THE AMERICAN COMMUNITY SURVEY

THE QUALITY OF RURAL DATA

REPORT OF A CONFERENCE

Prepared for:

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EXECUTIVE SUMMARY

As a result of concerns raised about the decennial census "long form," the Census Bureau has proposed replacing it with a continuing sample survey, known as the American Community Survey (ACS). The Census long form would be discontinued with the Census of 2010. The Census Bureau believes that the ACS, to be implemented in 2003, will provide a reliable source of timely demographic, economic, social, and housing data throughout the decade for the same jurisdictions for which data have been published in recent censuses.

Not surprisingly, as with virtually all survey efforts, the relative sampling errors of data for small population groups in the ACS will be higher than for large population groups or geographic areas containing large numbers of people. Concerns also have been expressed about other possible sources of error. This has led to questions about the quality of ACS data for small population areas, especially so for data for rural areas.

The importance of the subject and the concern of policy makers, the Congress, and the broad spectrum of potential users of the data led the Bureau of the Census to ask Westat, a private research organization, to call together a group of experts from academia, State government, and associations, who were knowledgeable about and concerned with the uses and implications for policy of data for rural areas. The agenda included discussion of the issues, review of the proposed design of the ACS and its ability to meet the data needs for small population areas, exploration of possible options, and presentation of the experts' views and suggestions.

Several general themes can be drawn from the extended discussions over the conference period. First, there was complete support of all participants in seeing the ACS achieve full implementation. Although some technical issues still need to be resolved, this effort is seen as providing important and useful information throughout the decade and as an acceptable alternative to the Census long form.

The second theme addresses the subject of the conference--namely, issues about the quality of rural data from the ACS. Participants devoted extensive time and energy to a review and discussion of these issues. Again, they concluded that, overall, plans for the ACS recognize the many concerns for small area data and address them *as best as can be expected* within the constraints faced by the ACS. Further, the entire ACS planning process has been open, extensive, and responsive, with objections heard and addressed. ACS has ensured that the moving 5-year averages for data for such areas will continue to

have almost the same precision as in recent decennial censuses. On the basis of the full exchange between the Bureau and the participants, they saw no evidence of an antirural bias in the design of the ACS.

Notwithstanding their overall support for ACS and its plans for rural or small area data, participants did raise questions about the planning, suggest areas that might benefit from further research or study, and note changes that might enhance the ACS, and especially data for rural areas. The third theme encompasses this activity. The suggestions with the most direct and immediate effect on ACS planning are:

- The Bureau should distribute the ACS sample through the use of a "smooth function" that samples smaller governmental units at increasingly higher rates. Doing so tends to equalize the level of precision for small governmental units of different sizes. Participants also urged the Bureau to undertake the necessary research to determine which adjustments of the sampling rates would best further smooth the disparities in the sampling errors between governmental units of different sizes.

- The Bureau has indicated its recognition of the need to ensure a "continuously updated" Master Address File (MAF). Further, it has set forth a number of approaches that will enable the ACS to overcome the rural coverage problems in the MAF. Since this is a difficult and relatively long-standing problem, the Bureau will need to undertake a large research effort and devote substantial resources if it is to meet its goals for an updated MAF.

Comments of a more general nature include:

- The Bureau needs to be highly responsive to its user community. Given its wide-ranging interests and needs, the Bureau should make every effort to provide materials explaining the survey, its objectives, its uses, and the positive aspects of averaging over time. This sensitivity also must extend to relevant and concerned public interest groups, such as local governments, appropriate governmental associations, Congressional committees, etc.

- Because ACS results will inevitably be considered for use in fund allocations, as well as in program planning, the Bureau must be sensitive to the fact that the ACS--and its data products--will be seen as "political," and must be prepared to openly and strongly support the methodology and the quality of its products.

- The ACS, because of its size, scope, frequency, and visibility, must be sensitive to the language needs of respondents. Questionnaires should be available in a number of languages, and multilingual skills must be a resource available for telephone follow-up, as well as when and where needed for personal interview follow-up. Failure to do so will result in lower overall data quality and, more importantly, will have negative effects on political support from minority and other groups.

