

GAO

Report to the Ranking Minority Member,
Committee on Government Reform,
House of Representatives

July 2003

DECENNIAL CENSUS

Lessons Learned for Locating and Counting Migrant and Seasonal Farm Workers



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Highlights

Highlights of [GAO-03-605](#), a report to the Ranking Minority Member, Committee on Government Reform

Why GAO Did This Study

One of the U.S. Census Bureau's (Bureau) long-standing challenges has been counting migrant farm workers. Although the Bureau goes to great lengths to locate these individuals, its efforts are often hampered by the unconventional and hidden housing arrangements, distrust of outsiders, and language and literacy issues often associated with this population group. To help inform the planning for the 2010 Census, we were asked to review the adequacy of the Bureau's procedures for locating migrant farm workers and their dwellings during the 2000 Census, and the steps, if any, that the Bureau can take to improve those procedures.

What GAO Recommends

The Secretary of Commerce should direct the Bureau to (1) study the feasibility of staffing partnership efforts at higher levels earlier in the decade to support address-listing activities, (2) consider developing protocols to allow the Bureau to take advantage of the address information kept by advocacy groups while preserving the confidentiality and integrity of the Bureau's master address list, and (3) explore integrating census and other data to help plan operations and target resources to those areas with large migrant farm work populations. In commenting on a draft of this report, the Bureau stated that it generally agreed with our conclusions and will work toward implementing our recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-03-605.

To view the full report, including the scope and methodology, click on the link above. For more information, contact Patricia A. Dalton at (202) 512-6806 or daltonp@gao.gov.

DECENNIAL CENSUS

Lessons Learned for Locating and Counting Migrant and Seasonal Farm Workers

What GAO Found

The Bureau used over a dozen operations to ensure a complete address list and accurate maps for the 2000 Census. To the extent that the operations were properly implemented, their design appears to have been adequate for identifying the hidden dwellings in which some migrant farm workers live, such as basement apartments. However, the operations were not as well suited to overcoming other difficulties associated with locating migrant farm workers such as language and literacy issues and a distrust of outsiders. These challenges were surmounted more effectively by relying on local advocacy groups and others in the community who knew where and how migrant farm workers lived, and could facilitate the Bureau's access to those areas.

The Bureau's plans for the 2010 Census include an ambitious program to make its maps more accurate. However, additional steps will be needed. Local and regional census offices employed innovative practices during the 2000 Census that could help improve the Bureau's ability to locate migrant farm workers in 2010. They include partnering with state and local governments earlier in the decade when many address-listing operations take place (during the 2000 Census, the Bureau's partnership program was used largely to get people to participate in the Census, but these activities took place after the Bureau had completed most of its address list development activities). Other innovations included making use of address information from local advocacy groups to help find migrant farm workers, and using census and other demographic data strategically to plan operations and target resources to those areas with high numbers of migrant farm workers.

Migrant Farm Worker Dwelling is Hidden Behind a House



Source: GAO.

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United States General Accounting Office
Washington, D.C. 20548

July 3, 2003

The Honorable Henry A. Waxman
Ranking Minority Member
Committee on Government Reform
House of Representatives

Dear Mr. Waxman:

One of the U.S. Census Bureau's (Bureau) long-standing challenges has been counting migrant and seasonal farm workers. Although the Bureau takes extra steps to count these individuals, its efforts are hampered by the frequent moves, temporary and unconventional housing arrangements, overcrowded dwellings, and language barriers that often accompany this population.

A cost-effective count of migrant farm workers, like all population groups, begins with an accurate address list and precise maps. Together, they help ensure that questionnaires are properly delivered; unnecessary and costly follow-up efforts at vacant or nonexistent residences are reduced; and people are counted in their usual place of residence, which is the basis for congressional reapportionment and redistricting. According to the Bureau, dwellings not on the address list at the time of questionnaire delivery are less likely to be counted.

The Bureau is currently developing and testing its operations for the 2010 Census, and plans to design specific operations for locating migrant farm workers and their dwellings later in the decade. At your request, to help inform those efforts, we reviewed the adequacy of the Bureau's operations for locating migrant farm workers and their dwellings during the 2000 Census, and the steps, if any, that the Bureau can take to improve those operations as it plans for the next national head count in 2010. This report is the latest in a series of evaluations on the results of the 2000 Census and the Bureau's plans for 2010. It is also one of several that we have issued on the Bureau's efforts to build a complete and accurate address list. (See app. II for the list of reports issued to date.)

Results in Brief

The Bureau used over a dozen operations to help ensure the maps and Master Address File (MAF) used for the 2000 Census were as complete and accurate as possible. To the extent they were properly implemented, the operations appear to have been adequate for overcoming the challenge of

identifying the hidden dwellings in which many migrant farm workers live, such as illegally converted apartments and labor camps.

The operations were generally not as well suited to overcoming other challenges associated with locating migrant farm workers. For example, many migrant farm workers speak little or no English, which made it difficult for them to provide address information to census workers. The Bureau was better able to surmount these challenges by relying on local advocacy groups and other members of the community who knew where and how migrant farm workers lived, and could facilitate the Bureau's access to those areas because the migrant farm workers trusted them.

The Bureau also experienced sporadic difficulties implementing operations used to build the MAF, which created various inefficiencies. For example, at some local census offices, materials used to train census workers on how to update the address list and enumerate people were delivered late. This created extra work for some regional and local census offices when they had to print the materials from e-mail messages.

The Bureau's plans for the 2010 Census include an ambitious program to modernize the MAF and the Bureau's database that supports its mapping efforts, called the Topologically Integrated Geographic Encoding and Referencing (TIGER) system. Although these efforts are steps in the right direction, additional improvements are needed to help the Bureau better locate migrant farm workers and their dwellings.

