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BUREAU OF THE CENSUS

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

Audit Report No. ESD-10784-8-0001 / 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:

Sacramento Dress Rehearsal Experience Suggests Changes to Improve Results of the 2000 Decennial Census
Final Audit Report No. ESD-10784-8-0001
September 1998

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

Seattle and Sacramento managers should be congratulated for their accomplishments in launching the dress rehearsal operation in Sacramento 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 Sacramento 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 9, 17, and 22. 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. The complete Census 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, at (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 Sacramento, California. 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 the 1998 Dress Rehearsal to test various operations and procedures. The bureau has selected three sites for the 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. 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 to test these procedures and planned systems.

Although OIG staff visited each dress rehearsal site, this report covers only Sacramento. 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.

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

- **Preparation for non-response follow-up was hindered by late delivery of supplies.** Census needs to ensure that materials are provided to local offices in advance to prevent delays in training and enumeration. (See page 5.)
- **The bureau had difficulty producing accurate, up-to-date maps that were usable by the regional census center and the local census office.** Map production ran behind schedule, and maps were not subject to sufficient levels of quality assurance. The bureau

needs to complete software development and integration necessary to permit timely updates of map products. (See page 5.)

- **The quality and effectiveness of the training given to enumerators and the effectiveness of instructional materials are concerns.** During our observation of non-response follow-up enumeration, we found that enumerators were often unaware of enumeration procedures that should have been taught during the training sessions. Census needs to improve training manuals and focus enumerator training on proper enumeration procedures. (See page 6.)
- **The bureau did not achieve its objective of having enumerators work in or near their own neighborhoods.** The bureau can avoid unnecessary travel expenses and potentially improve response rates by ensuring, to the extent possible, enumerators work in or near their own neighborhoods. (See page 7.)
- **Accurate information about “special places”, including group quarters and other locations for people without traditional residences, was not generated by the software used in preparation for the special population enumeration.** As a result, enumerators did not have the information they needed for effective enumeration. Also one special place was not identified because of poor preparatory work. In addition, we believe that the bureau will have difficulty identifying and eliminating some of the duplicate responses that we observed. Census must ensure that all special places are identified in the advance work and that procedures are put in place to emphasize prevention of duplicate responses. (See pages 12 through 17.)
- **The “Be Counted” program and the questionnaire assistance centers needed more explicit guidance from bureau headquarters.** The programs experienced ineffective field implementation and experienced accessibility problems. The bureau should evaluate Be Counted results and examine the cost effectiveness of the questionnaire assistance centers. (See page 20.)

Our recommendations for improvements to the plan for the 2000 decennial census appear on pages 9, 17, and 22. 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 two of the ten findings. In the first instance, Census contended that it did not need to reevaluate its procedures for identifying special places because it already has sound procedures in place. In the second instance, Census argued that questionnaire assistance centers provide important assistance to individuals without telephones and that cost savings from reducing reliance on the centers would be minimal because space and staffing is often provided free. These additional comments were considered, but we continue to believe that our findings are accurate and our recommendations are appropriate. Census’ written response to the draft report is attached as Appendix I. 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 Sacramento, California. 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, Sacramento was selected because its diverse population will allow the bureau to test methods designed to reduce undercounts among a variety of population groups. The Columbia site was selected, among other reasons, 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 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 Seattle Regional Census Center is responsible for conducting the Sacramento 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

The purpose of our audit was to evaluate selected activities at the dress rehearsal site in Sacramento. 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 enumerations of special places -- such as recreational vehicle parks, racetracks, soup kitchens, and homeless shelters -- as well as in the traditional door-to-door enumeration. We interviewed bureau headquarters officials in Suitland, Maryland; regional personnel in Seattle; and local census office employees and enumerators in Sacramento.

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) the 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 separately reviewed by staff from our Seattle 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, we did not review certain administrative areas, such as recruiting, personnel, and payroll, because they are being reviewed by our Seattle regional staff.

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 Seattle, and the local census office in Sacramento. 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 HINDERED BY PROBLEMS

The decennial census will begin on April 1, 2000, and must be completed by December 31, 2000. For the decennial to be completed accurately and on schedule, it is essential that all census operations be supported by the timely availability of sufficient quantities of usable supplies and materials. This support is especially important for non-response follow-up, when enumerators go door-to-door to count households that did not mail back their census form.

A. Bureau Recognizes the Need to Achieve Efficient, Economical Operations

Many of the discrete operations that will make up the 2000 decennial will be performed sequentially, with an operation beginning and ending according to a schedule that allows for very little slippage. One of the most important operations is non-response follow-up, which is noteworthy because it is also one of the most time-sensitive, labor-intensive, and expensive of the operations to be carried out by the local offices. In 2000, 475 local offices will hire nearly 242,000 enumerators to complete non-response follow-up. Thus, for the decennial to be completed on time and as efficiently and economically as possible, it is essential that bureau management provide the control and coordination needed to (1) permit the timely hiring, training, paying, and deploying of enough enumerators to complete the operation and (2) ensure that sufficient quantities of supplies and materials are available to the local offices when needed. In recognition of the local office's workload, the bureau structured non-response follow-up in ways intended to control costs and limit the demands on local office management and staffs.

Non-response follow-up at Sacramento was a large operation, not only in terms of field work, but also in terms of recruiting and training enumerators and preparing for the operation. In the two weeks preceding the start of the operation, the local office hired and trained 97 middle managers for field operations supervisors, crew leaders, and assistant crew leaders. Crew leaders and assistant crew leaders were trained to manage both the operation and the approximately 750 enumerators required to perform the operation. Once hired, enumerators were assigned to crew leaders, each of whom was responsible for a defined area for enumeration.

