to the RCCs. The Participation Program Guide defines the procedures to be used by the participants to conduct their review of the special places.

- **October 1999**

The invitation letter, Participation/Registration Form, and Participation Guide will be formatted for the DocuPrinter via ACSD. The NPC will mail the invitation letter, Participation/Registration Form, and Participation Guide to the local and tribal governments.

- **November 1999**

The SP/GQ file will receive updates from the Facility Questionnaire Operation through November. On November 22, the file will be “frozen” and DSCMO will deliver the file to GEO for the Master Address File update file (MAFUF). Once GEO has received the SP file they will geocode the special places, assign entity codes to each record, and unduplicate the file. The GEO will separate the file into partitions in order to send each governmental unit the special places within their area of jurisdiction. The GEO also will load the production control system with this information for tracking purposes. The RCCs will begin plotting the LUCA SP maps for those participants that require them.

- **December 1999**

The NPC will print, package, and ship the LUCA SP listings to participants. The RCCs will plot and ship the LUCA SP maps to those participants that need them. The participants will be given up to four weeks to review the listings and return the listings/maps to the RCCs with their changes.

- **January 2000**

Participants will continue to return their changes to the SP listings/maps to the RCCs. The RCCs will review map updates and if approved, the updates will be digitized and entered into TIGER. The RCCs will forward the annotated listings and SP add pages to special place staff in the corresponding Local Census Office (LCO) and will track the special place operations through the OCS2000. The special place staff in the LCOs will review the submissions using procedures adapted from the LKU operation. Valid SP adds will undergo a Facility Questionnaire interview, which also will allow the interviewer to geocode the SP (i.e., assign it to a block).

- **February 2000**

The RCCs will continue to review and digitize map updates. The LCOs will continue to review the SP listings. Once a Facility Questionnaire interview has been completed for a SP add, it is still considered a provisional add and will be incorporated into the SP advance visit workload in preparation for enumeration.

The details have not been confirmed, but it is expected that TMO will send weekly updates of the SP/GQ OCS2000 file to DSCMO through enumeration. It is expected that DSCMO will send a single file, in the form of a Decennial Master Address File (DMAF), to GEO in the fall of 2000 to be used to update the Master Address File (MAF).

Currently, TMO is researching possible methods of tracking the SP adds that result from the LUCA SP program to differentiate them from those adds resulting from the LKU program in order to determine the effectiveness of conducting a LUCA SP.

Unlike the LUCA 1998 and 1999 programs, the LUCA SP program will not require an appeals process. Since the Census Bureau will accept, and include in the census process, all SPs provided by participants in the LUCA SP program, there is no need for an appeals process.

The attached document [splcaplan.wpd] contains a more detailed description of the LUCA Special Place Plan.

Attachment

February 22, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 42

MEMORANDUM FOR: Distribution List

From: Susan Miskura (Signed)
Chief, Decennial Management Division

Subject: Guidelines for Disseminating Telephone Questionnaire Assistance
(TQA) Toll-Free Telephone Numbers

Contact Persons: Agnes Kee or Gemma Furno, Field Infrastructure Branch,
Decennial Management Division, Room 1422, (301-457-4223)

General Description

Telephone Questionnaire Assistance (TQA) is a service provided by telephone centers contracted by the Census Bureau to answer questions about Census 2000 or the census questionnaire. People can call six toll-free telephone numbers (in English, Spanish, Chinese, Korean, Vietnamese, and Tagalog) to obtain assistance with filling out their questionnaires, obtain replacement questionnaires, obtain language assistance guides, or provide their census questionnaire information.

Interactive voice recognition (a menu-driven recording) offers a first level of assistance and a live census operator offers a second level of assistance. The National Processing Center's telephone center offers Telephone Device for the Deaf.

Capacity

The telephone centers will support approximately 11 million calls starting March 3, 2000, and continuing through June 8, 2000. We do not believe we can handle a call volume beyond this projected level.

Targeted Audience

We aimed the TQA program at people who may have difficulty or a lack of interest in completing their census forms, particularly linguistically isolated groups and persons in hard-to-enumerate areas. We focused our promotion for the TQA numbers with approaches that allow us to reach these intended population groups or areas without overexposure to the general population. Specifically, we are limiting the national release of the TQA numbers to the questionnaires, reminder post cards, and Be Counted display boxes. We are not publishing the TQA numbers on official Census Bureau advertising, posters, fact sheets, and the like. We are particularly concerned that the national advertising campaign might generate numerous calls from nontargeted groups and from persons not really in need of assistance.

We will consider additional methods of releasing the TQA numbers if the proposed method is in keeping with our objectives.

Guidelines

You may disseminate the TQA numbers to partners, community groups, and others if you determine that their plan is appropriate. Please realize that we can not completely control how these groups use the TQA numbers, but we can emphasize our objectives. If you disseminate the TQA numbers to a partner or other group, please discuss these guidelines to help our partners and other groups understand the appropriate use of the TQA numbers.

- Stress that additional promotion or distribution of the TQA numbers must focus on the targeted audiences. Please see the examples in the next section.
- Encourage them to publicize the locations of Questionnaire Assistance Centers instead of the TQA numbers. People can receive the same services at the Questionnaire Assistance Centers.
- Explain the capacity limitations, and point out that if many people call who do not really need assistance, the people who most need help may get busy signals.
- Ask them not to disseminate the TQA numbers prior to March 3, 2000. We want to have the numbers activated and the questionnaires delivered before people start calling.
- Ask them not to disseminate the TQA numbers to other groups. Instead, they should refer such requests to their Local Census Office or Regional Census Center.

If you turn down a request for the TQA numbers, encourage the group to publicize our Questionnaire Assistance Centers. Let them know that the advance letter provides information on requesting a form in a specific language. Also, inform them that the TQA numbers will be available on our questionnaires, reminder post cards, and Be Counted display boxes.

Examples of Appropriate Uses of the TQA Numbers

- A radio station or newspaper aimed at a non-English speaking audience
- An employee newsletter for a company where most employees do not speak English
- A church or temple bulletin board in a linguistically isolated or hard-to-enumerate area
- Poster or flyers distributed at a public housing project
- A flyer in braille

Examples of Inappropriate Uses of the TQA Numbers

- Any television station, regardless of the language spoken by its target audience
- A broad-based media such as a major newspaper or major radio station
- Posters in a bus station serving a broad area
- Any nationwide group

April 27, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 52

MEMORANDUM FOR Distribution List

From: Susan M. Miskura (Signed)
 Chief, Decennial Management Division

Subject: Discontinue the Check-in and Processing in the National Processing
 Center (NPC) Data Capture Center (DCC) of all Be Counted
 Questionnaires Received after April 30, 2000

Contact Persons: William Norfolk, Processing Systems Branch, Decennial Management
 Division, Rm. 1422-2, (301) 457-4776, Andrea Brinson, (301) 457-
 8233

This memorandum documents the requirement for discontinuing the check-in and processing of the Be Counted questionnaires in the NPC DCC received after April 30, 2000.

Background

The Be Counted census questionnaires were available in the Questionnaire Assistance Centers and other distribution centers from March 31, 2000 to April 11, 2000. This 12-day time period provided adequate time for the respondents who did not receive a census form to pick-up a Be Counted questionnaire. The time period between April 1 and April 30 allows adequate time for the respondent to complete and mail the questionnaire to the NPC DCC.

The Be Counted questionnaires do not have a Census Identification Number and must be checked in through Exception Check- in at the NPC DCC where a processing identification number is assigned, and the address is keyed. A file with addresses from the Be Counted questionnaires is sent by Headquarters data processing to the Geography Division for geocoding, and for assignment of a permanent Master Address File (MAF) Identification Number, before the housing unit can be checked into the Decennial Master Address File (DMAF). This process must be completed before June 26, 2000. The permanent MAF Identification Number must be assigned for all Be Counted questionnaires in time to update the DMAF to support Field Verification and Invalid Return Detection (IRD).

Requirement

To meet the data capture, geocoding, and processing deadlines for support of Field Verification and IRD, we must discontinue the check-in and processing of the Be Counted questionnaires received after April 30, 2000. The questionnaires should be held in storage until 15 days after receipt and then may be shredded in the approved method for disposing of the mail back questionnaires. The Be Counted forms included are: D-10-English, D-10(C) Chinese, D-10(K) Korean, D-10(T) Tagalog, D-10(2) Spanish, D-10 Vietnamese, D-10 Puerto Rico, and D-10(S) Puerto Rico Spanish.

cc: Distribution List

June 7, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 52 - REVISION 1

MEMORANDUM FOR Distribution List

From: Susan M. Miskura (Signed)
 Chief, Decennial Management Division

Subject: Resume Processing in the National Processing Center (NPC) Data
 Capture Center (DCC) of all Be Counted Questionnaires Received
 after April 30, 2000

Contact Persons: William Norfolk, Processing Systems Branch, Decennial Management
 Division, Rm. 1422-2, (301) 457-4776, Andrea Brinson, (301) 457-
 8233

This memorandum documents the requirement for resuming the processing of the Be Counted questionnaires in the NPC DCC received after April 30, 2000. The original Informational Memorandum No.52 required that the Be Counted questionnaires received after April 30, 2000 not be processed through the NPC DCC, and that they be shredded. This memorandum rescinds those instructions.

Background

The Be Counted census questionnaires were available in the Questionnaire Assistance Centers and other distribution centers from March 31, 2000 to April 11, 2000. It was expected that the number of returned Be Counted questionnaires would be approximately 3,000,000, and an April 30, 2000 date to end data capture of the forms was required so that all of the questionnaires could be geocoded prior to HQ Processing to update the DMAF to support Field Verification.

However, the total Be Counted questionnaires received by the NPC (DCC) as of May 22, 2000 has been 605,276. Based on the low number of returned questionnaires, and a later date for beginning the Field Verification operation because of an extended period for the CIFU operation, it has been determined that all of the Be Counted forms can be completed through data capture and geocoding in time to meet the processing deadlines for support of Field Verification if data capture is extended until June 8, 2000.

Requirement

To capture as many Be Counted questionnaires as possible, continue to data capture the Be Counted questionnaires through June 8, 2000. The Be Counted forms included are: D-10-English, D-10(C) Chinese, D-10(K) Korean, D-10(T) Tagalog, D-10(S) Spanish, D-10(V) Vietnamese, D-10 PR Puerto Rico, and D-10 PR (S) Puerto Rico Spanish.

cc: Distribution List

June 22, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 63

MEMORANDUM FOR Distribution List

From: Susan M. Miskura (Signed)
 Chief, Decennial Management Division

Subject: Coverage Improvement Follow-up Development Quality Assurance
 Plan

Contact Person: Barbara S. Tinari
 Chief, Field Data Collection Branch, Decennial Management Division,
 Room 1422-2, 301-457-8324

I. Introduction

This memorandum documents the various components and requirements for the software and other product quality assurance plan for the coverage improvement follow-up (CIFU) operation. Its purpose is to outline the various steps either taken or planned to ensure the accuracy and completeness of the products required for the local census offices (LCOs) to conduct the CIFU operation in an as expeditious and thorough a manner as possible. As such, it is designed, through the application of some standard software and product quality assurance procedures and practices, to ensure both quality and usability of end products used by the LCOs. The quality assurance procedures described in this memorandum are divided in the following stages, specifications and requirements development, software development, pre-production, and post-production evaluation. They are intended to cover both CIFU software development as well as other critical components needed to ensure the successful completion of this operation in the LCOs.

We have undertaken a complete reexamination of the product quality assurance procedures that were in place for the nonresponse follow-up (NRFU) and CIFU operations and have made several enhancements. While the short time between NRFU and CIFU precludes the application of all our enhancements, we believe that the methods described in this plan are superior to the quality assurance procedures employed during the initial production for the NRFU operation. As such, these methods provide an adequate level of assurance to preclude the types of problems identified with LCO products for the NRFU operation. Attachment 1 summarizes how this plan differs from both the plan implemented for NRFU as well as from the plan that we would use given more time. Attachment 2 provides details of the plan, including time schedules and divisional responsibilities for its execution.

II. Specifications and Requirements Development

The specifications and where indicated, programming requirements needed to conduct a successful CIFU have been identified by an inter-divisional team directed by the Decennial Management Division (DMD) and assigned to the appropriate operating divisions for production. These specifications and programming requirements are identified in the CIFU Program Master Plan. To ensure the completeness and accuracy of the specifications and programming requirements, the DMD chaired, during the week of May 15th, a formal walk through of all specifications required to support various components of software and other products needed for the CIFU. The outcome of the formal walk through was a total reexamination and in some cases modification of the specifications, resulting in a comprehensive and accurate set of all specifications needed for the CIFU universe identification, LCO files for producing assignment registers and controls, and field quality assurance procedures. We also plan to conduct a formal, independent review of the programming requirements used to identify the CIFU universe and to produce assignment and control files for the LCOs.

III. Software Development

During software development, production divisions will follow standard, acceptable practices to ensure quality of outcomes. These will include such practices as peer code review/double programming and extensive internal product reviews.

IV. Preproduction

The actual software production for CIFU LCO products is the responsibility of the Decennial Systems and Contract Management Office (DSCMO), the Geography Division (GEO), and the Technologies Management Office (TMO). The DMD will establish a team to conduct formal preproduction testing of the critical components of the CIFU LCO products. These critical components will include all headquarters universe identification and products, such as listing sheets, questionnaire address labels, control listing, etc., needed for the control and conduct of the CIFU operation in the LCOs. Preproduction testing will in effect require end to end testing, encompassing each stage of the process needed to produce the LCO product. To ensure an adequate number of variables of interest and their possible values are handled correctly by the software at each stage, the Decennial Statistical Studies Division (DSSD) will examine preproduction extracts of the MAF and DMAF for the state of Vermont to identify geographic assignment areas where the values of the variables of interest are present. For the identified assignment areas, we will conduct the following test protocols:

- DSSD will produce paper copies of the MAF and DMAF variables of interest.
- Using the Technologies Management Office software, the BETA site will print LCO

assignment register listing and questionnaire address labels for the selected assignment areas.

- An inter-divisional team will conduct a formal review of the assignment register listing and questionnaire address labels (output) against the MAF and DMAF extract listings (input).
- We will provide copies of the assignment registers listings to the staff geographers in the Boston RCC. These staff will compare a sample of the assignment register listings with actual ground features.
- We will affix address labels to questionnaires and test address, geographic, and barcode data using barcode readers in the Bowie facility.

The DSSD also will run an independent CIFU universe selection from the DMAF extract for Vermont and compare their results with the results produced by DSCMO.

We will formally document all test and review results and not authorize production until any identified deficiencies have been corrected.

V. Post Production Evaluation

After the preproduction results have been certified, the DSSD will conduct, for evaluation purposes, an independent validation of CIFU universe identification for a sample of 28 production LCOs. The sample of LCOs will be the same as those selected for the NRFU post-production evaluation.

Attachments

Attachment 1

Summary CIFU SQA Comparision with Standard/NRFU

Standard SQA Component	Used for NRFU	Completed/Planned for CIFU
Formal specifications walk through	No	Yes
Internal S/W quality review	Yes	Yes
Peer code review	Yes	Yes
Test deck validation of code	No	No*
External review of output	Yes	Yes
External review of output against input files	No	Yes
End user review	No	Yes
Independent (external) code validation	No	Yes
Post production statistical sample evaluation	Yes	Yes

* Although time does not permit the use of a formal test deck for CIFU LCO products, we will be working to include this component in the future software development QA procedures.

Attachment 2

COVERAGE IMPROVEMENT FOLLOW-UP TEST PLAN
(Working Draft - June, 2000)

1. Team Members

TMO	J. Dawson
DMD	E. Gore, B. Tinari, M. Sanders E. Pike, B. Norfolk
DSSD	J. Clark, J. Treat, D. Moul D. Whitford, J. Reichert, R. Piegari
DSCMO	D. Stoudt, D. Dwyer, C. Kahn G. Doyle, W. McKay, M. Cook, B. Eng
GEO	D. Galdi
FLD	G. Leithauser, D. VanLangen

2. CIFU test to begin May 24, 2000 - June 15, 2000

3. Test Geography: Vermont (Vermont is a one LCO state in Boston RCC)
Blocks for subsequent AA delineation in Vermont for which we will create test FLD materials will be determined by DSSD.

4. Availability of CIFU eligible addresses for Vermont:

CIFU Universe of Eligible Addresses	Test Geography - Vermont
U/L and UU/L adds from nonresponding households	No UU/L
Late adds from 2/00 DSF and adds from 4/00 DSF	Yes for both
New construction	Yes - 7 participating jurisdictions
HU adds from the LUCA 98 and 99 appeals which were not included in the NRFU universe	No added addresses from LUCA 98 or 99 appeals
Blank mail return forms Lost mail return forms	Will be tested if addresses are found File available 5/27

Vacant and Delete HUs from NRFU	TMO production NRFU file available to identify vacant/delete status for CIFU eligible cases in VT
Nonrespondents in panels 7, 8, 9 of the Response Mode and Incentive Experiment	Actual file contents not available until 6/16, however indicators designating that a RMIE case should exist will be available on the test production DMAF extract. When the file is available, a check to see that the appropriate case was selected can be performed.