- Establishing an ACS "Advisory Group," similar in membership and focus to that for the decennial census, should be a high-priority requirement of the Bureau. Such a group could well assist the Bureau in dealing with many of the yet-to-be-answered issues of the ACS, provide some guidance in establishing priorities, and lend credence to the ACS as a major Bureau endeavor.

The thinking of participants at the end of the Conference, however, is perhaps best captured in these last words of one of the participants: "The Bureau has been exceptionally courageous to expose its proposals to open review, and that is much appreciated. We all want this survey to happen, and rural areas will be among the biggest beneficiaries. This effort will lead to greater local understanding of issues and problems, and provide the data for planning and better fund distribution."

INTRODUCTION

As a result of concerns raised about the decennial census "long form," the Census Bureau has proposed replacing it with a continuing sample survey throughout the decade. The Census long form would be discontinued with the Census of 2010. The Census Bureau believes that the American Community Survey (ACS), to be implemented in 2003, will provide a reliable source of timely demographic, economic, social, and housing data throughout the decade for the same jurisdictions for which data have been published in recent censuses. The ACS, which is now in testing, is the product of many discussions with interested parties, including Congressional committees.

The key objective of the ACS design is to provide survey estimates for all "communities" (geographic areas or demographic groups) based on 5 years of data collection that are roughly equivalent in statistical quality to the Census long form estimates, and to update such estimates every year. Not surprisingly, however, as with virtually all survey efforts, the reliability of data for small population groups is lower than for large population groups or geographic areas containing large numbers of people. This fact has led to questions about the quality of ACS estimates for small population areas, especially so for estimates for rural areas.

Given the importance of the subject and the concern of policy makers, the Congress, and the broad spectrum of potential users of the data, the Bureau of the Census asked Westat, a private research organization, to call together a small conference of experts on rural and other groups that comprise small percentages of the total population. The purpose of the conference was to discuss concerns regarding rural and related issues and the ability of the proposed design of the ACS to meet the data needs for these populations, to explore possible options, and to provide views and suggestions regarding the ACS design. Discussions were conducted under the assumption that the overall sample size and the overall budget for ACS remain fixed. Thus, any suggestion to add sample to rural areas would need to be offset by a decline in the sample in some other areas; similarly, a change increasing costs, such as increasing personal follow-up in rural areas, would necessitate a budget cut elsewhere in the process.

The group, which met on May 14 and 15, 1998, included experts who were knowledgeable about and concerned with the uses and implications for policy of data for rural areas. The attendees represented a wide range of interests, and were drawn from academia, from State government, and from associations. Included were individuals sensitive to minority concerns. The group also was supplemented by participants from relevant Federal government agencies, as well as from Westat and the

Bureau of the Census (see list of participants, page 7). Participants were sent a fairly detailed description of the ACS prepared by the Bureau staff, as well as a statement describing concerns about the program, delivered before a Congressional subcommittee.

It should be noted that the group was convened as a "Conference" at which individuals shared their expertise on a subject of common major importance and interest. No attempts were made to reach consensus, nor were votes elicited for recommendations. However, in general, the discussion did result in overall agreement. As a final point, the Conference was limited to discussion of the methodological issues facing the ACS; it did not address content considerations.

For the most part, this report follows the format of the discussion. A brief introduction to the ACS was followed by a presentation of the issues most directly affecting data for rural areas, which resulted in extended discussion by the participants. The concluding session moved forward to an exchange of views, suggestions, and thoughts on many different aspects of the ACS. Given the expertise and wide-ranging interest of the participants, it is not surprising that many of the comments about and reactions to the plans for the ACS went beyond the "rural" concerns of this discussion to deal with much broader aspects of the ACS.

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ACS: AN OVERVIEW

The ACS is intended to provide reliable annual estimates of social, economic, and housing characteristics for all states, and for cities, counties, metropolitan areas, and population groups of 65,000 persons or more. For smaller areas, data from the most recent 2- to 5-year samples will be accumulated to generate the estimates. For example, for rural areas and city neighborhoods or population groups of fewer than 15,000 people, it will take 5 years to accumulate a sample approximating the Census long form sample. Survey estimates based on these 5-year accumulations, updated each year, will be produced down to the level of census tracts, which have an average population of 4,000 persons.