We identified several innovative practices in this regard that regional and local census offices employed during the 2000 Census that, with refinements, show promise for nationwide use in 2010. For example, during the 2000 Census, a regional census office accepted address information from a migrant farm worker advocacy group that contained more than 3,000 housing units that were not already on the Bureau's address list. However, the Bureau lacked protocols governing when and how to use address information from outside sources. Moreover, while the Bureau had an active partnership program with state and local governments, community groups, and other organizations to support key census-taking activities, it was not fully staffed until after most of the address list development operations had taken place, which limited the extent to which the partnership program could add value to those efforts. Using census, address, and other data strategically to help plan operations and target resources to those areas where migrant farm workers are prevalent could also help the Bureau better locate this population group.

With this in mind, to help improve the Bureau's ability to locate migrant farm workers and their dwellings, we recommend that the Secretary of Commerce direct the Bureau to explore the feasibility of implementing these innovative practices nationwide, take steps to resolve the various implementation difficulties the Bureau experienced, and make better use of census and other available data to identify areas with large numbers of migrant farm workers to better plan operations and target resources more efficiently.

The Secretary of Commerce forwarded written comments from the Bureau of the Census on a draft of this report. The comments are reprinted in appendix I. The Bureau generally agreed with our conclusions and will work towards implementing the recommendations in the report.

Background

The foundation of a successful census is a complete and accurate address list and the maps that go with it. The Bureau's MAF is an inventory of the nation's roughly 120 million living quarters and serves as the basic control for the census in that it is used to deliver questionnaires as well as organize the collection and tabulation of data. The Bureau develops its maps from its TIGER database, which contains such information as housing unit locations, zip codes, streets, geographic borders, census tract and block boundaries, railroads, airports, and schools.

The Bureau goes to great lengths to develop a quality address list and maps, working with the U.S. Postal Service; federal agencies; state, local, and tribal governments; local planning organizations; the private sector; and nongovernmental entities. The Bureau also sends thousands of temporary census workers into the field to verify address information on site. For the 2000 Census, the Bureau spent around \$390 million on its address list compilation activities, which was about 6 percent of the \$6.5 billion spent on the census, or about \$3.33 for each housing unit.

Despite these efforts, the Bureau has historically encountered difficulties locating the dwellings of migrant farm workers because of a variety of obstacles ranging from workers' literacy levels to their legal status (see fig. 1). The net result is that migrants' places of residence may not get included in the MAF, which decreases their chances of being counted in the census.

Figure 1: Barriers to Locating and Counting Migrant Farm Workers

- 1. Distrust of outsiders.** As some migrant farm workers lack proper legal status, they often fear talking to strangers, especially those representing the government.
- 2. Unconventional housing arrangements.** Migrant housing often consists of employer-provided dormitories, cabins, and trailers arrayed in labor camps. In some cases, the camps are illegal and unregistered, and thus would not appear on any official listings. In other cases, the camps might be legal, but might not be registered in time for the census. Some camps are remote from main roads and lack street addresses, while others have blocked access roads, barbed wire fences, locked gates, and “No Trespassing” signs. Although landlords are legally required to let census workers onto their property, employers’ concerns over reduced productivity, as well as being penalized for hiring undocumented workers and violating housing codes, may make them less than fully cooperative. Migrant workers are also known to reside in motels, and “hidden” dwellings, such as sheds, illegally converted basement apartments, makeshift campgrounds, and cars.
- 3. Language and literacy.** Many migrant farm workers know little, if any, English. Others have low education levels, little or no reading skills, and may have difficulty completing official forms and speaking to census workers who do not speak their language. As a result, making forms and outreach material available in the workers’ native language may, in some instances, have a limited impact.
- 4. Mobility.** Migrant farm workers regularly move in response to the seasonal demands of the growers who employ them. They also return to visit their home countries. Their transient nature increases the chances of being missed by the census.

Source: Compiled from Census-Bureau-sponsored research, 1992-1997, unvetted or verified by GAO.

Ensuring that migrant farm workers are included in the census is important for at least two reasons. First, the Bureau is legally required to count all persons who reside in the United States on Census Day, regardless of their citizenship status or whether they are here legally or illegally. Second, according to the Bureau, migrant and seasonal farm workers have unique health, job safety, training, education, and other requirements. Federal, state, and local governments as well as other organizations use census data to plan and fund many of the programs that address these needs.

Scope and Methodology

Our objectives were to (1) review the adequacy of the Bureau’s operations for locating migrant farm workers and their dwellings during the 2000 Census, and (2) identify how, if at all, the Bureau can improve those operations for the next decennial census in 2010. Because the Bureau does not keep data on how well its address list development operations located the dwellings of specific population groups such as migrant farm workers (the operations were developed to locate dwellings regardless of who might live in them), to meet our two objectives we examined relevant

Bureau program and research documents. We also interviewed key Bureau headquarters officials who were responsible for planning and implementing the address list development operations.

Moreover, to obtain a local perspective on how the Bureau implemented its address list development operations and tried to overcome the challenges of locating the dwellings of migrant farm workers, we interviewed Bureau officials from 4 of its 12 regional offices (i.e., Atlanta, Charlotte, Dallas, and Los Angeles). We also interviewed former local census workers in Central California and Florida who helped conduct local address listing. We selected these areas primarily for their geographic dispersion and demographic diversity, and because these areas were identified before the 2000 Census as having a large number of migrant farm workers. Because of the small sample size, the results of our visits cannot be generalized to the Bureau's MAF-building efforts as a whole, but they do provide useful lessons and innovative practices that the Bureau could consider for 2010. We also included the results of our earlier work that consisted of on-site observations of block canvassing—an operation the Bureau used to verify the accuracy of “city-style” addresses.¹ We made these observations when the operation was underway in the spring of 1999 in Dallas, Tex; Los Angeles, Calif.; Paterson, N.J.; and Long Island, N.Y., which we chose for their geographic and demographic diversity.²

We also included the results of our survey of a stratified random sample of 250 local census office managers in which we obtained responses from 236 managers (about a 94 percent overall response rate). The survey—which asked local census office managers about the implementation of a number of key field operations—can be generalized to the 511 local census offices located in the 50 states. All reported percentages are estimates based on the sample and are subject to some sampling error as well as nonsampling error. In general, percentage estimates in this report for the entire sample have a sampling error ranging from about +/- 4 to +/- 5 percentage points at the 95 percent confidence interval. In other words, if all local census office managers in our population had been surveyed, the chances are 95 out of

¹City-style addresses are those where the U.S. Postal Service uses house-number and street-name addresses for mail delivery. Non-city-style addresses include post office boxes, rural route addresses, etc.