5. The goals/expectations of the CIFU test are:

< To ensure in a pre-production environment that the GEO/DSCMO file extracts are identifying CIFU eligible cases correctly according to specification and that deliverables are defined

COB 5/24 The DSCMO produces/delivers pre-production Vermont DMAF extracts with CIFU eligible cases to DSSD. Vermont pre-production DMAF extracts should contain universe components 5-6 on previous page.

COB 5/26 The GEO produces/delivers pre-production Vermont MAF extracts with CIFU eligible cases to DSSD. Vermont pre-production MAF extract should contain universe components 1-4 on previous page.

(Note: File formats for both extracts should mimic the files created for the NRFU test.)

COB 5/30 DMD issues CIFU test plan for review/comment by team members.

COB 6/1 The DSSD identifies Vermont blocks with high concentration counts of CIFU eligible cases for DSCMO. DSSD reports this information to GEO so they can prioritize their processing.
The DSSD produces CIFU universe component tallies for Vermont.

COB 6/2 Team members meet to discuss results of DSSD's evaluation; block and subsequent AA selections for test production.

< To ensure in a test production environment that the GEO/DSCMO/TMO file extracts are identifying CIFU eligible cases correctly according to specifications.

COB 6/5 The DMD provides DSCMO test block information and selected variables to

be delivered on the paper copy of the test production DMAF extract that will be used to test FLD assignment materials.

6/6-6/7 The GEO produces/delivers test production Vermont MAF extracts using DSSD's pre-test analysis identifying CIFU eligible blocks to DSCMO and DSSD.

(Note: The end date for the GEO to deliver production MAF extract for the nation is June 15)

6/7-6/12 The DSCMO updates test production DMAF extract with test production Vermont MAF extracts and production OCS2000 Vermont NRFU vacant/delete address cases.

The DSCMO runs CIFU universe determination on the test production Vermont DMAF extract. DSCMO runs AA delineation program and reports this information as soon as possible to the BETA site.

The DSCMO produces/delivers test production Vermont DMAF extract to DSSD.

The DSCMO produces/delivers test production Vermont address files to BETA site, TMO and DSSD.

6/9 Team meets to discuss progress of test production activities

COB 6/13 TMO reviews VT address file

6/13-6/15 The DSSD runs CIFU universe determination on the test production Vermont DMAF extract independent of DSCMO.

The DSSD compares DSCMO and DSSD generated universes.

< To ensure in a test production environment that the FLD assignment materials (address listing pages) and questionnaire labels are accurate.

6/13 The DSCMO delivers to CIFU team for test AAs a paper copy of the DMAF extract with selected variables to aid in testing FLD assignment materials and questionnaire labels.

6/14 BETA site prints address listings and labels for test AAs.
DMD delivers to FLD copies of BETA site materials output for region test.

6/14-6/15 Headquarter review of Address Listings and Questionnaire Labels:

Address Listings

- a) All addresses on address listings are in CIFU universe and that there are no missing CIFU addresses.
- b) All information on listing is accurate (matches DMAF extract).
- c) All addresses in block are correctly listed on address listings.
- d) Correct names are present where appropriate on address listings.
- e) QA indicator flag (asterisk) is displayed accurately and correctly on address listings eligible for the dependent QA review.

Questionnaire Labels

- a) All types of labels (questionnaire label and mini processing ID label) are readable for DCC scanning.
- b) Barcode information, including check digit validation is accurate on labels.
- c) QA indicator flag (asterisk) is displayed accurately and correctly on questionnaire labels eligible for the dependent QA review.

The FLD conducts regional test. A selected geographer in the Boston RCC will simulate the review in the FLD. Team members will assist FLD headquarters with development of FLD region test review checklist.

COB 6/15 Team gives go/no go to production processing.

< To comprehensively document the test results.

< To resolve critical errors before production begins.

6. Assumptions/decisions made in preparation for CIFU pre-production test plan:

< Vermont will have sufficient CIFU eligible addresses from critical CIFU universe components to perform a sound pre-production test plan. There are no entities participating in LUCA 98 appeals nor are there UU/L in Vermont. No alternative geography was selected in case insufficient data are identified in Vermont.

< We will test the OCS2000 CIFU component at the BETA site as was done in preparation for NRFU.

< There will be no testing of headquarter software processing from personnel at the BETA site. This role will be accomplished through the work of DSSD. DSSD will independently program the CIFU universe identification. The double programming and analysis will be done for pre-test production and pre-production universe test files.

< The testing of subsequent waves requirement will be met by DSSD conducting post-

production universe review of 28 LCOs.

7. Test Blocks

Note: Every address in the block should appear on the listings

State	County	Block	Suffix	Potential Universe Components
50	005	1310	A	NRFU vacants in TEA 2 NRFU deletes in TEA 2 Lost mail returns Update/Leave adds April 2000 DSF adds in TEA 2
50	007	1135		New Construction adds April 2000 DSF adds in TEA 1
50	007	2315		NRFU deletes in TEA 1 Lost mail returns New Construction adds April 2000 DSF adds in TEA 1
50	007	2569		NRFU vacants in TEA 1 NRFU deletes in TEA 1
50	011	1902		NRFU deletes in TEA 1 Lost mail returns RMIE cases
50	013	1060		No CIFU eligible cases expected
50	015	1749		NRFU vacants in TEA 2 NRFU deletes in TEA 2 Blank mail returns Update/Leave adds February 2000 DSF adds in TEA 2 April 2000 DSF adds in TEA 2

50	027	3164		NRFU deletes in TEA 1 February 2000 DSF adds in TEA 1 April 2000 DSF adds in TEA 1
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8. DMAF variables to appear in review listings:

ASAM
AA
BKN
BKP
CIU
CEU
COU
CUSTOMER Processing ID
DC(7)
DW
HW
LCO
MAC(6)
MAC(7)
MAC(9)
MAC(15)
MAFID
MAILD
MCONGA
MCONGB
MS
MSDF(4)
MSDF(5)
MW
NRC
NRS
NRU

PHONE
PL
REXPAN
RMNE
ST
SUR
SW
TEA
TRACT
UAA
USTAT
ZIP

July 26, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 65

MEMORANDUM FOR Distribution List

From: Susan M. Miskura (Signed)
 Chief, Decennial Management Division

Subject: The Accuracy and Coverage Evaluation (A.C.E.) Person Interview
 Operation Finish Date in the Hialeah LCO

Contact Person: Maria Urrutia
 Chief, Statistical Programs Branch, Decennial Management Division,
 Room 2104-2, (301) 457-4244

Prepared by: Sarah Brady
 Statistical Programs Branch, Decennial Management Division

The Accuracy and Coverage Evaluation (A.C.E.) Person Interview operation cannot begin for a Local Census Office (LCO) area until the Census 2000 Nonresponse Follow-up (NRFU) operation has been completed in that LCO. Given this fact and the decision to rework all of the NRFU cases in the Hialeah LCO, which will not be completed until August 22, 2000, a decision has been made to change the finish date for the A.C.E. Person Interview operation in that LCO to September 24, 2000, to accommodate for the NRFU cases in Hialeah that need to be reworked. The A.C.E. Person Interview operation for all other LCOs is expected to be completed as scheduled, by September 1, 2000.

August 15, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 67

MEMORANDUM FOR Distribution List

From: Susan M. Miskura (Signed)
 Chief, Decennial Management Division

Subject: Addresses in the Master Address File (MAF) Excluded from the April
 7, 2000 MAF Extract

Contact Person: Kathleen M. Halterman, Geographic Programs Branch, Decennial
 Management Division, Rm. 1422-2, (301) 457-8230

This memorandum documents types and numbers of addresses included in the mail stream that were taken out of the Master Address File (MAF) for the April 7 MAF extract used for updating the Decennial MAF (DMAF) in preparation for the Nonresponse Followup (NRFU) operation.

When creating the initial MAF for the initial questionnaire mailout, the Census Bureau used a very conservative approach for including addresses in the MAF. This approach was intended to provide maximum coverage, but it resulted in some duplicate addresses which inflated the address counts in the MAF (see the Count Review Memorandum Series). To correct the universe of census addresses and, as a result, reduce the workload for the NRFU operation because of these duplications, the Census Bureau re-evaluated and revised the rules on merging addresses. This resulted in 3,520,153 addresses that had been mailed a questionnaire being excluded from the census universe and potentially from the NRFU operation.

Below is a description of the types of situations and addresses that were taken out of the census universe and were not eligible for the NRFU operation.

1. Exact Duplicates (Merges)

It was known that exact duplicates of addresses existing on the MAF were mailed questionnaires and were eligible for the NRFU operation. These addresses were merged into a single address if:

- a. The address matched exactly on five-digit ZIP code, house number, street name (including prefix and suffix directionals and type), and unit identifier;
- b. The addresses were not both Block Canvassing adds; and
- c. One or both had not been accepted by the Local Update of Census Addresses (LUCA) Appeals process.

There were exceptions in some of these cases, however, and addresses were not merged.

- a. For addresses for which the within-structure designation was blanked by Block Canvassing or LUCA '98 Field Verification, and for which non-blank within-structure designation from the Address Control File (ACF) or DSF were available, the non-blank designation was restored to the MAF. This then prevented the unit from merging with other units that also had their within-structure designation blanked. This algorithm was applied only to units that exactly duplicated another unit in the MAF and therefore would have been merged.
- b. It was considered somewhat risky to override non-blank within-structure designations provided by the field with ACF or DSF designations. So for cases where duplicates were caused by field changes (other than blanking the within-structure designation) and for which the duplicates to be merged were both Block Canvassing corrections in the same block, the merging was not allowed.

The merge of exact duplicates removed 509,042 addresses from the census universe and made them ineligible for the NRFU operation.

In the DMAF, the MAF ID for an address that was merged is linked to an existing address on the DMAF. If a questionnaire is returned for an address that was merged with another address, the data from the questionnaire is merged with the data associated with the existing address and included in the census.

2. DSF Addresses (defined as addresses in Type of Enumeration Area 1, 6, 7, and 8)

There are "old" DSF addresses on the MAF that were mailed questionnaires and were eligible for the NRFU operation that:

- a. Had no positive Block Canvassing, LUCA, and LUCA 1998 Field Verification action; and
- b. Were not in the November 1999 or February 2000 DSF.

This removed 879,338 DSF addresses from the census universe and made them ineligible for the NRFU operation.

“Old” DSF addresses for which we receive a questionnaire will be made eligible for the Address Field Verification operation. This operation will verify whether the address really exists. If the address really exists, the DMAF will be updated to make the address eligible for the census and the data from the questionnaire will be included in the census.

3. Addresses Deleted Twice by Census Operations and/or Processes (“Double Kills”)

Because of duplication in the MAF, some areas of the country were identified by the Population Division as having potential overcoverage. Many of these areas also had many “double kills,” which are addresses that were deleted twice by a census operation or process. To reduce the potential overcoverage, “double kills” were merged with existing MAF addresses using the same rules for merging. There were 547,433 “double kills” that were merged with an existing MAF address. There were 1,584,340 “double kills” that were not merged.

All “double kills,” regardless of whether they merged with an existing MAF address, were taken out of the census universe and were not eligible for the NRFU operation. This resulted in 2,131,773 “double kills” being removed from the NRFU operation.

“Double kills” for which we receive a questionnaire will be made eligible for the Address Field Verification operation. This operation will verify whether the address really exists. If the address really exists, the DMAF will be updated to make the address eligible for the census and the data from the questionnaire will be included in the census.

The attached chart provides detailed information on the types of merges, the tally of addresses for each type of merge, and the total reduction to the NRFU-eligible universe. The chart also provides information on the number of merged addresses, DSF addresses, and “double kills,” both from merged and not merged addresses.

Attachment

HOUSING UNITS

Housing Units Merged:

Two NRFU-eligible Addresses Merged	463,416
NRFU-eligible address merged with Non-NRFU-eligible Address	547,433

Housing Units Not Merged:

Addresses Not Merged Because Both were BC Adds	169,787
Addresses Not Merged Because of Different ZIPs	84,842
Addresses Not Merged Because they coded to Different Streets in TIGER	35,829
Addresses Not Merged Because of Different Street Directions	19,655

Housing Units vs. Group Quarters

Housing Unit Merged with Group Quarters	45,626
Not Merged due to Multiple GQs or Hus at BSA	109,018

Total Reduction in NRFU-eligible Universe (from Merges)	509,042
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Addresses in the Mailstream which will not be in NRFU

Merges of NRFU-eligible Addresses	509,042
Old DSF Addresses	879,338
Double Kills	2,131,773
Merged with a NRFU-eligible Address	547,433
Not Merged	1,584,340
Total Addresses in the Mailstream not in NRFU	3,520,153

August 22, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 68

MEMORANDUM FOR Distribution List

From: Susan M. Miskura (Signed)
 Chief, Decennial Management Division

Subject: Documentation of Coverage Improvement Followup Software
 Quality Assurance Plan

Contact Person(s): Barbara S. Tinari and Monique V. Sanders
 Decennial Management Division, Room 1422-2, 301-457-8324

In accordance with the software and other product quality assurance plan developed for the Coverage Improvement Followup Operation, Decennial Management Division (DMD), along with assistance from Field Division (FLD), Geography Division (GEO), Decennial Systems and Contracts Management Office (DSCMO), Decennial Statistical Studies Division (DSSD) and Technologies Management Office (TMO) implemented the various components and requirements of the plan. As reference material, the Coverage Improvement Followup Development Quality Assurance Plan is available as part of the DMD Informational Memorandum Series Number 63.

A summary of the core plan components along with results follows:

1) Formal specifications walk-through

On May 16-17, 2000, DMD, along with participating divisions completed a walk-through of all specifications required to support various software components and other products needed for successful implementation of CIFU. The event provided a useful forum for gaps to be identified and resolved. Revisions to specifications resulted from this walk-through and final versions provided to DMD.

2) Software Development

CIFU software production products are the primary responsibility of GEO, DSCMO, and TMO. During software development, these divisions followed standard, acceptable practices to ensure quality outcomes. They each employed such practices as peer code review and internal software quality review. Documentation of the specific practices employed for CIFU software development can be provided by the participating production divisions.

3) Independent (External) Software Validation

DSSD performed an independent software validation for the CIFU-eligible universe and the CIFU universe. This double programming was thorough and well documented. The results provided assurances that the production programming was developed accurately according to specification. See Attachment A for more detailed information.

4) External Review of Software Output

Headquarter personnel from participating divisions reviewed the CIFU universe software output against DMAF input files. This review included field assignment listings and questionnaire address labels. Labels were sent to Bowie facility to test validity of barcode information. Boston Regional Census Center geographers reviewed a sample of the assignment listings and compared to ground features. The results from these reviews provided assurances that the inputs were correctly and accurately outputted for end use. See Attachment A for more detailed information.

5) Post Production Evaluation

As part of post evaluation studies, DSSD will receive from DSCMO the Decennial Master Address Files for a sample of 28 Local Census Offices along with the actual files transmitted to TMO to produce the CIFU materials. These deliverables are for the purpose of analyzing the CIFU universe. Documentation from this analysis is to be announced at a later time.

Attachment A documents each participating division's written assessments for the various CIFU test activities/processes under their responsibility. The information provides a detailed description of the activity/process, identification and resolution of problems/errors, along with division clearance of activity/process.

Note: On June 16, 2000, based on overall assessments, DMD authorized DSCMO and TMO to begin production processing for CIFU.

Attachments

cc: Distribution List

Attachment A

CIFU TEST PRODUCTION ASSESSMENTS	
Division Responsible: DSSD	Name of Tester: James B. Treat
CIFU activity being tested: Test production Vermont MAF Extract Test production Vermont DMAF Extract Test production CIFU universe determination software Test production Vermont address list file for OCS2000	
Please describe fully the CIFU activity tested. Document all problems identified and how they were resolved.	

Issue: *Analysis of above activities necessary to ensure software programs met expected outcome before CIFU production.*

Result: *DSSD's analysis of Vermont - LCO 2149*

Data Sources - Vermont MAF Extract provided on June 6, 2000

Vermont DMAF Extract provided on June 13, 2000 (at 2:55pm)

Vermont Address List File provided on June 13, 2000 (at 2:40pm)

1. GEO provided 100,670 cases in the MAF extract update file.
2. DSCMO provided 280,500 cases in the DMAF extract.
3. All 100,670 cases provided by GEO are on the DMAF. This check is based solely on the MAFID, no other variables were reviewed.
4. The comparison of DSSD's programming of the CIFU universe (variable CIFU_U) to DSCMO's programming of the CIFU universe (variable CIU) resulted in agreement between the two programs. In addition, the following workloads were identified:
 - Not in the CIFU Operation 10,359 cases
 - In CIFU, but will not be contacted 248,018 cases
 - Vacant or Delete housing unit in NRFU 14,186 cases
 - New Construction Adds 147 cases
 - Update/Leave Adds 5,407 cases
 - Lost Mail Returns 438 cases
 - Blank Mail Returns 1,077 cases
 - RMIE 13 cases
 - Feb 2000 or April 2000 DSF Adds 855 cases
 - LUCA 98 or LUCA 99 Appeal Adds 0 cases

 - Total Number of Housing Units 280,500 cases

5. From the DMAF extract file, blocks/suffixes with at least one housing unit requiring contact in CIFU were identified (using the CIU variable with values to 2 through 9 - see Attachment A). This resulted in 6,251 blocks/suffixes being identified. All the eligible CIFU housing units in these blocks/suffixes were selected (CIU greater than 0). This resulted in 210,195 MAFIDs being identified. Thus, housing units in blocks/suffixes with no cases in the CIFU workload (CIU not between 2 and 9) or housing units ineligible for inclusion in CIFU (CIU equals 0) are removed from review.
6. DSCMO provided 228,377 observations on the Address List file (for TMO) for Vermont - LCO 2149. There were 210,195 unique MAFIDs on the file.
7. From the 210,195 cases from DMAF identified in Step 5 and the 210,195 cases from the Address List file identified in Step 6, the cases were matched across the two files by MAFID. There was complete agreement between the two files. In addition, a review of the coding of the CIFU Operations Flag variable (position 242) on the Address List file was performed. The review indicates that this variable was coded correctly.