The survey will be conducted by mail, with computer-assisted telephone interviewing used to contact the mail nonrespondents whose telephone numbers can be identified. A subsample of final nonrespondents will be selected for personal interview. The survey will be administered continuously: each month, survey forms will be mailed to a systematic sample of all U.S. households throughout the nation (the Census Bureau intends that no housing units will be contacted more than once in any 5-year period).

The survey is currently in the testing and developmental phases; current plans envision full implementation in 2003. At that time, the ACS will be administered in every county in the United States, with an annual sample of some three million housing units. Current thinking is that the survey will replace the traditional long form in gathering the detailed social and economic information by the time of the Census of 2010. In order to detect whether any important differences exist between the long form approach and that used in the ACS, the Bureau plans to conduct the ACS in 37 sites containing 46 counties between 1999 and 2001; results from these sites will be compared directly with those obtained from Census 2000. A next step calls for a large, national sample survey designed to produce state level estimates and utilizing the methodology of the ACS to be conducted between 2000 and 2002 as an overlap with Census 2000 results.

The ACS sample will be drawn from an updated version of the Master Address File (MAF) developed for Census 2000. Reflecting a concern for small area data, the ACS sample, like the decennial census, is designed to reach a specified minimum sample size in each jurisdiction for which tabulations are planned and, thus, to achieve acceptably low sampling errors; this implies a higher proportion of households in small governmental units. As with the decennial census, the ACS will cover the total resident population, including both the armed forces and the institutionalized.

The goal of eliminating the long form in Census 2010 implies that the ACS needs to include the subject-matter content of the long form, particularly since the content determination process for Census 2000 restricted the long form items to those required by Federal law at small levels of geography. Replacing the long form, particularly by an endeavor that carries the requirement of a "mandatory" response, seemed to dictate that the ACS cover at least these topics. Corroboration for this decision also was forthcoming from the large and diverse constituency of long form data users who rely on the information traditionally available from the long form. Over time, the ACS also may cover a number of additional, different topics, according to demands.

Published data from the ACS are expected to be provided to users within six months after the end of each calendar year--that is, in July of the following year. For larger governmental units, direct annual estimates will be published. For units of all sizes and for other population groups, however, the published estimates will be based on refreshed multi-year accumulations of data.

As a continuous activity, the ACS has numerous advantages. From the perspective of policy makers, analysts, and users, the survey will identify rapid changes in an area's population and provide statistical pictures each year, not just once every ten years as at present. The changes in the social safety net that have taken place over the last several years at both federal and state levels have raised the premium on obtaining information which is both more accurate and timely. The survey also can serve to identify households with particular characteristics and, thus, potentially provide a robust sampling frame for other household surveys of economic or social well-being, without the expensive screening stage currently required.

RURAL ISSUES

Sample Sizes/Sampling Errors Over Time

The sample size and design of the ACS imply that every area or domain will have an "effective sample size" over any 5-year period that is approximately the same as for the Census 2000 long form design. Therefore, the sample size over any 5-year period will be the same as that planned for Census 2000, or an average of about 1 in every 6 households. As in 1990, the sample for the Census 2000 long form will have a higher sampling rate in areas of less than 2,500 population which have a "functioning unit of general-purpose government," such as counties, cities, townships, towns, etc. In 1990, these small population governmental units were sampled at a rate of 1 in 2, rather than the overall rate of 1 in 6. To maintain the overall average rate at about 1 in 6, census tracts of over 8,000 population were sampled at a rate of 1 in 8, excepting any small-population governmental units in the tracts. The net effect of using these rates was to shift about 15 percent of the total sample from large tracts to small governmental units. For Census 2000, four sampling rates have been proposed—1 in 2, 1 in 4, 1 in 6, and 1 in 8 --specifically to smooth out the allocation as a function of place size. Use of these rates will shift the sample proportion (about 15 percent) as in the 1990 Census.

