

U.S. DEPARTMENT OF COMMERCE
Office of Inspector General



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BUREAU OF THE CENSUS

*Columbia Dress Rehearsal Experience
Suggests Changes to Improve Results
of the 2000 Decennial Census*

Audit Report No. ESD-10783-8-0001 / September 1998

Office of Audits, Economics and Statistics Audits Division





UNITED STATES DEPARTMENT OF COMMERCE
The Inspector General
Washington, D.C. 20230

September 30, 1998

MEMORANDUM FOR: James F. Holmes
Acting Director, Bureau of the Census

FROM: Johnnie E. Frazier
Acting Inspector General

SUBJECT: *Columbia Dress Rehearsal Experience Suggests Changes to Improve Results of the 2000 Decennial Census*
Final Report No. ESD-10783-8-0001
September 1998

Attached is the final report on our audit of selected activities at the dress rehearsal site in Columbia, South Carolina. An executive summary begins on page i. This report covers the initial phases of the Columbia dress rehearsal, including the beginning of non-response follow-up.

Charlotte and Columbia managers should be congratulated for their accomplishments in launching the dress rehearsal operation in Columbia with few delays. However, we would not want their achievements to mask the fact that improvements are needed for the 2000 decennial. In particular, our review identified operational problems encountered by the Columbia local census office, many of which were caused or influenced by external factors. In some instances, these problems delayed operations. In others, cost and effectiveness of operations were adversely impacted. Our recommendations for improvements to the plan for the 2000 decennial appear on pages 6, 8, 11, 16, 19, 21, and 23. The Acting Director, Bureau of the Census, expressed general agreement with our recommendations, with exceptions as noted in the report.

We commend the Bureau on its responsiveness in taking quick action to address most of our concerns. Many of the issues we raised have already been resolved. In other cases, implementing actions are planned. Complete comments to our draft report are attached, and we have incorporated them into the final report where appropriate.

We would appreciate receiving your audit action plan addressing our recommendations within 60 calendar days, in accordance with Department Administrative Order 213-5. The plan should be in the format specified in Exhibit 7 of the DAO. Should you have any questions or need to discuss the report's contents, please contact Charles Tegeler, Director, Economics and Statistics Audits Division, on (202) 482-2395. We appreciate the cooperation and courtesies extended to us during our review by Census Bureau staff at headquarters and at the regional and local census offices.

Attachment

cc: Robert J. Shapiro, Under Secretary for Economic Affairs

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EXECUTIVE SUMMARY

The Office of Inspector General conducted a performance audit of selected dress rehearsal activities for the 2000 Decennial Census in Columbia, South Carolina. The Constitution mandates that a census of the nation's population be taken every 10 years for the purpose of congressional apportionment. While apportionment is the most widely known use of census data, the data is also used for allocating federal funds and is widely disseminated to state and local governments, academia, and the private sector.

The Bureau of the Census has the responsibility for conducting decennial censuses. The next decennial census will be conducted on April 1, 2000. In preparation for the 2000 decennial, the bureau is conducting dress rehearsals to test various operations and procedures. The bureau has selected three sites for the dress rehearsals: (1) the city of Sacramento, California; (2) 11 counties in an area near and including the city of Columbia, South Carolina; and (3) the Menominee American Indian Reservation in Wisconsin. The combination of a large urban site, a small city-suburban-rural site, and an American Indian reservation was chosen to provide a comprehensive testing environment for refining planned 2000 methodologies. The bureau believes that the three sites will provide a good operational test of decennial procedures and systems.

The dress rehearsal provides for the operational testing of the procedures and systems planned for use in 2000 at the regional census centers, local census offices, and the data capture center. New procedures being considered—such as respondent-friendly forms readily available in many locations, multiple mail contacts with each household, digital capture of forms, and statistical estimation techniques—have all been tested individually in earlier operations. The dress rehearsal provides a decennial-like environment for testing these procedures and systems.

Although OIG staff visited all three dress rehearsal sites, this report covers only Columbia. Separate reports are being issued for the other two sites. Our audit objective was to test dress rehearsal operations with particular emphasis on special procedures developed to enumerate population groups that have historically been undercounted. This report includes the audit work completed through the initial phase of non-response follow-up. Separate OIG reports will be issued to address other phases of the dress rehearsal.

Charlotte and Columbia managers should be congratulated for their accomplishments in launching the dress rehearsal operation in Columbia with few debilitating delays. However, our review identified a number of areas where we believe the bureau needs to make improvements:

- **Non-response follow-up preparation was hampered by problems with printing address files and by the late delivery of supplies.** Also, non-response follow-up assignment preparation in rural areas was too complex and labor-intensive. Census needs to ensure computers have sufficient memory to print files and that materials are provided to local offices in advance to prevent delays in training and

enumeration. The bureau also needs to streamline non-response follow-up assignment preparation in rural areas. (See page 3.)

- **Changes to the address file were not always processed and resulted in unnecessary field work.** The bureau needs to determine why changes made to address listings during the update/leave operation were not reflected in the address file provided to the local census office for non-response follow-up. Census must ensure that all changes to the address file are processed timely. (See page 8.)
- **Map problems occurred throughout dress rehearsal operations.** Update/leave operation maps were too congested, missing map spots, and did not always match address registers. Moreover, the procedure used by enumerators to match housing units in the address registers to the related non-response follow-up maps was very time consuming. Finally, the local census office was unable to effectively assign enumerators to work in or around their neighborhoods because recruiting maps designed to match job applicants to the areas where they live were not practical and were not used. The bureau must evaluate map requirements and procedures for update/leave, non-response follow-up, and recruiting to determine why maps of poor quality were provided to the local census office. (See page 10.)
- **Software problems prevented accurate information about special places from being provided to enumerators. We also found that the targeted non-sheltered outdoor location enumeration could be more efficiently run. Finally, we believe the bureau will have difficulty identifying and eliminating some of the duplicate responses that we observed.** The bureau has established procedures to enumerate special populations who do not live in traditional housing units, but instead live in places such as nursing homes and college dormitories. Census must ensure that software problems are corrected so that enumerators are provided all relevant information about special places. In addition, Census must reevaluate whether to enumerate targeted non-sheltered outdoor locations that are identified by local officials but do not meet the bureau's own criteria, and require more information be collected at special places to ensure duplicate responses can more easily be identified. (See page 13.)
- **We found a number of shortcomings in the training materials used during the dress rehearsal.** For example student training manuals contained errors and confusing acronyms, did not always match up with instructor manuals, and did not have indexes for finding topics and answering questions. Furthermore, videos referenced in the manuals were not always used. As a result of these training shortcomings, we found that enumerators were not always prepared and occasionally mishandled questions and problems during enumerations. Census needs to improve training materials to ensure enumerators are better prepared. (See page 18.)