Assumptions:

- ***Correct identification of UU/L adds (not present in VT) assumed since double programming of the CIFU universe produced the same results for identification of U/L adds.***

Conclusions:

- ***All the MAFIDs provided from GEO on the MAF extract update file are in the DMAF, thus the DMAF has been updated to contain the appropriate housing unit inventory. Note that this review is based solely on the presence of the MAFIDs (provided in the MAF extract) in the DMAF, no other variables were reviewed.***
- ***As a results of this review the CIFU Definition memorandum and CIFU specification memorandum will be updated to reflect revisions to the CIFU universe that was identified.***
- ***The double programming of the CIFU universe produced the same results with respect to 1) the inventory of addresses that will appear on the CIFU address listing page; 2) the reason (category) a housing unit is in the CIFU universe; 3) the identification housing units to be contacted in CIFU; and 4) identification of the dependent quality assurance (QA) workload.***

- ***Based on these results, the programming of the CIFU universe appears to be consistent with the specification.***

Attachment A

CIU and CIFU_U Values

- 0 = Universe Not Set
- 1 = Not in CIFU
- 2 = In CIFU, vacant or delete housing unit from NRFU
- 3 = In CIFU, new construction
- 4 = In CIFU, adds from Update/Leave or Urban Update/Leave
- 5 = In CIFU, lost mail return
- 6 = In CIFU, blank mail return
- 7 = In CIFU, Response Mode and Incentive Experiment (RMIE)
- 8 = In CIFU, Feb 2000 or Apr 2000 DSF add
- 9 = In CIFU, Late HU adds from LUCA appeals

Note that housing units with a CIU value of 0 are not included in the CIFU address listing pages/registers. Housing units with a CIU value of 1 are included in the CIFU address listing pages/register, however they are not contacted during CIFU. Housing units with a value of 2 through 9 are included in the CIFU address listing pages/register and are contacted during CIFU.

Activity approved by division: James B. Treat, DSSD

CIFU TEST PRODUCTION ASSESSMENTS

Division Responsible: DSSD

Name of Tester: James B. Treat

CIFU activity being tested: Test production Alaska DMAF Extract
Test production CIFU universe determination software
Test production Alaska address list file for OCS2000

Please describe fully the CIFU activity tested. Document all problems identified and how they were resolved.

Issue: Analysis of above activities necessary due to no LUCA appeal cases in Vermont.

Result: DSSD's review of Alaska - LCO 2711:

Data Sources - Alaska DMAF Extract provided on June 13, 2000

Alaska Address List File provided on June 13, 2000

1. DSCMO provided 252,907 cases in the DMAF extract.
2. The comparison of DSSD's programming of the CIFU universe (variable CIFU_U) to DSCMO's programming of the CIFU universe (variable CIU) resulted in agreement between the two programs. In addition, the following workloads were identified:
 - Not in the CIFU Operation 7,547 cases
 - In CIFU, but will not be contacted 224,033 cases
 - Vacant or Delete housing unit in NRFU 14,731 cases
 - New Construction Adds 860 cases
 - Update/Leave Adds 4,556 cases
 - Lost Mail Returns 83 cases
 - Blank Mail Returns 587 cases
 - RMIE 23 cases
 - Feb 2000 or April 2000 DSF Adds 473 cases
 - LUCA 98 or LUCA 99 Appeal Adds 13 cases

 - Total Number of Housing Units 252,907 cases
3. From the DMAF extract file, blocks/suffixes with at least one housing unit requiring contact in CIFU were identified (using the CIU variable with values to 2 through 9 - see Attachment A). This resulted in 5,320 blocks/suffixes being identified. All the eligible CIFU housing units in these blocks/suffixes were selected (CIU greater than 0). This resulted in 201,471 MAFIDs being identified. Thus, housing units in blocks/suffixes with no cases in the CIFU workload (CIU not between 2 and 9) or housing units ineligible for inclusion in CIFU (CIU equals 0) are removed from review.

4. DSCMO provided 218,252 observations on the Address List file (for TMO) for Alaska - LCO 2711. There were 201,471 unique MAFIDs on the file.

5. From the 201,471 cases from DMAF identified in Step 3 and the 201,471 cases from the Address List file identified in Step 4, the cases were matched across the two files by MAFID. There was complete agreement between the two files. In addition, a review of the coding of the CIFU Operations Flag variable (position 242) on the Address List file was performed. The review indicates that this variable was coded correctly.

6. From the 201,471 cases on the DMAF, 153 cases were flagged as adds from LUCA98 Appeals operation. None of these cases required contact in CIFU because they were a LUCA98 Appeals add. Below is a breakdown of the 153 cases by the CIU value:

- Not in the CIFU Operation 2 cases
- In CIFU, but will not contacted 111 cases
- Vacant or Delete housing unit in NRFU 39 cases
- New Construction Adds 1 case

- Total Number of Housing Units 153 cases

Note that the two cases “Not in the CIFU Operation” have surviving MAFIDs which makes them ineligible for CIFU.

7. From the 201,471 cases on the DMAF, 96 cases were flagged as adds from LUCA99 Appeals operation. Thirteen of these cases require contact in CIFU because they are a LUCA99 Appeals add. Below is a breakdown of the 96 cases by the CIU value:

- In CIFU, but will not contacted 20 cases
- Vacant or Delete housing unit in NRFU 59 cases
- Update/Leave Adds 4 cases
- LUCA 99 Appeal Adds 13 cases

- Total Number of Housing Units 96 cases

Conclusions:

- ***The double programming of the CIFU universe produced the same results with respect to 1) the inventory of addresses that will appear on the CIFU address listing page; 2) the reason (category) a housing unit is in the CIFU universe; 3) the identification housing units to be contacted in CIFU; and 4) identification of the dependent quality assurance (QA) workload.***
- ***While 153 cases were added to the DMAF as the result of LUCA98 Appeals operation, none require followup in CIFU because they are LUCA98 Appeal adds. However, 40 of the 153 cases do require followup for reasons other than being a LUCA98 Appeal add. Therefore, the category of LUCA98 Appeal add was observed, but not tested.***
- ***Of the 96 cases added to the DMAF as the result of LUCA99 Appeals operation, 13 cases require followup in CIFU because they are LUCA99 Appeal adds. Therefore, the category of LUCA99 Appeal add was observed and tested.***
- ***Based on these results, the programming of the CIFU universe appears to be consistent with the specification. In addition, even though the LUCA98 Appeal add category was not tested, LUCA98 Appeal adds are included in the CIFU workload for other reasons (vacant/delete or new construction). In addition, 13 of the 96 LUCA99 Appeal adds are included in the CIFU workload because they are LUCA99 Appeal adds.***

Attachment A

CIU and CIFU_U Values

- 0 = Universe Not Set
- 1 = Not in CIFU
- 2 = In CIFU, vacant or delete housing unit from NRFU
- 3 = In CIFU, new construction
- 4 = In CIFU, adds from Update/Leave or Urban Update/Leave
- 5 = In CIFU, lost mail return
- 6 = In CIFU, blank mail return
- 7 = In CIFU, Response Mode and Incentive Experiment (RMIE)
- 8 = In CIFU, Feb 2000 or Apr 2000 DSF add
- 9 = In CIFU, Late HU adds from LUCA appeals

Note that housing units with a CIU value of 0 are not included in the CIFU address listing pages/registers. Housing units with a CIU value of 1 are included in the CIFU address listing pages/register, however they are not contacted during CIFU. Housing units with a value of 2 through 9 are included in the CIFU address listing pages/register and are contacted during CIFU.

Activity approved by division: James B. Treat, DSSD

CIFU TEST PRODUCTION ASSESSMENTS

Division Responsible: GEO

Name of Testers: MAF Operations Branch

CIFU activity being tested: Implementation of Vermont MAF extract software

Please describe fully the CIFU activity tested. Document all problems identified and how they were resolved.

The GEO conducted a preproduction and production quality assurance review on the CIFU MAF extracts, including those for the state of Vermont which were produced first in order to support quality assurance activities on other components of the system to produce CIFU listings. This review revealed a problem with block number suffixes missing from the map spot/block data item, which was corrected.

Activity approved by division: Linda M. Franz, GEO

CIFU TEST PRODUCTION ASSESSMENTS

Division Responsible: GEO

Name of Testers: MAF Operations Branch

CIFU activity being tested: Vermont MAF extract file creation and transfer to DSCMO

Please describe fully the CIFU activity tested. Document all problems identified and how they were resolved.

Prior to the creation of the production Vermont MAF extracts, preliminary versions of the Vermont extracts were created and delivered to the DSCMO to allow its staff to identify the various conditions on which to focus their quality assurance review. These same preliminary extracts were delivered to the DSCMO for testing purposes, and DSCMO staff discovered that customer identification numbers were missing; this was rectified. The Vermont MAF extracts were then created as the first production deliveries and supplied to the DSCMO following GEO's standard quality assurance check.

Activity approved by division: Linda M. Franz, GEO

CIFU TEST PRODUCTION ASSESSMENTS

Division Responsible: **DSCMO-Processing Systems**

Name of Tester:

CIFU activity being tested: Receipt of GEO Vermont/Alaska MAF extract
Updating DMAF with Vermont/Alaska MAF extract
Updating DMAF with NRFU OCS2000 vacant/delete status
Implementation of universe determination software
Implementation of Assignment Area delineation software
Vermont address file creation and transfer to TMO/BETA/DSSD
Scanning of Vermont labels (questionnaire label and mini processing ID label) at Bowie facility ensuring: 1) barcode information, including check digit validation, and format is accurate and 2) QA indicator flag (asterisk) is displayed accurately and correctly on questionnaire labels

Please describe fully the CIFU activity tested. Document all problems identified and how they were resolved.

DSCMO participated in the SQA activities as described in this text. DSCMO did not submit a formal evaluation form but informally communicated that the process went as planned, on schedule and with minor issues that were resolved as they were encountered.

Activity approved by division:

CIFU TEST PRODUCTION ASSESSMENTS	
Division Responsible: TMO	Name of Tester: Leah M. Arnold
CIFU activity being tested: Receipt of Vermont address file from DSCMO.	
Please describe fully the CIFU activity tested. Document all problems identified and how they were resolved.	

DSCMO delivered the file to the BETA OCS (BEOCS) server, the standard procedure. This process went smoothly, there were no problems.

Activity approved by division: Leah M. Arnold, TMO

CIFU TEST PRODUCTION ASSESSMENTS

Division Responsible: DSCMO-BETA

Name of Tester: Roxanne C. Patton

CIFU activity being tested: Printing of labels and register listings

Please describe fully the CIFU activity tested. Document all problems identified and how they were resolved.

Printed address registers, address registers labels, and questionnaire labels.
Sent questionnaire labels to Bowie to be scanned.

Activity approved by division: Roxanne C. Patton, DSCMO-BETA

CIFU TEST PRODUCTION ASSESSMENTS

Division Responsible: DMD

Name of Tester: Monique V. Sanders

CIFU activity being tested: Receipt of Vermont DMAF extract review listings with selected variables

Please describe fully the CIFU activity tested. Document all problems identified and how they were resolved.

In preparation for the headquarter review, DSCMO delivered Vermont DMAF extract review listings for all 49 blocks identified by DSSD, including the 8 test blocks used during the headquarter and FLD region review. The variables specified by DMD were on the listings. DSCMO also provided a useful reference sheet displaying an actual record listing with clear description of variables for reviewers not familiar with the DMAF record layout.

Activity approved by division: Monique V. Sanders, DMD

CIFU TEST PRODUCTION ASSESSMENTS

Division Responsible: DMD, FLD, TMO,
DSCMO, and DSSD

Name of Testers : Luana L. Tran, Judith A.
Dawson, Darlene A. Moul, Roxanne C. Patton,
Broderick E. Oliver, Dennis L. Van Langen,
Herbert F. Stackhouse, John W. Gloster,
Darlene L. Stewart, James A. Cope, Donald R.
Dwyer, Robert G. Tomassoni

CIFU activity being tested: Headquarter review of Vermont CIFU OCS2000 output
(Address Listing Pages (D-106A) and questionnaire labels)

Please describe fully the CIFU activity tested. Document all problems identified and how they were resolved.

On June 15, 2000, twelve people representing DMD, DSSD, DSCMO, TMO, and FLD assisted in the comparison of information from the Vermont based DMAF extract listings to the CIFU OCS2000 output (D-106A and questionnaire labels) to ensure data accuracy. The review was based on the following:

1. Selected Vermont Test Blocks and subsequent Assignment Area delineations
 - A. The geographic information (county codes, block numbers, and corresponding assignment areas) selected for review:

005	1310	86-1111.01
007	1135	86-4104
007	2315	86-4125
007	2569	86-4119
011	1902	86-4151
013	1060	No address listings or questionnaire labels produced because no CIFU eligible cases for contact (pre-review validation of expected outcome)
015	1749	86-1822.01
027	3164	86-4208
2. The review process/procedures and results is documented below:
 - A. Team members grouped in pairs and located CIFU test block ID numbers on the Vermont DMAF extract listings and verified that:
 - 1) For the cases eligible to be contacted in CIFU, the information on the D-106A and questionnaire label was consistent with the Vermont DMAF extract listings for the following items:
 - LCO
 - TRACT
 - AA

- STATE/COUNTY
- ID NUMBER
- BLOCK NUMBER
- MAP SPOT
- PHYSICAL LOCATION ADDRESS/DESCRIPTION
- OCCUPANT NAME
- TELEPHONE
- MAILING ADDRESS
- FORM TYPE

a) *Team Findings - Phone number was not appearing on D-106A*

We identified in the review that phone numbers appearing on the DMAF were not being displayed on the D-106A. It was confirmed from FLD and TMO after the review that this was not a requirement for NRFU and that the same was applicable for CIFU. The phone number variable (PH) was not to be displayed on the listing pages. FLD indicated that the vintage of the phone number (dating back to address listing which occurred 2 years ago) was the reason for not displaying the number.

b) *Team Findings - Confusing Address Designation on D-106A*

We identified for a small number of rural TEA cases that the unit designation in the house number/street name/unit designation address and the unit designation in the physical location description were different. In one situation, it resulted in an entry on the listing pages that was confusing, see example 1 below.

Example 1

*Street Name, Physical Location Address, and Unit Designation
(ex. USHY5 USHWY 5 Unit 17 Unit 15)*

Label address displayed USHY5.

*Physical location description
(US HWY 5 UNIT 2 BACK BUILDING)*

Label displayed: 4 BACK BUILDING US HWY UNIT 3

The program that selects the information that is included in the physical location column of the listing pages is the same one that has been used in previous operations. Essentially, it does the following:

If house number, street name and unit designation is present, the program displays all 3 in the physical location column of the listing pages. This is the logic used in example 2.

*If house number is missing, but we have street name and unit designation, the program displays the street name, unit designation, **and** physical location in the physical location column of the listing pages. This is the logic used in example 1.*

If there is no house number, street name, or unit designation, then the program displays the physical location address only.

Conclusion: The program is working as planned. The situation that caused the confusing entry is unclear. During discussions with FLD and TMO, it appears that there could be two units assigned to one map spot and that previous operations did not make them separate entities. FLD will investigate whether this is an anomaly or whether it occurred frequently enough in U/L or NRFU to have caused field offices to ask for clarification.

Overall Assessment: D-106A approved for field production work

- B) For the cases eligible to be contacted, reviewers ensured that the QA indicator flag (asterisk) was displayed accurately on both the D-106A and the questionnaire label signaling eligibility for the dependent QA review.

Team Findings - Based on the DMAF source variable (CIU) and eligible values, the QA indicator flag (asterisk) was displayed accurately on both the D-106A

Overall Assessment: D-106A and questionnaire labels approved for field production work.

- C) Identification of cases that were in the Vermont DMAF extract listings but not on the D-106A.

Team Findings - Test Block in 2 AAs

We had a test block which was split between two AAs, one of which was not part of the test. After the initial review of the test AA, DSCMO-BETA printed the 2nd AA listing (4126) for the block and it was verified that the handling of overlap addresses was performed correctly on both AA listing pages.