The ACS plans a similar oversampling of small-population governmental units. Initially, ACS plans to use the same rates as the decennial census during its overlap period of 1999-2001; however, in recognition of the concerns of users of data for rural and small-population areas, a number of other sampling rates or allocations are being examined and discussed with user groups in order to reach agreement for full implementation in 2003. Most areas are sampled at a 3 percent rate per year, which over a 5-year period aggregates to 15 percent and thus approximates the decennial sampling rate; however, small governmental units of 2,500 population or less are sampled at a rate of 10 percent per year, which aggregates to a rate of 50 percent over a 5-year cumulative period. The overall balance in sample size is maintained by sampling large tracts (those with more than 8,000 population) at a slightly lower rate of 2.25 percent per year, or 11.25 percent over a 5-year period. The overall sample rate over a 5-year period, then, is similar to that proposed for Census 2000.

Using a cumulated 5-year sample satisfies a targeted reliability criterion of a 12 percent coefficient of variation (CV) for a 10 percent estimate, for areas containing about 15,000 population. Areas larger than 15,000 will have greater reliability. Table 1 provides an indication of the precision of small areas estimates for a number of different allocations.

Table 1

90% Confidence Interval for a 5-year Average Estimate

for Communities of Different Sizes

Under Various Sampling Options

Assuming that the Estimate Equals 10 Percent

Given the total amount of "extra sample" to be shifted to small communities, an important question is whether a better system can be developed than the one currently proposed. To address this issue, the Bureau presented the option of a "smooth function," which would provide more gradual changes in sampling rates and attempt to avoid abrupt jumps in the standard errors (see Table 1, ACS #3).

Although there was much discussion on details and effects, it was clear that a "smooth function" met with the widest approval. For that reason, participants urged the Bureau to distribute the ACS sample through the use of a "smooth function." Doing so tends to equalize the level of precision for small governmental units of different sizes. They also urged the Bureau to undertake the necessary research to determine which adjustments of the sampling rates would best further smooth the disparities in the sampling errors between governmental units of different sizes.

Implications of a Multi-Year Average

The fundamental premise of the ACS design is that averages over time are an effective way to describe and compare areas. Further, a crucial assumption of the ACS proposal is that the average is at least as useful as an estimate for a fixed date about three years ago, and far preferable to estimates for fixed dates that are much older. Given the many constraints surrounding the design of the ACS--such as cost, respondent burden, and operational feasibility--the 5-year average approach best answers the many conflicting and limiting requirements.

Although averages over time have been widely used--and readily accepted--in many applications, the Bureau has recognized and attempted to address the concerns of some users, especially those who are accustomed to "snapshot" estimates (such as those derived from the Census long form) and, thus, question the applicability of "moving averages." The position of the Census Bureau is that although 5-year updated averages may not give the best information for all needs, they are clearly preferable to having information for only one year in every ten, with data not even available until 2 to 3 years after the reference date.

In discussing this issue, a number of the participants thought that averages were particularly problematic for those areas in which change is irregular. For example, the question was raised as to the meaning of "average poverty" over a 5-year period in which poverty rose and fell from one year to the next and, thus, the average would have no obvious meaning. Similar comments were forthcoming in regard to such characteristics as unemployment and income. While agreeing with the comments, it was

pointed out that the annual updating of the 5-year averages will provide some insight into trends, although turning points will be difficult to discern precisely, as will short-term trends. Moreover, in predicting the current or future state of an area, a 5-year average of a fluctuating estimate is probably more useful than an estimate for a single earlier year. At the end of the discussion, there was clear agreement that a 5-year moving average is preferable to a single snapshot, as in the decennial census. There was strong support for the Bureau's efforts to disseminate the arguments in favor of such an approach, and agreement that users, including those studying sparsely populated areas, would adapt to these types of estimates, use them extensively, and find them superior to the once-in-10 year census measure.