- **Questionnaire assistance centers did not appear to be effective and may be unnecessary.** The bureau needs to reevaluate whether questionnaire assistance centers should be included in its decennial design. (See page 20.)
- **Partnership specialists working in conjunction with local partners encountered problems in selecting and monitoring Be Counted locations.** Initially, there were no Be Counted locations in rural areas and some locations selected did not display the Be Counted forms. If the program is used during the 2000 census, the bureau needs to ensure that rural areas have access to Be Counted forms and that locations are monitored to ensure forms are being displayed. (See page 22.)

Our recommendations for improvements to the plan for the 2000 decennial census appear on pages 6, 8, 11, 16, 19, 21, and 23. We commend the bureau on its responsiveness in taking quick action to address most of our concerns. Many of the issues we raised have already been resolved. In other cases, implementing actions are planned. However, Census provided additional comments where it did not agree on one of the eight findings. The disagreement concerned the continued use of questionnaire assistance centers. We believe that more effective alternatives are available and discuss the issue in detail beginning on page 20. Census comments were considered and, where appropriate, are reflected in the final report. Census' written response to the draft report is attached as an Appendix.

We appreciate the cooperation and courtesies extended to us during our review by Census Bureau staff at headquarters and at the regional and local census offices.

INTRODUCTION

The Office of Inspector General has completed a performance audit of initial phases of dress rehearsal activities in Columbia, South Carolina. The dress rehearsal provides for the operational testing of procedures and systems for the 2000 decennial.

The Constitution mandates that a census of the nation's population be taken every 10 years for the purpose of congressional apportionment. However, the census data is also used for allocating federal funds and is widely disseminated to state and local governments, academia, and the private sector. A major problem in the 1990 decennial was the number of people not counted in the census: this net "undercount" was estimated by the bureau to be 4.7 million people.

The Commerce Department's Bureau of the Census has the responsibility for conducting decennial censuses. The next decennial census will be held on April 1, 2000. Prior to a decennial, the Census Bureau conducts a dress rehearsal to test various operations and procedures. In July 1996, the bureau selected three sites for the 1998 Dress Rehearsal: (1) the city of Sacramento, California; (2) 11 counties in an area near and including the city of Columbia, South Carolina; and (3) the Menominee American Indian Reservation in Wisconsin.

According to the bureau, Columbia was selected for its mixed rural and urban features and because its relatively high proportion of African-Americans will give the bureau an opportunity to test methods of reducing the differential undercount for this population group. The Sacramento site was selected because its diverse population will allow the bureau to test methods designed to reduce undercounts. The Menominee site was included to allow the bureau to test measures aimed at reducing the undercount among American Indians. The bureau believes the combination of a large urban site, a small city-suburban-rural site, and an American Indian reservation site will provide a comprehensive testing environment for refining planned 2000 operations and procedures.

Perhaps the most visible of all dress rehearsal activities was Census Day, which was conducted on April 18, 1998. However, as is the case with the actual decennial, dress rehearsal activities span a much longer period of time. Since Census Day, the bureau has been developing its population count by conducting necessary follow-up activities at nonresponding households and completing other fieldwork.

The dress rehearsal provides for the operational testing of procedures and systems planned for use in 2000 at the regional census centers, local census offices, and data capture centers. Administratively, the bureau's Charlotte Regional Census Center is responsible for conducting the Columbia dress rehearsal, while its National Processing Center at Jeffersonville, Indiana, is responsible for data capture for all three dress rehearsal sites. New procedures being considered for 2000—such as respondent-friendly forms readily available in many locations, multiple mail contacts with each household, digital capture of forms, and statistical estimation techniques—have all been tested individually in earlier operations.

PURPOSE AND SCOPE OF AUDIT

The purpose of our audit was to evaluate selected activities at the dress rehearsal site in Columbia. We placed particular emphasis on reviewing the special enumeration procedures developed by the bureau to include population groups that have historically been undercounted. We reviewed applicable laws, regulations, policies, and procedures; examined selected files and records; and reviewed appropriate documentation. OIG teams observed the enumeration of special places -- such as recreational vehicle parks, soup kitchens, and homeless shelters -- as well as the traditional door-to-door enumeration. We interviewed bureau headquarters officials in Suitland, Maryland; regional personnel in Charlotte; and local office employees and enumerators in Columbia.

We reviewed and evaluated compliance with applicable laws, regulations, policies, and procedures. Specifically, we reviewed (1) Title 13, U.S. Code; (2) Office of Management and Budget Statistical Policy Directive No. 15; (3) Public Law 103-430, which specifies cooperation between Census and the U.S. Postal Service; and (4) Paper Work Reduction Act (Title 44). We found no instances of noncompliance with applicable laws and regulations.

We did not review the adequacy of internal controls because they are being reviewed separately by staff from our Atlanta Regional Office of Audits. We also did not assess the reliability of computer-generated data because such data was not used in our review. The OIG's Office of Systems Evaluation is conducting separate reviews of decennial-related computer systems. In addition, certain administrative areas, such as recruiting, personnel, and payroll are being reviewed by our Atlanta regional staff and are covered in a separate report.

Because the dress rehearsal is still in process, and more comprehensive data on the results of the dress rehearsal are not yet available, our observations are considered preliminary and are subject to change pending further information and analysis.

Our audit was conducted at bureau headquarters in Suitland, the Regional Census Center in Charlotte, and the local census office in Columbia. The audit was conducted in accordance with the *Government Auditing Standards*, and was performed under the authority of the Inspector General Act of 1978, as amended, and Department Organization Order 10-13, dated May 22, 1980, as amended.

FINDINGS AND RECOMMENDATIONS

I. NON-RESPONSE FOLLOW-UP PREPARATION WARRANTS MANAGEMENT ATTENTION

A nationwide census will begin April 1, 2000, and must be completed by December 31, 2000. To be completed accurately and on schedule, it is essential that local census office staff be provided with sufficient supplies and materials and that the number of tasks related to preparing enumerator work assignments be kept to a minimum for local offices. This is especially important for non-response follow-up because, of all decennial operations, it is the most time-sensitive, labor-intensive, and costly.

In Columbia, non-response follow-up was an eight-week operation, scheduled to begin on May 14 and end on July 10. Based on the mail return, Columbia was required to follow-up with approximately 133,000 nonresponding housing units. To accomplish this, the local office hired and trained approximately 1,800 enumerators and assembled over 3,300 work assignments.

However, assignment preparation was hampered by problems with printing computer-generated address listings, matching computer-generated maps with the appropriate assignment areas, and recovering from the late delivery of materials. Local census office staff put in long hours assembling assignments to ensure that non-response follow-up would start on time. Nevertheless, not all enumerators were provided with assignments the first day of the operation. Beginning non-response follow-up on time for the 2000 decennial will be imperative because it directly affects the start of subsequent operations.

We believe that these conditions, if replicated at local offices nationwide during 2000, could result in a less accurate decennial and unnecessary costs.

A. Training Packets Were Incomplete

It is important that enumerators be provided with the materials needed to complete their training, perform enumeration activities, and process payroll. For example, new employees need personnel and payroll forms, training materials, and enumeration materials. These materials are supposed to be included in packets and provided to every employee on the first day of training.