Overall Assessment: D-106A approved for field production work

- D) Ensure that cases not to be contacted in CIFU but displayed on the D-106A with X's in columns 1-3 have addresses verified against the Vermont DMAF extract listings.

Team Findings - All cases not to be contacted in CIFU but displayed on the D-106A with X's had their addresses verified against the Vermont DMAF extract listings.

Overall Assessment: D-106A approved for field production work

Activity approved by division: Multi Divisions (DMD, DSSD, TMO, FLD, DSCMO)

CIFU TEST PRODUCTION ASSESSMENTS

Division Responsible: Field Division

Name of Testers: Vincent J. Pito
Philip G. Busch

CIFU activity being tested: Regional Review of Vermont CIFU OCS2000 output

Please describe fully the CIFU activity tested. Document all problems identified and how they were resolved.

Two Boston Regional Census Center Geographers conducted a field check in Assignment Areas (AAs) 4125, 4129, and 1327.02, Chittenden County, Vermont. FLD-HQ supplied the Geographers with Forms D-106A(CIFU), Address Listing Pages, for each AA.

As they conducted their field check, the Geographers entered notes on these "test" listing pages. None of their annotations indicated any problems with software or the data output on the "test" listings. Instead, the field check revealed other issues, such as:

1. Block number corrections -- sporadic.
2. Slight address corrections -- very sporadic.
3. A few new units in both rural and urban AAs -- source is unknown, but some may have resulted from geo-coding errors. They may have been missed in earlier field operations.
4. Several addresses (mainly in trailer parks) not found -- probably occurred because the geographers had only 1 ½ days to conduct their field check and make annotations. Some addresses were not visible and there was no time to make inquiries in the field. Address changes could have had an impact on adds.
5. Notations that have no impact -- for example, "house # not visible".

Field Division has received faxes of the annotated listings and Dennis VanLangen of FLD-HQ discussed the annotations with Vincent Pito, one of the Geographers who conducted the field check.

There were test limitations in the field check. The Geographers took the listings and block maps into the field, and had no other reference documents (such as D-MAF extracts) to use in their evaluations. They did not have listings and maps for adjacent AAs. They simply did an "eye-ball" check to compare ground reality to listing page output for the 3 "test" AAs. Also, processing was still going on at the time of the test, so the "test" listings were not "live" address listings.

In summary, none of the RCC reports indicate any problems with the data getting onto the listing pages correctly.

Activity approved by division: Dennis VanLangen, FLD Gail Leithauser, FLD

October 16, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 75

MEMORANDUM FOR Distribution List

FROM: Susan Miskura (Signed)
 Chief
 Decennial Management Division

Subject: Publication of Final Rule on the Delegation of Decision-Making
 Authority Regarding the Methodology to be Used to Produce the P.L.
 94-171 Data

Contact Person: Andrew W. Visnansky, Chief, Program Information Branch, Decennial
 Management Division, Room 2002, Bldg. 2 (301-457-8567)

This memorandum documents the October 6, 2000 *Federal Register* publication of the final rule on the delegation of decision-making authority regarding the methodology to be used to produce the Public Law (P.L.) 94-171 data. The rule will go into effect on November 6, 2000. The Director of the Census will make the final determination regarding the methodology to be used in calculating the tabulations of population reported to States and localities for redistricting by April 1, 2001, after receipt of the recommendation of the Executive Steering Committee for A.C.E. Policy (ESCAP).

For your reference, the *Federal Register* notice containing this final rule is attached. The notice includes a summary of the comments submitted in response to the proposal of this rule on June 20, 2000. The actual comments received can be accessed from the following Census Bureau web page: <http://www.census.gov/dmd/www/Feascom.htm>

The Census Bureau made a feasibility determination with regard to the use of statistical sampling in producing the P.L.94-171 data. (see "Accuracy and Coverage Evaluation – Statement on the Feasibility of Using Statistical Methods to Improve the Accuracy of Census 2000," *Federal Register*, 65: 38373-38398). The feasibility statement is available via the Census Bureau web page that follows: <http://www.census.gov/Press-Release/www/feasibility.pdf>

Attachment

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 187**

[Docket No. FAA-00-7018; Amendment No. 187-11]

RIN 2120-AG17

Fees for FAA Services for Certain Flights; Extension of Comment Period**AGENCY:** Federal Aviation Administration (FAA), DOT.**ACTION:** Interim final rule; extension of comment period.

SUMMARY: On June 6, 2000, the FAA published an Interim Final Rule (IFR) establishing fees for FAA air traffic and related services for certain aircraft that transit U.S.-controlled airspace but neither take off from, nor land in, the United States and invited comments for a 120-day period. The IFR went into effect on August 1, 2000, and the comment period was originally scheduled to close on October 4, 2000. However, the FAA is extending the comment period to October 27, 2000, to ensure that affected entities (mostly foreign) have sufficient time to comment on the contents of the docket.

DATES: Comments must be received on or before October 27, 2000.**ADDRESSES:** Address your comments to the Docket Management System (DMS), U.S. Department of Transportation, Room Plaza Level 401, 400 Seventh Street, SW., Washington, DC 20590-0001. You must identify the docket number "FAA-00-7018" at the beginning of your comments, and you should submit two copies of your comments.You may also submit comments through the Internet to <http://dms.dot.gov>.You may review the public docket containing comments to this interim rule in person in the Dockets Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Dockets Office is on the plaza level of the NASSIF Building at the Department of Transportation at the above address. Also, you may review public dockets on the Internet at <http://dms.dot.gov>.**FOR FURTHER INFORMATION CONTACT:** Randall Fiertz, Office of Performance Management, (APF-1), Federal Aviation Administration, 800 Independence Avenue, SW., Washington, 20591; telephone (202) 267-7140; fax (202) 493-4191.**SUPPLEMENTARY INFORMATION:****Comments Invited**

Interested persons are invited to comment on the interim rule submitting such written data, views, or arguments as they may desire. Comments relating to the environmental, energy, federalism, or economic impact that might result from adopting the interim rule are also invited. Substantive comments should be accompanied by cost estimates. Comments must identify the regulatory docket or notice number and be submitted in duplicate to the Rules Docket address specified above.

All comments received, as well as a report summarizing each substantive public contact with FAA personnel on this interim rule will be filed in the docket. The docket is available for public inspection before and after the comment closing date.

The Administrator will consider all comments received on or before the closing date. Late-filed comments will be considered to the extent practicable. The Interim Final Rule, as well as the Final Rule, may be changed in light of the comments received.

Commenters wishing the FAA to acknowledge receipt of their comments must include a pre-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. FAA-00-7018." The postcard will be date-stamped and mailed to the commenter.

Availability of Interim Final Rule

You can get an electronic copy using the Internet by taking the following steps:

(1) Go to the search function of the Department of Transportation's electronic Docket Management System (DMS) web page (<http://dms.dot.gov/search>).

(2) On the search page type in the last four digits of the Docket number shown at the beginning of this notice. Click on "search."

(3) On the next page, which contains the Docket summary information for the Docket you selected, click on the document number for the item you wish to view.

You can also get an electronic copy using the Internet through FAA's web page at <http://www.faa.gov/avr/arm/nprm/nprm.htm> or the **Federal Register's** web page at http://www.access.gpo.gov/su_docs/aces/aces140.html.

You can also get a copy by submitting a request to the Federal Aviation Administration, Office of Rulemaking, ARM-1, 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267-9680. Make sure to

identify the docket number of this rulemaking.

Extension of Comment Period

On June 6, 2000, the FAA published Amendment No. 187-11, Fees for FAA Services for Certain Flights (65 FR 36002). The FAA requested that comments to that document be submitted on or before October 4, 2000. The FAA has received and reviewed approximately 70 comments. In response to the extreme significance and international implications of this IFR, as expressed in the comments, FAA is extending the comment period to give affected entities (mostly foreign) additional time to comment on the contents of the docket. Also, the first billing under this rule has recently occurred and entities that may not have commented to date may desire to comment. This action provides the opportunity.

The FAA determines that extending the comment period is in the public interest and that good cause exists for taking this action. Accordingly, the comment period for Amendment No. 187-11 is extended until October 27, 2000. If possible, any comments received after this date will be considered by the FAA prior to any further action in this rulemaking.

Issued in Washington, DC, September 29, 2000.

Donna McLean,*Assistant Administrator for Financial Services.*

[FR Doc. 00-25633 Filed 10-3-00; 2:42 pm]

BILLING CODE 4910-13-M

DEPARTMENT OF COMMERCE**Bureau of the Census****15 CFR Part 101**

[Docket No.: 000609172-0268-02]

RIN: 0607-AA33

Report of Tabulations of Population to States and Localities Pursuant to 13 U.S.C. 141(c) and Availability of Other Population Information**AGENCY:** Department of Commerce.**ACTION:** Final rule.

SUMMARY: The Department of Commerce is issuing a final rule setting forth how the Bureau of the Census will carry out its responsibilities to report tabulations of population to States and localities pursuant to 13 U.S.C. 141(c) and in making available certain other population information.

DATES: This rule is effective November 6, 2000.

FOR FURTHER INFORMATION CONTACT: John H. Thompson, (301) 457-3946.

SUPPLEMENTARY INFORMATION: Through the Census Act, which is codified in title 13 of the United States Code, Congress has delegated to the Secretary of Commerce its broad constitutional authority over the decennial census (see U.S. Constitution Art. I, Sec. 2, Cl.3). On June 13, the Commerce Department issued a proposed rule that would set forth how the Bureau of the Census will carry out its responsibilities to report tabulations of population to States and localities pursuant to the Census Act. See 65 FR 38370 (June 20, 2000). The proposed rule would establish a process for the release of data to the States and codify the process by which a committee of senior career officials of the Census Bureau would advise the Director of the Census. In addition, the proposed rule contained a delegation of authority from the Secretary to the Director of the Census to make a determination regarding the methodology to be used in calculating the tabulations of population to be reported to States and localities pursuant to 13 U.S.C. 141(c). While the background and basis for the entire proposal were included in the June 20 publication and are not repeated here, this delegation of authority to the Director, in particular, was included in the proposed rule because the decision turns entirely on operational and methodological implementation within the scientific expertise of the Bureau of the Census, and it is important to avoid even the appearance that considerations other than those relating to statistical science are being taken into account.

Comments and Responses

Comments in Support of the Proposed Rule

The Department received 17 letters in support of the proposed rule. There were a total of 243 signatories to these letters. Comments included one letter signed by four former Directors of the Census Bureau; five letters with six signatories from statistical, social science, and survey research organizations; three letters with six signatories from universities or university-based research institutions; two letters signed by 69 Members of Congress; three letters with 15 signatories from national associations and organizations; two letters with two signatories from state or local government officials; and one letter with 141 signatories from a public interest organization.

Comment

Common to the letters in support of the proposed rule were the following two comments: (1) The decision on the use of statistically corrected redistricting and other non-apportionment data from Census 2000 is a technical/scientific decision that should be made by the Director of the Census upon the recommendation of his or her professional staff, and (2) the rule ensures that other, irrelevant considerations, especially those that are political in nature, do not affect the decision-making process. A number of comments stated agreement with the intent to ensure that politics do not dictate what should be a scientific decision. Others said the proposed rule sets forth a fair and unbiased procedure for making a vital decision on the release of statistically corrected redistricting and other non-apportionment data. Others viewed the release of the recommendation of the Executive Steering Committee for Accuracy and Coverage Evaluation (A.C.E.) Policy (ESCAP) to the public at the same time that it is delivered to the Director as helpful in ensuring that the proposed decision-making process is an open and transparent one.

Response

The Department notes the support for the proposal stated in these comments.

Comments in Opposition to the Proposed Rule

The Department received seven letters in opposition to the proposed rule. There were a total of 12 signatories to these letters. Two of these letters were signed by university officials; one letter was signed by six Members of Congress; two letters with two signatories from state government officials; one letter with one signatory from a non-profit legal organization; and one letter from a private individual.

Comment

Several of those commenting viewed the contents of the "Accuracy and Coverage Evaluation—Statement on the Feasibility of Using Statistical Methods to Improve the Accuracy of Census 2000," 65 FR 38373-38398 (hereinafter, the Feasibility Statement), as evidence that the Census Bureau pre-judged the superior accuracy of the sampling-based counts.

Response

We regret this concern. To date, no decision has been reached. The Census Bureau has stated that it expects the statistically corrected data to be more accurate for non-apportionment uses of

the data, including redistricting and for this reason it is implementing the Accuracy and Coverage Evaluation (A.C.E.) (see the Feasibility Statement). However, the Census Bureau will not determine whether it is appropriate to release statistically corrected redistricting data until it has brought its technical judgment to bear in assessing the available data to verify that its expectations have been met. The Census Bureau will consider operational data to validate the successful conduct of the A.C.E., assess whether the A.C.E. measurements of undercount are consistent with historical patterns of undercount and independent Demographic Analysis benchmarks, and review measures of quality. If the Census Bureau determines that incorporating the results of the survey would not improve the accuracy of the initial census counts, then the data without statistical correction would be released to meet the requirements of Pub.L. 94-171.

Comment

Several letters raised technical concerns regarding the use of statistical methods to correct the census and challenged the arguments set forth in the Feasibility Statement.

Response

These concerns or issues are beyond the scope of the rulemaking and will not be addressed specifically. However, as part of the evaluation process described in the proposed rule, these and other technical issues will be considered. Also, this fall, at a public meeting with outside statistical experts and other interested parties, the Census Bureau will provide additional information regarding the detailed analyses it plans to conduct as part of its decision-making process.

Comment

Two letters questioned the expertise of the National Academy of Sciences (NAS) panels that have been convened over this decade to review the planning and conduct of Census 2000. One questioned the expertise of the Secretary of Commerce's and the Census Bureau's advisory committees in their work relating to Census 2000.

Response

The NAS panels and the various advisory committees are composed of professionals with excellent credentials to review and provide advice on the planning and conduct of the decennial census. In particular, the NAS panel members are carefully selected from among the country's leading experts in

a wide variety of research fields, including statistical and survey methodology. The NAS has a long and distinguished history of advising the federal government on scientific and technical matters. With regard to the selection of advisory committee members, both the Secretary of Commerce and the Census Bureau went to great lengths to ensure that the committees possess well-documented expertise in a wide range of areas relating to the conduct of the decennial census, including, but not limited to, statistical and survey methodology.

Comment

Several letters indicated that the Census Bureau professional staff have a vested interest in the acceptance and use of the statistically derived counts. One stated that past Census Bureau judgments on adjustment issues lead one to question the agency's ability to reach the correct decision. In addition, one letter stated that the lack of review or input from independent scientific experts biases the decision making process.

Response

The senior professional officials who serve on the Executive Steering Committee for A.C.E. Policy (ESCAP) are distinguished, objective, career civil servants whose only interest is in producing the most reliable and accurate census data possible. Many of these individuals have been recognized by leading statistical organizations for their significant contributions in the areas of survey methodology and statistics in general. Based on their years of experience and expertise, these officials are best suited to bring their professional judgment and integrity to bear in reviewing all the available data and directing a comprehensive, scientifically-defensible analysis in making a recommendation on their findings to the Director regarding the use of the statistically corrected census data. The ESCAP's recommendation will be released publicly, at the same time that it is delivered to the Director, to demonstrate the thoroughness and integrity of the process for all interested parties.

Comment

One comment acknowledged that the Census Bureau committed itself to achieving an open and transparent planning and decision process, however, the writer considered Census Bureau reports and documentation, including the A.C.E. documentation, on statistical adjustment to be difficult to

access because they were not catalogued to facilitate external access.

Response

The Census 2000 A.C.E. methodology has been pre-specified and documentation regarding the methodology has been disseminated through a variety of forums including the Census Bureau's website, public meetings, two public workshops sponsored by the National Academy of Sciences (October 6, 1999, and February 2-3, 2000), and at a May 19, 2000, hearing before the House Subcommittee on the Census. The Census Bureau will continue to make documentation relating to Census 2000 publicly available and available upon request.

Comment

One comment questioned whether the Secretary's proposed delegation of authority to the Director of the Census for making certain determinations concerning the census amounted to a divestiture of obligations vested in the Secretary by the Congress. The comment expressed three key concerns: (1) That the delegation of authority is, in fact, a "divestiture" of authority because the Secretary is seeking to escape responsibility for the decision of the Census Director by stating that the Secretary will not review or reverse that decision, (2) that by issuing a regulation that allegedly divests the Secretary of his statutory responsibility, the Secretary is attempting to supersede the statutory scheme passed by the Congress, and (3) that if "the Commerce Secretary believes he cannot, or should not, be responsible for the final release of adjusted numbers, then he should ask that Congress remove the Census Bureau entirely from the Commerce Department and make it a separate agency."

Response

The Department of Commerce considers Section 4 of Title 13, United States Code to clearly provide the Secretary authority to issue the proposed rule and to include in that proposal the delegation of authority at issue. That section provides that:

The Secretary shall perform the functions and duties imposed upon him by this title, *may issue such rules and regulations as he deems necessary* to carry out such functions and duties, and *may delegate the performance of such functions and duties* and the authority to issue such rules and regulations to such officers and employees of the Department of Commerce as he may designate. (Emphasis added.)