The discussion of "time-effects" also brought out additional issues of concern. The first dealt with "changing geography"; one example concerned how data would be presented for an area which has changed its boundaries or otherwise modified its political integrity by incorporating or merging with a neighboring entity. A second dealt with possible changes in the "geographic" definition of the area, such as rapid growth, which could result in the area changing from "rural" to "urban." Changes in size also could lead to changing sampling fractions over time. It was noted that the smooth function for sampling rates would help reduce the impact of moderate size changes.

A question was raised as to how and whether the expected results from the ACS might be used or incorporated into funding formulae, both existing or new. Current thinking suggests the strong possibility that these updated data will quickly be put to use through their application in funding formulae, as well as in program planning and evaluation.

The view of the group toward the use of 5-year estimates is perhaps best captured in the words of one participant to the effect that: "When first presented, (users) tend to think of all the downsides of the smoothing, but what will happen is that we will more or less accommodate to the use of 5-year averages, even those who today are a bit queasy about the idea. In addition, in time, those who do research on the data will develop a set of skills which users will add to their tool kits and learn how to use the data efficiently. Right now it's difficult to get consensus on, it's difficult to understand exactly how the user will adjust, but I'm convinced it will be accepted." In that same vein, another participant emphasized the need to ensure that data from ACS were not perceived as "anti-rural"; accordingly it was vitally important that the Bureau and supporters of the program emphasize the quality of the 5-year data, and not allow the emphasis to be on 1-year reporting. It also was suggested that the Bureau attempt to take a lead in providing users with illustrations of how the data can be analyzed, combined, and examined. The Bureau plans to release annual estimates for large governmental units for which the estimates are of adequate precision, but only five-year averages will be provided for small units. The

annual data, however, will be available for units of any size. There was strong support for having the Bureau provide users with annual public use files for them to conduct their own analyses. Users will need to be particularly careful to assess the precision of estimates for small governmental units based on fewer than five years of data; however, such estimates may well be "valuable" for a number of purposes.

Sampling Frame: Addresses and Updating

The frame of addresses for the ACS will start with the Master Address File (MAF), which is being created to serve the needs of Census 2000. For ACS use, this resource will be updated on a continuous basis, in order to ensure its continuing complete coverage of current addresses. Not surprisingly, the availability of mailing addresses for housing units is a far greater problem in rural areas than in urban areas. The presence of post office boxes, rural route numbers, or general delivery precludes the ACS follow-up activities and presents a serious problem for ACS. To offset this problem, a variety of techniques are being explored, including obtaining physical addresses by direct "area listing," which is both more expensive and still leaves some question as to the completeness of the effort, combining a number of approaches, such as targeting the efforts to areas in which administrative sources suggest the presence of substantial numbers of new units, exploring for new units as part of ACS activities in the area, and exploring the use of permit data.

The accuracy and completeness of the address list, especially in rural areas, has been a topic of concern. However, it should be noted that these same concerns--and any bias introduced into the data as a result of the limitations and errors--exist for any and all MAFs, including the MAF developed for the decennial census itself. The hope with ACS is that the continuing nature of the effort will permit the development and implementation of a variety of focused techniques and approaches, including a number of those noted above, as well as an on-going relationship with local officials, which will result in more complete coverage in the MAF, especially so in rural areas. Realistically, however, it is quite clear that rural areas present the greatest problem and require the greatest effort to ensure high coverage of the population.

Participants recognized the importance of efforts to maintain--in fact, improve--the MAF, and uniformly urged the Bureau to stay on top of this issue and to devote sufficient research effort and resources to making sure that the MAF provides high coverage of households in rural areas throughout the decade.

Data Collection Methods

As noted earlier, ACS plans to collect its information through a mail inquiry, supplemented by reminder cards and another mailing in order to obtain a high response rate. Nonrespondents for whom telephone numbers can be obtained are next telephoned in an attempt to obtain the data, and personal interviews are conducted among a one-third subsample of the remaining nonrespondents. Although not in disagreement with the overall plan, this issue generated significant comment, which included a number of points that have implications for other topics.

