



Census Enumeration of Immigrant Communities In Rural California: Dramatic Improvements But Challenges Remain

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INTRODUCTION

We examined decennial census undercount in 2010 in a random sample of 33 hard-to-count (HTC) census tracts in California’s San Joaquin Valley, Central Coast, and South Coast areas with extensive labor-intensive agricultural production.ⁱ About one out of five of the nation’s migrant and seasonal farmworkers live in these counties.ⁱⁱ I focus on the distinctive problems of census enumeration in these rural US communities with high concentrations of farmworkers and immigrants—in part because these groups have historically been seriously undercounted but, also, because, immigration, during the past several decades, has changed the demographic and sociocultural profile of rural areas of the United States more rapidly than that of urban areas and will continue to do so in the future.ⁱⁱⁱ Assessment of 2010 decennial census efforts is relevant to planning for a broad spectrum of social programs—because the American Community Survey (ACS), the source of detailed demographic and socioeconomic data on population and housing, relies on the same core survey methodology, management, and has operational procedures similar to those utilized in the decennial census.

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THE POLICY CONTEXT OF CENSUS IMPROVEMENT EFFORTS

Differential undercount is a major problem for effective social policy development and program planning because, typically, hard-to-count populations, neighborhoods, and communities are those which most benefit from such interventions. Flaws in enumeration of these relatively small groups of Americans bias the resulting demographic and socioeconomic profiles developed from decennial census and ACS data. Consequently, these flaws inevitably contribute to broadening pre-existing social and economic fault lines in contemporary society—because federal programs, targeted to

servicing these groups, as well as state and local institutions cannot reliably assess current policies, plan programs, or allocate program funding.

RESEARCH PRIORITIES AND STRATEGY

In previous analyses of differential undercount of migrant and seasonal farmworkers we determined there were extremely high levels of total and partial household omission. We estimated that 48-52% of the nation’s migrant and seasonal farmworkers were missed in the 1990 decennial census as a result of total or partial household omission.^{iv} Subsequently, in the 2000 decennial census we examined census coverage in five rural California communities with high concentrations of farmworkers and indigenous-origin Mexican immigrants and found undercount rates ranging from 11% to 38%.^v The research methodology utilized our 2010 census coverage assessment extends our earlier findings regarding neighborhood pockets of differential undercount to an assessment of patterns of differential undercount in larger areas.

The findings reported here are based on a multi-stage random sample of 423 households within 33 rural HTC tracts -- in the San Joaquin Valley, Merced, Madera, Fresno, Tulare, Kings, and Kern counties, in the Central Coast region, Monterey, Santa Barbara, and Ventura counties, and the agricultural area of northern San Diego county. Lessons learned about what worked in the 2010 decennial census are immediately relevant to other rural areas of the country with high concentrations of Mexican and/or Central American immigrants.^{vi} It is very likely that the patterns of undercount we observed in the 2010 decennial census will persist in the ACS—because the types of operational difficulties encountered in the decennial census will be replicated, and probably amplified since the survey effort is accompanied with fewer promotional activities, relies primarily on phone contacts for non-response followup (NRFU) and, of course, because the respondent burden is much higher than for the short-form decennial census.

DEMOGRAPHICS, SOCIOECONOMIC PROFILE, HOUSING ARRANGEMENTS AND MAIL RETURN IN THE STUDY AREA

Most (75%) of households in our study sample are Latino but there are also significant numbers of White non-Latino households (18%) and small numbers of mixed-race (3%), Asian (2%), African-American (1%), and American Indian households (<1%). Two-thirds (67%) of the household heads are foreign-born, with most having been born in Mexico. In about one-quarter (24%) of the households no adult speaks English. In slightly more than one-third (37%) of the households in the study sample, the head of household had no more than elementary-level schooling.^{vii} About two-fifths (41%) of the households in the sample are farmworker ones—although the proportion varies from county to county, with higher concentrations of farmworkers in Fresno, Tulare, Kern, and Monterey counties.^{viii} The combination of Mexican immigrant households’ limited command of English and low educational attainment poses challenges to census enumeration because the decennial census is primarily a mail survey. However, the Mexican immigrant households sometimes resort to “collaborative literacy” strategies for dealing with printed