To accommodate 50 enumerator training classes, the local office requested local organizations to donate space for use as training facilities. The local office also assembled assignment and training packets, although responsibility for assembling these packets was supposed to reside with the National Processing Center in Jeffersonville. The schedule for delivering packet materials to the local offices included little slack time. Delivery of materials immediately before the operation offered two advantages. First, the quick turn-around time between the delivery of materials to local census offices and its redistribution to enumerators decreased the need for storage and avoids space costs at local offices. Second, it allowed local staffs to focus on fewer tasks. With tight delivery schedules, local staffs did not need to be distracted from their current task by receiving materials for an upcoming one.

Upon receipt of the packets, local census office staffs were responsible for completing their assembly by inserting area-specific materials, such as maps, address listings, and questionnaires, for which the local office also printed and affixed address labels. The Sacramento office distributed about 1,700 assignment packets and 800 training packets for the operation.

The bureau structured the operation in ways intended to control costs and limit the demands on each local census office. For example, the primary method of training enumerators was through lecture and discussion, delivered with a training guide, which was read verbatim to the trainees. The bureau used 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 own training programs.

Finally, in conducting the operation, the bureau attempted to minimize enumerator travel time and demands for managerial guidance by assigning them to enumerate in areas with which they were familiar. The bureau attempted to match enumerators to familiar neighborhoods because it contended that such matching would decrease operational costs and improve performance. When enumerators live close to their assignment districts, they spend less time traveling and more time collecting data. They are also less reliant on bureau maps, more familiar with the neighborhood and the times when residents are at home, and perhaps better able to gain the trust of residents reluctant to respond. When enumerators have appropriate language skills, the local office no longer needs to make special arrangements for enumerating non-English speaking households.

Although local, regional, and headquarters personnel are to be commended for their efforts to achieve these goals, the following sections of our report discuss areas that we believe warrant management's attention.

B. Bureau's Attempts to Achieve Operational Effectiveness and Cost Containment Fell Short

Sacramento had difficulty in providing adequate and timely supplies and materials needed by enumerators to conduct important aspects of non-response follow-up. These problems occurred with basic materials, such as accurate assignment listings and questionnaires, and supplemental tools, such as maps and background information on neighborhoods. Preparations were hampered because supplies arrived late, contained many errors, and were incomplete. In addition, unreliable electronic address lists and map files and error-prone training manuals led to a delay in the start of the operation and mistakes in enumeration. Moreover, the delivery schedule for packet materials transformed otherwise minor delays into serious risks for the operation. When the delivery of packet materials and their subsequent assembly at Sacramento lagged behind schedule, potential delays in non-response follow-up operations put the effectiveness of the dress rehearsal at risk. While Sacramento was able to compensate for these factors and eventually achieve timely completion of the operation, we believe that quality control standards were compromised.

Packet Materials Late and Incomplete

Problems began when the bureau's National Processing Center in Jeffersonville, Indiana failed to compile all packet materials and shipped only partially assembled packets to Sacramento. Thus, in addition to having to add area-specific documents, such as maps and address listings, as planned, Sacramento had to assemble the basic packets with materials received only days before the scheduled start of operations. The local office was able to complete the packet assembly in time only because it quickly organized nearly 50 staff members working 12-hour days over the weekend preceding the start of the non-response follow-up operation.

Under these conditions, the assembly operation could not be properly controlled for quality. As a result, errors made in the hurried assembly process went undetected, and incomplete packets were delivered to enumerators. For example, missing from many training kits were employee handbooks, *Privacy Act* forms, *Welfare-to-Work* forms, and *W-4* forms. Also, two forms, *Confidentiality Notices* and *Notices of Visits*, were received late and in insufficient quantities. Consequently, some enumeration teams were prevented from starting the operation on time.

Problems with Electronic Address Files

Three important area-specific packet inserts—maps, address listings, and address labels—come to the field offices in electronic format. Bureau headquarters prepared the initial maps, while the Seattle Regional Census Center was responsible for finalizing map layouts, printing maps, and shipping them to Sacramento for inclusion in the enumerator packets. The address listing and labels were printed at Sacramento from electronic files prepared at headquarters and forwarded through the regional census center.

Sacramento experienced many problems with the packet inserts received in electronic format. Address listings and late mail return updates to the listings arrived behind schedule. The electronic files containing the address labels did arrive on time, but printing of the labels by Sacramento was delayed because the label paper had not arrived. Once the paper did arrive and the printing started, it was discovered that the file size was incompatible with Sacramento's computing resources. Again, further delays occurred while computer experts were brought in from the Seattle Regional Census Center to enhance Sacramento's computing capabilities.

Because of the special efforts at the local office, the inserts were placed into the packets before enumeration, but the delayed assembly hampered Sacramento's ability to conduct the necessary quality control measures.

Problems with Map Files

Enumerators were to be trained to use maps to plan efficient daily enumeration activities. However, the local census office's ability to accomplish this objective was diminished because

the initial maps received at Sacramento contained many errors. First, the initial map files omitted street names. Bureau officials explained that the maps were not linked to the Street Index File because problems were experienced with the “filtering software.” Second, the bureau was unable to insert all corrections to maps resulting from the “Local Update to Census Addresses” in time for the start of the operation. Bureau geography specialists explained that processing of updates to the map files was delayed because while as many as four bureau teams were trying to update Sacramento’s master map file concurrently, only one person at a time is permitted access to the map file. As a result, geography specialists attempting to make local updates to census address changes were unable to access the map file; therefore, maps did not reflect these changes.