In preparing for non-response follow-up, the bureau had difficulty providing Columbia with adequate and timely materials. For example, missing from some training packets were personnel and payroll forms, employee handbooks, Privacy Act Notices, Welfare-to-Work forms, and W-4 forms. In addition, there was an insufficient supply of forms needed for enumeration, such as the Notice of Visit. All these materials are referred to in the training manual, are needed for training, and should have been included in the training packets.

Initially, these packets were to have been assembled in Jeffersonville. However, for non-response follow-up, the packets had to be assembled by the local office. Regional office personnel indicated that because Jeffersonville was running behind schedule, forms and manuals were shipped in bulk to the local census office. We believe that shifting the burden of assembling training packets to the local census office was further complicated by the “just in time” concept, under which materials were to be delivered to local census offices just before they were to be used for training and enumeration. The bureau decided on “just in time” delivery due to a shortage of storage space at local census offices.

However, the “just in time” concept did not allow for unplanned slippages, and Columbia was forced to assemble the training packets only days prior to the start of non-response follow-up. As a result, the local census office did not have sufficient time to order the additional supplies needed and some enumerators were provided with incomplete training packets. Without sufficient forms and materials, training orientation on filling out personnel and payroll forms was of limited effectiveness. In addition, as enumerators went out for the first time, many did not have the Notice of Visit form. This form provides the name and telephone number of the enumerator and is to be left at those housing units where no one answers the door. Without this form, residents were unaware of the enumerator’s visit.

Furthermore, having to assemble nearly 1,800 training packets for non-response follow-up put an unnecessary strain on local census office resources and prevented the timely start of non-response follow-up because staff, expecting to assemble over 3,300 non-response follow-up work assignments, had to be reassigned to assemble training packets.

Having the local office dedicate resources to assembling training packets was a factor in causing delayed work assignments. Consequently, enumerator training could not be completed because work assignments were not ready. For the decennial census, we believe that the bureau must improve the delivery/supply system for the local offices and regional centers to ensure quality control and timely delivery of supplies, equipment, and computer-generated products.

B. Local Census Office Experienced Problems Printing Address Files

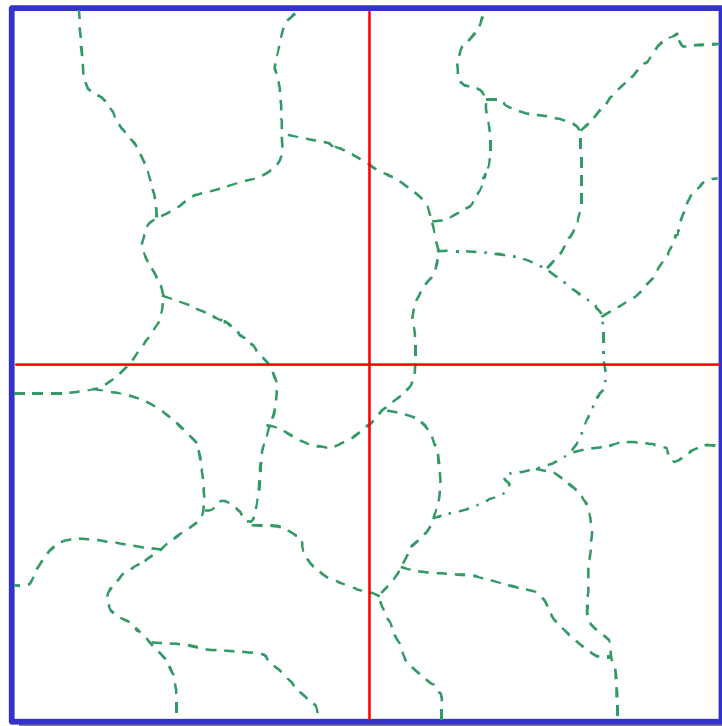
Electronic files containing address listings and address labels for 133,000 housing units included in non-response follow-up were prepared by headquarters and sent to the regional census center. Using assignment software, the regional census center sorted the address listing into assignment areas. Each assignment area, consisting of approximately 40 housing units, was given a unique identifying number. The regional census center then sent the sorted address listings and address label file to the local census office for printing. After printing, the local office placed address labels on questionnaires and matched address lists with maps.

However, when Columbia initially attempted to print the address listings and label files, the size of the computer files proved incompatible with computing resources and address information could not be printed. Computer staff were sent from the regional census center to install additional memory in the computers. As a result, three days were required to print address listings and labels instead of the several hours that had been planned. These printing problems also contributed to the delayed start of non-response follow-up operations in some assignment areas.

C. Matching Maps with Address Registers Was Problematic

The update/leave operation precedes non-response follow-up. During update/leave, enumerators, while hand-delivering questionnaires to housing units in rural areas, make corrections to maps. During non-response follow-up, the annotated update/leave maps are to be matched with smaller redrawn assignment areas. An assignment area for update/leave consisted of 250 housing units, whereas an assignment area for non-response follow-up consisted of 40 housing units. The following figure illustrates the overlap of assignment areas for update/leave and non-response follow-up:

Figure 1: Sample Map Boundaries



Solid lines indicate Update/Leave Assignment Area

Dotted lines indicate Non-Response Follow-Up Assignment Area

Because the assignment areas for non-response follow-up differed from those for update/leave, regional census center and headquarters officials created special procedures for matching maps to address registers for rural areas. Since census blocks were consistent between assignment areas, blocks could be used as the basis for matching maps with address registers. To accomplish this, the local census office was provided with two lists: one list paired update/leave assignment areas with census blocks; the other list paired non-response follow-up assignment areas with census blocks. Local census office staff were then instructed to manually compare the two lists and record the associated non-response follow-up assignment area number on the update/leave listings. Through this procedure, maps and address registers could, in rough fashion, be matched for non-response follow-up in rural areas.

Bureau officials acknowledged that these procedures were time-consuming, labor-intensive, and error-prone. Using these procedures for matching maps to address registers contributed to the delay in providing enumerators with work assignments.

Late delivery of supplies and insufficient quantities of materials, printing problems, and unplanned tasks related to the preparation of non-response follow-up assignment areas created an office environment in which errors could easily be introduced and resulted in some enumerators not being provided with assignments in time for the start of non-response follow-up. Beginning the operation on time is imperative because it directly affects the start-up of subsequent operations. For example, phone interviews in blocks selected for the post-enumeration survey begin as soon as corresponding non-response follow-up assignments are closed out.

In some instances, local and regional staffs were able to take action to resolve the obstacles, such as the printing of address files. In other instances, problems could not be resolved in time to prevent an impact on operations. In particular, these problems contributed to the delay in providing enumerators with work assignments at the start of non-response follow-up. Regional census center staff acknowledged that they will not be able to supplement the activities of every local office during the 2000 decennial as they did for the dress rehearsal in Columbia. Regional and local managers and staff should be congratulated for their accomplishments in launching non-response follow-up with only minor delays, and for completing non-response follow-up ahead of schedule. However, we would not want their achievements to mask the fact that improvements are needed to ensure an accurate, timely, and cost-effective 2000 decennial census.