²U.S. General Accounting Office, *Decennial Census: Information on the Accuracy of Address Coverage*, GAO/GGD-00-29R (Washington D.C: Nov. 19, 1999).

100 that the result obtained would not differ from our sample estimate in the more extreme cases by more than +/- 5 percent.

To provide further local context, we interviewed representatives of farm worker and other advocacy groups that worked with the Bureau to develop accurate address lists in Florida, Georgia, and California, as well as representatives of local governments who provided local address information to the Bureau. Moreover, we interviewed growers in Florida to discuss how they worked with the Census Bureau. In addition to these field locations, we performed our audit work at Bureau headquarters in Suitland, Md., as well as in Washington, D.C.

We performed our audit work for this report from September 2001 through April 2003, in accordance with generally accepted government auditing standards. We requested comments on a draft of this report from the Secretary of Commerce. On June 2, 2003, the Secretary forwarded the Bureau's written comments on the draft (see app. I), which we address in the "Agency Comments and Our Evaluation" section of this report.

The Bureau's Listing Operations Addressed Some of the Barriers to Locating Migrant and Seasonal Farm Workers but Significant Challenges Remain

The Bureau used more than a dozen operations to help ensure a complete and accurate address list. Although the operations were designed to locate various types of dwellings, not population groups as a whole, if properly implemented their design appears to have been adequate for identifying the hidden living arrangements in which a number of migrant and seasonal farm workers live. However, the operations were generally not as well suited to overcoming language and other challenges associated with locating these population groups. Moreover, various implementation problems hampered the Bureau's activities at certain locations.

The Bureau's Operations Could Not Overcome Certain Challenges

The MAF consists of two types of dwellings: housing units such as single-family homes, apartments, and mobile homes and what the Bureau calls "special places and group quarters." A special place is an entity with which a group quarter is linked. For example, a university is a special place and a dormitory is a group quarter linked to the university.

To build the master address list for the 2000 Census, the Bureau employed over a dozen operations nationwide between 1997 and 2000. Each operation was geared toward locating either housing units or special places, although both address types could be added to the MAF by most of

the operations. The Bureau enhanced these “standard” address list development operations with supplemental procedures for use in areas with large migrant farm worker populations that directed Bureau employees to, among other actions, check vehicles for evidence of habitation.

Operations aimed at locating and verifying the existence of housing units included, among others:

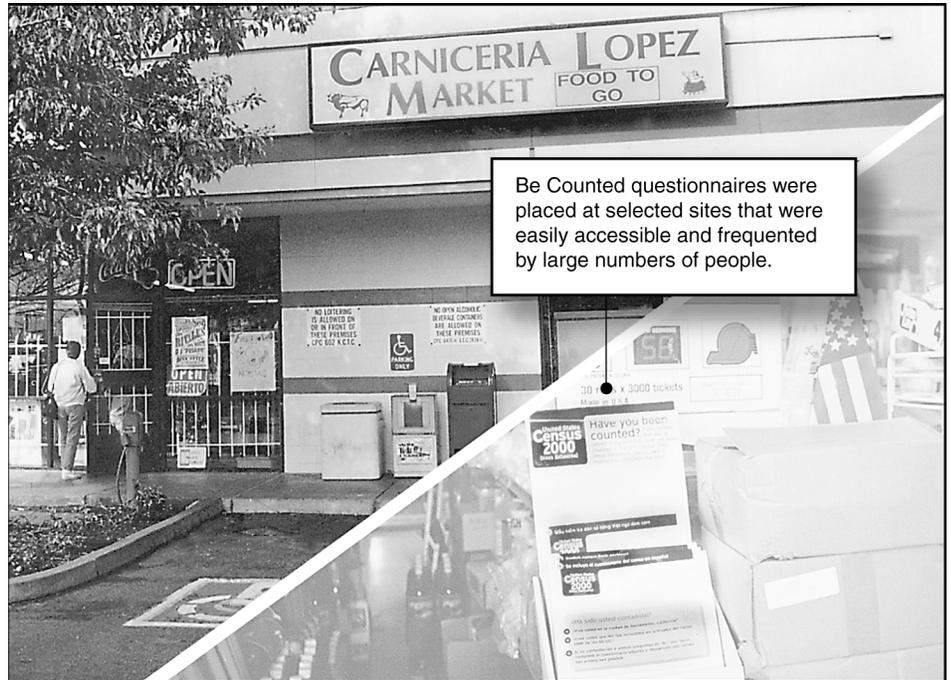
- *United States Postal Service File Transfer* (November 1997), where the Postal Service electronically shared with the Bureau the address lists it uses to deliver mail. The MAF was updated periodically by the Postal Service data between November 1997 and January 2000.
- *Local Update of Census Addresses* (May 1998–June 2000), where local and tribal government officials reviewed and updated the Bureau’s address lists and maps. Participating governments could submit their changes in paper or electronic form.
- *Address Listing* (July 1998–May 1999), a field operation where census workers traveled the roads in areas with mail delivery systems that are not predominately based on street names and street addresses, identifying housing units and updating census maps as necessary.
- *Block Canvassing* (January–July 1999), a field operation where census workers verified the addresses of all the housing units in areas with mail delivery systems that are predominately based on street names and street addresses, and updated census maps as necessary.
- *Update/Leave and Update/Enumerate* (March–July 2000), field operations where census workers either distributed a census questionnaire to be returned by mail (update/leave) or, in certain areas, attempted to enumerate the household. The address list would be updated at the same time.
- *Nonresponse Follow-up* (April–June 2000), where temporary census workers attempted to enumerate households for which a questionnaire was not returned by mail. Any dwellings not on the workers’ assignment lists were also to be enumerated and possibly added to the MAF.