In response, a second map file, this time with street names, was provided by the bureau to Sacramento, but only days before training began. Because of the delays in map production, regional staff and local office trainers were not provided adequate opportunity to review map formats before the start of training. In many instances, neither instructors nor enumerators had actual map formats available during the training. And once again, no measures were taken to bring the maps current with “Local Update to Census Addresses” data. In summary, the maps used for dress rehearsal non-response follow-up operations were of little use to enumerators, whom the maps are designed to assist. In fact, many enumerators felt that they were better served by purchasing commercial city maps to plan their enumeration activities.

Problems with Training Manuals

The errors in and delayed delivery of the enumerator training manuals also affected the quality of training. When manuals were provided for advance review by the local office staff, the time allowed for review was too short for adequate quality control. Among the problems we noted with the training manuals were the following:

- Enumerator training manuals did not have indexes and did not always correspond with instructor manuals. As a result, enumerators had difficulty locating subjects and following presentations.
- Acronyms and codes were confusing.
- Manuals contained errors, and some sections were difficult to understand.

These factors contributed substantially to enumerators not being trained as well as they should have been. In our opinion, inadequate training was a significant factor in enumeration errors that we later observed. During operations, enumerators were often unaware of procedures that they should have learned in the training. For example, enumerators sometimes did not know how to address situations where (1) persons requested blank questionnaires, claiming to have not received one in the mail, (2) there were duplicate listings for the same address, (3) there were no residences matching the address listings, and (4) visual aids were to be used in enumerating

individuals at Spanish-speaking residences. Also, some enumerators improperly paraphrased questions rather than reading them word for word, as required, especially on questions dealing with race or ethnicity. For example, enumerators would ask leading questions such as, "Oh, you're white?" or "You're Jamaican?" rather than asking the person to self-identify his or her race or ethnicity.

Bureau officials with whom we spoke acknowledged such problems with the training manuals, and attributed the shortcomings to the authors' lack of field experience and headquarters' failure to provide manuals sufficiently in advance of operations to incorporate needed improvements. Bureau headquarters officials assured us that, while they did not have time to perform adequate quality control procedures for the dress rehearsal, there will be sufficient lead time to perform such procedures for 2000.

Problems with Targeting Resources

The bureau's goal is to assign enumerators to areas near their residences and take maximum advantage of the enumerator's familiarity with the area. For non-English-speaking neighborhoods, enumerators from that area are considered more likely to have the requisite language skills to effectively enumerate those areas. Also, travel costs would be reduced through less travel time and mileage. However, such matching efforts were largely unsuccessful in Sacramento because the computer matching tool was not available and alternative methods proved ineffective.

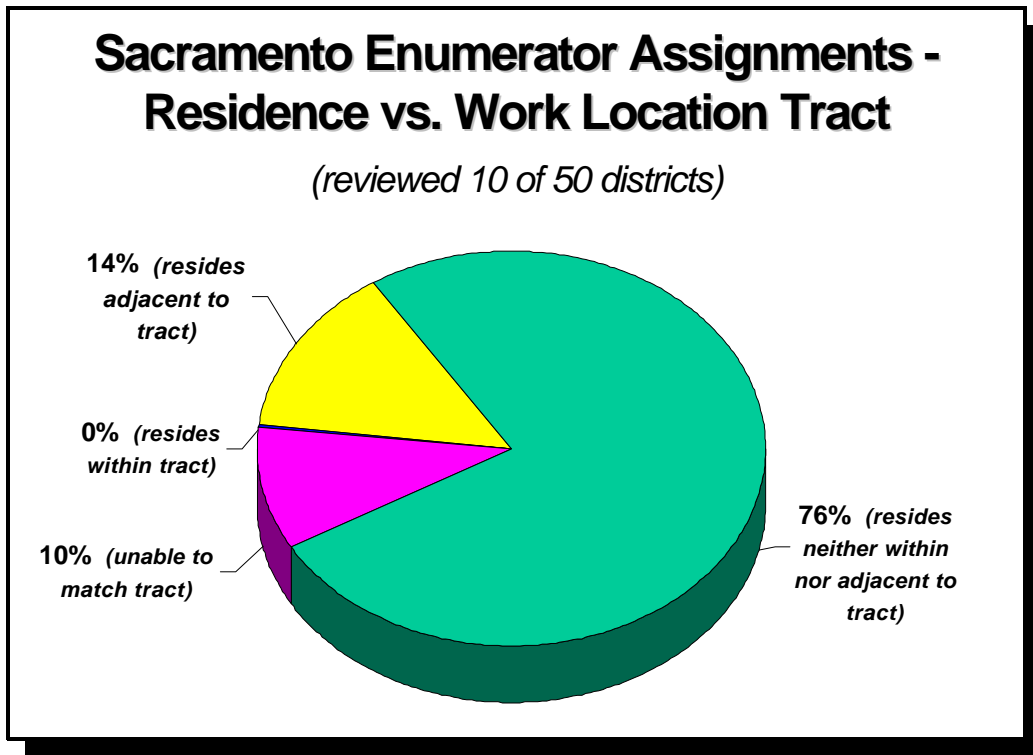
To perform the match, it was originally planned that Sacramento would compare enumerator personal addresses to geographic locations using computers. However, that operation was not developed in time for the dress rehearsal. As a stop-gap measure, Sacramento was provided with large city maps, called recruiting maps. It was believed that enumerators would be able to locate the districts in which they resided on the maps. Because the maps did not contain the names of streets, however, it was difficult for many enumerators to locate their own residences, and many errors were made in attempting to do so. Consequently, that effort was also discontinued.