Recommendation

We recommend that the Acting Director, Bureau of the Census, improve the delivery/supply system for the local offices and regional centers to ensure quality control and timely delivery of supplies, equipment, and computer-generated products.

Agency Response

The bureau believes that these problems have been resolved stating that the Census 2000 Dress Rehearsal has provided valuable lessons regarding quality control needs for shipping and receiving supplies, kits, and other Census 2000 products. Due to the significant operational burden placed on regional staff during the Dress Rehearsal, the Census Bureau has reevaluated its procedures for supply and kit delivery. In Census 2000, materials and kits will be packaged centrally at the Jeffersonville National Processing Center and shipped to the regions rather than assembled on-site at the local offices, as was done in the Dress Rehearsal. In addition, quality control needs associated with materials, supplies, equipment, and all other regional deliveries have been significantly improved as a result of an on-line, automated tracking system the Bureau put into place this summer. This system will enable the regions to provide real time feedback to bureau headquarters about deliveries and better manage their schedules and work around anticipated deliveries.

OIG Comments

The OIG agrees with the bureau's plan to centralize material and kit preparation at the Jeffersonville National Processing Center and to quality control deliveries through an on-line automated tracking system. We believe this plan will better ensure that the local census offices will receive supplies and materials on time and in sufficient quantities. However, we do not believe the bureau has adequately addressed how it will resolve problems associated with printing computer-generated address files at the local census office for Census 2000. The audit action plan should address how printing problems encountered by the local census office will be resolved for Census 2000.

II. UPDATES TO ADDRESS FILE NEED TO BE PROCESSED

During update/leave operations, as housing units are being located and questionnaires left, enumerators note those housing units that are shown as existing, but do not in fact exist. These “deletes” are provided to headquarters for processing. In this manner, address files provided to local census offices during non-response follow-up will contain only existing housing units. However, for the dress rehearsal, housing unit deletes recorded during update/leave were not processed by headquarters. Because housing unit deletes were not removed from the address file, enumerators were unnecessarily tasked with following up on units that did not exist and should have been removed from the address files.

When we followed up with headquarters officials to determine why deletes had not been processed, we were given two different explanations. One official indicated that software problems prohibited housing unit deletes from being removed from the non-response follow-up address file. However, another official indicated that, without field verification, the bureau was simply reluctant to delete housing units from the database.

Regardless of which explanation is correct, the failure of the address file to have been corrected for update/leave deletes was not communicated to regional and local officials. Local managers were frustrated that the time and effort expended to update address listings during update/leave had been wasted.

It is critical that address changes from update/leave operations be processed timely and be reflected in the non-response follow-up address files for the start of that operation. Failure to do so in the 2000 decennial will result in unnecessary costs associated with paying enumerators to follow-up on housing units that should have been removed from the address file.

Recommendation

We recommend that the Acting Director, Bureau of the Census, provide for the timely and accurate updates to maps with census address data. We would like to clarify that this recommendation also is applicable to finding *III. Map Problems Occurred Throughout Dress Rehearsal Operations.*

Agency Response

The bureau concurred with our recommendation and its Geography Division has established an inter-divisional Geographic Products Quality Assurance Team that includes staff from the Field and Decennial Statistical Studies Divisions. This team has been reviewing all maps and other geographic products since mid-July, and the maps provided for recent field operations, such as the nationwide Address Listing Operation, have not had the types of problems that affected the Dress Rehearsal.

OIG Comments

We agree that a Quality Assurance Team is necessary to review maps and other geographic products. However, the audit action plan must specifically address the processing of update/leave housing unit deletes for Census 2000.

III. MAP PROBLEMS OCCURRED THROUGHOUT DRESS REHEARSAL OPERATIONS

Accurate maps and associated address lists are essential for ensuring that households receive census questionnaires and that enumerators are able to locate housing units. During update/leave operations, enumerators simultaneously hand-delivered questionnaires to households in rural areas and updated address lists and maps to reflect housing unit additions and deletions. During non-response follow-up, enumerators were provided with maps and address registers to locate housing units from which questionnaires had not been returned. Maps were also used during recruiting to determine whether enumerators could be assigned to work in areas near their residence.

A. Update/Leave Maps Had Numerous Problems

Columbia experienced a variety of problems associated with update/leave maps. Maps provided to the local office for the operation in some cases were too congested, had missing housing units, and did not match related address registers. To correct this problem, staff from headquarters and the region assisted the local office in reprinting maps and devising special procedures for the update/leave operation. Thus, the bureau was able to identify and correct problems with update/leave maps in a timely manner, and we commend them for this accomplishment. Early action permitted update/leave operations to start on time. However, in the 2000 decennial, the bureau will have limited ability to assist each local census office in the manner it was able to assist Columbia in the dress rehearsal.

B. Non-Response Follow-Up Maps Were Difficult To Match with Address Registers

Maps for non-response follow-up are printed only for areas where questionnaires are delivered through the mail (urban areas). For residences where questionnaires were to be hand-delivered, enumerators reused the update/leave maps from a previous operation. Problems with reusing update/leave maps have previously been discussed. (See page 5.)

Because maps for urban areas did not define assignment areas, many enumerators indicated that they spent several hours reviewing non-response follow-up maps attempting to match housing units listed in address registers with related maps. For example, one enumerator was provided with 42 maps: a census tract map that identified the assignment's general geographic area; 40 detailed census tract maps; and an index map that allows enumerators to toggle between the tract map and the detailed maps. After reviewing all 40 detailed census tract maps, the enumerator determined that only 8 were needed. The other 32 maps included areas not in the assignment area, and therefore, were not necessary.

The enumerator also pointed out the difficulty in matching the address registers to the maps. In address registers, housing units are categorized into census blocks. However, since index maps did not include block numbers, enumerators had to review each of the detailed maps searching for appropriate block numbers. This process was very tedious and time-consuming and needs to be streamlined.

C. Recruiting Maps Were Unusable

Recruiting maps were to be used by the local census office to match job applicants with assignments in areas where they live. It was anticipated that job applicants would be able to locate their neighborhoods on the maps; the local office could then assign enumerators to work in areas close to their homes. Census has determined that assigning enumerators to areas near their residences is beneficial because enumerators will be familiar with street locations and neighborhoods. Also, costs would be reduced through less travel time and mileage.

However, the recruiting maps were not easy to use. For example, the block maps were cumbersome, measuring 3 by 3 ½ feet, and some testing locations, where job applicants first see the maps, were provided with as many as 40 block maps. When using the maps proved to be impractical, the local census office attempted to match enumerators to assignment areas using phone number prefixes. However, this too proved to be ineffective.

We believe the bureau needs to provide local census offices with procedures that will allow them to systematically assign enumerators to work in areas close to where they live. When we spoke to headquarters officials concerning the usability of recruiting maps, they advised us that they plan to use computers to match enumerators with their assignment areas during the 2000 decennial.