Operations meant to locate primarily special places and group quarters included, among others:

-
- *Advance Visit and Facility Questionnaire operations* (November 1998–March 2000), where temporary census workers personally visited with officials of special places to identify locations and specific dwellings.
 - *Special Places Local Update of Census Addresses* (December 1999–May 2000), where local government officials reviewed and updated the Bureau’s list of special places.
 - *Local Knowledge Update* (January–February 2000), where local census office staff reviewed the Bureau’s list of special places and added, deleted, or corrected special place names and addresses as appropriate.

If all of these operations failed to find a dwelling, people could still be included in the census through the Be Counted program, which the Bureau developed to enumerate people who believed they did not receive a census questionnaire, or were otherwise not included in the census. The program also allowed people with no usual residence on Census Day such as migrants, seasonal farm workers, and transients to get counted in the census. The Bureau placed Be Counted forms (specially modified short-form questionnaires) in community centers, churches, groceries, and other locations where the targeted groups were thought to congregate (see fig. 2).

Figure 2: Be Counted Forms in a California Grocery Store



Source: GAO.

As shown in figure 3, the MAF-building operations were sequential and took place between 1997 and 2000, which helped ensure that an address missed in one operation could be found in a subsequent operation. For example, if an unconventional dwelling was not recognized as habitable during an early operation such as address listing, it could be found during a later operation, such as update/leave.

Table 1: Listing Operations Addressed Only Some of the Challenges Associated With Locating Migrant Farm Workers' Dwellings

MAF-building operation	Hidden and unconventional housing	Distrust of outsiders	Language and literacy	Mobility
Postal Service file transfer				
Local update of census addresses				
Address listing	✓			
Block canvassing	✓			
Supplemental procedures	✓			
Advance visit/facility questionnaire	✓			
Special places local update of census addresses	✓			
Local knowledge update	✓			✓
Update/leave and update/enumerate	✓	✓	✓	
Be Counted program	✓	✓	✓	✓
Nonresponse follow-up	✓	✓	✓	

✓= Generally addressed challenge of locating migrant and seasonal farm workers' dwellings

Source: GAO analysis of Census data.

However, most of these operations were not as well suited to overcoming other challenges to locating migrant farm workers, such as a distrust of outsiders and language and literacy issues. The Bureau appeared to do a better job surmounting these challenges when it worked with local people who knew where and how migrant farm workers lived, and could help facilitate the Bureau's access to those communities. Indeed, at the time of the later operations, local and regional census offices could hire qualified noncitizens to help locate dwellings.

Some local census offices also hired "cultural facilitators"-- people with ties to a particular community who knew where specific population groups

lived and could speak their language, and could thus ease the Bureau's access to those areas. Local offices in the Dallas census region hired residents of the colonias (small, rural, unincorporated communities along the U.S.-Mexico border) as cultural facilitators to accompany temporary census employees on their assignments. Their presence helped reduce barriers that would have prevented the census employees from obtaining a successful interview. However, cultural facilitators were not deployed during the two major MAF development operations, address listing and block canvassing. Instead, the Bureau used cultural facilitators for later operations that could add or delete addresses from the MAF, but were geared toward enumeration.

If deployed during block canvassing and address listing, cultural facilitators could accompany census workers and, because of their knowledge of local living conditions, help them determine whether any of the sheds, cars, boxes, and other potential shelters they might encounter were in fact habitable dwellings. This would be important because although the Bureau took steps to train workers to look for extra mailboxes, utility meters, and other signs of habitation, decisions on what was a habitable dwelling were often subjective—what was habitable to one worker may have been uninhabitable to another. Even with the Bureau's guidelines and training, deciding whether a house is unfit for habitation or merely unoccupied and boarded-up can be very difficult. An incorrect decision on the part of the census worker could have caused the dwelling and its occupants to get missed by the census. Conversely, if the dwelling was listed as habitable when it was not, it could have received a questionnaire and follow-up visits during the enumeration phase, thus increasing the cost of the census. Nationally, 8.2 percent of the roughly 120 million housing units on the Bureau's address list at the start of Census 2000 were later determined to be nonexistent.

We observed this challenge first-hand on one of our site visits, where a representative of a farm worker advocacy group showed us a housing unit that he said was not on the Bureau's address list. As can be seen below, the housing unit in question was a small wooden structure behind a larger house that could have easily been mistaken for a storage shed (see fig. 4).