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information when necessary—an important consideration, as it turns out, in understanding the dynamics of census response in the study area.^{ix}

HOUSEHOLD STRUCTURE AND HOUSING ARRANGEMENTS

Contrary to conventional wisdom, most farmworkers do not live in on-farm housing, i.e. “farm labor camps”.^x The study area is typical of US labor-intensive agricultural areas in that most farmworkers live in single-family dwellings. However, census definitions of “housing unit” and “household” do not always conform to actual housing arrangements since, in the case of single housing units occupied by multiple family/social units, as well as in informal clusters of dwellings on a single property (typically a main house and one or more “back houses”), there is ambiguity about the boundaries of “household”. The strength of social bonds between persons living in a single dwelling or in non-mail housing units in a cluster of non-mail housing units around a primary housing unit/household at a single property, and, thus, visualization of household membership, varies greatly.^{xi} In some cases, people living in rooms or portions of a single main housing unit (even when there is not a separate entrance) are considered by the primary householder to be part of a separate household even if, as visualized by the Census Bureau residence rules, they are not. Overall, 7.2% of the surveyed residences lacked standard mail delivery. Slightly more than half of these housing units without mail delivery-- 3.8 % of all the housing units-- were “unusual” low-visibility ones such as “back houses”, garages, camper shells, or apartments over garages where respondents stated there was no mail delivery or that they had not received a mailed census form. The rest were single-family homes and trailers in a community with no mail delivery.

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DELIVERY OF CENSUS FORMS VIA US MAIL AND UPDATE/LEAVE (U/L)

Our survey results suggest that the Census Bureau’s performance in delivering census forms to families living in the HTC tracts surveyed was quite good (with about 95% of all households having been identified and contacted via mail, having received a dropped-off census form, or a visit by an enumerator).

MAIL PARTICIPATION RATE AND FACTORS THAT AFFECT IT

The mail participation rate reported by the respondents to our survey, i.e., the proportion of those who had received a form who had returned it, was 77%, close to the overall national average reported by the Census Bureau but higher than for comparable areas (since the national mail return rate for Hispanic households is 69.7%). Reviewing a range of factors that affect mail participation rate yields several important findings:

TARGETED MAILING OF BILINGUAL FORMS

The Census Bureau’s program of targeted mailing of bilingual census forms in Spanish and English was an extremely important factor in Census 2010 participation. The targeted mailing appears to have been quite successful in reaching the limited-English households which most needed a form in

Spanish. Three-quarters (75%) of the non-English speaking households, i.e. those where the survey respondent reported that no one spoke English or where only a child spoke English, received a bilingual form. This seems to have helped with mail return rates since the mail return rates of the Latino households were very close to those for White households (77% for Latinos, 76% for Whites), and only slightly lower for households where no one spoke English fluently (75%)

A potential problem for the targeted mailing program is that English-only households may receive bilingual forms and, due to confusion or annoyance, be less likely to return their forms. However, our interviewers heard only a few negative remarks about the bilingual forms from White non-Hispanic survey respondents, which seemed to reflect general apprehension about cultural/ethnic shifts within these Latino-majority rural areas and/or “big government”. There was only one interview in which an English-only respondent complained about census forms being mailed “in Mexican”.

DIFFERENCES IN CENSUS FORM MAIL RETURNS—RECENT VS. LONG-TERM, SETTLED MEXICAN IMMIGRANTS

The census form return rate was 73% for households in which the household head had been in the U.S. 5 years or less and 88% for households where they had been in the U.S. for 6 or more years, i.e. since 2004. This finding has important implications both for census promotion efforts and for operations, since it suggests that legal status per se is not as important a factor in determining willingness to respond to the census questionnaire as the degree to which they are socially integrated into community life. The immigrant households’ sense of community membership and, consequently, responsiveness to the census promotion message about benefits from participation, seem to be most closely related to having children in school.