One such example questions the use of a mail collection technique in rural areas, given the problems noted in the earlier discussion on the sampling frame, and also raises the possibility of widely varying mail response rates among certain rural based populations, such as Native Americans. The Bureau acknowledged the concerns and pointed out that, in order to obtain empirical evidence on the workings of the ACS in rural areas, its current test sites are disproportionately distributed in nonmetropolitan counties, many of which contain small populations. Further, the Bureau is vigorously exploring many different approaches, both to improve the MAF, as noted earlier, and to maximize response.

The Bureau also indicated that a continuing survey, such as the ACS, with its smaller scale of operation than the long form effort, can be expected to produce data with smaller nonsampling errors, that is, with better quality, in regard to such factors as completeness of data collection and minimal enumerator bias. The improvement would come about through the use of more experienced interviewers and field supervisors in the telephone as well as personal follow-up. The Bureau also expects that the ACS will reflect the effects of more uniform quality throughout the entire process.

However, conference participants observed that although the ACS indeed is a smaller operation than the Census long form, it would still remain far and away the largest continuing survey activity ever undertaken. Further, the wide spread of the sample, encompassing all counties in the nation, may not permit attainment of the same levels of experience as seen in other, much smaller, Bureau activities; in fact, it may result in relatively high interviewer turnover rates, which would diminish the ability to develop experienced staff. It also was noted that the Bureau's current experience with ACS data collection methods is based on a relatively few test areas, a far different situation than that to be encountered in full operation. The group urged restraint and caution on statements of improved quality, noting that it is far too early to make a definitive assessment of the quality of the ACS data.

The Bureau also was reminded that the ACS, in particular, given its size, scope, frequency, and visibility, must be sensitive to the different language needs of respondents. As such, questionnaires should be available in a variety of languages, and multilingual skills must be a resource available for telephone follow-up, as well as when and where needed for personal interview follow-up. Failure to do so could result in diminished return rates, incomplete forms, and a lowering of data quality. More importantly, it would have direct effects on political support from minority and other groups and would affect the credibility of the ACS with both the Congress and the public.

Response Rates

Based on test site activity, the Bureau is estimating that about 60 percent of occupied units will respond by mail; another 10 percent will respond by telephone. A personal interview, using a 1-in-3 subsampling approach, will be used to represent the 30 percent not obtained by mail or telephone. From the very limited experience to date, it appears that mail response rates may be somewhat lower in nonmetropolitan--and rural--areas than elsewhere.

Again, as noted elsewhere, the problem of obtaining usable mailing addresses in rural areas is much greater than in urban places. As the Bureau learns more about the variation between areas regarding the availability of good mailing addresses, as well as response rates, it may attempt to adjust sampling rates and follow-up rates to balance out the final effective sample sizes. This will be especially important for many rural areas, as well as for selected inner city neighborhoods.

The Bureau has not yet resolved how it will interview in so-called “very remote areas.” Given concerns with costs, weather, and small workload requirements, some of these areas may be visited only one month a year. Considerable research remains before this issue is resolved.

The many remaining uncertainties led to the strong suggestion that the Bureau continue, if not expedite, its research into methodology to maximize mail return rates, and expand its efforts “on the ground” to test procedures to accomplish this objective.

Further, in regard to the recognition that mail rates do vary, it was noted that this affects sample sizes and, consequently, sampling errors; that is, areas with high mail return rates will have better reliability than areas in which significant personal follow-up is required, even if the final adjusted response rates are approximately the same. That recognition led the Bureau to raise the possibility of adjusting the sample size to reflect the expected differential in response rates and, thus, to attempt to standardize the sampling errors of estimates across areas. Again, the Bureau is aware of this problem

area, but has not yet planned or undertaken the necessary research. The problem is of particular concern for small governmental units. The group strongly urged that this subject be given high priority.

Average Annual Population

The definition of the population of an area used for the ACS differs from that used for the decennial census in terms of time frame and residency rules. Participants raised concerns about both these sources of difference.