Sacramento had to manually match its 800 enumerators to the 50 assignment districts through the use of postal ZIP codes. As a result of the time-consuming nature of this process, other responsibilities suffered. For example, this process caused a delay in organizing training classes. Many enumerators were not made aware of training sessions in time to attend, and replacement training had to be arranged.

More importantly, there is no clear relationship between ZIP codes and Census assignment districts. Consequently, enumerators often were geographically and/or linguistically ill-suited for the neighborhoods to which they were ultimately assigned. As a result, enumerators without language skills appropriate to the neighborhoods to which they were assigned spent unproductive

time trying to complete their enumerations. In such instances, enumerators would refer their uncompleted cases to their supervisors, and then be reassigned. A number of enumerators expressed concerns that their assignments were not only in unfamiliar sections of the city but also at some distance from where they lived. As a result, additional cost was incurred for enumerator time and mileage to travel to the distant locations.

An analysis of enumerator assignments at the start of non-response follow-up confirmed that enumerators were not being assigned to neighborhoods where they lived. To assess the magnitude of the problem, we randomly sampled 154 assignments made as of May 15, 1998, in 10 of the city's 50 assignment districts. We then compared the census tracts in which enumerators resided with the tracts to which they were assigned. We referred to Sacramento assignment listings to determine each enumerator's home address and assignment district, and used the bureau's Census Tract Street Index to match enumerator home addresses to census tracts. Our analysis showed that none of the enumerators were assigned to districts that included their residences:



As the chart shows, only 21 enumerators, or about 14 percent, were placed in assignment districts that included tracts adjacent to those in which they resided. About 76 percent of enumerators in the sample were given assignments that were neither within nor adjacent to the neighborhood in which they resided. And for the other 10 percent, we were unable to match their addresses to census tracts. (We did not attempt to ascertain whether these non-matches were due to errors in Sacramento files, inaccuracies in the Census Tract Street Index, or other sources.)

The inherent difficulty in completing an accurate non-response follow-up operation under tight time constraints was exacerbated in Sacramento by problems with supplies. The local office received incomplete and erroneous materials for use in both training and enumeration.

As discussed earlier in the report, in some instances local and regional staff were able to identify special measures to resolve obstacles, such as bringing staff in to work overtime. In other cases, problems could not be entirely resolved. We are concerned that the same level of effort needed to overcome problems in the dress rehearsal will not be available during the 2000 decennial. Local and regional managers have acknowledged that they only narrowly avoided significant delays in early phases of non-response follow-up operations. Furthermore, they have stressed that they would not be able to carry out the same degree of trouble-shooting during the large-scale operations that will occur in the 2000 Decennial Census. Seattle and Sacramento managers should be congratulated for their accomplishments in launching the dress rehearsal operation in Sacramento with few debilitating delays. However, we would not want their achievements to mask the fact that considerable improvements are needed for the 2000 decennial.

Recommendations

We recommend that the Acting Director, Bureau of the Census, take the following actions:

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.
2. Improve quality control to ensure timely delivery of accurate map products.
3. 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.
4. Develop reliable methods to match enumerators with the most appropriate assignment areas.

Agency Response

- (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. 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) Improve quality control to ensure timely delivery of accurate map products.

Problem resolved: The Geography Division has established an inter-divisional Geographic Products Quality Assurance Team, which 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 nationwide Address Listing Operation, have not had the types of problems that affected the Dress Rehearsal.

(3) 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 Non-response Follow-up (NRFU) and Service-Based Enumeration (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.

(4) 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 headquarter 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 RCC/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 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.

OIG Comment

Although the Bureau was responsive to recommendations 2, 3, and 4, we do not believe that the first recommendation was completely resolved. While the Bureau advised that it has reevaluated its procedures for supply and kit delivery, it did not address the problem with computer-generated products. Sacramento experienced many problems with important area-specific packet inserts that came to the field office in electronic format. The Bureau needs to address in its audit action plan how it intends to handle this problem for the 2000 decennial.

II. IMPROVEMENTS NEEDED IN SPECIAL POPULATION ENUMERATION

The Census Bureau is responsible for enumerating special populations--people who live in nontraditional housing and those with no permanent residence. Although we found that the bureau was generally effective in this endeavor during the dress rehearsal, we believe that improvements could be made to make the enumerations more efficient. Specifically, we found that poor preparatory work had delayed some enumerations and had not identified all special place sites; enumerating targeted outdoor locations proved to be unproductive; and some of the procedures used in enumerating special populations may have increased the risk of duplicate responses.

A. Different Types of Special Population Enumerations Were Tested

In addition to counting people living in houses and apartments, the Census Bureau must also enumerate people who live in group quarters and other nontraditional housing units, as well as people with no usual 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 of the enumeration methods that will be used for these special populations in 2000 such as:

- Service-based enumeration, designed to improve the count of individuals without a usual residence who might not be included in standard enumeration methods. Service-based enumeration was conducted in selected service locations, such as shelters and soup kitchens, and at targeted non-sheltered outdoor locations.
- A special enumeration that counted highly transient individuals living at recreational vehicle campgrounds and marinas.
- Group quarters enumeration of nursing homes, prisons, and colleges.

To enumerate people at special places, the bureau first creates an inventory of special places. The inventory includes the location, the name of a contact person, the number of people expected to be counted, the preferred time to enumerate, and whether male or female enumerators should be used. All this information is important to the enumeration because it enables local staff to schedule the times of enumeration and to assign the appropriate number and type of enumerators. In Sacramento, we observed several different types of enumeration, including shelters, soup kitchens, and recreation vehicle parks, and noted areas where improvements could be made for the 2000 decennial.

