

U.S. DEPARTMENT OF COMMERCE
Office of Inspector General



**PUBLIC
RELEASE**

BUREAU OF THE CENSUS

*Quality Check Survey Should Be Kept
Independent of Other Decennial Operations*

Audit Report No. ESD-10784-8-0002 / 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: *Quality Check Survey Should Be Kept
Independent of Other Decennial Operations*
Final Audit Report No. ESD-10784-8-0002
September 1998

The Office of Inspector General has conducted reviews of the Census Bureau's Dress Rehearsal activities at Columbia, South Carolina; Sacramento, California; and Menominee, Wisconsin. The OIG staff observed several conditions in the implementation of the quality check survey--an independent operation intended to locate and correct for those not counted in the traditional enumeration--that we want to bring to your attention. Accordingly, this report outlines our concerns about shortcomings in the separation between the census enumeration and the quality check survey in Columbia and Sacramento. Our recommendations begin on page 5. In addition, we have concerns about the current plans for processing the payroll of quality check personnel during the 2000 decennial. Our recommendation appears on page 7.

The Bureau expressed general agreement with our recommendations. Additionally, the Bureau proposed some revisions to the *Introduction*, and we have adopted those clarifications. The Bureau's complete comments to our August 20, 1998 draft report are attached, and we have incorporated them 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 regarding the preparation of the audit action plan, please contact Charles Tegeler, Director, Economics and Statistics Audits Division at (202) 482-2395.

We would like to thank Census Bureau staff at headquarters and at the regional and local census offices for the cooperation and courtesies extended to us during our review.

Attachment

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

INTRODUCTION

During a decennial census, the Census Bureau makes a good faith effort to count everyone – mailing questionnaires to a comprehensive list of residential addresses and then following up with those individuals who do not mail back the forms. Nonetheless, some undercount of the population has occurred in all censuses. In 1990, a quality check survey, known as the Post-Enumeration Survey (PES), independent of the Census enumeration, selected a sample, and collected an independent roster of all households contained within it. The difference between the census count and the measure produced by PES was used to calculate statistical estimates – by area, racial group, and other relevant demographic characteristics – of the net undercount and overcount contained in the original Census data. After much legal debate, the Secretary of Commerce made the decision to direct the Bureau not to use the results of the PES to adjust the initial 1990 count, leaving the country with two sets of census totals. The net undercount was estimated at 4 million.

For 2000, the Bureau has redesigned the plan for the census, integrating statistical methods, including the quality check, into the decennial design. Unlike 1990, this approach, referred to as the integrated coverage measurement (ICM), is intended to produce an integrated single-number count. However, Congress is not convinced that statistical methods such as ICM should be made part of the overall design. To this end, a fiscal year 1998 budget compromise required the Bureau to designate Columbia as a non-sampling dress rehearsal site. Because of its similarity to the 1990 survey, the quality check survey for Columbia is referred to as PES. In Sacramento, the quality check survey is referred to as ICM because its results will be integrated into the final site totals. However, it is important to note that “operationally” the surveys remain identical; therefore, throughout the report we refer to both quality check surveys as the ICM. We will adhere to Bureau terminology in referring to the slate of activities which constitutes the first enumeration—including the return of census forms through the mail and the non-response follow-up campaign, but excluding all phases of the ICM— as the initial phase of the census.

To be reliable, the census and the quality check operations must be conducted independently of each other, since the design of the estimation procedure is predicated on the assumption that data collection activities in one operation have not affected results in the other operation. Headquarters staff have not yet finalized the operational plan for maintaining independence in the 2000 decennial; they intend to draft detailed procedures this fall. For the 1998 Dress Rehearsal, headquarters provided regional staff with a general framework for implementing independent operations, including the following guidelines:

- Quality check staff should work at all times in areas separated from census staff. At the regional level, quality check operations would be housed at the Regional Office, and census operations would move into a wholly separate, self-sufficient office, known as the Regional Census Center.

- Quality check and census staff should not share address listings or maps, or discuss their operations with each other. While unsupervised, quality check listings and maps should be stored in a secure location.
- Employees should not participate in census activities after being assigned to quality check field work. Census employees could move to quality check field work, but could not receive assignments in the neighborhoods where they had been responsible for census enumeration.
- Limited quality check operations, such as payroll processing, should be conducted at the local census offices in Sacramento and Columbia.