This statutory language provides the Secretary with broad authority to take the steps he deems appropriate to carry

out his responsibilities under the law, and that language does not establish limitations on the Secretary's ability to delegate the performance of his functions and duties under the Census Act. As such, the Secretary may delegate the authority to determine the methodology to be used in calculating the tabulations of population reported to States and localities pursuant to 13 U.S.C. 141(c).

The delegation of authority contained in the Department's proposed rule is not an unlawful divestiture of the Secretary's statutory responsibility or authority because the delegation, if adopted in a final rule, would not be irrevocable. Thus, the current or any future Secretary of Commerce could revoke that delegation by issuing another final rule doing so. It is unassailable that a rule revoking the delegation would be effective, if it satisfied the requirements of the Administrative Procedure Act and other applicable legal standards. Further, the fact that the rule seeks to authorize the Director of the Census to make a determination under the Census Act, and states that the Director's decision would not be subject to review or reconsideration by the Secretary, does not mean the Secretary would escape responsibility for that determination. By establishing this delegation of authority by regulation, the Secretary is merely creating a transparent process for allowing a scientific determination to be made by scientists. However, the decision is being made on behalf of the Secretary. Inherent in the delegation of authority is the notion that the Secretary is responsible for the determination made by the head of the scientific bureau in which the particular knowledge and experience for making that determination lies. Nevertheless, in order to erase any doubt that the delegation of authority is not a divestiture of obligations or responsibility by the Secretary, text has been added to 15 CFR 101.1(a) that explicitly states that nothing in the rule diminishes the authority of the Secretary of Commerce to revoke this delegation of authority or relieves the Secretary of Commerce of responsibility for any decision made by the Director of the Census pursuant to this delegation, and that this rule shall remain in effect unless or until amended or revoked by the Secretary of Commerce.

Comment

One letter provided the Memorandum of Law in a case currently proceeding in the U.S. District Court for the District of Columbia (*Commonwealth of Virginia v. United States of America*, Case No.

1:00CV00751) stating that the memorandum demonstrates the rulemaking provides no real opportunity to provide meaningful comments.

Response

The Department considers the notice and comment associated with this rulemaking to be an appropriate venue for meaningful comment. With respect to the Memorandum of Law, the Department is not party to the case and, therefore, does not believe it appropriate to make any statement on the arguments presented.

Administrative Law Requirements

Executive Order 12866

This final rule has been determined to be not significant under section 3(f) of Executive Order 12866.

Paperwork Reduction Act

This final rule contains no new information collection requests subject to the Paperwork Reduction Act.

Regulatory Flexibility Act

The Chief Counsel for Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration that the proposed rule, if adopted, would not have a significant economic impact on a substantial number of small entities. No comments were received regarding this certification. Thus, the factual basis for the certification has not changed. As such, a final regulatory flexibility analysis is not required, and none has been prepared.

Unfunded Mandate Reform Act of 1995

This rule contains no Federal mandates, as that term is defined in the Unfunded Mandates Reform Act, on State, local and tribal governments or the private sector.

Executive Order 12630

This rule does not contain policies that have takings implications.

List of Subjects in 15 CFR Part 101

Administrative practice and procedure, Census data.

Dated: September 28, 2000.

Norman Y. Mineta,

Secretary of Commerce.

For the reasons set out in the preamble, 15 CFR Part 101 is added to read as follows:

PART 101—RELEASE OF DECENNIAL CENSUS POPULATION INFORMATION

101.1 Report of tabulations of population to states and localities pursuant to 13 U.S.C. 141(c).

101.2 Availability of other population information.

Authority: 5 U.S.C. 301; 13 U.S.C. 4, 141, 195; 15 U.S.C. 1512.

PART 101—RELEASE OF DECENNIAL CENSUS POPULATION INFORMATION

§ 101.1 Report of tabulations of population to states and localities pursuant to 13 U.S.C. 141(c).

(a)(1) The Director of the Census shall make the final determination regarding the methodology to be used in calculating the tabulations of population reported to States and localities pursuant to 13 U.S.C. 141(c). The determination of the Director will be published in the **Federal Register**.

(2) All relevant authority of the Secretary of Commerce under 13 U.S.C. 141(c) and other applicable provisions of title 13 of the U.S. Code with respect to the decision to be made pursuant to paragraph (a)(1) of this section is hereby conferred upon the Director of the Census.

(3) The Director of the Census shall not make the determination specified in paragraph (a)(1) of this section until after he or she receives the recommendation of the Executive Steering Committee for A.C.E. Policy (ESCAP) in accordance with paragraph (b)(1) of this section.

(4) The determination of the Director of the Census shall not be subject to review, reconsideration, or reversal by the Secretary of Commerce.

(5) Nothing in this section diminishes the authority of the Secretary of Commerce to revoke or amend this delegation of authority or relieves the Secretary of Commerce of responsibility for any decision made by the Director of the Census pursuant to this delegation. This section shall remain in effect unless or until amended or revoked by the Secretary of Commerce.

(b)(1) The Executive Steering Committee for A.C.E. Policy shall prepare a written report to the Director of the Census recommending the methodology to be used in making the tabulations of population reported to States and localities pursuant to 13 U.S.C. 141(c).

(2) The report of the Executive Steering Committee for A.C.E. Policy described in paragraph (b)(1) of this section shall be released to the public at the same time it is delivered to the Director of the Census. This release to the public shall include, but is not

limited to, posting of the report on the Bureau of the Census website and publication of the report in the **Federal Register**.

(3) The “Executive Steering Committee for A.C.E. Policy” (ESCAP) is composed of the following employees of the Bureau of the Census:

(i) Deputy Director and Chief Operating Officer;

(ii) Principal Associate Director and Chief Financial Officer;

(iii) Principal Associate Director for Programs;

(iv) Associate Director for Decennial Census (Chair);

(v) Assistant Director for Decennial Census;

(vi) Associate Director for Demographic Programs;

(vii) Associate Director for Methodology and Standards;

(viii) Chief, Planning, Research, and Evaluation Division;

(ix) Chief, Decennial Management Division;

(x) Chief, Decennial Statistical Studies Division;

(xi) Chief, Population Division; and

(xii) Senior Mathematical Statistician.

§ 101.2 Availability of Other Population Information.

(a) When the Director of the Census determines pursuant to § 101.1(a)(1) of this part to use methodologies including the statistical method known as “sampling” to produce the tabulations of population to report to States and localities pursuant to 13 U.S.C. 141(c), data prepared without the use of such statistical method shall be made available to the public in accordance with the standards set forth in section 209(j) of Public Law 105–119, 111 Stat. 2440, simultaneously with the issuance of the report to States.

(b) When the Director of the Census determines pursuant to § 101.1(a)(1) of this part to produce tabulations of population without the use of methodologies including the statistical method known as sampling, for reporting to States and localities pursuant to 13 U.S.C. 141(c) notwithstanding a recommendation by the Executive Steering Committee for A.C.E. Policy to use sampling, data prepared with the use of such statistical method shall be made available to the public in accordance with the standards set forth in section 209(j) of Public Law 105–119, 111 Stat. 2440, for the release of data prepared without the use of such statistical method, simultaneously with the issuance of the report to States.

[FR Doc. 00–25501 Filed 10–5–00; 8:45 am]

BILLING CODE 3510-07-U

October 24, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 76

MEMORANDUM FOR Distribution List

From: Susan M. Miskura (Signed)
 Chief, Decennial Management Division

Subject: Official Release of Census 2000 Public Law (P.L.) 94-171
 Redistricting Data

Contact Person Marshall L. Turner, Jr.
 Chief, Redistricting Data Office
 Room 3631-3, Telephone 301-457-4039

Based on current plans, we expect to begin the release of the Census 2000 P.L. 94-171 Redistricting Data files on CD-ROMs, on a state-by-state basis, in early March of 2001. Files for all states are to be delivered to official state recipients no later than April 1, 2001, as required by law.

As each state's P.L. 94-171 Redistricting Data file is cleared by the Population Division, the Administrative and Customer Services Division will produce the number of "one-off" CD-ROM copies as specified by the Census Redistricting Data Office (RDO) in order to provide single copies to the official recipients in the given state (e.g., governor, majority and minority legislative leaders). RDO will ship these copies on Day 1 via overnight delivery. The next work day (Day 2), RDO will contact each official recipient in that state and confirm receipt* of the specified P.L. 94-171 CD-ROMs. Having confirmed receipt by the state, RDO will immediately notify POP, PIO, the DSCMO/AFF team, and DMD.

This process will continue until all states' Census 2000 P.L. 94-171 Redistricting Data on CD-ROMs are released.

* If a given state official (e.g., one but not all) did not, for whatever reason, receive their official copy of the state's P.L. 94-171 Redistricting Data CD-ROM, the Bureau will make other arrangements to provide that official with the P.L. 94-171 Redistricting Data as soon as possible, but public release via the AFF will go forward.

October 24, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 77

MEMORANDUM FOR Distribution List

From: Susan M. Miskura (Signed)
 Chief, Decennial Management Division

Subject: Release of Census 2000 Public Law (P.L.) 94-171 Redistricting
 Data to the American FactFinder, Partners, and the Media

Contact Person Jane H. Ingold
 Chief, Content and Data Products Branch
 Decennial Management Division
 Room 1422-2, Telephone 301-457-4646

This memorandum documents the Census Bureau's internal plans for timely release of the Census 2000 Redistricting Data (P.L. 94-171) Summary File to the public in the American FactFinder (AFF) on the Internet and to our partners and the media through CD-ROM. The Census Bureau's plans for the release of redistricting data to the state officials are documented in the Census Informational Memorandum on "Official Release of Census 2000 Public Law (P.L.) 94-171 Redistricting Data."

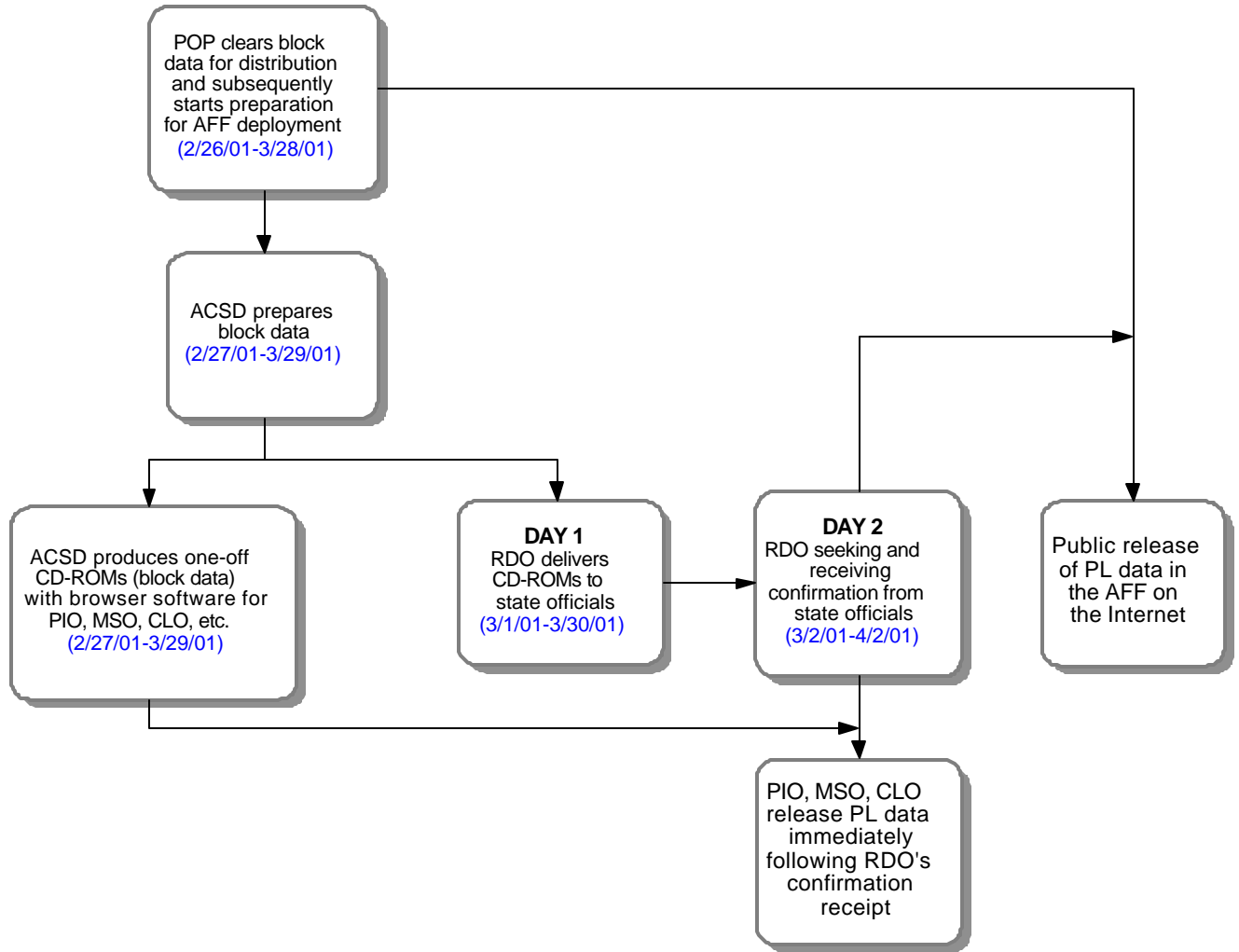
The official notification from the Census Redistricting Data Office (RDO) triggers action by the Public Information Office (PIO) and the AFF to coordinate the synchronized release to the public with the appropriate press release and accompanying notification to media. The Population Division's clearance of the redistricting data on the AFF precedes and is completed during the Day 1 and Day 2 period (Attachment 1) outlined in the Census Informational Memorandum mentioned above.

The Administrative and Customer Services Division produces the one-off CD-ROM necessary to initiate the Marketing Services Office/Customer Services Center's premium duplication process. As determined by the Rapid Response Team, the process for duplicating the additional copies of the CD-ROM for distribution to the Congress, State Data Centers, Census Information Centers, and the Census Advisory Committee members, also begins immediately following RDO's confirmation of receipt by state officials.

This collaboration includes the Marketing Services Office, Customer Liaison Office, Population Division, Administrative and Customer Services Division, Public Information Office, Decennial Systems and Contracts Management Office/Data Access and Dissemination System staff, and the Decennial Management Division.

Attachment

**Attachment 1
Census 2000 Redistricting Data (P.L.
94-171) Release Procedures**



November 7, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 78

MEMORANDUM FOR Distribution List

From: Susan M. Miskura (Signed)
 Chief, Decennial Management Division

Subject: Overview of the Duplicate Housing Unit Operations

Contact Person: Fay F. Nash, Assistant Division Chief, Statistical Design/Special
 Census Programs, Decennial Management Division, Room 2008-2,
 (301) 457-8039

The duplicate housing unit operations were developed and implemented to identify and remove from the census duplicate housing units that remained on the decennial file after all data collection activities had been completed. The implementation of the operations was an ad hoc interdivisional effort. The attached document describes the operations implemented.

Attachment

Overview of the Duplicate Housing Unit Operations

Prepared by: Fay F. Nash
November 7, 2000

Overview of the Duplicate Housing Unit Operations

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Overview of the Duplicate Housing Unit Operations

The Master Address File (MAF) development process for Census 2000 was considerably different from the process used in the 1990 Census. A major impetus for this change was the undercounts experienced in the 1990 and earlier decennial censuses, nearly a third of which was attributed to entirely missed housing units. Among the responses to this persistent pattern of decennial censuses undercounts was a Congressionally-sponsored initiative called the Census Address List Improvement Act of 1994, Public Law 103-430. This Act required the U.S. Postal Service to provide, and the U.S. Census Bureau to use the U. S. Postal Service's Delivery Sequence File (DSF) along with address information from local and tribal governments to build the Census 2000 address list. The Census Bureau also implemented several field operations that canvassed the ground for the purpose of 1) creating an address list (in list-enumerate and update/leave areas) or 2) updating the address list (in mailout/mailback areas). Other field operations were designed to verify the existence of specific housing units - a targeted field activity rather than a comprehensive canvass-type approach.

Thus, the Census Bureau devised a strategy of redundancy using a variety of sources for addresses, both internal and external, to overcome the historic undercoverage of in the address list for its decennial censuses. In doing this, the Census Bureau assumed responsibility for developing a comprehensive, unduplicated file of addresses.

The success of identifying multiple address versions of a single (same) housing unit depends on our ability to perform automated address matching and to identify duplicate addresses during the various field operations. Our redundant address list building efforts are believed to have resulted in very complete coverage of the housing unit inventory of the nation. Complete coverage of housing units is a vital prerequisite for complete coverage of the population. Using multiple sources of addresses is important because prior census experience showed that each contributes unique information to the process. However, ensuring that a housing unit is accounted for only one time presented unique challenges. Different sources may have different designators of structure addresses or units within structures. Relying on field visits to correct listings is subject to error, depending on a census worker's ability to read maps, follow a specific path of travel, recognize addresses, and assure a correspondence between mailing address and structure location when these two elements differ. Although processing the results of each compilation or update step was designed to recognize duplication and remove

nonexistent addresses, its effectiveness was limited by the quality and consistency of the incoming information. Because of the need to ensure complete coverage, the determination of whether to delete or correct an address was based on conservative rules. That is, it favored adding units unless there was a high probability of matching. There is evidence that the results of this process were to add or maintain duplicate addresses resulting from a variety of circumstances.