A. Preparatory Work Hampered by Inadequate Software

Local census offices need an accurate, comprehensive list of special places and group quarters in order to effectively enumerate them. The bureau, however, was unable to provide timely and accurate special place/group quarters listings to Sacramento because of software errors. These errors resulted in delays in data entry, the unnecessary repetition of field data collection, and ultimately in insufficient information about the sites.

The bureau began advance preparation on a special place/group quarters site list by extracting the listing of facilities in Sacramento from 1990 decennial records. Headquarters divisions then combined this file with supplemental listings from partner organizations and conducted telephone interviews with the facilities to update the listings. The bureau was able to obtain sufficient information by phone on about half of the facilities on the listing, and referred the remaining work to Sacramento. Beginning in the summer of 1997, the local census office in Sacramento conducted three sets of updates to the special place/group quarters file, known as personal visit updates, local knowledge updates, and advance visit updates. The results of these three updates were forwarded to bureau headquarters after each of the operations for entry into the special places/group quarters file.

Although field staff expected to be provided with a regularly updated special places/group quarters file, they never were. Consequently, Sacramento staff began the local knowledge updates without access to the personal visits findings. As the advance visits update began in February 1998, headquarters processing systems replaced all special place/group quarters records residing on Sacramento computers with an "updated" file in order to provide accurate, up-to-date information as a base for the operation. However, when Sacramento staff accessed the file, they found it contained none of the corrections produced during the two previous updates. In fact, it contained even more errors than the first listing, which they had received the previous year. Finally, when Sacramento began actual enumeration in April, headquarters provided yet another outdated listing, which also lacked the corrections that Sacramento staff had made during previous visits. For the third time, Sacramento staff devoted time to re-creating a timely special place/group quarters listing before starting the next phase of field work.

Headquarters officials, in both data collection and data processing offices, have acknowledged that special place/group quarters advance preparation needs improvement. In particular, processing staff have identified persistent problems related to inadequate development and testing of the software supporting the special place/group quarters listing. They have found that the file does not always retain revisions once they are entered, and, on more than one occasion, they have had to choose between being timely and being comprehensive with the updates. In a February analysis, data processors noted that the special place/group quarters data system involves multiple deadlines and handoffs, and they classified the activity as high-risk.

We are concerned that, although headquarters managers in data collection and data processing were aware of the risks and vulnerabilities in special place/group quarters advance preparation, none that we interviewed had been tracking or responding to the problems of inadequate data files as experienced in local offices. The headquarters officials with whom we spoke had not known before our conversations of the scope or extent of problems that Sacramento and Seattle staff had encountered in using the special place/group quarters listings. Although headquarters officials first became aware of potential problems with special place/group quarters data processing in the fall of 1997, no apparent effort was made to communicate these findings to local and regional staff, or to assist field staff in forming contingency plans for working with flawed data files. The bureau needs to correct the software problems that reduced the effectiveness of the special place/group quarters listing, and also needs to address the underlying problem of lack of coordination and communication between headquarters and field offices.

Enumeration Form Lacked Key Information

In our field visits, we observed multiple cases in which special place enumerators lacked adequate advance information about sites. The most frequent problem experienced by enumerators was that vital information about a site's characteristics, gathered in advance of operations, had not been retained by electronic listings.

Enumeration teams use an Enumeration Record (Census Form DX-352) to assist them in enumerating special places. The form should contain the name and location of the special place and other relevant information. We reviewed the forms used by enumerators during the dress rehearsal and found that they did not include any comments in the remarks section.

In addition, most of the Enumeration Records we reviewed did not have the recommended times for enumeration, and enumerators were sometimes given inaccurate estimates of the number of people to be enumerated. It is important for local staff to know the number of people to be enumerated and the time to enumerate them in order to know how many enumerators to assign and when to have them arrive at the site.

We observed several delays in enumeration and inefficient use of staff during the special places/group quarters enumeration that could be traced to inadequate information. For example, 10 enumerators and a crew leader had to wait over two hours at a shelter before they could begin enumeration because the Enumeration Record had not indicated the proper time for them to arrive. In other instances, enumerators were unable to complete their count on shelter night because they had not complied with instructions insisted upon by the special places. Also, in several cases the number of enumerators assigned to special places was not appropriate: over a dozen enumerators were assigned to enumerate a recreational vehicle park with about 15 vehicles, and a team of enumerators was sent to a locked marina with no residents. Although the special place enumerations were eventually completed, assigning too many enumerators or having enumerators wait around to start their work results in unnecessary costs.

We discussed our concerns about the Enumeration Record with managers in Sacramento and Seattle. They agreed on the importance of including information in the remarks section of the electronic form to assist in enumeration. They believed that the remarks section from the advance visit update was supposed to be included on the form, but a software glitch prevented transmission of the information. The bureau needs to correct the software problem to ensure that enumerators are provided accurate and complete information on special places being enumerated.

Not All Special Places Were Identified

Identifying locations where special populations can be found is one means of improving the accuracy of the decennial, and the bureau has procedures in place to ensure that locations are identified. However, one site with an estimated 300 people was not listed for enumeration. Two enumerators accidentally found the location on transient night while enumerating an adjacent recreation vehicle park. The people were living in stables at a harness racetrack. The enumerators attempted to enumerate the occupants, but were largely unsuccessful because most of the occupants spoke only Spanish and neither enumerator spoke the language.