Determinations about the specific implementation of operational independence were left to regional staff in Seattle and Charlotte. Regional staff were not required to document these decisions or to obtain written approval for their actions from headquarters.

PURPOSE AND SCOPE OF AUDIT

The purpose of our visits to Sacramento and Columbia in April and May 1998 was to assess dress rehearsal activities, specifically special place and group quarter enumerations and non-response follow-up operations. We are preparing a series of reports for the two sites that will detail our observations and concerns and provide recommendations for improving the 2000 decennial. However, during our visits we observed certain ICM operations being conducted at the local census offices concurrently with the other aforementioned activities. Consequently, we followed up to determine (1) whether the Bureau had, in fact, intended for certain operations to be conducted at the local level and (2) what safeguards are in place to ensure that the necessary independence is maintained.

While we plan to do additional work in assessing the ICM, to date we have analyzed relevant documentation (including ICM manuals) and have visited and interviewed Bureau headquarters staff in Suitland, Maryland; field office staff in Columbia and Sacramento; and regional office staff in Charlotte, North Carolina, and Seattle, Washington.

We conducted our fieldwork from April through July 1998. For this limited scope audit, we focused on internal controls as they relate to the separation of ICM from other dress rehearsal activities. We did not rely on computer-generated data. We issued the draft report on August 20, 1998, and received the Bureau's comments, which were used in preparing the final report. This audit was conducted in accordance with generally accepted government auditing standards and 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

Bureau Needs to Strengthen the Independence of the Quality Check Survey

The Bureau needs to ensure that ICM operations are conducted independently from other Census operations. During site visits to Sacramento and Columbia, we found Census and ICM operations sharing office space. The two operations were sharing because ICM staff in the field were not provided with office space. While we have no evidence that the ICM operation has been adversely affected, we are concerned that the decennial design is vulnerable to the appearance of having its independence compromised.

According to ICM procedures, the key to conducting a valid ICM is keeping it independent from other decennial operations. To ensure independence at the dress rehearsal sites, enumeration activities are conducted by local census offices in Sacramento and Columbia, and ICM activities are managed by the regional offices in Seattle and Charlotte.

Originally, ICM payroll was the only operation planned to be conducted at the local census office level. But as the dress rehearsal progressed, other ICM operations also began to rely on local census office resources. For example, in Sacramento we observed ICM staff shipping materials from the local census office, even though, according to ICM officials, all ICM materials are to be shipped from and received at the personal residences of ICM staff. When we questioned headquarters officials about this practice, they were not sure why ICM materials had been sent through the local census office.

Also, in the Sacramento local census office, officials set up desks and installed phone lines in a storage room for use by ICM staff. The intended purpose of the ICM storage room was to hold ICM personnel forms and general supplies, but it appears that this room evolved into an ICM workstation. ICM supervisors conducted occasional operations in this space, including supervising and assisting interviewers during phone interviews and transmitting data through the laptop computers of interviewers who either did not have a phone in their home or whose home phone lines were inoperable. Although headquarters is aware that not all ICM interviewers will own a phone, written procedures addressing whether local census office phone lines can be used for ICM activities were not developed for the dress rehearsal.

In addition, in Sacramento we found ICM staff working on the hiring and testing of census personnel at the local census office between ICM assignments. ICM procedures covering work assignments state that ICM staff may not work on *any* census operations after working on ICM. According to regional managers, ICM staff in Sacramento were assigned to census-related administrative projects because regional managers were concerned that they might lose staff during time lags between ICM assignments. Regional managers believed independence was not impaired since ICM staff in Sacramento were given administrative, rather than operational assignments. When we informed Bureau managers in Suitland of this work assignment situation, they indicated that they had not anticipated this type of situation, but would evaluate the situation further in conjunction with regional managers.

In Columbia, the local census office converted a conference room into a storage area for ICM computer laptops. However, unlike Sacramento, we did not observe any ICM activities being conducted out of the conference room. We believe the reason for this contrast is because Columbia ICM staff found separate office space at Fort Jackson, a military installation. However, headquarters officials indicated that they were surprised that ICM staff found their own office space, since they did not expect or require the acquisition of ICM office space in the local area.