Another major factor that resulted in differences between the Census 2000 and the 1990 census address list development methodology was the process used for delineation of areas in which various enumeration strategies would be used. For 1990, more than 60 percent of the housing units were in areas with city-style addresses for which address lists could be purchased. (The Census Bureau could not use the U.S. Postal Service file for the 1990 census.) A field address update and geocoding process was used to compile this portion of the list for which automated geocoding and address matching could be performed. The U.S. Postal Service delivered questionnaires to these addresses and Census Bureau staff made visits to nonresponding units. Approximately 30 percent more of the 1990 census addresses were in areas that did not have city-style addresses. Either the U.S. Postal Service or temporary Census Bureau staff delivered questionnaires to these housing units, with follow-up visits to nonresponsive units made by Census Bureau staff. The remaining less than 10 percent of addresses were in list-enumerate areas for which census staff compiled the address list and conducted enumeration activities simultaneously.

For Census 2000, the composition was approximately 82 percent city-style mailout/mailback addresses, with addresses coming mostly from the 1990 census address list and the U.S. Postal Service's DSF. Approximately 17 percent more addresses were in Update/Leave areas in which Census Bureau staff rather than U.S. Postal Service letter carriers delivered questionnaires; the houses in these areas normally do not use city-style addresses. The Census Bureau staff used the map spot location of each housing unit to guide their delivery in these areas, not the "address" of the unit. They also were asked to further update the address list as they delivered questionnaires. The final group of addresses, less than 1 percent, were in List-Enumerate areas in which Census Bureau staff once again compiled the address list and conducted enumeration activities simultaneously.

Given that the Census 2000 address list development process was susceptible to including duplicate housing units, it was decided that a process needed to be implemented to identify and remove from the census duplicate housing units that still remained on the decennial file after all data collection activities had been completed. This paper describes the process that was implemented toward this end.

A. BACKGROUND

Demographic benchmark analyses of early extracts of the MAF indicated an overcoverage of housing units at the national level. The July 1999 Decennial Master Address File (DMAF) extract contained seven percent more housing units than the Census Bureau's July 1998 independent housing unit estimate.^{1,2} The January 2000 DMAF extract showed

improvement. During this time frame, field work had been conducted in mailout/mailback areas to identify addresses that should not be included on the file. No work was performed in update/leave areas so the housing unit counts in those areas remained the same. Assuming that all updates to the file in counties containing only mailout/mailback areas result in census deletes, the difference between the January 2000 DMAF and the independent estimate was 3.2 percent, while the corresponding July 1999 DMAF difference rate was 6.8 percent.³ Analyses of the April 2000 and June 2000 DMAF still indicated that there was an overcoverage problem.

Comparisons of the DMAF extract counts with the independent estimates of housing units indicated specific counties where the differences were proportionally large. A field research project was conducted to investigate the problem in some of these counties. During the week of June 18, 2000, staff visited targeted blocks in New York City, Baltimore and Chicago. Using the April version of the MAF for these blocks, staff examined approximately 20,000 addresses and found high percentages of duplicated (11.6 %) or nonexistent (1.5 %) housing units.⁴ This confirmed that overcoverage of housing units on the MAF was a valid concern.

The unknown factor was the extent to which housing unit overcoverage would be corrected by the field data collection process, primarily the Nonresponse Follow-up (NRFU) operation. That is, how effectively will field enumerators identify duplicate addresses or nonexistent housing units? However, NRFU can only correct errors for those housing units that did not return questionnaires by mail, as only nonresponding addresses will be visited. Anecdotal information received by the Census Bureau indicates that some households received and returned by mail more than one questionnaire. Because these households are not likely to be visited during the Nonresponse Follow-up operation, duplication from this source would likely remain on the final census file unless additional actions were taken.

B. DUPLICATE HOUSING UNIT OPERATIONS

Because of continuing concerns about the housing unit overcoverage due to duplication, and given that the Census Bureau would not obtain data regarding the final census housing unit counts until the Hundred Percent Census Unedited File (HCUF) was created (scheduled date of October 3, 2000), it was decided that prior to the HCUF creation the Census Bureau should develop an automated process that would identify duplicate housing units and remove them from the final census counts. The process implemented was conducted in two phases.

1. Phase 1 - Identify Potential Duplicate Housing Units

This phase was devoted to developing algorithms for identifying MAF IDs that were likely to be duplicates. Two approaches were taken. For the first approach, a set of algorithms were developed to be run on the MAF. These algorithms identified pairs (or

clusters) of MAF IDs that were likely duplicates because the addresses were the same or substantially equivalent. The second approach was to develop a set of algorithms to be run on the Decennial Response File 1 (DRF1). These algorithms identified pairs (or clusters) of MAF IDs that were likely duplicates because the households (using person data) were the same or substantially equivalent. Once the pairs of MAF IDs were identified by each of these separate processes, a combined file was created. This combined file was used as an input to the HCUF process. For each pair of MAF IDs, one MAF ID was flagged for potential deletion (unless the census process had already removed one). These flagged MAF IDs were handled in Phase 2.

a. Address Matching

Ideas for how to identify multiple address versions of the same housing unit were elicited from a broad spectrum of staff. Over 35 staff members participated in this step. Information gathered from the field research project conducted in June also informed this activity. Ideas were then analyzed with respect to high benefit, low potential for error and operational feasibility. Seven edits were then identified to be programmed.

The seven address matching edits were run on the MAF for the following nine counties: Honolulu County, Hawaii; Cook County, Illinois; Green County, Kentucky; Baltimore City, Maryland; Bronx County, New York; Kings County, New York; Queens County, New York; Chittenden County, Vermont; and Windham County, Vermont. The seven edits identified significant numbers of duplicate housing units in the more heavily populated counties, but relatively few in the three less populated counties investigated. Results were reviewed in conjunction with person data available from the DRF1 and field enumeration status codes from NRFU/CIFU OCS2000 data. Six of the seven edits performed reasonably well as measured by the percent of matched addresses that were confirmed by 1) identifying the same household, 2) containing the same “vacant” status or 3) containing a MAF ID deleted during a field data collection operation. One edit performed poorly and was modified to eliminate error-prone matches. The seven final edits⁵ were then run nationwide, resulting in 1,573,606 duplicate pairs being identified.

b. Person Matching

Person data were matched across all households in each state to identify a set of potential duplicate MAF IDs. (This differed from the address matching in which all matching was done within county.) MAF IDs were classified as potential duplicates if at least one person in an MAF ID was an exact match of

a person in another MAF ID based on first name, last name and date of birth. This initial cut produced approximately 6 million pairs of MAF IDs.

This set of potential duplicate MAF IDs was further reduced to obtain a set of equivalent households. Households were equated based on comparing each person recorded for one MAF ID with those recorded on the other MAF ID.

- Persons were considered to be the same if 70 percent of the name and date of birth characters matched.
- Households were considered to be the same if two-thirds of the individuals in one household matched to individuals in the other household.

Finally, the file was reduced again to 1) eliminate duplication between housing unit and GQ MAF IDs and 2) apply a distance criteria (30 miles) to eliminate cases unlikely to represent the same housing unit (while including duplication potentially caused by geocoding errors).

The person matching process⁶ resulted in a final file containing 2,088,197 duplicate pairs of MAF IDs.

c. File Creation

The address-matched MAF IDs were combined with the person-matched MAF IDs to create one file of unique MAF ID pairs⁷. Note that in a small proportion of cases, both address and person matching pulled together clusters of three or more MAF IDs, rather than pairs. The file was constructed so that such clusters would be identified by a common MAF ID appearing as the first MAF ID in each set of pairs within the cluster. For example, suppose the following MAF IDs were matched initially:

MAF ID 1 and MAF ID 2
MAF ID 2 and MAF ID 3

The file of pairs would be constructed as:

First MAF ID, Second MAF ID
MAF ID 1 , MAF ID 2
MAF ID 1 , MAF ID 3

MAF ID 1 would be the MAF ID that links all the pairs within a cluster together.

During the work performed to identify duplicates through address and person matching, enumerators were also conducting the block splits/misallocation field work to improve the geocoding of housing units to tabulation blocks. Some instances of duplication were reported through this operation. These duplicates were also added to the file. This process contributed 2,516 pairs of duplicates not already accounted for by the address and person matching processes.

The final combined file of duplicates was used as the input file for flagging potential deletes on the HCUF and consisted of 3,333,285 records (paired MAF IDs).

d. Flagging Potential Deletes

For each pair of duplicate MAF IDs (or cluster of MAF IDs as described above), one census ID was retained and the other(s) flagged as a delete on the HCUF. Actually, this procedure was implemented immediately upon an HCUF having been created for a state. Consequently, a new file was created, the HCUF^{Prime}, that contained the relevant information on deleted MAF IDs.

The process for selecting MAF IDs to be retained versus those flagged as deletes took into account data on the final status of the MAF ID (occupied, vacant or killed by earlier Census 2000 operations), data-defined returns (respondent- or enumerator- returns vs. imputations), number of persons, and form type (long vs. short). MAF IDs were scored based on these variables and the MAF ID with the highest score was retained.⁸ This process resulted in 2,411,743 census IDs being flagged for deletion on the HCUF^{Prime}. This number is 27.7 percent lower than the number of pairs on the input file and indicates that more than a quarter of the duplicate housing units identified by address and person matching were already removed from the HCUF as a result of earlier Census 2000 processes.

2. Phase 2 - Determine Final Housing Unit Status for Potential Duplicates

The flagged duplicate MAF IDs were temporarily disregarded in further census processing until their final housing unit status was determined. Staff reviewed address information, operational data, and person data to assess the appropriateness of classifying the flagged MAF IDs as duplicate housing units. Paired MAF IDs that were

equated by both address matching and person matching were confirmed as duplicates. The Statistical Research Division's (SRD) standard person matching algorithm was run for all the matched pairs and new probability person match scores obtained. Similarly, for the person-matched pairs, Geography Division's address scoring algorithm⁹ was applied to identify equated addresses. Addresses originally paired based on the address matching edits AND determined by the SRD matcher to contain matched households were considered to be confirmed duplicates. Conversely, address pairs containing person matches AND high address match scores were considered to be confirmed duplicates.

The remaining research focused on how well address matching worked for those cases not confirmed by a person match and vice versa. A review of update/leave and list-enumerate duplicates revealed a consistent pattern of cases where the address matching erroneously identified duplicates. The address edits pulled together MAF IDs that contained the same basic street address (such as 801 Main Street) and no data in the unit address field (called the within structure ID). However, staff determined that, generally, the location description indicated that the MAF IDs represented unique housing units. This was the first attempt at matching addresses in update/leave and list-enumerate areas and it was determined that duplicates identified only through address matching edits in these areas was too error prone. Consequently, this class of cases was identified for reinstatement into Census 2000. Use of unique map spot numbers in conjunction with information as to original address source led to another group of cases to be reinstated.¹⁰ In mailout/mailback areas, two of the original seven address edits were determined to be unreliable indicators of duplicate addresses and this set of cases were also designated for reinstatement.

Research was also focused on the ability of the person matching to identify duplicate housing units, rather than the duplicate person records serving as substitutions for other households. Prior census experience indicates two main situations where duplicate household data are not indicative of a duplicate housing unit. The first is when questionnaires are misdelivered. Although such errors may occasionally occur anywhere, the predominant source of this error is within multi-unit structures. It is not uncommon for a census questionnaire labeled for one apartment to be delivered to another. For example, suppose Apt. A is occupied by the Smith household, while Apt. B is occupied by the Jones household. If the questionnaires were misdelivered, the Smiths may return the questionnaire for Apt B. If the Jones did not return a questionnaire, a census enumerator would be assigned to visit Apt. A, because the census control file indicates that Apt. A was the address that had not returned a form. The Smiths could be re-enumerated thus causing a duplicate household record, but the census would properly count these apartments as separate, unique housing units. In effect, the Smith household serves as substitute data for the Jones household. (Note

that if on Census Day, Apt. B was vacant, the total population count would be overstated by a factor equal to the size of the Smith household in the second apartment.)

The second situation where duplicate household data are not indicative of a duplicate housing unit is where a household moves from its Census Day address to another address during the data collection time frame. Respondent recall error or enumerator procedural error may result in a mover household being enumerated more than once, at different addresses. As with misdelivery situations, the mover household data serves as substitute data for the household that actually lived at the address on Census Day. The population count will be overstated to the extent that one of the addresses was vacant on Census Day.

Based on a review of the initially deleted duplicates, algorithms were established for identifying instances where a duplicate household was more likely than not to reflect a substituted enumeration, rather than a duplication of housing units.¹⁰

a. File Creation

A control file was created that consisted of the MAF IDs deleted in Phase 1 and their corresponding duplicate paired (or clusters of) MAF IDs. Software was developed to apply the algorithms established as a result of the Phase 2 research against this control file. The algorithms were run against all pairs, and clusters of size 9 or fewer. The software output was a list of MAF IDs to be reinstated into the census.

All clusters of size 10 or more were manually reviewed by headquarters staff to determine which MAF IDs should be reinstated. These MAF IDs were keyed and then added to the file created through the computer process.

It is unknown at this time how many MAF IDs will be reinstated based on the algorithms specified.

b. Reinstating Deleted MAF IDs

The file of MAF IDs to be reinstated generated from the above process was applied to the creation of the final Hundred-percent Census Edited File (HCEF). Deleted MAF IDs that were not on the reinstatement file were permanently removed from further Census 2000 processing and thus not included on the HCEF. The reinstated MAF IDs were flagged in the FINST field and retained on the HCEF for subsequent processing.

C. SCHEDULE OF ACTIVITIES

	<u>Start</u>	<u>End</u>
Brainstorm ideas for address matching algorithms	07/26/00	08/25/00
Program and run address matching algorithms for 9 test counties	08/28/00	09/07/00
Analyze test data for address matching algorithms	09/07/00	09/15/00
Modify address matching algorithms and run nationwide	09/18 /00	10/06/00
Create a state-level extract of the DRF1 person data	09/08/00	09/27/00
Program and run person matching algorithms	09/16/00	10/07/00
Combine address and person-matched MAF IDs and prepare input file for flagging duplicates	09/20/00	10/11/00
Flag potential duplicate MAF IDs on the HCUF ^{Prime}	09/28/00	10/19/00
Determine classes of MAF IDs for reinstatement	10/16/00	11/03/00
Program and run reinstatement algorithms	11/06/00	11/14/00
Reinstate deleted MAF IDs on the HCEF	11/15/00	12/07/00

D. QUALITY ASSURANCE

Various quality assurance processes were employed throughout the project and were focused on the more complex or critical stages. In Phase 1, the GEO's standard software development quality assurance process was applied for the address matching process applied on the MAF to identify duplicate housing units. The software development process for the person matching activity was validated through an independent programming effort. Since the DRF1 files and programming algorithms used by the two programmers were not exactly the same, however, the quality assurance validation was based on whether the outputs from the person matching looked consistent and reasonable, rather than achieving complete concurrence. The software for flagging potential deletes on the HCUF^{Prime} was reviewed internally and then applied to a test state for interdivisional review before production runs were implemented.

In Phase 2, software was internally reviewed by the responsible division. Then double

programming was implemented to validate the final output of MAF IDs to be reinstated. The software for reinstating flagged deletes on the HCEF and removing the confirmed deletes was reviewed internally and then applied to a test state for interdivisional review before production runs were implemented.

E. RESPONSIBLE DIVISIONS

This was a major, ad hoc process to quickly develop a solution to the duplicate housing unit problem. The following divisions were active in developing the matching rules and conducting the necessary research:

- Chief Mathematical Statistician (DIR)
- Decennial Management Division (DMD)
- Decennial Statistical Studies Division (DSSD)
- Decennial Systems and Contracts Management Office (DSCMO)
- Field Division (FLD)
- Geography Division (GEO)
- Housing and Household Economic Statistics Division (HHES)
- Planning, Research and Evaluation Division (PRED)
- Population Division (POP)

In addition, the following divisions had responsibility for software development and creation of files.

DIR

Conducted software validation of the person-matching algorithms. Also developed and ran the software for generating the research materials used in Phase 1. For Phase 2, applied the SRD person matcher to identify the final matched households. Developed software used to analyze the duplicate pairs and created variables that were used in the reinstatement algorithms and finally, created the input files for the reinstatement process.

DSSD

Developed and ran the software for generating the research materials used in Phase 2. Also developed and ran the software to apply the reinstatement rules and to create the MAF ID reinstatement file.

DSCMO

Developed and ran the software for flagging the potential deletes in Phase 1 and for reinstating

appropriate MAF IDs in Phase 2.