Local managers and a representative from the Seattle Regional Census Center could not satisfactorily explain why the stable area was missing from the list of special places. The regional manager speculated that the site might have been listed as a migrant worker camp; however, Sacramento did not have any migrant worker camps listed for enumeration. The bureau needs to reevaluate its procedures for identifying special places.

B. Enumeration at Targeted Non-Sheltered Outdoor Locations Unproductive

One of the service-based enumeration procedures was to visit targeted non-sheltered outdoor locations where 15 or more people are expected to congregate. This operation is designed to include people who would otherwise be missed. The outdoor locations were identified by local officials, advocacy groups, and community-based organizations. Additionally, the local office worked with members of the Sacramento veterans community to act as guides in targeting outdoor sites and educating the residents about the dress rehearsal. Because of the absence of sites in Sacramento that met the bureau's criterion of at least 15 residents, the operation targeted sites where as few as one or two residents were expected.

Local managers and enumerators indicated that few people were found during the targeted outdoor locations enumeration in Sacramento. Bureau officials could not provide us with the total number of enumerations at outdoor locations, but they acknowledged that the operation produced a low yield. We discussed the results of the program with the Chief, Decennial Data Collection Branch, Field Division, who advised that the bureau will be reviewing the operation in light of the disappointing results of the dress rehearsal. He admitted that results will probably not be as good in rural areas and medium-sized cities, such as Sacramento, as in large urban areas where outdoor living situations would be more common. He said, however, that any special enumeration needs to be implemented uniformly nationwide.

In view of the unproductive results of outdoors enumeration in the dress rehearsal, we believe that the bureau should reevaluate whether to enumerate sites with less than 15 people. Otherwise, the bureau will incur the expense of training and enumerating in locations where there will be little return for the expense and effort.

C. Duplicate Responses Likely in Special Place Enumeration

Some of the techniques used for special place enumeration during the dress rehearsal increase the possibility that multiple responses will be submitted by the same individual. For example, during the dress rehearsal, transient night was held on Friday, April 17; shelters were enumerated on Monday, April 20; and soup kitchens were done on Tuesday, April 21. The sequencing of these enumerations increases the likelihood of duplicate responses when the same people are present at the different locations.

In Sacramento, there is only one soup kitchen in the city. The soup kitchen provides morning coffee and a noontime meal, and is a social gathering place where people from shelters and other special places congregate to talk and play cards. When members of the OIG team observed the soup kitchen enumeration, they recognized a number of people who had already been enumerated the evening before at various shelters. In fact, several of the people at the soup kitchen asked enumerators whether they had to complete a questionnaire since they had been counted the night before.

We observed other instances of duplicate enumeration during the soup kitchen enumeration. For example, a field operations supervisor instructed a team of enumerators to visit an adjacent women's shelter and count the residents, even though the shelter enumeration had been conducted the previous evening. On its way into the shelter, the team met a crew leader who informed them that she had just collected the completed census forms from the enumeration the night before. Nevertheless, the team went ahead and enumerated the residents, including use of last resort procedures for those residents who would not cooperate. In another example, a team enumerated a shelter for runaway children even though it would have been included in the shelter enumeration.

We informed field operations supervisors at the scene that some people were being counted a second time, but the supervisors were adamant that people were to be enumerated even though they had been counted before. They said their instructions were to count everybody and not to worry about duplication. We could understand their position since we had attended a training session for crew leaders where this same message was given. Local supervisors justified their decision by explaining that they believed any duplicate responses would be identified by a headquarters' computer program and eliminated.

We discussed our observations with bureau headquarters managers, who said that some duplication is to be expected in these types of enumeration, but data processing might be able to eliminate duplications as long as it had the names of respondents. They acknowledged, however, that the bureau would not be able to eliminate last resort information.

The bureau does have software programs to identify certain cases of duplicate responses, but the software will have limited success in identifying duplicate responses from special place enumerations. Because of these factors, the bureau should attempt to reduce the number of duplicate responses at the time of enumeration rather than relying on a matching process of unproven effectiveness.

Recommendations

We recommend that the Acting Director, Bureau of the Census, take the following actions:

1. Correct the software problems that reduced the effectiveness of the special place/group quarters listings.
2. Reevaluate the bureau's procedures for identifying special places so that major sites are not overlooked during the 2000 decennial census.
3. Determine whether targeted outdoor locations with fewer than 15 expected people are appropriate for special enumeration nationwide.
4. Provide specific instructions during special place enumeration to reduce the possibility of duplicate responses, or change the sequencing of site enumeration so that people counted at one site will have less of an opportunity to be counted at a different site.

Agency Response

- (5) Correct the software problems that reduced the effectiveness of the special place/group quarters listings.**

The Bureau concurs: We do acknowledge that the special place advance preparation process needs improvement. Many divisions are involved in building and updating the Special Place list. The Dress Rehearsal schedule to accomplish these tasks did affect the quality of the Special Place/Group Quarters listings. When some processes were not able to be completed in time, a choice had to be made to complete the task and delay operations or not to complete updates and stay on schedule. Headquarters chose to stay on schedule.

Plans for 2000: As with many operations, we intend to use the Dress Rehearsal experience as an opportunity to learn and improve our processes. To address this situation, the Bureau is conducting a review of the file interface process to determine what did get updated, what did not get updated, and why. Additionally, Bureau staff in the data content, data processing, geography, and data collection areas are working together to improve the workflow and the timing. The Bureau is addressing field requirements to improve the file maintenance process in the LCOs and to allow updates to GQ and Special Place type codes. The Bureau is working with the data content and data processing areas to define the universe for Personal Visit follow-up and document the minimum amount of information the OCS requires to meet field requirements. Staff meet on a regular basis to discuss plans for 2000 to improve the process and result in a better quality product.