“FORGOTTEN PERSONS” IN SAMPLE HOUSEHOLDS

We asked survey respondents if they thought anyone had been omitted from the census form which was returned for their household, either because whoever filled out the form had “forgotten” to include the person (or been uncertain about including them) or because there was not enough room on the census form to include everyone in the household. Someone in the household had been “forgotten” in a small, but significant, proportion of cases: in 3.9% of the households that returned their form by mail. The most common omission was a peripheral social group member living in a doubled-up household who had been omitted from the census form which was returned by mail, especially in large, overcrowded households. For example, a couple and their two children who were living with friends in a housing unit with nine people in a crowded household were omitted. Two cousins were “forgotten” in another large complex farmworker household where 13 persons from an extended family shared a single-family home.

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EFFECTIVENESS OF CENSUS PROMOTION EFFORTS—MEDIA, ORGANIZATIONAL OUTREACH, AND SOCIAL NETWORKING

The actual behavioral impact of media campaigns and organizational efforts to promote census participation (i.e. actually completing a census form accurately/correctly, and returning it via mail) is the result of multiple interacting messages which may affect respondents' knowledge, beliefs, attitudes, aspirations, and behavior. We asked respondents whether they had been exposed to census promotion messages via mass media (TV, radio, print), within their social networks (family, friends, co-workers, or neighbors), and if they had been contacted by an organization involved in census outreach. Virtually all (97%) remembered a TV spot or radio message on the importance/benefits of census participation to the local community and institutions. However, print messaging was not as effective. Only 59% of the Latino households remembered an article, flyer, billboard, or mailed notice promoting census participation.

Formal “outreach” by community organizations partnering with the Census Bureau only touched 14% of the households but probably made an important contribution by building trust/*confianza* and, thereby, helping mobilize non-formal social networks. These non-formal social networks seem to have played a significant role in effective promotion of census participation—because 48% of the respondents remembered a family member, friend, co-worker, or neighbor urging them to participate.

PERCEIVED IMPORTANCE OF CENSUS PARTICIPATION

The 2010 census promotion campaign appears to have had an impact on Latino households' beliefs regarding the importance of census participation. More Latino respondents (86%) than Whites (78%) said that they thought census participation was “very important”.^{xiii} Interviewers heard widespread recognition and mention of the benefits that result from communities being counted (e.g. schools, hospitals). However, it also deserves note that there is a small proportion of the Latino (4.9%) and White (4.1%) respondents who expressed negative opinions about census participation, e.g. “they don't need to know about us”. The negative opinions

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from Whites typically were framed with reference to government inefficiency/size while the negative Latino opinions, not surprisingly, hinged on “the gaze of surveillance”, government's role in round-up of unauthorized immigrants, or linked to the general context of anti-immigrant public sentiment or government behavior (such as denial of access to health care benefits).

BELIEFS ABOUT CONFIDENTIALITY OF INFORMATION PROVIDED TO THE CENSUS

A worrisome number of survey respondents did not believe in the confidentiality of census information. Three-quarters (75%) believed the census information would be confidential but 11% were unsure and 12% believed the information would be shared with other government agencies. Actually, slightly more of the White than Latino respondents distrusted that census data would be confidential, but the lack of trust was statistically equivalent for both.

REPORTED IMPACT OF MEDIA MESSAGES

Behavioral impact of media campaigns on audience beliefs must be considered in light of whether those who were exposed to the media message were already convinced to “do the right thing”. Slightly less than half (40%), in both White and Latino households, said they had heard a census message but had already believed ahead of time that they should participate. The media campaign made the most clearly observable difference in convincing Latino households to fill out the questionnaire: 38% of the Latino survey respondents said the messages had helped convince them to fill out and return the questionnaire while only 16% of the White households said the messages had an impact on them.

