



MEMORANDUM FOR Distribution

From: Cynthia Clark
 Associate Director for Methodology and Standards

Subject: Assessment of Consistency of Census Results with Demographic
 Benchmarks

I am pleased to present the executive summary of one of the evaluation studies for the Census 2000 Dress Rehearsal. The dress rehearsal was conducted in three sites — Columbia, South Carolina; Menominee County, Wisconsin; and Sacramento, California. The evaluation studies cover detailed aspects of eight broad areas related to the census dress rehearsal — census questionnaire, address list, coverage measurement, coverage improvement, promotion activities, procedures addressing multiple options for census reporting, field operations, and technology.

The executive summary for each evaluation study is also available on the Census Bureau Internet site (<http://www.census.gov/census2000> and click on the link to “Evaluation”). Copies of the complete report may be obtained by contacting Carnelle Sligh at (301) 457-3525 or by e-mail at carnelle.e.sligh@ccmail.census.gov. Please note that the complete copy of the following reports will not be publically released: reports regarding procedures addressing multiple options for census reporting and the Evaluation of Housing Unit Coverage on the Master Address File.

The evaluations are distributed broadly to promote the open and thorough review of census processes and procedures. The primary purpose of the dress rehearsal is to simulate portions of the environment we anticipate for Census 2000, so we can identify and correct potential problems in the processes. Thus, the purpose of the evaluation studies is to provide analysis to support time critical review and possible refinements of Census 2000 operations and procedures.

The analysis and recommendations in the evaluation study reports are those of staff working on specific evaluations and, thus, do not represent the official position of the Census Bureau. They represent the results of an evaluation of a component of the census plan. They will be used to analyze and improve processes and procedures for Census 2000. The individual evaluation recommendations have not all yet been reviewed for incorporation in the official plan for Census 2000. These evaluation study reports will be used as input to the decision making process to refine the plans for Census 2000.

The Census Bureau will issue a report that synthesizes the recommendations from all the evaluation studies and provides the Census Bureau review of the dress rehearsal operation. This report will also indicate the Census Bureau’s official position on the utilization of these results the Census in 2000 operation. This report will be available July 30th.

Assessment of Consistency of Census Results with Demographic Benchmarks

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J. Gregory Robinson

Kirsten West

Arjun Adlakha

Population Division

Executive Summary

This report assesses the accuracy of the Census 2000 Dress Rehearsal results for Sacramento City, Menominee County, and the Columbia, South Carolina site. We examine the consistency of housing and population totals with independent benchmarks for each site. We assess the consistency of key demographic characteristics, such as persons per household, age/sex distributions, race/Hispanic origin distributions, vacancy rates, and group quarters population.

The dress rehearsal census results pass most tests of demographic consistency. For all three sites, the demographic characteristics examined agree with past census data and expected trends.

For Sacramento City, the released census population total of 403,313 is confirmed by independent demographic estimates adjusted for net undercount. Further, the underlying Integrated Coverage Measurement (ICM) estimate of net undercount (6.3 percent) is validated by the independent benchmarks. Without the ICM adjustment, the census result for Sacramento City would be too low.

For Menominee County, Wisconsin, the released census population total of 4,738 is confirmed by independent demographic estimates adjusted for net undercount. The underlying ICM estimate of net undercount (3.0 percent) is broadly validated by the independent benchmarks.

For the South Carolina site, the census housing and population totals fall below expected levels. Population coverage in 1998 declined relative to 1990--attributable in large part to the incompleteness of the address list and the resulting shortfall of census housing units. The large undercoverage in the dress rehearsal results for the site was measured by the Post Enumeration Survey and validated by the demographic benchmarks.

In reaching this assessment, the demographic evaluation answers the four broad questions set forth in the September 15, 1998 outline of the C7 report:

1) Are the overall results plausible?

YES. The age, race and Hispanic origin distributions, household distributions, vacancy rates, and group quarters population conform with past census data and expected trends.

2) Are there coverage problems associated with the 5-person questionnaire?

NO. The distribution of the number of persons per household is consistent with historical trends and changes in the composition of the population. Similarly, when the proportion of households with 6 or more persons is compared to the proportion with 5 persons, the results do not point to coverage problems. It should be noted that this assessment is a face validity check. Tests of statistical significance of differences were not performed.

3) Do the independent demographic benchmarks provide early indications of the magnitude of coverage errors?

YES. The dress rehearsal data were evaluated in sequential comparisons. Early assessment of the Decennial Master Address File suggested a shortage in the number of housing units in the South Carolina site. The demographic indicators gave an early assessment of the magnitude of the population undercount in each site. All the demographic benchmarks signaled the decline in coverage in the South Carolina site relative to 1990.

4) Are the subnational demographic tools effective in validating the census results for geographic areas in a manner similar to the traditional national Demographic Analysis estimates?

YES. In every census since 1950, demographic analysis has played an important role in evaluations of data quality and in assessments of completeness of coverage at the national level. The dress rehearsal demonstrated the application of the demographic benchmark approach at the subnational level. Postcensal housing and population estimates and data from previous censuses were used as demographic benchmarks to examine data consistency and coverage errors at the site and county level. The demographic approach provided important independent benchmarks to validate the census and ICM results.

The results were available internally shortly after the release of the various census data files and in time for inclusion in status reports.

It is recommended that the demographic evaluation of Census 2000 start with the release of the Decennial Master Address File in the summer of 1999. The evaluation should examine the accuracy of the housing unit count based on this file with independent housing benchmarks and historical census data. A coverage assessment before Census Day will provide an opportunity to take corrective actions when necessary.

It is further recommended that in Census 2000 the demographic evaluation approach extends to the subnational level (state and county). Traditionally, demographic analysis has been used to assess the accuracy of the census results and the magnitude of population undercoverage at the national level. This demographic evaluation of the dress rehearsal sites and the earlier evaluation of the 1995 Census Test demonstrate that an expanded demographic analysis program could be a timely, inexpensive, and operationally feasible coverage evaluation tool for Census 2000.