Figure 4: Habitable Dwellings Could be Hard to Identify

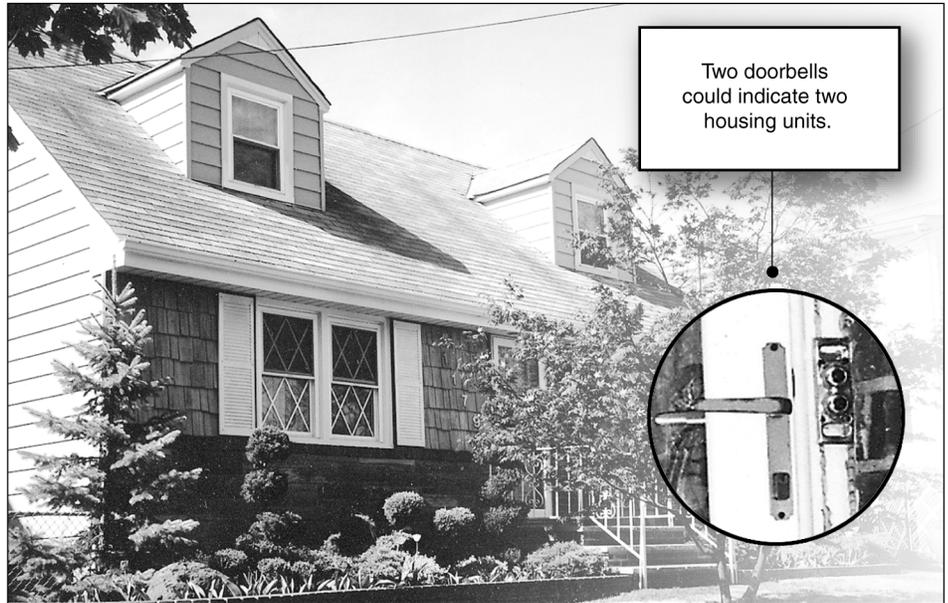


Source: GAO.

Census workers would have needed a fair amount of cultural sensitivity and knowledge of local living conditions to recognize the structure as a potential residence. Although census workers were instructed to make every effort to make contact with adult farm workers who lived in the area, the farm workers did not always tell the truth because the dwellings were sometimes illegal or the inhabitants undocumented.

Living quarters were difficult to identify in other ways. For example, as shown in figure 5, what appears to be a small, single-family house could contain an illegal apartment as suggested by its two doorbells.

Figure 5: Single or Multi-unit Dwelling?



Source: GAO.

Implementation Difficulties Added to the Bureau's Challenges in Finding Migrant and Seasonal Farm Workers

Implementation and logistical problems at some locations also hampered the Bureau's efforts to locate migrant and seasonal farm workers. They included the following:

- *Accessing labor camps and farms was often difficult.* We found the migrant labor camp and farm shown in figure 6 off of a state road on one of our site visits. Although this particular camp was readily visible and the farm owner was willing to have census workers come onto his land, this was not always the case at other farms.

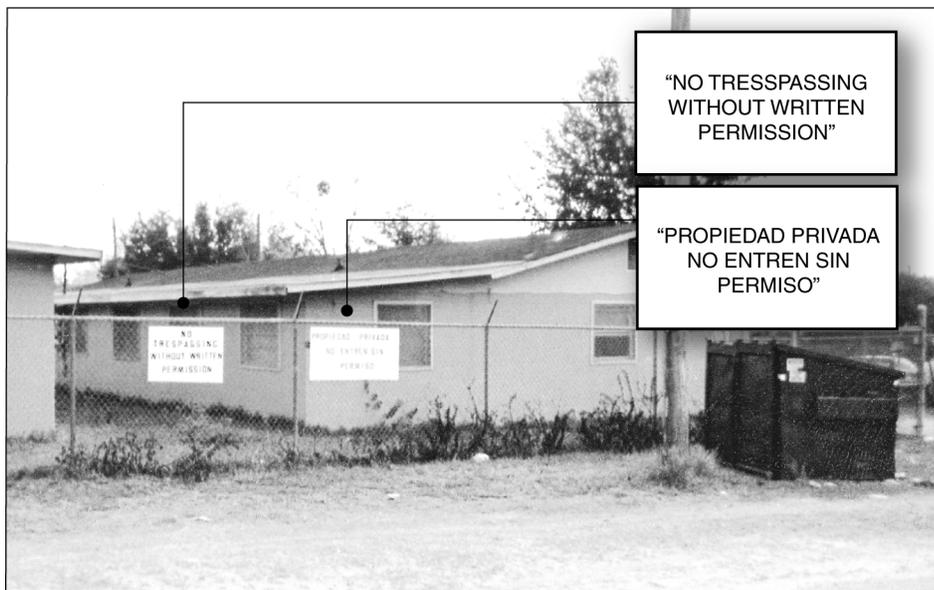
Figure 6: Migrant Labor Camp



Source: GAO.

Indeed, as shown in figure 7, some dormitories were fenced-in and posted with “No Trespassing” signs, while others were in remote locations away from main roads. Although property owners are required by law to allow census workers onto their land to enumerate residents, owners sometimes created an unwelcome and intimidating atmosphere. For example, a census worker at one of our site visits told us that one farm with worker housing on its premises was patrolled by armed guards.

Figure 7: Migrant Labor Camps Were Sometimes Fenced-in and Difficult to Access



Source: GAO.

- *Training materials for MAF-building and enumeration operations arrived late.* Local and regional Bureau staff we contacted reported that, for a variety of reasons, training materials often arrived later than they had planned and, in some cases, so late that extra steps had to be taken by local offices to ensure that training could take place on schedule.

For example, at one office we visited, the late materials created unnecessary staff work when an official from the McAllen, Tex., local census office reported that he had to drive 142 miles to the Laredo, Tex., local census office to obtain copies of needed training materials. As shown in figure 8, the boxes of training kits arrived too late to be used. Other local census office managers said that they received multiple revisions of the same training materials, which caused confusion. Bureau officials told us that special place and group quarters procedures were of a lower priority than other procedures and, therefore, the procedures and training materials were not finalized until very late. Local census office managers in the Bureau's Atlanta and Los Angeles regions reported that they had to print training materials from

e-mail attachments finalized and received the night before training was scheduled to begin. Bureau guidance encouraged trainers to collect, organize, and study the training materials well in advance of their training session, but the late receipt of these materials impeded their ability to do so. According to one regional office official, the late arrival of training materials resulted in some local office officials being unprepared to run field operations.

Figure 8: Training Materials in McAllen, Tex., Arrived Too Late to Be Used



Source: GAO.