GEO

Developed and ran the software for address and person matching in Phase 1. Also, created the input file of paired MAF ID duplicates for flagging. For Phase 2, created files used to generate the research materials. Also, performed the address scoring process for the person-matched pairs.

END NOTES

1. West, Kirsten K. (2000a), “Results from the County Level Demographic Benchmark Analysis of the Decennial Master Address File -Part A: Differences 5 Percent or Below for Selected Types of Enumeration Areas.” Count Review Memorandum Series 99-01. U. S. Census Bureau. January 10, 2000.
2. West, Kirsten K. (2000b), “Results from the County Level Demographic Benchmark Analysis of the Decennial Master Address File–Part B: Differences in Excess of 10 Percent for Selected Types of Enumeration Areas.” Count Review Memorandum Series 99-02. U. S. Census Bureau. February 15, 2000.
3. West, Kirsten K. (2000c) “Results from the County Level Demographic Benchmark Analysis of the Decennial Master Address File - Part C: Results from the January Master Address File”. Count Review Memorandum Series 00-01. U. S. Census Bureau. April 18, 2000.
4. Miskura, Susan M. (2000), “Overcoverage Field Research Project,” U. S. Bureau of the Census memorandum, dated September 11, 2000.
5. Knott, Joseph and Galdi, David (2000), “Geography Division Participation in Census 2000 Overcoverage Research: Processing of Address- and Person-Matched Files - Section 4: Algorithms for Pairing Addresses,” U. S. Bureau of the Census memorandum, dated November 7, 2000.
6. Knott, Joseph and Galdi, David (2000), “Geography Division Participation in Census 2000 Overcoverage Research: Processing of Address- and Person-Matched Files - Section 3: GEO Person Data Processing Method,” U. S. Bureau of the Census memorandum, dated November 7, 2000.
7. Knott, Joseph and Galdi, David (2000), “Geography Division Participation in Census 2000 Overcoverage Research: Processing of Address- and Person-Matched Files - Section 1: Introduction and Section 2: File Documentation,” U. S. Bureau of the Census memorandum, dated November 7, 2000.
8. Hogan, Howard (2000a), “Specifications for Eliminating Duplicate Records on the Hundred Percent Census Unedited File,” DSSD Census 2000 Procedures and Operations Memorandum Series #D-10 . U. S. Census Bureau. November 7, 2000.

9. Knott, Joseph and Galdi, David (2000), "Geography Division Participation in Census 2000 Overcoverage Research: Processing of Address- and Person-Matched Files - Section 5: Street Name Scoring Methodology," U.S. Bureau of the Census memorandum, dated November 7, 2000.

10. Hogan, Howard (2000b), "Specification for Reinstating Addresses Flagged as Duplicates on the Hundred percent Census Unedited File (HCUF)," DSSD Census 2000 Procedures and Operations Memorandum Series #D-11. U.S. Census Bureau. November 7, 2000.

November 21, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 82

MEMORANDUM FOR Distribution List

From: Susan M. Miskura (Signed)
 Chief, Decennial Management Division

Subject: Results of Reinstatement Rules for the Housing Unit Duplication
 Operations

Contact Person: Fay F. Nash, Assistant Division Chief for Statistical Design/Special
 Census Programs, Decennial Management Division, Room 2008-2,
 (301) 457-8039

The duplicate housing unit operations were developed and implemented to identify and remove from the census duplicate housing units that remained on the decennial file after all data collection activities had been completed. The operations were conducted in two phases. Phase 1 consisted of identifying clusters of potential duplicates and flagging one Master Address File ID (MAFID) for each cluster for potential deletion. Phase 2 of the duplicate housing unit operations identified which of the MAFIDs flagged for potential deletion would be reinstated, and thus included in the final census counts. The attached document is a memorandum explaining the tallies that result from the Phase 2 process.

Attachment

November 21, 2000

MEMORANDUM FOR Preston J. Waite
 Assistant to the Associate Director for Decennial Census

From: Susan M. Miskura (Signed)
 Chief, Decennial Management Division

Subject: Results of Reinstatement Rules for the Housing Unit Duplication
 Operations

Contact Person: Fay F. Nash, Assistant Division Chief for Statistical Design/Special
 Census Programs, Decennial Management Division, Room 2008-2,
 (301) 457-8039

Evidence from early Master Address File (MAF) extracts indicated a potential overcoverage problem. Further research indicated there was a potential for duplicate addresses. The Housing Unit Duplications Operations were implemented to identify and remove duplication to the extent possible. These operations are fully described in the Overview of the Duplicate Housing Unit Operations document dated November 7, 2000, prepared by Fay F. Nash.

Phase 1 of the program consisted of identifying potential duplicates by performing both address-level and person-level matching. A small number of duplicates were also identified during the misallocation/block splits operation. These activities yielded 2,645,387 matched pairs. For each cluster of matched MAFIDs, one MAFID was retained in the Census, while the remaining MAFIDs were flagged for potential deletion. These flagged cases were temporarily disregarded from further census processing until their final housing unit status was determined.

Phase 2 of the program identified which of the 2,411,743 MAFIDs flagged for potential deletion would be reinstated, and thus included in the final census counts. MAFIDs were reinstated if they were not likely to represent duplicate housing units, but reflected other situations, such as mover households or instances of questionnaire misdelivery. After substantial research, rules were developed to classify MAFIDs as either reinstated or deleted (and removed from the final census counts). The result from applying the rules was to reinstate 1,019,057 MAFIDs (42 percent) and to delete 1,392,686 MAFIDs

(58 percent).

Attachment 1 provides a flowchart of the tallies for each step of the process from identifying matched pairs (duplicates) to reinstating or deleting flagged MAFIDs.

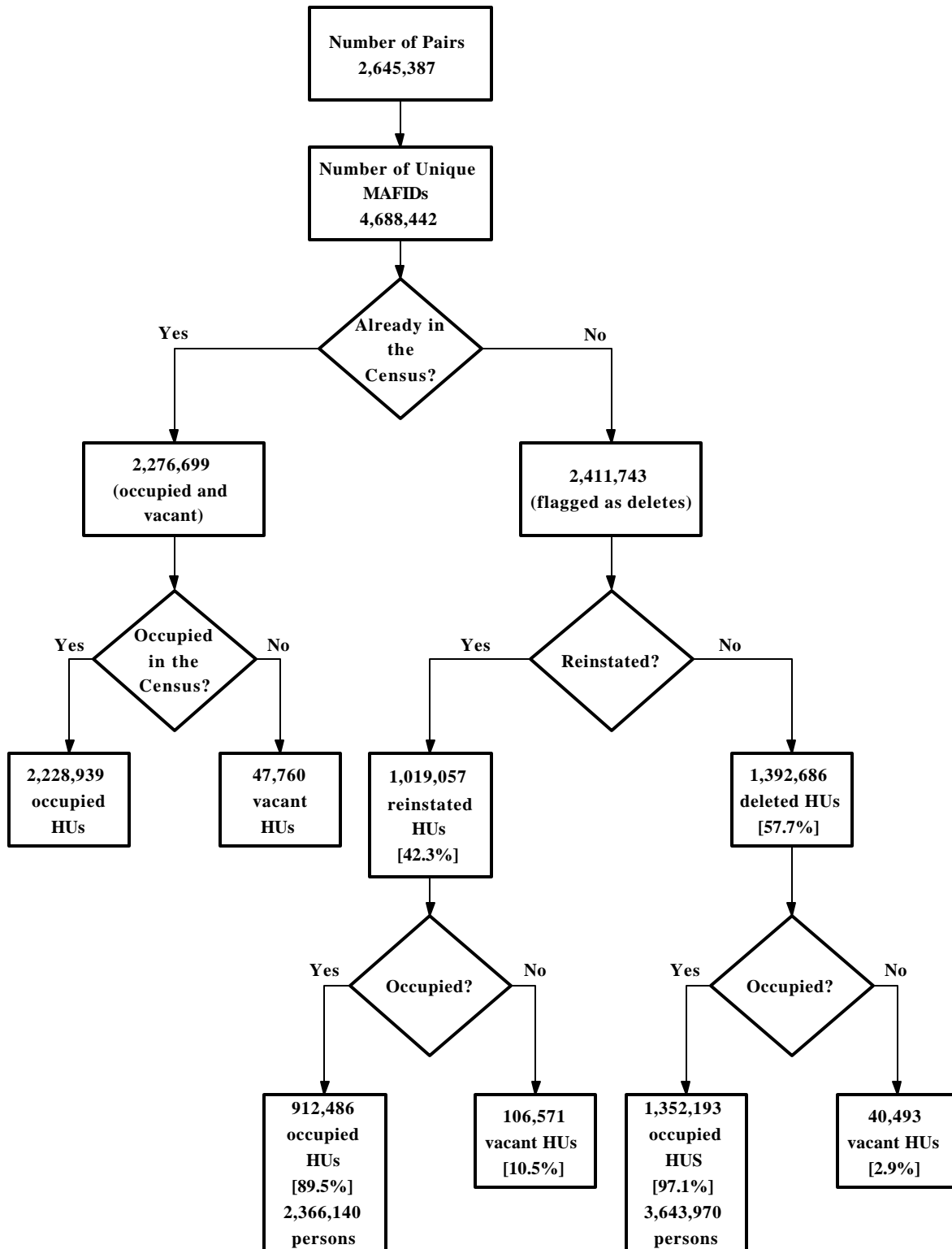
Attachment 2 presents tallies of reinstated and deleted housing units and people resulting from the Phase 2 process. The rules for reinstating are described in detail in the Specification for Reinstating Addresses Flagged as Deletes on the Hundred percent Census Unedited File (HCUF).¹ The table is divided into two main sections, clusters of size two and clusters of size three or more. Ninety percent of the flagged MAFIDs were in clusters of size two. For clusters of size 2 specific rules were applied to determine the final status. The process for reinstating MAFIDs in clusters of size three through nine consisted of forming all possible pair combinations. The specified rules were applied to the pairs and a determination was made at the cluster level as to which MAFIDs to reinstate. Clusters of size ten and greater were reviewed clerically by headquarters staff for a final status determination.

Attachments

cc: H. Hogan (DSSD)
 J. Clark “
 J. Treat “
 F. Nash (DMD)
 M. Urrutia “
 S. Brady “

¹Hogan, Howard (2000), “Specification for Reinstating Addresses Flagged as Duplicates on the Hundred percent Census Unedited File (HCUF),” DSSD Census 2000 Procedures and Operations Memorandum Series #D-11. U. S. Census Bureau. November 7, 2000.

Results of Duplicate Housing Unit Operations



Final Disposition of Flagged Potential Deletes

November 21, 2000

		Rule			Reinstated		Deleted			
		Description	No.	HU Count	Population	HU Count	Population			
URBAN	Misclassified occupancy status	NRFU Delete		1a			124,750	348,145		
		NRFU Vacant		1b			49,216	138,949		
	Misallocation Match/Block Split Match-Duplicate HUs				2			1,194	2,516	
	No Match (Address or Person)-Unique HUs				3	1,003	1,763			
	Address and Person Match	Situation 1-Duplicate HUs				4		139,999	380,274	
		Situation 2-Duplicate HUs				5		76,116	166,007	
		Situation 3-Duplicate HUs				6		131,896	374,458	
	Address-Only Match	Duplicate HUs				7		89,261	112,073	
		Unique HUs				8	44,237	58,125		
	Different Blocks	Mover between blocks-Unique HUs				9a	172,990	495,133		
		Non-mover between or across blocks-Duplicate HUs				9b			103,157	273,805
	Same Block	Misdelivery within Multi-units of size 4 or greater-Unique HUs				9c	49,891	122,738		
		Misdelivery within Multi-units of size 3-Unique HUs				9d	32,377	99,284		
		Misdelivery within Multi-units of size 2-Unique HUs				9e	148,361	469,644		
		Non-misdelivery cases-Duplicate HUs				9f			238,277	644,102
	Unconfirmed Person-Only Match-Unique HUs				10	20,707	29,688			
RURAL	Misclassified occupancy status	NRFU Delete		21a			33,147	95,031		
		NRFU Vacant		21b			30,389	86,532		
	Misallocation Match/Block Split Match-Duplicate HUs				22			423	901	
	No Match (Address or Person)-Unique HUs				23	292	501			
	Address-Only Match-Unique HUs				24	191,124	230,949			
	Different Blocks	Mover between blocks-Unique HUs				25a	42,430	122,185		
		Non-mover between or across blocks-Duplicate HUs				25b			147,447	404,383
	Same Block	Different Map Spots	Unique HUs		25c	127,930	354,762			
			Duplicate HUs		25d			110,131	313,795	
		Same Map Spots	Unique HUs		25e	50,295	136,183			
Duplicate HUs			25f			12,932	35,381			
Unconfirmed Person-Only Match-Unique HUs				26	8,033	10,798				
Clusters of Size 3 or More	Clusters of Size of 3					71,125	130,608	87,351	235,778	
	Clusters of Size of 4					26,469	48,527	9,903	21,667	
	Clusters of Size of 5					11,424	19,669	2,076	3,058	
	Clusters of Size of 6					7,175	12,068	1,775	1,903	
	Clusters of Size of 7					4,584	7,535	984	1,129	
	Clusters of Size of 8					3,815	6,209	700	651	
	Clusters of Size of 9					2,400	3,940	320	421	
	Clusters of Size 10 or More					2,395	5,831	1,242	3,011	
					1,019,057	2,366,140	1,392,686	3,643,970		

November 24, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 83

MEMORANDUM FOR: Distribution List

FROM: Susan M. Miskura (Signed)
Chief, Decennial Management Division

Subject: Project Requirements Document: Census 2000 Initial and Final
Response Rates Internet Site Project

Contact Person: Monique V. Sanders
Supervisory Survey Statistician, Field Data Collection Branch
Decennial Management Division
Room 1422-2, 301-457-8227

The Project Requirements Document (PRD) for the Census 2000 Initial and Final Response Rates Internet Site Project is attached.

Please forward any inquiries to the contact person.

Attachment

Date: November, 2000

Census 2000 Initial and Final Response Rates Internet Site Project Requirements Document

The Project Requirements Document (PRD) is an informational source that defines the requirements to fulfill the intended goals of the Census 2000 Initial and Final Response Rates Internet Site project.

Project Name: **Census 2000 Initial and Final Response Rates Internet Site Project**

Project Start Date: June, 1999

Project End Date: September, 2000

I. Project Background

Census questionnaires will be delivered to households either by the United States Postal Service (USPS) or by Census Bureau personnel. The USPS will deliver questionnaires in mail-out/mailback areas between March 13 and March 15, 2000 while questionnaires will be delivered by Census Bureau personnel in update/leave areas between March 3 and March 30, 2000. The Census Bureau will check in responses from the public via mail, Internet, telephone, and Be Counted forms starting about March 3, 2000. It is anticipated that most of the census responses will be returned within 3 or 4 weeks of delivery to the public, or around April 11, 2000. At that point, the Census Bureau will identify for nonresponse follow-up (NRFU) those households from which a census response has not been received. Any late returns checked in between April 11 and April 18, 2000 will be removed clerically from the NRFU universe by field staff. The NRFU operation is scheduled to start April 27, 2000. It is in the best interest for the Census Bureau that the universe for the NRFU operation is as small as possible.

The primary purpose of the Census 2000 Initial and Final Response Rates Internet Site project will be to encourage public cooperation in returning Census 2000 information and thereby reduce the NRFU universe. Toward this end, in the Spring, 1999, the Census Bureau posted on the Internet the 1990 mail response rates (based on 1990 geography) for active governmental entities in mailback areas. The Internet display provides local government officials, complete count committees, community based organizations, and others the information in which to begin planning activities to improve their community's response rate for Census 2000.

The Census 2000 Initial and Final Response Rates Internet Site project will be a key component of a broad-based promotion and public relations campaign developed for Census 2000 called "How America Knows What America Needs" (HAKWAN). Specifically, the Census 2000 Initial and Final Response Rates Internet Site project will be designed to support phase 1 of the program called *'90 Plus Five*, which involves challenging the highest elected officials (HEOs) of local and tribal governments in the mailback universe to increase their census response rate at least five percentage points above their 1990 response rate. These governments will be contacted by the Census Bureau by mail to participate in the *'90 Plus Five* program voluntarily. Jurisdictions that participate in the program will receive special recognition in the fall of 2000.

The core activity of the Census 2000 Initial and Final Response Rates Internet Site project will be to display response rates for use by governmental entities, complete count committees, and community based organizations beginning in March, 2000. This activity will provide yet another opportunity for these groups to increase the response rates for their communities. In late September, 2000, a final response rate posting will be available on the Internet so communities can see their level of participation in Census 2000.

In conjunction with governmental entity data, Census 2000 Initial and Final Response Rates for interim census tracts will be available for the 50 states, District of Columbia, and Puerto Rico along with limited mapping capabilities for experienced Geographic Information System (GIS) users. The Census Bureau will be offering no technical or mapping assistance.