While map problems associated with update/leave operations were identified and corrected for the dress rehearsal, it is doubtful that a similar process can be easily implemented in the 2000 decennial. Furthermore, we believe that the bureau should determine whether it is possible to reduce the time enumerators spend trying to locate housing units on maps used for non-response follow-up. Finally, the bureau needs to evaluate how to effectively assign enumerators to areas where they live, whether through maps, computer matching, or other alternatives.

Recommendation

We recommend that the Acting Director, Bureau of the Census, develop reliable methods to match enumerators with the most appropriate assignment areas. In addition, recommendation for finding *II. Updates to Address File Need to Be Processed* also applies to this finding.

Agency Response

The bureau concurred with our recommendation and has conducted a thorough review of our finding regarding the need to develop more reliable methods to match enumerators to appropriate

assignment areas. The bureau has assessed decennial products and/or operations and has discussed this matter extensively with regional and headquarters' field staff. Based on the bureau's analysis the following steps will be implemented to address this issue in Census 2000:

1. The bureau has improved recruiting maps to make the tract numbers and tract boundaries more evident.
2. Efforts are already underway to incorporate a verification edit into the PAMS/ADAMS system that will check for a valid tract number, ensuring that it relates to the appropriate local census office.
3. The bureau will require Regional Census Center and Local Census Office managers to code the location of each job applicant's home address at the tract level, at the time of recruitment and /or testing. This requirement will be strengthened in recruitment training manuals to ensure that applicant geocoding at the tract level or below occurs during the recruitment/testing process.
4. The bureau will reinforce, through training and materials, the need to make applicant selections at the tract level or below.
5. The bureau will ensure that non-response follow-up crew leaders have county locator maps that clearly show the various census tracts and can be used to assist in making enumerator assignments at the time of enumerator training.

OIG Comments

These actions, if properly implemented in Census 2000, will meet the intent of the recommendation.

IV. IMPROVEMENTS NEEDED IN SPECIAL PLACE ENUMERATION

Census is responsible for enumerating special populations -- people who live in nontraditional housing, or who have no permanent residence. Although we found that Census was generally effective in carrying out the operation, we believe that some improvements can be made to improve its efficiency and effectiveness. Specifically, we found that poor preparatory work resulted in an incomplete enumeration at one site; enumerating targeted outdoor locations appeared to be unproductive for Columbia; and some of the procedures used for enumerating special populations may increase the risk of uncorrectable duplicate responses.

A. Different Types of Special Population Enumerations Were Tested

In addition to counting people living in houses and apartments, Census must also enumerate people living in group quarters, other nontraditional housing units, and people having no permanent residence. Nontraditional housing units include nursing homes, group homes, college dormitories, and migrant worker camps. The bureau has developed a comprehensive set of procedures to enumerate these special populations who are characterized by unique living circumstances and have historically experienced high undercount rates.

The dress rehearsal tested some enumeration methods that will be used for these special populations in the 2000 decennial:

- Service-based enumeration is designed to improve the count of individuals who do not have a permanent residence and who might not be counted using traditional enumeration methods. Service-based enumerations were conducted in selected service locations, such as shelters, soup kitchens, and at targeted outdoor locations.
- Transient night enumeration attempts to count highly mobile individuals who do not live in traditional homes. Examples include people who live in recreational vehicles and boats or who travel with carnivals.
- Group quarters enumeration counts individuals living in places such as nursing homes, prisons, and college dormitories.

To enumerate effectively using these methods, the bureau recognizes that it must first create inventories of special places. These inventories include the location, the names of contact persons, the number of people expected to be counted at each location, the preferred times to enumerate, and where appropriate, whether male or female enumerators should be used. This information is important to the enumeration because it enables the scheduling of the best times to enumerate, and the assignment of the appropriate numbers and types of enumerators.

B. Enumeration Form Lacked Key Information

Enumeration teams use an Enumeration Record (Census Form DX-352) to assist in enumerating special places. The form should contain the name and location of the special place and other relevant information. However, we reviewed forms used by enumerators during the dress rehearsal and found that they omitted pertinent comments in the remarks section. In addition, most of the Enumeration Records we reviewed did not have the recommended times to enumerate. Some also contained inaccurate estimates of the number of people to be enumerated. It is important for Census to know the numbers of people expected to be enumerated and the best times to enumerate in order to know how many enumerators to assign and when they should arrive. Because the forms lacked this key information, enumerators were unaware of the special circumstances that could affect their enumeration.

Inadequate key information about transient night--an evening designated to count people living in recreational vehicles, on boats and in other types of transient facilities--resulted in inappropriate numbers of enumerators assigned to conduct the counts. For example, in one instance, six enumerators and a crew leader visited a campground expecting to count more than 100 campers. Information about the number of campers was not shown on the Enumeration Record, but had been orally communicated to the enumeration team. When the team arrived at the campground, the contact person had not been notified that the team was coming, and the team found only 20 campsites, 16 of which were vacant. As a result, the team of seven enumerators counted the occupants of only 4 recreational vehicles.

In another instance, on the same evening, a team of 6 enumerators visited a state park, for which the Enumeration Record failed to provide the key information necessary to plan the enumeration. The enumerators found the park to be very large, encompassing a marina, 5 lakeside villas, and sites for nearly 100 recreational vehicles and 15 tents. The team was unable to complete the enumeration at that time and had to reschedule its visit.

Assigning too many enumerators can result in unnecessary costs, while not assigning enough enumerators can possibly result in incomplete counts. In all cases, not having sufficient information to plan enumerations results in inefficiencies. In discussing these problems with local managers, we were told that a software glitch prevented the necessary information from being shown on the Enumeration Record. For the 2000 decennial, the bureau needs to ensure that enumerators are provided with accurate and complete information to plan enumerations at special places.

C. Enumeration at Targeted Non-Sheltered Outdoor Locations Was Unproductive

Enumerations conducted at targeted non-sheltered outdoor locations are designed to count people who would otherwise be missed because they do not live in traditional housing units. For the dress rehearsal, the Columbia police department provided a list of six outdoor locations. To execute the count, 3 enumeration teams, each consisting of approximately 10 enumerators, visited 2 sites each.

The end result proved disappointing: these 30 enumerators were able to locate and count only 7 people.

In discussing these results with a headquarters official, and noting that the policy is to enumerate only those locations where 15 or more people are expected to be found, we were told that the bureau will reevaluate its procedures in light of the disappointing results we noted. The official hypothesized that, while it may be of limited effectiveness in cities like Columbia, the operation might be better suited for larger urban areas.

D. Duplicate Responses Are Likely in Special Place Enumeration

Techniques used for special place enumeration during the dress rehearsal increased the possibility that multiple responses would be submitted by the same individuals. For example, during the dress rehearsal special place enumeration, shelters were enumerated on Monday, April 20; soup kitchens on Tuesday, April 21; and targeted non-sheltered outdoor locations on Wednesday, April 22. We found that the sequencing of these enumerations makes duplicate responses likely when the same individuals from the target population group are counted at the different locations on different days.