- *The system for managing field operations confused local census staff.* The Bureau used an automated system to track field operations. However, one of its shortcomings was that it did not show a group quarters (e.g., a dormitory) that was in one local census office's jurisdiction, if the group quarters was linked to a special place (a college) in another office's jurisdiction. In addition, the two sets of instructions that told workers how to handle these situations conflicted with one another. One set of instructions stated that the local census office in which the special place resides "must handle all operations associated with the special place," while a second set of instructions noted that local census offices were responsible for enumerating all group quarters within their area.

Additionally, to avoid this shortcoming, regional census office officials told us that local census office staff, when keying data into the automated system, sometimes gave the group quarters located outside of their area an address that was inside their office's jurisdiction so that the group quarters would show up as part of the office's workload. Because this group quarters then had an incorrect address, its residents wound up being counted in the wrong geographic location.

Greater Use of Partnership Program and Innovative Practices Could Improve the Bureau's Ability to Locate Migrant Farm Workers in the Future

Bureau officials told us that because it is relatively early in the decade, its plans for locating and enumerating migrant farm workers are still being developed. However, the Bureau has launched an ambitious MAF/TIGER modernization program. As part of this effort, the Bureau plans to correct the locations of streets and other map features; work with state, local, and tribal governments to obtain better geographic information; and modernize its geographic data processing operations. The Bureau's longer term plans include equipping census workers with Global Positioning System receivers that use satellites to help them determine the precise locations of housing units and group quarters and validate the accuracy of each address.

If successfully implemented, the Bureau's enhancements could produce more accurate maps that would pinpoint individual dwellings. However, for these initiatives to work effectively for migrant farm workers, the Bureau must first know where to look for migrant and seasonal farm workers' dwellings and be able to overcome challenges to identifying where they live. In the course of our review, we identified several practices from the 2000 Census that show promise in this regard for 2010.

- *Leverage partnerships.* The Bureau partnered with state, local, and tribal governments as well as religious, media, educational, and other community organizations to improve participation in the 2000 Census and to mobilize support for other operations. The partnership program stemmed from the Bureau's recognition that local people know the characteristics of their communities better than the Census Bureau.³ The city of Los Angeles (L.A.), for example, directed Department of Water and Power employees, sanitation, and many other city workers to

³For more information on the Bureau's partnership program, see U.S. General Accounting Office, *2000 Census: Review of Partnership Program Highlights Best Practices for Future Operations*, GAO-01-579 (Washington, D.C.: Aug. 20, 2001).

identify dwellings that the Bureau may have missed as part of its address-list development operations. The city selected these employees because they went door-to-door as part of their work, and could thus help find nonstandard dwellings. L.A.'s Information Technology Agency developed a 10-minute video that described the importance of the effort and how to find unconventional housing. According to city representatives, the employees found over 38,000 nonstandard dwellings.

The partnership program was also important for the Be Counted campaign as partnership staff worked with local governments, community organizations, and other groups to help identify the best places to put Be Counted forms, including undercounted and non-English-speaking neighborhoods.

However, the full complement of partnership program staff did not come on board until after October 1, 1999, when the Bureau filled the remaining 202 (34 percent) of the 594 positions authorized for the initiative. As shown in figure 3, this was several months after the Bureau completed the bulk of its address list-building activities. Had the full complement of partnership specialists been available to support the listing operations in 1998 and 1999, they could have encouraged greater participation on the part of local governments and community groups in building a better address list for the 2000 Census, much like they did later on in the census to increase local awareness of the census and boost response rates.

For example, partnership specialists could reach out to local governments and encourage greater participation in the Local Update of Census Addresses (LUCA) program. During the 2000 Census, of the 17,424 eligible city-style jurisdictions the Bureau invited to participate in what was known as "LUCA 1998", 9,263 (about 53 percent) volunteered to participate. Ultimately, about 36 percent of eligible jurisdictions reviewed the material and returned something to the Bureau. Partnership specialists could have followed up with the nonresponding localities to determine why they did not return material to the Bureau and, if necessary, encourage their participation in LUCA.⁴

⁴For more information about the LUCA program, see U.S. General Accounting Office, *2000 Census: Local Address Review Program Has Had Mixed Results to Date*, GAO/T-GGD-99-184 (Washington, D.C.: Sept. 29, 1999).

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- *Make use of address information from local organizations.* As part of its partnership efforts, the Bureau frequently obtained information about special places and group quarters from local advocacy and community groups. In one instance, the Bureau's Los Angeles regional office partnered with the California Rural Legal Assistance (CRLA) Corporation, a nongovernmental migrant farm worker advocacy group, to improve coverage of housing units in areas populated by many migrant farm workers.

Carrying forms similar to those used by census workers during the block canvassing and address-listing operations, CRLA staff canvassed communities where they knew migrant farm workers lived. Because the staff were familiar with the types of structures migrant farm workers used as dwellings and were known by many of the workers, they were able to locate housing units that the Bureau might have missed. According to data provided by the Bureau, but not audited by GAO, CRLA staff identified over 4,000 addresses of which 3,076 (about 73 percent) the Bureau accepted as valid. The Bureau added these addresses to its list of housing units to be visited during census follow-up operations.

Bureau officials we spoke with knew of no other instances where the Bureau accepted address data from nongovernmental sources, and there were no protocols for doing so. Headquarters officials said they were not aware of the Los Angeles Region's reliance on CRLA, but that they would not necessarily have objected if the region had included the information within other tested and approved procedures.

- *Use Census data strategically to help plan and manage address listing operations.* Following each census, the Bureau has a wealth of data on the social and demographic characteristics of each and every census block in the nation. However, for a variety of reasons the Bureau does not always use that information strategically to help inform, plan, and administer operations in the subsequent census.

For example, in its initial plan for the 2000 Census, the Bureau conceived of a planning database that would capture data down to very small geographic levels and would be continuously updated over the decade for a number of census purposes. The Bureau envisioned a system that, among other functions, would have enabled it to target areas where language resources were needed and identify neighborhoods where enumeration and recruiting could be difficult.