We believe intermingling Census and ICM operations at the Sacramento local office leaves the overall design susceptible to questions regarding the degree of independence. If census enumerators were to discover which blocks are in the ICM sample (there is no evidence that this occurred during the dress rehearsal), then independence could be compromised when field staff change, or are perceived to have changed, their enumeration methods because they believe their work is being assessed. In effect, the quality check survey would become a less effective correction tool. Even if independence is not measurably impaired, the Bureau still needs to be concerned about public perception. Thus, to protect the independence of what is possibly the Bureau's most controversial operation, the Bureau must demonstrate that its census staff are conducting their work without knowledge of or interplay with the ICM surveys.

Without an office infrastructure, both Columbia and Sacramento operationalized ICM differently. Given the size, magnitude and importance of ICM for the 2000 decennial, not allocating separate office space for ICM could produce varying degrees of independence with varying degrees of quality assurance reliability. At the same time, having ICM staff find their own office space, as was done in Columbia, has its own set of risks, such as concerns over office security and the suitability of temporary staff entering into *ad hoc* agreements that could leave the Bureau liable for such space.

Recommendations

To ensure that independence is maintained, we recommend that the Acting Director, Bureau of the Census:

1. Develop specific guidelines to ensure that ICM activities are conducted completely independent of other census activities, including (a) how ICM personnel will conduct telephone interviews and transmit data when they have no usable home telephone, (b) how regional managers will monitor the use of ICM storerooms in local census offices and limit their use to intended functions, (c) how local and regional staff will ship and receive ICM materials in a reliable and secure manner, (d) how the Bureau will maintain security and limit liability with regard to any donated ICM office space, and (e) how local and regional interpretations of independence criteria will be documented and reviewed.
2. Enforce the policy that precludes ICM staff from working on census projects after working on ICM.

Agency Response and OIG Comment

Recommendation No. 1—Census generally concurred with the recommendation to develop specific guidelines to ensure that ICM activities are conducted completely independent of other census activities. Census officials advised that during the Census 2000 Dress Rehearsal, the Census Bureau identified a compelling need for local office space independent of the Local Census Offices (LCOs) to support certain aspects of ICM field operations. Specifically this office space is required: 1) as a secure location to receive, securely store, and further deploy laptop computers, 2) as a location where those interviewers who have difficulty with laptop transmissions can come and receive further training or assistance, 3) as a backup transmission location in the event that an enumerator's home phone precludes trouble-free transmission of data, 4) as storage space for blank ICM forms and generic supplies (no ICM sample specific material is allowed to be stored there), and 5) as a possible site for crew leader meetings with ICM interviewers. As planned, the Census Bureau will require that this office space is secure, that access is limited to ICM staff, and that the activities that take place within this space are narrowly defined to fulfill only ICM requirements.

The Census Bureau will incorporate these guidelines, together with those already prescribed regarding utilization of staff and ICM sample security, into Census 2000 ICM office manuals and training materials and other reference documents for regional ICM managers. Funding for this local ICM office space was not originally planned and has not yet been committed. These funds will have to be diverted from other important operational needs.

These actions, if properly funded and implemented in Census 2000, will meet the intent of the recommendation. The Bureau's complete response is attached.

Recommendation No. 2—Census generally concurred with our recommendation to preclude ICM staff from working on census projects after working on ICM. The Bureau's response noted that the audit report cited one instance of an ICM field supervisor assisting other "initial count" census staff in general field staff recruiting activities. Census advised that current guidelines specifically preclude ICM field staff from being reassigned to initial count census data collection operations. Automated tools are in place for field managers to use that ensure that this cannot recur. The guidelines will be broadened to include administrative support activities, such as collaborating in recruiting and testing. However, ICM operations will continue to be provided general administrative support (payroll and personnel matters) by the LCO staff. This support will necessitate occasional communications between ICM field supervisors and LCO administrative staff. Census 2000 ICM office and field manuals and training will include specific and strongly worded cautions regarding the limited nature of these contacts and the absolute requirement that no information regarding the location of the ICM sample areas be revealed to anyone other than authorized ICM staff.