We noted one special place that was enumerated twice, once on Monday during a shelter enumeration, and then again on Tuesday during a soup kitchen enumeration. At the soup kitchen, we observed several people asking whether they had to complete questionnaires again since they had been enumerated the previous night during the shelter enumeration. Furthermore, we found the soup kitchen enumeration was susceptible to duplicate responses, because one organization served breakfast, another served lunch, and a third served dinner. Because each location served a different meal to the same target population group, but at different times, it is quite possible that the same individuals may be counted more than once.

Soup kitchen and shelter training manuals require enumerators to count everyone at every location. Furthermore, if individuals fail to cooperate, enumerators are instructed to collect “last resort” information—that is, through observation, to note the gender and race of the individual. However, enumerators are not instructed on how to manage situations where people claim that they have already been counted.

When we spoke to headquarters officials, they stated that most multiple responses should be eliminated during data processing. However, they did acknowledge that “last resort” duplicate enumerations would not be detected because of insufficient information.

Although the bureau uses software programs designed to detect and eliminate duplicate responses, we believe that it will have only limited success in eliminating responses from special place enumerations. Because of this difficulty, the bureau should explore ways to reduce the number of duplicate responses at the time of enumeration rather than relying on automated unduplication processes. For example, consideration might be given to performing all special place enumerations

at the same time, such as is done for transient night operations, thereby reducing the probability that the same individuals will be counted more than once.

Recommendation

We recommend that the Acting Director, Bureau of the Census, provide enumerators with accurate and complete information to plan enumerations at special places.

Agency Response

The bureau concurred with our recommendation advising that it will ensure better training of the special place operations' supervisor to improve this procedure for Census 2000. The bureau will incorporate this concern in future service-based enumeration training activities and explain the importance of entering complete and accurate information on enumeration records prior to actual enumeration activities.

OIG Comments

These actions, if properly implemented in Census 2000, will meet the intent of the recommendation.

Recommendation

We recommend that the Acting Director, Bureau of the Census, provide specific instructions for special place enumeration to reduce the possibility of obtaining duplicate responses.

Agency Response

The bureau concurred with our recommendation advising that it is sensitive to the issue of duplication during service-based enumeration operations, and has already taken steps to address this matter in Census 2000. The bureau has added a question to the "Individual Census Questionnaire," which asks service-based enumeration respondents if they have filled out another census form during the past week. The bureau also intends to evaluate Dress Rehearsal service-based enumeration results, including the quality of data collected during this operation. Based on this assessment, the Bureau will develop revised plans by February 1999 to minimize duplication risks in Census 2000.

OIG Comments

These actions, if properly implemented in Census 2000, will meet the intent of the recommendation. When the evaluation is completed, the bureau is asked to provide our office with a copy of the assessment of the service-based enumeration and its revised plans to minimize duplication risks in Census 2000.

V. ENUMERATOR TRAINING NEEDS IMPROVEMENTS

Census has the responsibility for training enumerators, crew leaders, and field office supervisors in conducting field operations. We attended several training sessions covering different dress rehearsal phases and found training manuals inadequate for preparing enumerators for certain situations.

The Columbia local census office is expected to train almost 3,800 employees for the various phases of the dress rehearsal. The largest training phase was for non-response follow-up: more than 1,800 enumerators had to be trained. Crew leaders, who are themselves temporary employees, serve as instructors for enumerator training. The method used for training is lecture and discussion, delivered verbatim by the crew leaders from a training guide. Census uses verbatim guides to ensure uniform training; to control the cost and timing of training; and to free supervisors from the burden of having to prepare their training programs.

We found a number of shortcomings in the training materials used during the dress rehearsal. For example, student training manuals contained errors and confusing acronyms, did not always match instructor manuals, and did not have indexes for locating topics quickly. Furthermore, video presentations, referenced in the manuals, were not always used.

As a result of these training shortcomings, we found that enumerators mishandled many situations during enumerations. For example, the training manual for transient night -- an operation designed to enumerate individuals living in recreational vehicles and boats or who travel with carnivals -- was unclear as to which day to conduct the count. Transient night occurred on Friday, April 17, the night before Census Day. This led to much confusion because the questionnaire being filled out on April 17 asked about people living there on the next day, April 18. We observed that during training, enumerators asked the crew leader to clarify which date they should be using. The crew leader, unsure of the correct answer, told the class to use April 18. As a result of this decision, the crew leader instructed the enumerators to ask the interviewees what their status would be the next day. That is, according to the crew leader, if they would be leaving the park on April 18, they should not be enumerated, but if they expected people to be joining them on April 18, then the new arrivals would also need to be enumerated.

When informed about the confusion over the dates, headquarters officials indicated that the crew leader's interpretation of which date to use was incorrect. Bureau managers agreed that the training manuals had shortcomings. Headquarters officials advised that they did not have sufficient time to do a dry run of the training materials for the dress rehearsal, but plan to do so for the 2000 decennial.

The bureau needs to ensure that sufficient time is provided in 2000 for a thorough review of training manuals, including dry runs by the regional offices to correct errors. The bureau also needs to review its manuals to eliminate unnecessary acronyms and make them less confusing.

Recommendation

We recommend that the Acting Director, Bureau of the Census, improve training manuals to make them more user friendly (such as including indexes and eliminating unnecessary acronyms) and to reduce the number of errors and inconsistencies.

Agency Response

The bureau concurred with our recommendation and advised that it will provide indexes for training manuals and will also clarify and better explain acronyms used in training. The bureau will also clarify and better explain acronyms during non-response follow-up training and ensure that non-response follow-up and service-based enumeration training manuals receive more extensive internal reviews before issuance to regional training staff, including requiring dry runs for all training manuals.

OIG Comments

These actions, if properly implemented in Census 2000, will meet the intent of the recommendation.

VI. QUESTIONNAIRE ASSISTANCE CENTERS MAY BE UNNECESSARY

The questionnaire assistance center and the telephone questionnaire assistance toll-free line have similar goals: help respondents complete their forms. In comparing dress rehearsal data from both programs, it is clear that the toll-free line was much more effective at providing assistance than questionnaire assistance centers. For the dress rehearsal, as of June 28, the bureau received 23,371 phone calls for assistance from the three dress rehearsal sites, while the questionnaire assistance center program in Columbia yielded only 40 respondents seeking assistance.

Questionnaire assistance centers are places where the public can go for help with filling out questionnaires. In addition, if someone does not receive an addressed census form, that person may pick up a Be Counted form at one of the centers. According to headquarters officials, the bureau prefers that individuals go to assistance centers for help with the form received in the mail, rather than the Be Counted form, because the mailback form is easier to process. Be Counted forms must be geocoded and checked for duplicate responses once received, and many will require field verification.

Questionnaire assistance centers can be staffed by paid bureau employees or by volunteers. All assistance centers in Columbia were staffed by volunteers. Columbia's two partnership specialists were responsible for identifying locations and recruiting and training volunteers to staff the centers.