However, a Bureau official said the effort was suspended in the mid-1990s for budgetary reasons. According to this official, while the Bureau revived the planning database later in the decade, it was never completely developed or used to the fullest extent possible.

Although the Bureau used labor force data on agricultural workers to help target its supplemental MAF-building procedures, some of the data was from 1992 and may not have been current enough to be accurate, thus highlighting the importance of up-to-date information. For example, employees of the Bureau's Atlanta and Charlotte regional offices told us that the migrant populations in some locations in their regions had grown noticeably during the latter half of the 1990s, and the Charlotte employees said that they used the supplemental procedures in many areas that had not been previously identified by the Bureau.

In those instances where the Bureau was more successful in using demographic information to plan subsequent census-taking activities, the potential payoff is clear. As we noted in our report on lessons learned for more cost-effective follow-up with nonrespondents,⁵ the Bureau called on local and regional census offices to develop action plans that, among other things, identified hard-to-enumerate areas within their jurisdictions, such as immigrant neighborhoods, and propose strategies for dealing with those challenges. The strategies included such methods as paired and team enumeration for high-crime areas, and hiring bilingual enumerators. We concluded that this advance planning contributed to the timely completion of nonresponse follow-up.

If similar advance planning and geographic databases are integrated into the MAF-building process early on, the Bureau could produce thematic maps that use colors and symbols to show areas where migrant and seasonal farm workers and other hard-to-enumerate groups and housing are located. The result—a geographic information system consisting of “hard-to-list” areas—could help the Bureau target its MAF-building, partnership, hiring, and other efforts far more efficiently.

⁵U.S. General Accounting Office, *2000 Census: Best Practices and Lessons Learned for More Cost-Effective Nonresponse Follow-Up*, [GAO-02-196](#) (Washington, D.C.: Feb. 11, 2002).

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- *Train census workers in languages other than English.* The material used to train census workers was printed only in English (the exception to this was Puerto Rico, where training kits were available in Spanish). However, to better prepare census workers—some of whom spoke Spanish as their first language—to locate migrant farm workers and other hard-to-count groups, a local census office in the Los Angeles region conducted a training session in Spanish. Because the trainer had only English language materials, she simultaneously translated these materials verbally during the training session. Since the trainees had been recruited to help locate and enumerate dwellings in largely Spanish-speaking areas, the staff we spoke with believed that presenting the training in Spanish directly improved their effectiveness.

Conclusions

The Bureau went to great lengths to build its MAF and locate the dwellings of migrant farm workers, using a series of complementary and sometimes overlapping operations spanning several years. Together, the operations formed a safety net that helped ensure that dwellings missed in one operation would be found in a subsequent procedure. Nevertheless, while the various MAF-building operations appeared to be adequate for locating the hidden housing arrangements in which some migrant farm workers live, surmounting barriers such as language and literacy issues proved to be more problematic. Combating these challenges will be critical to a more complete count of migrant and seasonal farm workers and a more accurate census in 2010.

Based on the Bureau's experience during the 2000 Census, this challenge might be addressed more successfully by using its own data more strategically to target resources, and starting its partnership program earlier to support address list development operations, rather than with a new or improved MAF-building procedure. At the same time, it will be important for the Bureau to address the implementation problems that occurred as these operations were carried out. Although they appeared to be sporadic in nature, they added inefficiencies to an already difficult task.

Recommendations for Executive Action

To ensure a more complete count of migrant and seasonal farm workers, we recommend that the Secretary of Commerce direct the Bureau to take the following actions as part of its planning process for the 2010 Census.

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- Identify best practices and lessons learned from the 2000 Census and ensure that they are incorporated into planning efforts for the 2010 Census.
 - Study the feasibility of staffing partnership efforts at higher levels earlier in the decade to support key address list development efforts.
 - Consider developing protocols that would allow the Bureau to take advantage of housing unit information kept by advocacy and other responsible groups, while preserving the confidentiality and integrity of the Bureau's master address list.
 - Explore integrating census, MAF/TIGER, and other data to produce a geographic information system and thematic maps that would identify those areas with large migrant farm worker and other hard-to-count populations in order to better plan operations and target resources.
 - Consider providing training materials in languages other than English to targeted areas.
 - Ensure that the link between Special Places and Group Quarters is clear to those implementing the operations and that responsibility for ensuring each group quarter is enumerated is clearly delegated.
 - Ensure that MAF-building operations are properly tested and integrated with other census operations, and are adequate for locating migrant and seasonal farm workers and other hard-to-count groups.

Agency Comments and Our Evaluation

The Secretary of Commerce forwarded written comments from the Census Bureau on a draft of this report on June 2, 2003, which are reprinted in appendix I. The Bureau generally agreed with the conclusions of the report and said it will work towards implementing our recommendations. The Bureau also suggested some minor technical corrections and clarifications, which we have incorporated.

In addition, the Bureau noted that our report states that, "the full complement of partnership program staff did not come on board until after October 1, 1999. . ." and that, "had partnership specialists been available to support these earlier operations, they could have encouraged greater participation." The Bureau maintains that partnership specialists were in

fact in place and actively involved in supporting address list development activities.

Our report did not state that partnership specialists did not support address list development activities. In fact, earlier in the report we noted how the Bureau partnered with the city of Los Angeles to help find nonstandard dwellings. Rather, our point was that they were thinly spread as around a third of the partnership specialist positions were not filled until fiscal year 2000, after the Bureau had completed its key address list development procedures. We revised the text to clarify this.

As agreed with your office, unless you announce its contents earlier, we plan no further distribution of this report until 30 days after its issuance date. At that time, we will send copies of the report to other interested congressional committees, the Secretary of Commerce, and the Director of the U.S. Census Bureau. Copies will be made available to others upon request. This report will also be available at no charge on GAO's Web site at <http://www.gao.gov>.