(6) Reevaluate the bureau's procedures for identifying special places so that major sites are not overlooked during the 2000 decennial census.

The Bureau disagrees: The Census Bureau has sound procedures in place for identifying special places, which include the following: (1) identifying sites to be designated as Special prior to T-night enumeration; (2) contacting facility operators in advance to obtain an estimate of the number of people residing on site; and (3) visiting the site prior to T-night to review the location.

Bureau staff reviewed the OIG's observation that "300 people" were found at an inhabited horse stables facility that was not for enumeration. In this instance, Seattle regional staff members followed the procedures described above. When approximately 40 people were found sleeping in the horse stables on T-night (and not 300 as indicated in the report), Bureau staff included this facility as a late "Add" for Special Place Enumeration.

Current Bureau procedures for identifying Special places rely heavily on obtaining accurate information from the administrators of such sites (including carnivals, race tracks, and other locations), who characterize, to the best of their ability, the number of residents who may live at that facility on a given day. The facility operator indicated to regional staff during the advance visit that there were an estimated 60 recreational vehicles (RVs) in the adjacent RV park, and another 20 trailers in the "horse arena". The facility operator did not indicate, however, that people would be residing in horse stables, nor were they evident at the time of the Bureau's advance visit. Field staff suspect that the people occupying the horse stables arrived in conjunction with a two-week horse racing event at the facility in question, which coincided with T-night operations.

(7) Determine whether targeted outdoor locations with fewer than 15 expected people are appropriate for special enumeration nationwide.

The Bureau concurs: The Census Bureau is reassessing enumeration procedures for Targeted Nonshelter Outdoor Locations (TNSOLs), the outdoor component of the SBE operation. Since the Dress Rehearsal demonstration of TNSOL enumeration, the Census Bureau has established an

internal work group to fully assess TNSOL operations and procedures. The work group consists of representatives from the Director's Office, Field Division, Decennial Management Division, Geography Division, Population Division, and regional representatives, including selected regional directors. Issues such as TNSOL definition, selection, and crew size are among those currently being reviewed by the work group. The OIG's recommendation to reassess the minimum threshold for TNSOL selection also will be addressed during work group deliberations. The Bureau expects to develop a final plan on TNSOL enumeration by February, 1999.

- (8) Provide specific instructions during special place enumeration to reduce the possibility of duplicate responses, or change the sequencing of site enumeration so that people counted at one site will have less of an opportunity to be counted at a different site.**

The Bureau concurs: The Census Bureau is sensitive to the issue of duplication during SBE operation, 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.

OIG Comment

In response to our draft report, the Acting Director agreed with three of our recommendations and indicated that the Bureau is taking action to resolve the problems. However, the Bureau did not agree with our recommendation to reevaluate procedures for identifying special places.

We agree that the Bureau has procedures in place to identify special places. However, in this instance, the procedures did not identify a special place location, which was only found by accident. Since the Bureau acknowledges in its response that it was unaware that people would be residing in the horse stable, we reaffirm our recommendation that the Bureau reevaluate its procedures to identify special places so that major sites are not overlooked during the 2000 decennial.

The Bureau also contended that only about 40 people were found in the horse stables rather than the estimate of 300 used in the draft report. The figure used in the report was provided by the two enumerators who found the site and based their estimate on the results of their partial enumeration. They said they were only able to enumerate part of the stable area before they were told to stop working because they had used up their allotted hours for the day. Since these were the people who actually did the enumeration, we believe that their estimate was the best available figure.

III. BE COUNTED AND ASSISTANCE CENTER PROGRAMS DID NOT APPEAR TO BE EFFECTIVE

The Be Counted campaign is designed to provide a means for people (particularly in population groups historically undercounted) to be included in the decennial. Because of inadequate guidance from the bureau and a lack of local management resources, the Sacramento office was unable to effectively target the campaign and monitor its progress. As a result, some of the locations chosen for Be Counted sites and questionnaire assistance centers suffered from low activity, and Sacramento was unable to identify the underperforming sites and reallocate them to more appropriate locations.

The goal of the Be Counted campaign is to make questionnaires, in foreign languages as well as English, accessible to targeted populations at public locations, such as post offices, libraries, community centers, convenience stores, and other places people frequent. Although questionnaire assistance centers provide replacement forms for people who need them, their primary purpose is to assist people in filling out forms received in the mail. However, we found that the distinction between Be Counted sites and questionnaire assistance centers was blurred in Sacramento.

A. Be Counted Project Needs Stronger Guidance

The intent of the Be Counted program is to provide replacement forms for people who do not receive a questionnaire in the mail, whose original form has been lost or damaged, or who require forms in a language other than English. The program attempts to locate services at targeted sites in hard-to-count areas, since the widespread use of Be Counted forms could increase data processing costs and degrade data quality. At this time, final data on Be Counted results are not available because responses still have to be unduplicated. Therefore our analysis is limited to the results of field implementation of the program.

Field implementation of the program suffered from a lack of guidance on criteria for selecting sites and a lack of management resources to monitor the program. As a result, Sacramento selected some sites with little targeting. But without the resources to monitor demand at different sites, Sacramento was unable to identify poorly performing locations and change the sites.

Problems with Site Selection and Monitoring

Headquarters managers directed Sacramento to consult with local partners to target distribution points in undercounted and non-English-speaking neighborhoods. However, local partners provided few suggestions on locations and little advice on where to target foreign language forms. With little guidance from the bureau or local partners, Sacramento managers selected sites themselves, with mixed results. They did not attempt to target foreign language forms, but instead stocked locations with forms in all languages.