These actions, if properly implemented in Census 2000, will meet the intent of the recommendation. The Bureau's complete response is attached.

Bureau Needs to Ensure That ICM Staff Will Be Paid on Time After Local Census Offices Close

During the 2000 decennial activities, the Bureau needs to address how ICM payroll will be processed after the local census offices close. The current plan for both the dress rehearsal and the 2000 decennial is for the local census offices to process ICM daily time sheets for payroll purposes. However, during the 1998 dress rehearsal, local census offices were originally set to close by August, while ICM activities continue through December. We asked regional staff how ICM payroll would be processed if the local census offices close.

Charlotte regional staff indicated that the Columbia office would probably stay open after the dress rehearsal to begin gearing up for 2000. Therefore, ICM payroll would continue to be processed at the Columbia local census office. In Sacramento, the lease for the local census office was negotiated through October; therefore, ICM payroll will continue to be processed there. After October, it is anticipated that ICM payroll will be processed by the Seattle regional office. After discussing this issue with regional staff, we concluded that for the dress rehearsal, ICM payroll will be processed without interruption at both sites. Nevertheless, exactly how ICM payroll will be processed in 2000 has not been determined.

We acknowledge that during the dress rehearsal, the Bureau will be able to merge ICM payroll processing into other ongoing operations because of the relatively small dress rehearsal staff. In 2000, however, the size of a nationwide ICM will demand far greater resources for processing payroll. Bureau managers at headquarters agree that processing ICM payroll is an operational issue that needs to be resolved for the 2000 decennial. To prevent a delay in ICM payroll processing, which could result in employees not being paid on time, the Bureau needs to prepare a plan for ICM payroll processing.

Recommendation

To ensure that payroll is processed on time, we recommend that the Acting Director, Bureau of the Census, define how ICM payroll will be processed without interruption after the local census offices close in 2000.

Agency Response and OIG Comment

The Census Bureau believes that this recommendation is resolved. The Bureau advised that after the LCOs close, these activities will be supported from the Regional Census Centers (RCCs). During the peak periods of ICM activity, the LCOs will be in a significantly better position to provide more accurate, efficient, and timely payroll support than the RCCs. Payrolling the ICM staff might increase the work load on an average of about 5 percent in an LCO. The Bureau believes that this type of administrative support provided by the LCO presents no threat to the security and integrity of the ICM operations, as this activity does not involve the review or handling of ICM sample-specific data, materials, or information.

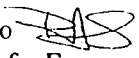
These actions, if properly implemented during Census 2000, will meet the intent of the recommendation. In addition, we agree that merely providing payroll services to ICM staff will not compromise the independence of ICM operations. The Bureau's complete response is attached.

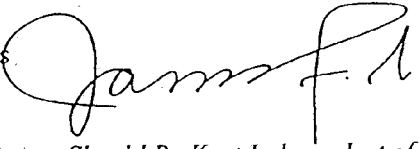


UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, DC 20233-0001

OFFICE OF THE DIRECTOR

MEMORANDUM FOR George E. Ross
Assistant Inspector General for Audits

Through: Robert J. Shapiro 
Under Secretary for Economic Affairs

From: James F. Holmes 
Acting Director

Subject: *Quality Check Survey Should Be Kept Independent of
Other Decennial Operations*
Draft Audit Report No. ESD 10784-8-xxxx

This is in response to your memorandum transmitting the above referenced draft audit report. The Bureau's responses to the "Recommendations" issued in the report appear below. In the Attachment to this memorandum, the Bureau proposes revisions to three sentences located in the "Introduction" of this report.