OVERALL EFFECTIVENESS OF CENSUS PROMOTION CAMPAIGN

The fact that the media campaign reached a higher proportion of Latino than White households is particularly noteworthy. Spanish-language television and radio played a major role in this achievement. Special census promotion events, by contrast, reached few people and had negligible impact on return of mailed census forms.^{xiii} More of the Latino households were exposed to social network contacts that involved some form of census promotion. However, we could not determine which specific elements of the census promotion strategy generated the positive network “buzz” around census participation.

The role played by family, friends, neighbors, and co-workers, in conjunction with trusted local organizations such as churches and schools, in fostering census participation deserves particular attention because it appears that households in the hard-to-count tracts, particularly the Latino households, were successfully motivated to be enumerated. The campaign overlay of active involvement by the trusted sources of information seems to have functioned to convert “knowledge about the census”, i.e. standard media messages giving the positive rationale (benefits) and countering worries about non-confidentiality into trust and actual aspirations to participate. Nonetheless, is very unlikely, however, that the census promotion campaign could have leveraged the high levels of mail return we observed without the targeted mailing of Spanish-language forms.

QUALITY OF NON-RESPONSE FOLLOWUP

The Census Bureau, in most cases, successfully deployed Spanish-speaking enumerators during NRFU to secure information from Spanish-speaking households. Two-thirds (64%) of the Spanish-speaking households which had not mailed in the form and for whom we have information on NRFU said that the enumerator who contacted them spoke Spanish very well and 14% said the enumerator spoke at least some Spanish. The remaining 22% of the Spanish-speaking household respondents said that the NRFU interviewer did not speak Spanish. Children or a relative in many of these cases translated the questions posed by the NRFU interviewer to an adult in the household. The overwhelming majority (80%) of the survey respondents contacted regarding their experience in talking with an enumerator said the enumerator communicated well with them and that the questions they posed were easy to understand. However, in 8% of the households, respondents had a great deal of difficulty in understanding why the enumerator had visited them.^{xiv}

CENSUS ENUMERATION OUTCOMES

Inevitably, the quality of decennial census efforts ultimately is judged by results. We were able to definitively determine the enumeration status of 399 of the surveyed households (94.1%) based on initial interviews and follow-up interviews at these addresses. We also reviewed individually each of the 5.9% of the cases in our sample where we were unable to definitively determine household enumeration status because our own interviewers were unable to re-interview our original survey respondent or a proxy.

ESTIMATE OF TOTAL HOUSEHOLD OMISSIONS

Based on our interviews, the observed minimum rate of total household omissions, i.e., the proportion of households which had not returned a census form by mail or said definitively that “no one from the Census” had enumerated them when we talked to them after NRFU had been completed, is at least 3.8%.^{xv} The analysis of households that were definitely totally omitted from the census demonstrates that there are two sets of statistically significant correlates of total household omission, one related to housing conditions, what we refer to as “structural” correlates of undercount, the other related to household composition, which we refer to as “respondent” correlates of undercount. Persons living in a housing unit without mail delivery or living in an “unusual” low-visibility housing unit such as a “back house” or a garage, continue to be missed at a significantly higher rate than others.^{xvi} Only 73% of the housing units which were categorized by our interviewers as “unusual” low-visibility units (“back houses”, garages and other sub-standard accommodations) were successfully enumerated while 97% of the standard housing units were successfully enumerated. The other type of correlate of total household omission was the length of time the survey respondent had been in the U.S. One out of six (17.7%) of the immigrant households where the survey respondent (P1) had been in the U.S. for 5 years or less were totally omitted, while only 1.6% of the households where the survey respondent had lived in the U.S. for 6 or more years were totally omitted.^{xvii} This indicates that undocumented status is not the primary factor in non-response—since the majority of the farmworkers and rural immigrants in these areas, including many who have lived in the U.S. for 6-25 years are undocumented.^{xviii} The two distinct correlates of undercount, housing accommodations and a household’s length of time in the U.S., are intertwined because the more recent immigrants (as well as those with less mature migration networks) are inevitably those who have the greatest difficulty finding housing initially after arriving in California or paying for it—since access to housing and work alike are mediated by social/migration network affiliation.