II. Division Responsibilities

Advertising-Communications Directorate/Public Information Office (ADCOM/PIO)

- S Primary Contacts: Steven Jost, LaVerne Collins, Bey-Ling Sha, Neil Tillman.
- S Receives geography files to prepare mailings relating to the HAKWAN program.
- S Reviews and provides input to Internet site development.
- S Maintains the email address (census2000irr@ccmail.census.gov) residing on the Internet site. Distributes user's questions to established bureau contacts. Disseminates bureau contact's answers to users in a timely manner.
- S Writes press releases and develops informational data packets for media representatives relating to project.
- S Responds to general public inquiries regarding the project (Neil Tillman-PIO).

Decennial Management Division (DMD)

- S Primary Contacts: Edison Gore, Barbara Tinari, Monique Sanders.
- S Provides overall funding and oversight for the project.
- S Develops project requirements document.
- S Establishes contacts to answer users' feedback/questions received from the Internet site email address.
- S Develops frequently asked questions (FAQs).
- S Coordinates, assists and supports participating divisions where needed.
- S Develops and implements data review procedures for Internet postings.

Decennial Systems and Contract Management Office (DSCMO)

- S Primary Contacts: Dennis Stoudt, George McLaughlin, Gerard Moore.
- S Generates data from data capture centers to calculate Census 2000 Initial and Final Response Rates for Governmental Entities and Interim Census Tracts.
- S Provides data files for data table loading and Internet posting.
- S Responds to programming issues, questions, etc. relating to project (George McLaughlin - DSCMO).

Decennial Statistical Studies Division (DSSD)

- S Primary Contacts: James Treat, Charles Robert Dimitri, David Sheppard, Phillip Gbur, Rajendra Singh.
- S Develops specifications defining requirements for Census 2000 Initial and Final Response Rates.
- S Assigns target rates to 1990 entities.
- S Assigns entities created after 1990 with default 1990 response rates and target rates.
- S Assists the DMD in data review operations during production Internet postings.
- S Reviews and provides input to Internet site development.
- S Responds to public inquiries to statistical issues, questions, etc. relating to project (Rajendra Singh - DSSD).

Geography Division (GEO)

- S Primary Contacts: Joseph Marinucci, Lourdes Ramirez, Marjorie Nicolas.
- S Develops geography files for ADCOM/PIO to prepare mailings relating to the HAKWAN program.
- S Identifies entities that changed boundaries between 1990 and 2000 and entities new in 2000.
- S Develops geography files for the DSSD to assign target rates to 1990 entities and default 1990 response rates and target rates to entities created after 1990.
- S Develops geographic definitions for posting to Internet site.
- S Develops Interim Census Tract boundary files for posting to Internet site.
- S Reviews and provides input to Internet site development.
- S Responds to public inquiries to geography issues, questions, etc. relating to project (Joseph Marinucci - GEO).

Systems Support Division (SSD)

- S Primary Contacts: Thomas Berti, Rachael Taylor.
- S Develops dynamic Internet user interface to display rate information.
- S Receives data files from the DSCMO and DSSD for data table loading and Internet posting.
- S Develops and runs edit program to identify anomalies.
- S Develops review tools to analyze and approve data before public Internet postings.
- S Reviews and provides input to Internet site development.
- S Maintains the overall project Internet site.

III. Project Deliverables

Project Time Frame	Project Deliverables - Data Files for Governmental Entities
December, 1999	<p>The GEO will deliver an ASCII file (file 1) to the ADCOM/PIO containing all (mailback and non mailback) active governmental entities, names of highest elected officials and their addresses for the HAKWAN program. The source of the file will be the Geographic Program Participation Database maintained and updated by the Field Division.</p>
December, 1999	<p>The GEO will deliver ASCII files (file 2) to the ADCOM/PIO and DSSD containing the <u>mailback only</u> active governmental entities eligible universe for the HAKWAN program and the Initial and Final Response Rates Internet Site project. The type of enumeration areas (TEAs) for this universe are 1,2,6,7 and 9. There will be a total of 53 files, including 50 state files, District of Columbia, Puerto Rico, and a file containing only American Indian reservations and off-reservation trust land entities. The following information will be available for each record:</p> <ul style="list-style-type: none"> S Geographic codes (2000 based) S Geographic names (2000 based) S Geographic codes (1990 based) S Geographic names (1990 based) S Flag indicating boundary changes from 1990 to 2000
December, 1999	<p>The GEO will deliver to the DSSD an ASCII file of defunct governmental entities since 1990 for the Initial and Final Response Rates Internet Site project. The DSSD will use this file as a control file for their assignment of target rates. The following information will be available for each record:</p> <ul style="list-style-type: none"> S Geographic codes (1990 based) S Geographic names (1990 based) <p>Cohn and Wolfe, contractors for the ADCOM/PIO, will match file 1 with file 2 to prepare mailing packages for the HAKWAN Program to active governmental entities in <u>mailback only</u> areas. Cohn and Wolfe are responsible for the accuracy of this file matching operation.</p>
December 23, 1999	<p>The DSSD will deliver an ASCII file (file 2 above appended) to the ADCOM/PIO and SSD containing the <u>mailback only</u> active governmental entities eligible universe for the HAKWAN program and the Initial and Final Response Rates Internet Site project. The TEAs for this universe are 1,2,6,7 and 9. There will be 1 file containing information for the 50 states, District of Columbia, Puerto Rico, American Indian reservations and off-reservation trust land entities. The following information with division responsible will be available for each record:</p> <ul style="list-style-type: none"> S Geographic codes (2000 based) - GEO S Geographic names (2000 based) - GEO S Flag indicating boundary changes from 1990 to 2000 - GEO S Target rate (1990 mail response rate + 5 percentage points) - DSSD S Mail response rate (1990 based) - DSSD S Entity type flag - DSSD S Flag indicating assignment of default 1990 mail response rate (65%) and default target rate (65% + 5 percentage points = 70%) - DSSD

Project Time Frame	Project Deliverables - Data Files for Governmental Entities
<p>March, 2000 to September,2000</p>	<p>The DSCMO will deliver ASCII files to the DSSD and SSD containing the Initial or Final Response Rates for <u>mailback only</u> active governmental entities eligible universe. The following information will be available for each record:</p> <ul style="list-style-type: none"> S Geographic codes (2000 based) S Census 2000 Initial or Final Response Rates S Numerator and denominator data (for internal purposes only)
<p>March 27 - April 11, 2000 April 18, 2000 April 25, 2000</p>	<p>The SSD will receive data files from the DSCMO and DSSD and deliver an Internet site posting of static 1990 target rates alongside cumulative Census 2000 Initial Response Rates for active governmental entities in mailback areas at the national, state, county, minor civil division (MCD), incorporated place, consolidated city, independent city, and tribal governmental level. An active governmental entity is a general purpose government that have elected or appointed officials and can raise revenues, provide services and enter contracts. A rate for the whole tribal governmental entity will be displayed.</p> <p>The DSSD and DMD will perform an analysis of rates to ensure data integrity and accuracy before each public posting.</p> <p>The national rate will include Puerto Rico.</p> <p>Governmental entities with 7 or less housing units will be removed.</p> <p>Rates are to be displayed in whole integers (e.g., 66%).</p> <p>Rates will be posted on the Census Bureau's Internet site (www.census.gov) at 9PM EDT March 27, 2000 with subsequent postings (March 28 - April 11, 2000; April 18 and 25, 2000) at 6PM EDT. The Internet site data refresh includes weekends, where necessary. The rates posted will include cases as of 2 days prior. The Internet site will also house frequently asked questions (FAQs), geographic definitions, and an email address for users to provide feedback.</p>

Project Time Frame	Project Deliverables - Data Files for Interim Census Tracts
<p>March 27, 2000 April 1, 2000 April 11, 2000 May 2, 2000</p>	<p>The SSD will receive files from the DSCMO and deliver 4 Internet site postings of Census 2000 Initial Response Rates for Interim Census Tracts for the 50 states, District of Columbia, and Puerto Rico.</p> <p>The GEO will provide Interim Census Tract boundary files for experienced Geographic Information System (GIS) users who have an understanding of the complexities of mapping census data.</p> <p>The Census Bureau will offer no technical support nor mapping assistance beyond the availability of the Interim Census Tract boundary files.</p> <p>The DSSD and DMD will perform an analysis of rates to ensure data integrity and accuracy before each public posting.</p> <p>Rates are to be displayed to 1 decimal place (e.g., 66.1%).</p> <p>Interim Census Tracts with 7 or less housing units will be removed.</p> <p>Rates will be posted on the Census Bureau's Internet site (www.census.gov) at 9PM EDT March 27, 2000 with subsequent postings (April 1, 2000, April 11, 2000 and May 2, 2000) at 6PM EDT. The Internet site will also house frequently asked questions (FAQs) and an email address for users to provide feedback.</p>

Project Time Frame	Project Deliverables - Data Files for Governmental Entities
September 19, 2000	<p>The SSD will receive a data file from the DSCMO and deliver an Internet site posting of static 1990 target rates alongside cumulative Census 2000 Final Response Rates for active governmental entities in mailback areas at the national, state, county, minor civil division (MCD) incorporated place, consolidated city, independent city, and tribal governmental level. A rate for the whole tribal governmental entity will be displayed.</p> <p>The DSSD and DMD will perform an analysis of rates to ensure data integrity and accuracy before final public posting.</p> <p>The national rate will include Puerto Rico.</p> <p>Governmental entities with 7 or less housing units will be removed.</p> <p>Rates are to be displayed in whole integers (e.g., 66%).</p> <p>Final rates will be posted on the Census Bureau's Internet site (www.census.gov) at 10:35AM EDT September 19, 2000. The site will also house frequently asked questions (FAQs), geographic definitions, and an email address for users to provide feedback.</p>
September 25, 2000	<p>The SSD will develop a data file for the ADCOM/PIO of the governmental entities that met their target rate. This file will be used to generate awards for participants of the HAKWAN program.</p> <p>The SSD will develop a data file for the ADCOM/PIO which includes for each governmental entity their publicly posted IRRs and FRR.</p>

<p>Project Time Frame</p> <p>September 19, 2000</p>	<p>Project Deliverable - Data File for Interim Census Tracts</p> <p>The SSD will receive a data file from the DSCMO and deliver an Internet site posting of Census 2000 Final Response Rates for Interim Census Tracts for the 50 states, District of Columbia, and Puerto Rico.</p> <p>The GEO will provide Interim Census Tract boundary files for experienced Geographic Information System (GIS) users who have an understanding of the complexities of mapping census data.</p> <p>The Census Bureau will be offering no support in the form of technical or mapping assistance beyond the availability of the Interim Census Tract boundary files.</p> <p>The DSSD and DMD will perform an analysis of rates to ensure data integrity and accuracy before final public posting.</p> <p>Rates are to be displayed to 1 decimal place (e.g., 66.1%).</p> <p>Interim Census Tracts with 7 or less housing units will be removed.</p> <p>Final rates will be posted on the Census Bureau's Internet site (www.census.gov) at 10:35AM EDT September 19, 2000. The Internet site will also house frequently asked questions (FAQs) and an email address for users to provide feedback.</p>
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IV. PROCEDURES FOR ASSIGNMENT OF TARGET RATES - GOVERNMENTAL ENTITIES

Geographic Situations	Procedures for Assignment of Target Rates
Areas that were mailout/mailback in 1990 and 2000	The DSSD will assign respective 1990 mail response rate + 5 percentage points to obtain target rate.
Areas that were list/enumerate in 1990 and are now mailout/mailback areas in 2000	The DSSD will assign 65% (1990 national mail response rate) + 5 percentage points = 70% (target rate).
Boundary Changes from 1990 to 2000: N to 1 (many to 1)	The DSSD will add numerators and denominators from respective multiple 1990 entities and calculate a new rate. They will assign the new rate + 5 percentage points to the single 2000 entity to obtain target rate. <u>Note:</u> There will be one record for each new entity in 2000.
Boundary Changes from 1990 to 2000: 1 to N (1 to many)	The DSSD will assign respective 1990 mail response rate + 5 percentage points for each respective new 2000 entity to obtain target rate. <u>Note:</u> There will be one record for each new entity in 2000.
Puerto Rico	The DSSD will assign 65% (1990 national mail response rate) + 5 percentage points = 70% (target rate).

V. Census 2000 Initial and Final Response Rates Specifications

Official term - *Census 2000 Initial Response Rates* (to be used for March 27-April 11, 2000 data postings; April 18 and 25, 2000 data postings).

Refer to the DSSD CENSUS 2000 PROCEDURES AND OPERATIONS MEMORANDUM SERIES #L-4 (Revised) for a detailed specification to the DSCMO defining the requirements for the Census 2000 Initial Response Rates.

Official term - *Census 2000 Final Response Rates* (to be used for September 19, 2000 data posting).

Refer to the DSSD CENSUS 2000 PROCEDURES AND OPERATIONS MEMORANDUM SERIES #L-6 (Revised) for a detailed specification to the DSCMO defining the requirements for the Census 2000 Final Response Rates.

VI. Data Review Process for Census 2000 Initial and Final Response Rates Internet Site Project - Governmental Entities and Interim Census Tracts

The DSCMO will receive check-in data from the 4 data capture centers. The DSCMO will create one file containing the Initial Response Rate (IRR) or Final Response Rate (FRR) data. An edit will be performed on the file record by record to identify the following: current IRR or FRR less than last approved IRR or FRR. In the event that this type of anomaly exists, the DSCMO will update particular record using the last approved IRR or FRR. The DSCMO will place edited IRR or FRR file on the DMBA01 VAX machine.

The SSD will retrieve latest edited IRR or FRR file from DMBA01 VAX machine and run their independent edit program against last approved IRR or FRR file. There are three files which are outputted from this edit program described below in order of importance:

Critical Error file (file 1) - Along with the DSCMO edit where current IRR or FRR less than last approved IRR or FRR, the SSD will include the following additional edits: IRR or FRR greater than 100%, character in IRR or FRR field, IRR or FRR field is blank, and symbols, excluding decimal point, in IRR or FRR field.

Warning file (file 2) - Warnings are the following: IRR or FRR which increase 10 percentage points from last approved IRR or FRR. The following will be displayed in this file: current IRR or FRR, current housing unit count, last approved IRR or FRR, last approved housing unit count, difference in current and last approved IRR or FRR, and difference in current and last approved housing unit count.

High Profile file (file 3) (Governmental Entities only) - These governmental entities are the top 100 cities based on population for the 50 states, District of Columbia, and Puerto Rico. The information displayed: entity name, current IRR or FRR, target IRR or FRR, default target rate flag, and boundary change flag. Since this file will be generated dynamically through the software, in order to compare with last approved rates, users must print this file to compare during consecutive production runs.

Reviewers from the DSSD and DMD will access and review current files 1 - 3

independently via a data review Internet administration page setup by the SSD. The URL will be: <http://circe.ssd.census.gov/mrr/admin>. The site will be password protected.

Reviewers will meet to discuss findings from their independent reviews. The following agenda items will be discussed: Group assessment of data anomalies and whether to update or not to update the public Internet application with current data.

Scenario 1 - If there are no critical errors in file 1 and the results from either files 2 and 3 above raise no concerns, the current file will be approved and automatically updated to the public Internet application.

Scenario 2 - In the event critical errors are found in file 1, the current file will be disapproved and the SSD will be notified to update the public Internet application using the last approved file regardless of results from files 2 and 3. The SSD will perform no file updates to individual records.

Scenario 3 - If there are no critical errors in file 1 and the results from either files 2 and 3 above raise concerns, the current file will be disapproved and the SSD will be notified to update public Internet application using the last approved file.

After the public Internet posting, reasons for disapproved files will be presented to the DSCMO or SSD for explanation and correction.

Note: If the review cannot take place (i.e. Internet server down), the SSD will be notified to update public Internet application using last approved file.

The above procedures will take place during weekends when necessary with a smaller review and approval audience.

November 30, 2000

CENSUS 2000 INFORMATIONAL MEMORANDUM NO. 84

MEMORANDUM FOR: Michael J. Longini, Chief
Decennial Systems and Contracts Management Office

From: Susan Miskura, Chief (Signed)
Decennial Management Division

Subject: Authorization To Stop Processing Late Census Questionnaires in the
National Processing Center - Data Capture Center (NPC-DCC), At
the Close of Business on December 1, 2000

Contact Person: Andrea F. Brinson, DMD, Processing Systems Branch, Room 1422-2,
301-457-8233

This memorandum documents the requirement to stop processing the late census questionnaires through the NPC-DCC effective the close of business on December 1, 2000. The analysis completed by the Late Census Data Working Group, issued on November 22, 2000, determined that the late census questionnaires will have little or no impact on the quality of the census. For this reason, there is no longer a need to continue the capture of these questionnaires.

The disposition of the late census questionnaires for archiving and form destruction should follow the same procedures issued for other questionnaires of the same type.

cc:

P. Waite (DIR)	S. Miskura (DMD)
A. Berlinger (DSCMO)	E. Pike “
E. Wagner “	E. Gore “
T. Wessler “	F. Nash “
P. McGuire “	M.C. Miller “
D. Matthews “	M. Perez “
D. Stoudt “	J. Ingold “
J. Petty (NPC)	S. Boyer “
M. Grice “	C. Fowler “
M. Matsko “	A. Brinson “
H. Hogan (DSSD)	