Report In Brief

MAY 10, 2012

Background

The Census Bureau maintains a database containing a complete list of all living quarters (the master address file, or MAF) and geospatial data (the topologically integrated geographic encoding and referencing system, or TIGER) of the nation to use in all demographic and decennial programs. The bureau's method of collecting and tabulating decennial census data is to link (geographically encode, or geocode) MAF addresses to TIGER.

The Census budget for maintaining the MAF/TIGER database (MTdb) was $425 million for the period leading up to the decennial census (fiscal years 2000 through 2010). Census spent another $496 million on a 2010 geographic initiative: an 8-year effort ending in 2010 to improve the accuracy of the MTdb. Finally, in 2009, a $444 million operation to visit and verify or add every place a person lives or could live was conducted. Totaling nearly $1.4 billion, these combined efforts produced the 2010 decennial census address list.

For the 2020 census, the bureau intends to continuously update the MTdb, which will improve the address lists and maps throughout the decade and support a less costly targeted address-canvassing operation. Toward this effort, the bureau has introduced a $407 million 2020 geographic initiative.

Why We Did This Review

Our objectives were to (1) review the bureau's progress on its 2010 geographic initiative, (2) evaluate the impact of various address-updating operations on the MTdb and identify trends that introduced error, and (3) review Census's procedures for updating the map and address files.

U.S. CENSUS BUREAU

High-Quality Maps and Accurate Addresses Are Needed to Achieve Census 2020 Cost-Saving Goals

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WHAT WE FOUND

The 2010 geographic initiative's efforts to produce an adequate measure to assess MTdb quality were unsuccessful. In addition, the program's goal of updating address and map information from tribal, state, county, and local government partners was not fully realized. Both of these goals must be met to implement a 2020 decennial census address-canvassing operation with reduced costs. Furthermore, 3.5 million ungeocoded records existed in the MAF as of June 2011, and that number is likely to rise, as it did during Census 2010. Without maintenance of the MTdb by continuous geocoding throughout the decade, the bureau will again have to rely on an expensive end-of-decade operation. Finally, the MAF updating process of accepting more recent address changes without adequate verification may result in a lower quality address list.

WHAT WE RECOMMEND

1. Develop an MTdb measure for determining address list quality at a low level of geography that (a) provides a fair and equal opportunity for targeting selection, (b) drives selection and planning decisions, and (c) is well-documented and verifiable.
2. Work with the Department to determine the feasibility of improving methods of sharing MTdb information throughout the decade with governmental entities (partners) to create a uniform, national address list.
3. Investigate and remedy the exclusion of 500,000 ungeocoded address records, which had been designated as valid U.S. Postal Service delivery addresses, from the 2010 census.
4. Conduct the necessary research, develop a proven methodology, and allocate the necessary funds to continuously reduce the number of ungeocoded records throughout the decade.
5. Develop and implement quality indicator tools, including use of administrative records, to ensure that updates to the MAF are accurate.