If you or your staff have any questions concerning this report, please contact me on (202) 512-6806 or by e-mail at daltonp@gao.gov or Robert Goldenkoff, Assistant Director, on (202) 512-2757 or by e-mail at goldenkoffr@gao.gov. Key contributors to this report were Benjamin Crawford, Ty Mitchell, Corinna Wengryn, Timothy Wexler, and Christopher Miller.

Sincerely yours,



Patricia A. Dalton
Director
Strategic Issues

Comments from the Secretary of Commerce



THE SECRETARY OF COMMERCE
Washington, D.C. 20230

June 2, 2003

Ms. Patricia A. Dalton
Director
Strategic Issues
General Accounting Office
Washington, DC 20548

Dear Ms. Dalton:

The Department of Commerce appreciates the opportunity to comment on the General Accounting Office draft document entitled *Decennial Census: Lessons Learned for Locating and Counting Migrant and Seasonal Farm Workers*. The Department's comments on this report are enclosed.

Sincerely,

A handwritten signature in black ink, appearing to read "D. L. Evans".

Donald L. Evans

Enclosure

Comments from the U.S. Department of Commerce
U.S. Census Bureau

U.S. General Accounting Office (GAO) draft report entitled *Decennial Census: Lessons Learned for Locating and Counting Migrant and Seasonal Farm Workers*

Comments on the Text of the Report

The U.S. Census Bureau has reviewed this report carefully and appreciates this opportunity to respond prior to its publication.

We are in general agreement with the conclusions of this report and will work toward implementing GAO's recommendations. We have the following minor corrections and clarifications:

- Page 10—GAO's descriptions of the *Address Listing* and *Block Canvassing* operations need to be clarified. It would be more accurate to describe *Address Listing* as "a field operation where census workers traveled the roads in areas with mail delivery systems that are not predominately based on street names and street addresses," and *Block Canvassing* as "a field operation where census workers verified the addresses of all the housing units in areas with mail delivery systems that are predominately based on street names and street addresses."
- Page 10—GAO refers to the *Advance Visit and Facility Questionnaire* operation and states that it was conducted from April-November 1999. In fact, these were two separate operations. The *Facility Questionnaire Operation* was conducted from November 1998-March 2000. The *Advance Visit Operation* was conducted from February 2000-March 2000.
- Page 12—The time line of Address List Building Operations needs to be updated to include the dates and operations as listed in the previous bullet.
- Page 22—The report states that "the full complement of partnership program staff did not come on board until after October 1, 1999," and goes on to state that "had partnership specialists been available to support these earlier operations, they could have encouraged greater participation . . ." In fact, partnership specialists were in place and actively involved in supporting address list-building activities.
- Page 23—The report states that "the planning database . . . was never fully developed and used." This is not accurate; the planning database was used during Census 2000 operations.

Related GAO Products on the Results of the 2000 Census and Lessons Learned for a More Effective Census in 2010

2000 Census Coverage Measurement Programs' Results, Costs, and Lessons Learned. [GAO-03-287](#). Washington, D.C.: January 29, 2003.

Decennial Census: Methods for Collecting and Reporting Hispanic Subgroup Data Need Refinement. [GAO-03-228](#). Washington, D.C.: January 17, 2003.

Decennial Census: Methods for Collecting and Reporting Data on the Homeless and Others without Conventional Housing Need Refinement. [GAO-03-227](#). Washington, D.C.: January 17, 2003.

2000 Census: Complete Costs of Coverage Evaluation Programs Are Not Available. [GAO-03-41](#). Washington, D.C.: October 31, 2002.

2000 Census: Lessons Learned for Planning a More Cost-Effective 2010 Census. [GAO-03-40](#). Washington, D.C.: October 31, 2002.

The American Community Survey: Accuracy and Timeliness Issues. [GAO-02-956R](#). Washington, D.C.: September 30, 2002.

2000 Census: Refinements to Full Count Review Program Could Improve Future Data Quality. [GAO-02-562](#). Washington, D.C.: July 3, 2002.

2000 Census: Coverage Evaluation Matching Implemented As Planned, but Census Bureau Should Evaluate Lessons Learned. [GAO-02-297](#). Washington, D.C.: March 14, 2002.

2000 Census: Best Practices and Lessons Learned for More Cost-Effective Nonresponse Follow-Up. [GAO-02-196](#). Washington, D.C.: February 11, 2002.

2000 Census: Coverage Evaluation Interviewing Overcame Challenges, but Further Research Needed. [GAO-02-26](#). Washington, D.C.: December 31, 2001.

2000 Census: Analysis of Fiscal Year 2000 Budget and Internal Control Weaknesses at the U.S. Census Bureau. [GAO-02-30](#). Washington, D.C.: December 28, 2001.

2000 Census: Significant Increase in Cost Per Housing Unit Compared to 1990 Census. [GAO-02-31](#). Washington, D.C.: December 11, 2001.

Appendix II
Related GAO Products on the Results of the
2000 Census and Lessons Learned for a More
Effective Census in 2010

2000 Census: Better Productivity Data Needed for Future Planning and Budgeting. [GAO-02-4](#). Washington, D.C.: October 4, 2001.

2000 Census: Review of Partnership Program Highlights Best Practices for Future Operations. [GAO-01-579](#). Washington, D.C.: August 20, 2001.

Decennial Censuses: Historical Data on Enumerator Productivity Are Limited. [GAO-01-208R](#). Washington, D.C.: January 5, 2001.

2000 Census: Information on Short- and Long-Form Response Rates. [GAO/GGD-00-127R](#). Washington, D.C.: June 7, 2000.

Decennial Census: Information on the Accuracy of Address Coverage. [GAO/GGD-00-29R](#). Washington, D.C.: November 19, 1999.

2000 Census: Local Address Review Program Has Had Mixed Results to Date. [GAO/T-GGD-99-184](#). Washington, D.C.: September 29, 1999.

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