Volunteer-run questionnaire assistance centers were not effective in Columbia. Although the partnership specialist had identified 27 sites, we found that some of these sites were not participating in the program. Of the 10 questionnaire assistance centers we were able to contact, a public library was the only center that participated as a questionnaire assistance center, but participation ended after two days. According to a library spokesperson, the volunteer stopped coming when the volunteer realized that no one was coming in for help. Furthermore, bureau data indicates that only 41 respondents had requested assistance at centers in Columbia.

For the Columbia dress rehearsal, regional staff believed that they could rely on volunteers and that they were replicating how questionnaire assistance centers would be run for 2000, stating that it would be cost-prohibitive to pay staff at each center for 2000. However, given the poor performance of volunteer-run centers, the regional partnership coordinator is recommending that the bureau hire staff to assist volunteers in operating the centers.

We agree that relying exclusively on volunteers did not work. However, before additional funds to run questionnaire assistance centers are provided, we believe the bureau needs to evaluate how effective questionnaire assistance centers were in helping individuals fill out forms mailed to their residences. Because the bureau cannot easily publicize the locations of volunteer-staffed questionnaire assistance centers or ensure that a paid-staff site will receive a sufficient number of customers, we do not believe that assistance centers are a cost-effective means of providing assistance. We recognize that helping respondents in filling out forms is important, but we believe the bureau better accomplishes this through its telephone assistance program.

Recommendation

We recommend that the Acting Director, Bureau of the Census, reevaluate reliance on questionnaire assistance centers, in light of the apparent successes of the telephone assistance program.

Agency Response

The bureau disagreed with our recommendation stating that the use of walk-in assistance centers is envisioned as a key component of the Census Bureau's plan for providing questionnaire assistance, especially assistance in foreign languages during Census 2000. While the Census Bureau concurred that telephone questionnaire assistance is a cost-effective method for providing assistance to respondents in English, providing such assistance in languages other than English is more problematic and less cost-effective. In addition, it is particularly important that the assistance centers provide assistance to those individuals who do not have access to telephones and to individuals with poor literacy skills. The bureau also noted that space and, in some cases, staffing for questionnaire assistance centers are normally provided on a volunteer basis by the local community, thus reducing the potential cost savings that could be applied to other coverage improvement operations should centers be reduced.

OIG Comments

We disagree and believe the bureau needs to reevaluate its reliance on questionnaire assistance centers. Center locations are not publicized. Therefore, respondents are not aware where the centers are located within their communities. Although some potential respondents may not have telephones in their homes, we believe that it will be easier for them to find a public telephone (that can be used day or night) than to make transportation arrangements to an assistance center (that may or may not be staffed). Furthermore, assistance centers using volunteers were not effective; volunteers were not reliable; and questionnaire assistance centers in Columbia only assisted 41 respondents. Moreover, we disagree with the bureau's statement regarding the potential cost savings of volunteer-run questionnaire assistance centers because the bureau plans to use paid staff in questionnaire assistance centers for 2000, thus increasing the cost of the questionnaire assistance center program for Census 2000.

VII. BE COUNTED PROGRAM NEEDS IMPROVEMENT

The bureau's partnership specialists, who work with community partners, were not effective in selecting Be Counted locations. In fact, the Columbia office compiled three very different Be Counted site lists for the dress rehearsal. The first list contained 59 targeted sites; the second targeted 21 sites; and the third consisted of a combination of 116 generic and targeted sites. Given the short 4-week duration of the Be Counted program, a complete list of Be Counted sites should have been compiled well before the operation.

The Be Counted campaign was designed to count persons who believe they were not included on any other census form, to count people who did not receive a census questionnaire, and to encourage participation in the census by persons who have traditionally been undercounted. The Be Counted form is an unaddressed questionnaire that is distributed at selected sites, both generic and targeted. Generic sites include city halls, post offices, and libraries. Targeted sites are places where the traditionally hard-to-count persons might be expected to congregate, such as certain businesses and churches. In Columbia, the Be Counted operation lasted 4 weeks, beginning on April 16 and ending on May 14, 1998.

There are a number of reasons for the ineffectiveness of the Be Counted campaign. Some sites were targeted too early, in the fall of 1997, and after that time, many locations decided not to participate. Others were unaware of their commitment because the person agreeing to participate had since left the organization. When the regional coordinator learned of this, she adjusted the list from 59 proposed sites to 21 confirmed sites.

In addition, after the Be Counted campaign began, the regional partnership coordinator recognized that locations contacted in the fall of 1997 should have been contacted again before the start of the Be Counted campaign to ensure their commitment. We agree that a follow-up phone call would have lessened the uncertainty over whether a site would participate.

In discussing Be Counted sites in rural areas, the regional partnership coordinator indicated that headquarters required that Be Counted sites be targeted using local partners' input. Therefore, not having local partner input from rural areas, Be Counted sites had not been designated outside the city of Columbia. After realizing that rural areas did not have access to Be Counted forms, regional partnership staff decided to designate generic sites for rural areas. With these additions, the Be Counted list grew from 21 to 116 sites. However, generic sites were not added until after the start of the Be Counted campaign.

Written instructions for the dress rehearsal stated that *all* Be Counted sites would be targeted (that is, generic sites would not be used) and that these sites would be identified by the partnership specialist working with local and tribal governments and community organizations. According to headquarters staff, the bureau had determined that it would not be feasible to support a large number of sites in 2000, and that generic sites might lead to a high number of duplicate responses. However, these instructions contradict the recommendations from the 1995 Census Test, which

indicated that generic sites in rural areas, especially post offices and libraries, were the most productive in terms of forms picked up by respondents. To ensure that the Be Counted program is implemented successfully, bureau managers need to provide guidance consistent with lessons learned from previous studies.

Finally, the bureau needs to periodically monitor locations to ensure that forms are being displayed. During field visits on April 20, using the second list provided to us, we were able to contact 20 of the 21¹ Be Counted sites to determine whether Be Counted forms had been provided and were displayed. We found that two sites did not receive forms, while three others were not displaying the forms.

Recommendation

We recommend that the Acting Director, Bureau of the Census, reevaluate the Be Counted program to determine whether the number of sites or the location of sites contributed to improving the response rate or increasing the likelihood that duplicate forms were submitted.

Agency Response

The bureau concurred with our recommendation advising that on-going analysis of gains from the Be Counted program is part of the Census Bureau's operational assessment of the Dress Rehearsal results. Moreover, a formal evaluation of procedures used to resolve duplicate enumerations during the Dress Rehearsal will be completed by January 1999. Current Census 2000 plans are to limit the scope of the Be Counted program to include only sites identified in consultation with local partners in hard-to-enumerate areas.

OIG Comments

These actions, if properly implemented in Census 2000, will meet the intent of the recommendation. The bureau's audit action plan should include a copy of the bureau's assessment of Be Counted data.

¹ We were unable to contact a church listed as a Be Counted site because it was closed during the day and no one in the office answered the door or the phone.