The number of Be Counted sites selected by local staff proved to be far more than they could effectively manage. Local managers intended to monitor demand at the sites, but found that they did not have the resources available to do the monitoring and also did not have sufficient information on site activity.

B. Questionnaire Assistance Centers Did Not Provide Intended Services

The questionnaire assistance centers differed in two respects from the Be Counted sites -- the centers had a paid staff person on-site, and their primary goal was to assist people in completing forms received in the mail. While the centers had similar problems as the Be Counted sites with site selection and supervision, they encountered additional difficulties.

Centers' Primary Goal Not Achieved

The centers did not fulfill their primary purpose of helping people complete the census form mailed to their residences. Only a small percentage of the activity at the centers involved assisting individuals to complete questionnaires received in the mail. Most of the assistance provided involved replying to general questions about the decennial and the dress rehearsal, often by individuals who had already mailed back their questionnaires. A major factor could have been the lack of public awareness about the centers' services.

Program Publicity Inadequate

Public awareness of the services that the centers provide in completing census questionnaires is important to the program's success. However, because of the uncertainty about where the centers would be located, Sacramento was unable to effectively publicize the centers and public awareness of the centers was low. In an assessment of the program, local partners commented that an individual seeking in-person assistance would have had difficulty determining where the centers were located.

Alternate Programs Avoid Assistance Centers' Operational Dilemmas

Publicizing questionnaire assistance center locations would have required local staff to forgo their flexibility in monitoring site performance and changing locations as they deem appropriate. However, the bureau's Telephone Questionnaire Assistance Program fulfills the same goal of providing personal assistance in completing forms, yet can be publicized without facing the challenges of local site selection. Because of the obstacles in questionnaire assistance center field implementation, and because telephone assistance offers similar help without these difficulties, we believe that the bureau should reconsider the use of local assistance centers in 2000.

Recommendations

We recommend that the Acting Director, Bureau of the Census, take the following actions:

1. Reevaluate the Be Counted program to determine whether the number of sites or the location of sites contributed to (1) improving the response rate or (2) increasing the likelihood that duplicate forms were submitted.
2. Reduce reliance on questionnaire assistance centers and transfer any savings in funds and staff time to other coverage improvement efforts.

Agency Response

- (9) Reevaluate the Be Counted program to determine whether the number of sites or the location of sites contributed to (1) improving the response rate or (2) 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.

- (10) Reduce reliance on questionnaire assistance centers and transfer any savings in funds and staff time to other coverage improvement efforts.**

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 in Census 2000. While the Census Bureau concurred that telephone questionnaire assistance is a cost-effective method for providing assistance to respondents in English, they said such assistance in languages other than English is more problematic and less cost-effective. In addition, the Bureau said 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 such centers be reduced.

OIG Comment

We continue to believe that 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). 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 2000.

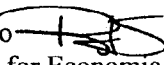


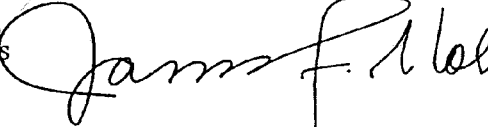
UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
 Washington, DC 20233-0001

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: Sacramento Dress Rehearsal Experience Suggests Changes
 to Improve Results of the 2000 Decennial Census
 Draft Audit Report No. ESD-10784-8-xxxx

This is in response to your memorandum dated August 31, 1998, transmitting the above referenced draft audit report regarding the Sacramento 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) *Improve quality control to ensure timely delivery of accurate map products.*

Problem resolved: The Geography Division has established an inter-divisional Geographic Products Quality Assurance Team, which 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) *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 Nonresponse Follow-up (NRFU) and Service-Based Enumeration (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.

4) *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 headquarter 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 RCC/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 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.

5) *Correct the software problems that reduced the effectiveness of the special place/group quarters listings.*

The Bureau concurs: We do acknowledge that the special place advance preparation process needs improvement. Many divisions are involved in building and updating the Special Place list. The Dress Rehearsal schedule to accomplish these tasks did affect the quality of the Special Place Group Quarters listings. When some processes were not able to be completed in time, a choice had to be made to complete the task and delay operations or not to complete updates and stay on schedule. Headquarters chose to stay on schedule.

Plans for 2000: As with many operations, we intend to use the Dress Rehearsal experience as an opportunity to learn and improve our processes. To address this situation, the Bureau is conducting a review of the file interface process to determine what did get updated, what did not get updated, and why. Additionally, Bureau staff in the data content, data processing, geography, and data collection areas are working together to improve the workflow and the timing. The Bureau is addressing field requirements to improve the file maintenance process in the LCOs and to allow updates to GQ and Special Place type codes. The Bureau is working with the data content and data processing areas to define the universe for Personal Visit follow-up and document the minimum amount of information the OCS requires to meet field requirements. Staff meet on a regular basis to discuss plans for 2000 to improve the process and result in a better quality product.

- 6) *Reevaluate the Bureau's procedures for identifying special places so that major sites are not overlooked during the 2000 decennial census.*

The Bureau disagrees: The Census Bureau has sound procedures in place for identifying special places, which include the following: (1) identifying sites to be designated as Special Places prior to T-night enumeration; (2) contacting facility operators in advance to obtain an estimate of the number of people residing on site; and (3) visiting the site prior to T-night to review the location.

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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.

- 10) *Reduce reliance on questionnaire assistance centers and transfer any savings in funds and staff time to other coverage improvement efforts.*

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.