- 1) *Develop specific guidelines to ensure that ICM activities are conducted completely independent of other census activities, including (a) how ICM personnel will conduct telephone interviews and transmit data when they have no usable home telephone, (b) how regional managers will monitor the use of ICM storerooms in local census offices and limit their use to intended functions, (c) how local and regional staff will ship and receive ICM materials in a reliable and secure manner, (d) how the Bureau will maintain security and limit liability with regard to any donated ICM office space, and (e) how local and regional interpretations of independence criteria will be documented and reviewed.*

The Census Bureau concurs: During the Census 2000 Dress Rehearsal, the Census Bureau identified a compelling need for local office space independent of the Local Census Offices (LCOs) to support certain aspects of ICM field operations. Specifically this office space is required: 1) as a secure location to receive, securely store, and further deploy laptop computers, 2) as a location where those interviewers who have difficulty with laptop transmissions can come and receive further training or assistance, 3) as a backup transmission location in the event that an enumerator's home phone precludes trouble-free transmission of data, 4) as storage space for blank ICM forms and generic supplies (no ICM sample specific material is allowed to be stored there), and 5) as a possible site for crew leader meetings with ICM interviewers. As planned, the Census Bureau will require that this office space is secure, that access is limited to ICM staff, and that the activities that take place within them are narrowly defined to fulfill only ICM requirements.

The Census Bureau will incorporate these guidelines, together with those already prescribed regarding utilization of staff and ICM sample security, into Census 2000 ICM office manuals and training materials and other reference documents for regional ICM managers. Funding for this local ICM office space was not originally planned and has not yet been committed. These funds will have to be diverted from other important operational needs.

- 2) *Enforce the policy that precludes ICM staff from working on census projects after working on ICM.*

The Census Bureau concurs: The Office of Inspector General cited one instance of an ICM field supervisor assisting other "initial count" census staff in general field staff recruiting activities. Current guidelines explicitly preclude ICM field staff from being reassigned to initial count census data collection operations. Automated tools are in place for field managers to use that assure that this cannot occur. The guidelines will be broadened to include administrative support activities, such as collaborating in recruiting and testing. However, ICM operations will continue to be provided general administrative support (payroll and personnel matters) by the LCO staff (see below), which will necessitate occasional communications between ICM field supervisors and LCO administrative staff. Census 2000 ICM office and field manuals and training will include specific and strongly worded cautions regarding the limited nature of these contacts and the absolute requirement that no information regarding the location of the ICM sample areas be revealed to anyone other than authorized ICM staff.

- 3) *Define how ICM payroll will be processed without interruption after the local census offices close in 2000.*

Resolved: Concern was expressed that the Census Bureau must have a plan for Census 2000 that assures that ICM field payrolls are processed without interruption after LCOs close in 2000. The Census Bureau plans to support ICM payroll and personnel activities from the LCOs during the period that they are open and ICM operations are occurring. The LCOs will remain open and support ICM payrolling through their peak period of operations. After the LCOs close, these activities will be supported from the Regional Census Centers' (RCCs). During the peak periods of ICM activity, the LCOs will be in a significantly better position to provide more accurate, efficient, and timely payrolling support than the RCCs. Payrolling the ICM staff might increase the work load on an average of about 5 percent in an LCO. Such administrative support provided by the LCO presents no threat to the security and integrity of the ICM operations, as this activity does not involve the review or handling of ICM sample-specific data, materials, or information.

Attachment

Attachment

Proposed Revisions to
Draft Audit Report No. ESD-10784-8-XXXX

In order to more accurately describe the procedures employed in the Post-Enumeration Survey, as well as the decision not to use the results it produced, the Census Bureau proposes the following revisions to sentences 3-5 of paragraph 1 of the Introduction of the report (Page 2). Added language is in bold, and deleted language is struck out.

“In 1990, a highly-intensive quality check survey, known as the Post-Enumeration Survey (PES), replicated independent of the Census enumeration, in a sample of census blocks selected a sample, and collected an independent roster of all households contained within it. The difference between the census count and the count measure produced by PES was used to calculate statistical estimates – by area, racial group, and other relevant demographic characteristics – of the net undercount and overcount contained in the original Census data. After much legal debate, the Bureau, as directed by the Secretary of Commerce, decided made the decision to direct the Bureau not to use the results of the PES to adjust the initial 1990 count, leaving the country with two sets of census totals. The net undercount was estimated at 4 million.”

In addition, the Census Bureau proposes the following revision to sentence 8 of paragraph 2 of the Introduction (page 2) in order to clarify the meaning of the referenced “Bureau terminology.”

“We will adhere to Bureau terminology in referring to the slate of activities which constitutes the first enumeration – including the return of census forms through the mail and the non-response follow-up campaign, but excluding all phases of the ICM – as the initial phase of the census.”