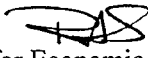


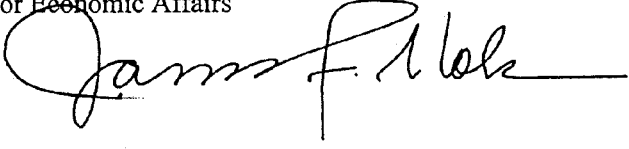
UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
 Washington, DC 20233-0001

OFFICE OF THE DIRECTOR

SEP 30 1998

MEMORANDUM FOR George E. Ross
 Assistant Inspector General for Auditing

Through: Robert J. Shapiro 
 Under Secretary for Economic Affairs

From: James F. Holmes 
 Acting Director

Subject: Columbia Dress Rehearsal Experience Suggests Changes to
 Improve Results of the 2000 Decennial Census
 Draft Audit Report No. ESD-10783-8-xxxx

This is in response to your memorandum dated September 2, 1998, transmitting the above referenced draft audit report regarding the Columbia Dress Rehearsal. The purpose of the Dress Rehearsal is to identify any technical and operational difficulties in the Census 2000 plan with the full expectation that there will be some difficulties. The success of the Dress Rehearsal can be gauged by its ability to provide the Bureau with information about what worked well and what areas need improvement. A successful Dress Rehearsal will also provide the Bureau with ideas with how to improve operations that did not function as well as expected. On this measure, the Dress Rehearsal has been a success, not only because the Census Bureau was able to hire sufficient staff, achieve targeted mail response rates, and complete operations on schedule, but also because we did learn about areas where we need make improvements, some of which have already been addressed. Indeed, the Office of Inspector General (OIG) has been very helpful in working with the Bureau to identify these areas of concern, and the Bureau is appreciative of the OIG's input.

Your report includes the following recommendations:

- 1) *Improve the delivery/supply system for the local offices and regional centers to ensure quality control and timely delivery of supplies, equipment and computer-generated products.*

Problem resolved: The Census 2000 Dress Rehearsal has provided valuable lessons regarding quality control needs for shipping and receiving supplies, kits, and other Census 2000 products. Due to the significant operational burden placed on regional staff during the Dress Rehearsal, the Census Bureau has reevaluated its procedures for supply and kit delivery. In Census 2000, materials and kits will be packaged centrally at the Jeffersonville National Processing Center and shipped to the regions rather than assembled on-site at the local offices, as was done in the Dress Rehearsal. In addition, quality control needs associated with materials, supplies, equipment, and all other regional deliveries have been significantly improved as a result of an on-line, automated tracking system the Bureau

put into place this summer. As the OIG has indicated in its recent report on the Menominee Dress Rehearsal, this system will enable the regions to provide real time feedback to Bureau headquarters about deliveries and better manage their schedules and work around anticipated deliveries.

2) *Provide for the timely and accurate updates to maps with census address data.*

The Bureau concurs: The Geography Division has established an inter-divisional Geographic Products Quality Assurance Team that includes staff from the Field and Decennial Statistical Studies Divisions. This team has been reviewing all maps and other geographic products since mid-July, and the maps provided for recent field operations, such

as the nationwide Address Listing Operation, have not had the types of problems that affected the Dress Rehearsal.

3) *Develop reliable methods to match enumerators with the most appropriate assignment areas.*

The Bureau concurs: The Census Bureau has conducted a thorough review of the OIG's finding regarding the need to develop more reliable methods to match enumerators to appropriate assignment areas. The Census Bureau has assessed decennial products and/or operations and has discussed this matter extensively with regional and headquarters' field staff. Based on this analysis, the following steps will be implemented to address these issues in Census 2000:

- The Census Bureau has improved recruiting maps to make the tract numbers and tract boundaries more evident.
- Efforts are already underway to incorporate a verification edit into the PAMS/ADAMS system that will check for a valid tract number, ensuring that it relates to the appropriate Local Census Office (LCO).
- The Census Bureau will require Regional Census Center/LCO managers to code the location of each job applicant's home address at the tract level, at the time of recruitment and/or testing. This requirement will be strengthened in recruitment training manuals to ensure that applicant geocoding *at the tract level* or below occurs during the recruitment/testing process.
- The Census Bureau will reinforce, through training and materials, the need to make applicant selections at the tract level or below.
- The Bureau will ensure that Non-Response Follow-up (NRFU) crew leaders have county

locator maps that clearly show the various census tracts and can be used to assist in making enumerator assignments at the time of NRFU enumerator training.

- 4) *Provide enumerators with accurate and complete information to plan enumerations at special places.*

The Bureau concurs: The Census Bureau will ensure better training of the Special Place operations' supervisor to improve this procedure for Census 2000. The Census Bureau will incorporate this concern in future Service-Based Enumeration (SBE) training activities and explain the importance of entering complete and accurate information on enumeration records prior to actual enumeration activities.

- 5) *Provide specific instructions for special place enumeration to reduce the possibility of obtaining duplicate responses.*

The Bureau concurs: The Census Bureau is sensitive to the issue of duplication during SBE operations, and has already taken steps to address this matter in Census 2000. The Census Bureau has added a question to the "Individual Census Questionnaire," which asks SBE respondents if they have filled out another census form during the past week. The Census Bureau also intends to evaluate Dress Rehearsal SBE results, including the quality of the data collected during this operation. Based on this assessment, the Bureau will develop revised plans by February 1999 to minimize duplication risks in Census 2000.

- 6) *Improve training manuals to make them more user friendly (such as including indexes and eliminating unnecessary acronyms) and to reduce the number of errors and inconsistencies.*

The Bureau concurs: The Bureau agrees with this recommendation and will provide indexes for NRFU and SBE training manuals. The Bureau will also clarify and better explain acronyms during NRFU training and ensure that NRFU and SBE training manuals receive more extensive internal reviews before issuance to regional training staff, including requiring dry runs for all training manuals.

- 7) *Reevaluate reliance on questionnaire assistance centers, in light of the apparent successes of the telephone assistance program.*

The Bureau disagrees: The use of walk-in questionnaire assistance centers is envisioned as a key component of the Census Bureau's plans for providing questionnaire assistance, especially assistance in foreign languages during Census 2000. While the Census Bureau concurs that telephone questionnaire assistance is a cost-effective method for providing

assistance to respondents in English, providing such assistance in languages other than English is more problematic and less cost-effective. In addition, it is particularly important that the assistance centers provide assistance to those individuals who do not have access to telephones and to individuals with poor literacy skills. The Bureau also notes that space and, in some cases, staffing for questionnaire assistance centers are normally provided on a volunteer basis by the local community, thus reducing the potential cost savings that could be applied to other coverage improvement operations should such centers be reduced.

- 8) *Reevaluate the Be Counted program to determine whether the number of sites or the locations of sites contributed to improving the response rate or increasing the likelihood that duplicate forms were submitted.*

The Bureau concurs: On-going analysis of gains from the Be Counted program is a part of the Census Bureau's operational assessment of the Dress Rehearsal results. Moreover, a formal evaluation of procedures used to resolve duplicate enumerations during the Dress Rehearsal will be completed by January 1999. Current Census 2000 plans are to limit the scope of the Be Counted program to include only sites identified in consultation with local partners in hard to enumerate areas.