A “BEST ESTIMATE” OF TOTAL HOUSEHOLD OMISSIONS INCLUDING IMPUTATIONS REGARDING ENUMERATION STATUS OF HOUSEHOLDS WHICH WE WERE UNABLE TO RE-INTERVIEW

We reviewed the 25 unresolved cases (5.9% of our overall study sample) where there should have been NRFU because a mailed or dropped-off form was not returned by the people living there but where our interviewers had not been able to successfully conduct a re-interview, in order to definitively determine whether these households had been enumerated or not. We then imputed enumeration status for these households to yield a “best estimate” of their final enumeration status based on the information we had secured in the initial interview and our field research supervisors’ notes on efforts to contact them for a re-interview.

We believe that 12 of the households we were unable to re-interview were probably successfully enumerated in the course of NRFU because the respondent had told our interviewer during the initial interview that they did receive a mailed census form or that they “got some letters from the government and threw them away”; therefore we believe their household was part of the MAF and very likely to have been contacted by Census Bureau enumerators since NRFU generally went well when it had been triggered by non-return of a mailed form. However, we believe that five of the households our interviewers were unable to re-contact (because their phone was disconnected) probably were missed in the course of NRFU because they had moved out soon after our initial interview with them and before NRFU began.^{xix} We believe that the 8 remaining households where a survey respondent had said during the initial interview that they definitely failed to receive either a mailed or dropped-off census form were not enumerated.^{xx} Thus, our best estimate is that about half of these households where we were unable to get definitive information were successfully enumerated and that about half were not. Our best estimate is that the actual rate of total household omission, after this adjustment, was about 5.9%.

CONCLUSIONS REGARDING FACTORS CONTRIBUTING TO SUCCESSFUL ENUMERATION VS. TOTAL HOUSEHOLD OMISSION

Whether the rate of total household omission was as high as 5.9% (our best estimate) or as low as 3.8% (our most conservative estimate), or somewhere in between, Census 2010 coverage of households in the HTC tracts in the San Joaquin Valley and Central Coast counties has improved significantly from previous decennials. Although problems with the Master Address File (MAF) continue to be the primary reason for total household omission, there is a secondary problem stemming from limitations in the Census Bureau’s ability to deploy bicultural and bilingual enumerators for NRFU. It is also important to remember that the sampling frame for our study did not include targeted non-sheltered outdoor locations or farm labor camps; thus, even our “best estimate” of census coverage probably overstates the success of the decennial census operations. Our field observations in March-April, 2010 showed substantial increases in the numbers of homeless immigrant farmworkers living in the fields and in abandoned buildings and houses; but we do not believe these homeless farmworkers make up more than 1% the total hard-to-count population.

AN ESTIMATE OF PARTIAL HOUSEHOLD OMISSIONS

Some people were omitted in 3.9% of the households that returned a form by mail, i.e., were cases where the survey respondent told our interviewer that the person who mailed back the census form “forgot” to include someone in the household. Exactly what it means to have “forgotten” to include someone on one’s census form is not always entirely clear. The competing concepts of “household” as “my family” or as “all persons living in a housing unit” or as “all persons living at a particular place (including hidden housing units without mail delivery)” lead to uncertainty among census respondents about whom to include on the form, irrespective of the fine print of census form instructions, because the “official” definitions are at odds with social constructs for thinking and talking about who lives in a “place”. The partial household omissions are clustered in housing units with multiple unrelated families.

AGGREGATE POPULATION UNDERCOUNT

Table 1 below shows the components of undercount for households where we can definitively determine aggregate undercount and provides a very conservative estimate of undercount.