The ACS will collect data monthly throughout the full calendar year to provide annual average results, unlike the decennial census, which is centered on April 1. As a result, the population of an area in the ACS will represent an average population over the calendar year. This average population may differ appreciably from the population at a particular point in time in such areas as college towns, vacation locales, and in areas containing military establishments or migratory labor camps. In general, the relative variation within a year is likely to be larger in small governmental units than in large ones. Concerns were expressed about the meaning of the average annual population concept when the population varies markedly over the year. Similar concerns exist with regard to analyzing data for characteristics which can change rapidly, such as unemployment, poverty status, or annual income (concerns which are equivalent to those relating to multi-year averages). Despite these concerns, participants indicated a willingness to learn to work with the new concepts.

The residency concept proposed for ACS also differs from that used in the decennial census. Specifically, ACS will define a resident as one who has lived in that unit for the past 2 months or has no residence elsewhere. The decennial census does not involve a "2 month" residency requirement; rather, it uses a "usual" residency rule (Where does the person *usually* sleep?) to determine residency. Insofar as the rules are inconsistent (or different), it was noted that users will encounter difficulty in attempting to compare results, and especially so for populations which change in the short run, such as snowbirds, college populations, and migrant workers.

The ACS plans to use population controls in weighting the estimates from the survey in conformity with the residence rules and sampling over the year. Specifically, the ACS will adjust the county results annually to independent population estimates, which will represent the average population in the specified county over the 12-month calendar period. The decennial census, in contrast, provides

direct population totals as of April 1, which are then used in weighting the long form data. The Bureau's current survey programs use population estimates derived from updating the census counts.

Participants expressed some reservations about the Bureau's ability to produce reasonably accurate and useful intercensal average population estimates at the county level for use as population controls by ACS, particularly as the survey period moves away from the preceding census date. Although the Bureau has hopes of utilizing ACS results, together with the standard point-in-time intercensal estimates, in the production of such estimates, little research has yet been conducted on their development.

It should be noted that the ACS will cover the "total"population of the United States, similar to that covered by the Census, which includes the civilian noninstitutional population, the institutionalized population, and the Armed Forces resident in the United States. By contrast, the Bureau's current survey programs are limited to the civilian noninstitutional population, and the current population estimates provided by the Bureau generally are for that population.

SUMMARY

Several general themes can be drawn from the extended discussions over the conference period. First, there was complete support by all participants in seeing the ACS achieve full implementation. Although some technical issues still need to be resolved, this effort is seen as providing important and useful information throughout the decade and as an acceptable alternative to the decennial census long form.

The second theme addresses the subject of the conference—namely, issues about the quality of rural data from the ACS. Participants devoted extensive time and energy to a review and discussion of these issues. Again, the general reaction was that, overall, plans for the ACS recognize the many concerns for small area data and address them *as best as can be expected* within the constraints faced by the ACS. Further, the entire ACS planning process has been open, extensive, and responsive, with objections heard and addressed. ACS has ensured that the moving 5-year averages for data for such areas will continue to have almost the same reliability as in recent decennial censuses. On the basis of their full exchange with the Bureau, the participants saw no evidence of an antirural bias in the design of the ACS.

Notwithstanding the overall support for ACS and its plans for rural or small area data, participants did question some of the aspects of the planning, suggested areas that might benefit from further research or study, and noted changes that might enhance the ACS, and especially data for rural areas. The third theme of the conference encompasses this activity. The suggestions with the most direct and immediate effect on ACS planning are:

- The Bureau should distribute the ACS sample through the use of a "smooth function" that samples small governmental units at increasingly higher rates. Doing so tends to equalize the level of precision for small governmental units of different sizes. Participants also urged the Bureau to undertake the necessary research to determine which adjustments of the sampling rates would best further smooth the disparities in the sampling errors between governmental units of different sizes.

- The Bureau has indicated its recognition of the need to ensure a "continuously updated" Master Address File. Further, it has set forth a number of approaches that will enable the ACS to overcome the rural coverage problem in the MAF. Given this difficult and relatively long-standing problem, the Bureau will need to undertake a large research effort and devote substantial resources if it is to meet its goals for an updated MAF.