Table 1: 2010 Census Coverage in 30 Rural HTC Tracts in the San Joaquin Valley, Central Coast and South Coast Counties of Rural California			
Indicators of Census Quality	Total Household Omission	Partial Household Omission	Aggregate Undercount
% of Households Affected	3.8%	3.9%	7.7%
% of Population Missed	4.9%	2.2%	7.2%

* The total population in the entire sample of surveyed households numbers 1,920 persons, of whom 95 were definitively missed as a result of total household omission and 43 definitively missed as a result of partial household omission.

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If our best estimate of census undercount, i.e. including imputation of enumeration status for households we could not ourselves re-contact is correct, the aggregate undercount is 9.9% of the overall population in the HTC rural tracts (since total household omissions would be 2.1% higher than the definitive cases of total household omission reported in **Table 1** above). If we assume that non-sheltered farmworkers are about 0.1% of the HTC population, then the overall undercount rate in the rural, predominantly immigrant HTC tracts is about 10%.

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

The objective in our study was to examine, first of all, the outcomes of CRLA's and other community-based organizations' efforts to work in partnership with the Census Bureau to improve enumeration of hard-to-count households in the 2010 decennial census. An over-arching consideration was to determine what aspects of the 2010 decennial census strategy, implementation, and partnership efforts contributed to census quality. Our study provides evidence of dramatic improvements in decennial coverage of rural hard-to-count populations of Mexican immigrants and farmworkers over the past two decades. In particular, the differential undercount of immigrant Hispanics has been attenuated by distribution of bilingual census forms. However, our finding that census undercount was reduced to 7-10% in these rural HTC tracts shows that, even though progress has been made, significant disparities remain (since this is about five to six times higher than the officially estimated undercount of 1.5% for Hispanic persons).

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Moreover, significant biases persist in the population profile of this sort of area. While overall Hispanic undercount has diminished, it appears that the undercount of recently-arrived immigrants, particularly those of indigenous origin, remains very high. This does not, as has been assumed by many, stem primarily from respondents' apprehension about confidentiality. It stems primarily from "structural" factors associated with undercount—the fact that the most socially and economically marginal individuals and families live in housing which often does not have mail delivery, in sub-standard low-visibility or actively concealed housing, typically in crowded accommodations where housing space is shared by unrelated male migrants and/or unrelated families.

Whether or not undercount of ethnic minorities within the Hispanic immigrant population constitutes differential racial undercount is a complex question, due to the arbitrary and intensely political issues surrounding definition of "race" in America. It is, however, a straightforward phenomenon from a social science perspective. In practical terms it means that certain sub-populations of recent immigrants, especially those from newer migration networks within the Mexican and Guatemalan immigrant populations are denied equitable access to crucial health, social, and education services—in part due to flawed census data.

The current study suggests that the biggest single problem contributing to differential census undercount continues to be inability to assure that data is collected from everyone in crowded households and in low-visibility housing units, not problems of respondent motivation. Intensified efforts to improve the Master Address File (MAF) for the Decennial Census and the ACS will need to be a very high priority in order to improve census data on immigrant households in general and specifically immigrant and farmworker households in rural HTC tracts and other areas with concentrations of migrant and seasonal farmworkers.

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Some of the positive accomplishments from the 2010 decennial census, for example, the use of bilingual forms, can be easily transferred into ACS operations. Nonetheless, some concerns remain because respondent burden is much higher for the ACS than for the short-form census, and promotion of participation is much less extensive. Thus, the extent to which non-formal social networks can provide the support needed to assure adequate and accurate ACS response, even with bilingual forms, is uncertain, given the likelihood that new immigrants' literacy levels will not have improved greatly. The most promising strategy to address this concern will be via "mobile QAC's", teams deployed in tracts believed to be hardest-to-count, to provide on-the-spot assistance in completing the ACS form. Other initiatives will be crucial also. The most critical will be reliance on local grassroots partnerships to improve the MAF based on local knowledge of housing conditions and arrangements, and efforts to update the MAF throughout the decade. It will also be important for the Census Bureau to work skillfully in continuing partnerships with community-based organizations throughout the decade to build survey respondents' willingness to respond to the ACS procedures and interviewers. Job descriptions for ACS field personnel will need to be updated to reflect the functional competencies required to successfully communicate with linguistic and cultural minorities. Once job descriptions are revised and the applicant pool is expanded to include all

individuals legally-authorized to work in the U.S. (not just citizens) it will be important for the Census Bureau to collaborate closely with community-based organizations to recruit and screen job applicants.

The study area represents an example of a newly-emerging pattern of 21st century differential undercount where race, as defined within the OMB conceptual framework, does not correlate as closely with social marginality as it did in the first half of the 20th century. However, being a recent immigrant, which is correlated with being an ethnic and linguistic minority within the Hispanic population and with having a low level of educational attainment, is a significant factor in census undercount. The vicious cycle in which census undercount results in inequitable access to social program resources, education, and health services has been attenuated but not eliminated.

END NOTES

ⁱ The author would like to thank and acknowledge the JBS International/CRLA, Inc. research team in these 10 study counties for their excellent work in carrying out challenging field research tasks throughout the spring and summer of 2010. Key personnel were: Anna Garcia and Jesus Martinez-Saldana (field supervisors), Shannon Williams (data processing). The team of multi-lingual/multi-cultural interviewers included: Mariano Alvarez, Jesus Estrada, Antonio Flores, Rafael Flores, Rachel Hoerger, Eugenia Melesio, Maria Guadalupe Ramos, Fausto Sanchez, Yolanda Rios, Jorge San Juan, Noemi Solis, and Gerardo Zenteno

ⁱⁱ Aguirre Division/JBS International, “Identifying High Concentrations of Migrant and Seasonal Farmworkers”, report to Population Division, Bureau of the Census, U.S. Department of Commerce, 2007.

ⁱⁱⁱ The immigrant population in rural states has grown much faster than in urban states over the decade since, at least, 1990. See **Table 2.1** of the chapter by Micah N. Bump, B. Lindsay Lowell, and Silje Petterson, “The Growth and Population Characteristics of Immigrants and Minorities in America’s New Settlement States” in Elzbieta Gozdziaik and Susan Martin (Eds.), **Beyond The Gateway: Immigrants in A Changing America**, Lexington Books, 1995. An update showing growth rate by state for 2000-2008 (based on analysis of ACS data) can be found in **Table 12** of The Pew Hispanic Center’s report, “Statistical Portrait of the Foreign-Born Population in the United States”, January 21, 2010.

^{iv} Susan Gabbard, Edward Kissam, and Philip L. Martin, “The Impact of Migrant Travel Patterns on the Undercount of Hispanic Farmworkers”, in **Proceedings of the 1993 Conference on Census Undercount of Minorities**, Bureau of the Census, 1994. This was a meta-analysis using several independent data sources (the National Agricultural Worker Survey, California Unemployment Insurance records, California Employment Development Department monthly estimates of agricultural employment, Commission on Agricultural Workers, and Public Use Microdata Sets from the 1990 decennial) and a model of census undercount developed by Census Bureau researchers (Fein 1989; Fein 1990).

^v Ed Kissam and Ilene Jacobs, “Practical Research Strategies for Mexican Indigenous Communities in California Seeking to Assert Their Own Identity”, in Jonathan Fox and Gaspar Rivera-Salgado (Eds.), **Indigenous Migrants in the United States**, University of California, San Diego, 2004. For this study, we adapted an ethnosurvey methodology developed by Leslie Brownrigg at the Census Bureau and used in 35 community case studies of differential undercount in the 1990 census.

^{vi} However, we believe that our estimates of overall MSFW household undercount are conservative—because farmworkers in the study area less often live in isolated, low-visibility dwellings than in major agricultural production areas of the Eastern U.S. such as Florida and North Carolina (because California communities have less rural dispersed housing than in other areas of the rural U.S. and because our study design did not permit adequate representation of concentrations of farmworkers living in extremely marginal housing conditions such as outdoor encampments.