Comments of a more general nature follow:

- The Bureau needs to be highly responsive to its user community. Given its wide-ranging interests and needs, the Bureau should make every effort to provide materials explaining the survey, its objectives, its uses, and the positive aspects of averaging over time. This sensitivity also must extend to relevant and concerned public interest groups, such as local governments, appropriate governmental associations, Congressional committees, etc., all of whom, in turn, can assist the Bureau in obtaining the support and cooperation of the public, as well as of the wide network of user groups.

- Because ACS results will inevitably be considered for use in fund allocations as well as in program planning, the Bureau must be sensitive to the fact that the ACS--and its data products--will be seen as "political," and must be prepared to openly and strongly support the methodology and the quality of its products. In that context, it was suggested that presenting or defining the ACS in terms of "Public Policy Outcomes" might be a more desirable strategy than referring to it solely in terms of a statistical effort. To that end, the Bureau might consider utilizing a "stakeholder" approach that recognizes the importance of ACS results which will, in the words of one participant, "reduce community and jurisdictional transactional costs, as well as contribute to alleviating cultural tension."

- The ACS, because of its size, scope, frequency, and visibility, must be sensitive to the different language needs of respondents. Questionnaires should be available in a variety of languages, and multilingual skills must be a resource available for telephone follow-up, as well as when and where needed for personal interview follow-up. Failure to do so would result in diminished return rates, incomplete forms, and lower overall quality. More importantly, it would have negative effects on political support from minority and other groups and would affect the credibility of the ACS with both the Congress and the public.

- Establishing an ACS "Advisory Group," similar in membership and focus to that for the decennial census, should be a high-priority requirement of the Bureau. Such a group could well assist the Bureau in dealing with many of the yet-to-be answered issues of the ACS, provide some guidance in establishing priorities, and lend credence to the ACS as a major Bureau endeavor.

The thinking at the end of the Conference, however, is perhaps best captured in these last words of one of the participants: "The Bureau has been exceptionally courageous to expose its proposals to open review, and that is much appreciated. We all want this survey to happen, and rural areas will be among the biggest beneficiaries. This effort will lead to greater local understanding of issues and problems, and provide the data for planning and better fund distribution."

WESTAT COMMENTS

In addition to bringing together a body of experts to discuss the ACS and rural issues and providing the Bureau with a report based on the conference, Westat also was charged with providing, to the extent possible within the very restricted time constraints, such reactions and suggestions it could draw, both from the conference and from its own investigation. We are in agreement with the overall reaction of the participants, but have several additional suggestions:

- We note that a number of important design issues have not yet been fully addressed in the Bureau's research program. Given the perceived importance of these issues to the development of the ACS, we urge that sufficient resources be made available to resolve them in a timely manner. Although there remains over 4 years before the ACS becomes fully operational, there is much yet to be done, and it is imperative that the ACS design be fully developed in advance.

- We are in full agreement with the suggestion that the Bureau develop and utilize a "smooth function" in establishing sampling rates for the ACS. Completing research on the proposed sampling scheme should be an item of very high priority.

- We have concerns that the relatively small workloads for interviewers in rural or small population areas in a fully implemented ACS may not permit the same development of skills as in other Bureau continuous surveys. Further, turnover among interviewers, both telephone and personal, has yet to be established and may prove to be more of a problem than anticipated.

- We attach considerable importance to the need to ensure that the rural coverage problems of the Master Address File be fully addressed, and that the MAF be updated effectively on a continuous basis throughout the decade.

- We strongly support the immediate establishment of an Advisory Committee on the ACS, for the reasons noted earlier.

- We suggest the need for accelerated research on the following topics:

  - Cost functions relating to alternative methods of subsampling for personal follow-up;

  - Alternative subsampling rates depending on mail and CATI follow-up;

  - Detailed geocoding on microfiles to provide maximum flexibility to users;

  - Confidentiality issues relating to detailed geocoding;

  - The addition of supplemental questions;

  - Methodologies for improving population controls;

- Analytic impacts of the proposed residence rules and population controls;

- Implications of annual- and multi-year averages on selected data items, such as income and unemployment.