^{vii} “Head of household” is constructed as being either P1, the survey respondent, or P2, typically their spouse. In some cases, the survey respondent (P1) was a teenager or young adult living in their parents’ household (and the response was, essentially, a collaborative one). Typically these household members have higher educational attainment than their parents, the nominal respondents.

^{viii} The highest concentration of farmworker households is in the Fresno County HTC tracts (64% of all households), followed by Monterey (55%), Tulare (54%), Kings (50%), and Kern (40%).

^{ix} Stephen Reder and Karen Green, “Giving Literacy Away: An Alternative Strategy for Increasing Adult Literacy Development”, paper prepared for the National Adult Literacy Project, Northwest Regional Educational Laboratory, 1985. See also Stephen Reder, “Comparative Aspects of Functional Literacy

Development: Three Ethnic American Communities” in D. Wagner (Ed.) **The Future of Literacy in a Changing World**, Pergamon Press, 1987.

^x The 2005 tabulation of California NAWS data reports that 18% of SAS workers live in employer-provided housing. The actual proportion living on farms is lower than this since much employer-provided housing is in-town housing provided by labor contractors, not on-farm housing.

^{xi} There are progressively weaker ties with those further from the center of a respondent’s social network; however there is also much variation among individuals in terms of “solidarity” both within extended family networks and across sub-networks within a village hometown network of *paisanos*. Thus, although social network ties have led to distinct social units living at the same location, respondents’ beliefs about who exactly “belongs “ to a household can be ambiguous. This carries over to survey respondents’ visualization of “household” in responding to census questions and makes the census-defined residence rules uncomfortable ones to follow which are only sometimes complied with.

^{xii} There are few respondents of “other” ethnicity (African-American, American Indian, Asian) so there are uncertainties regarding their actual level of response, but the tabulations show 80% stating the census was very important.

^{xiii} Less than 0.5% of respondents mentioned having attended such a special event.

^{xiv} The respondent in one out of eight cases (12%) said they had a few problems understanding what the enumerator meant, but these were not generally serious problems and did not reflect on quality of enumeration (e.g. difficulties with the race and/or Hispanic origin question)—although, as reported in CPEX there were widespread complaints about the basic formulation of these questions regarding social identity.

^{xv} This includes one household where an enumerator could not communicate with the person who answered the door, asked no questions, and where no one came back to secure information, and one case in which the respondent believed she had already been contacted by an enumerator and refused to provide information to the enumerator because she believed she had already been counted.

^{xvi} This relationship is statistically significant ($p < .01$). The cluster of “structural” correlates of total household omission—living in a low-visibility housing unit, living at a place where there is a cluster of housing units, not having mail delivery, having a PO box-- are co-variant but not perfectly. For example, not all households living in low-visibility non-mail housing have a PO box but some do.

^{xvii} Chi -square and Likelihood Ratio $p < .05$ for XTAB P1YRSINUS X TOTHH_MISSED

^{xviii} National Agricultural Worker Survey tabulations (Susan Gabbard, Daniel Carroll, and Russell Saltz presentation to Western Migrant Stream conference, January, 2009) show that about 61% of the farmworkers in the Western Migrant Stream were undocumented (in the period 2005-2007).

^{xix} This implies that NRFU was successful in reaching about two-thirds of the households which were included in the MAF. Our own follow-up efforts to “resolve” cases where a survey respondent told us they had not returned the form and had not been contacted in the course of NRFU took place very soon after NRFU (July 1-August 19), so we believe that the 5 households we called where a telephone was disconnected were most likely out-movers and were quite likely not to have been successfully contacted by enumerators during NRFU either.

^{xx} Two did not get a census form because they had no mail delivery and did not have a form left at their house and 6 told our interviewer that they did have mail delivery but did not get a form.