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**2012 AMERICAN COMMUNITY SURVEY RESEARCH AND EVALUATION REPORT
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MEMORANDUM FOR ACS Research and Evaluation Steering Committee

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Subject: Feedback from Small Area Data Users on American Community
Survey 5-Year Estimates

Attached is the final American Community Survey Research and Evaluation report on Feedback from Small Area Data Users on American Community Survey 5-Year Estimates. This report summarizes the results of a series of outreach sessions that the Census Bureau conducted to gain feedback on 5-year estimates from users of small area statistics.

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Attachment

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Feedback from Small Area Data Users on American Community Survey 5-Year Estimates

FINAL REPORT

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1. BACKGROUND

In the fall of 2008 Census Bureau Director Steven Murdock requested that American Community Survey (ACS) managers conduct a series of informal outreach sessions with data users that would be working with ACS 5-year estimates. Specifically he wanted the Census Bureau to hear directly from local decision makers in areas with populations of fewer than 20,000 - areas that would only receive ACS estimates in the form of 5-year aggregations. Our goal in conducting these outreach sessions was to educate small area data users on the transition away from the census long form estimates to the ACS and to obtain feedback on their expected challenges associated with using ACS multiyear estimates. Dr. Murdock feared data users in these most rural areas may not have been well represented in many of the consultation and outreach efforts the Census Bureau had conducted during the design of the ACS. He expressed concern that this set of data users may not fully understand the limitations of working with multiyear estimates.

Census Bureau staff partnered with the State Data Center (SDC) network and the Census Regional Office Partnership and Data Specialists to conduct a series of education and outreach sessions in late 2008 and early 2009.

2. RESEARCH QUESTIONS

We used the data user outreach session feedback to answer the following questions:

- a. Do small area data users believe they can effectively use ACS multiyear estimates?
- b. Do small area data users want to receive ACS 5-year estimates every year?
- c. What do small area data users think the Census Bureau should do with less reliable survey estimates? Do they expect (or prefer) unreliable estimates to be screened out?
- d. Should the Census Bureau pursue tools or methods of presentation to address reliability concerns?
- e. Would small area data users support a limited release of survey estimates in American FactFinder as long as the full set of estimates were available in another form such as files on an FTP site?
- f. What additional concerns or ideas do small area data users have about the ACS?

3. METHODOLOGY

The Census Bureau conducted a total of seven outreach sessions across the country, each chaired by either an SDC network member or another person in the state with knowledge of ACS data. Table 1 summarizes the locations, dates, and moderators for each of these sessions. We conducted an initial session in Maryland with a small group of participants and limited material. We used the experience gained from this session to develop materials for the other six sessions. The American Community Survey Office (ACSO) prepared a set of materials as background for the moderators, clarifying the meeting's key objectives (see Attachment 1). Moderators developed or requested additional materials

that they used as background and references during the sessions. Attachment 2 includes a PowerPoint presentation Richard Rathge used in the outreach session held in Bismarck, North Dakota.

Census Bureau staff attended the sessions to provide technical expertise and to listen to the comments from the invited data users. The SDCs worked with the regional office partnership specialists to identify local decision-makers and representatives from organizations with interest in information produced by the Census Bureau to participate in each session. They selected individuals who would speak candidly about their concerns and data needs. The Census Bureau does not have complete records of the participants at each session. Attachment 3 lists the names of participants at some outreach session and, when available, their affiliations.

Table 1. List of Locations for Outreach Sessions

Location	Moderator	Date
Annapolis, Maryland*	Jane Traynham, Maryland SDC	11/20/08
Burlington, Vermont	Will Sawyer, Vermont SDC	12/2/08
Bismarck, North Dakota	Richard Rathge, North Dakota SDC	12/5/08
Austin, Texas	Karl Eschbach, Texas state demographer	3/2/09
Denver, Colorado	Elizabeth Garner, Colorado SDC	3/11/09
Raleigh, North Carolina	Bob Coats, North Carolina SDC	3/26/09
San Juan, Puerto Rico	Lillian Torres and Mario Marazzi, Puerto Rico Institute for Statistics	3/27/09

*Dry run to develop materials for later sessions

The agenda for the sessions involved a brief welcome by the moderator followed by introductions of all attendees and their affiliations. ACS staff, Customer Liaison and Marketing Services Division (CLMSO) staff and regional office staff introduced themselves, thanking the attendees for taking the time to attend.

The outreach session we conducted in Austin, Texas differed from other sessions in size and scope. Approximately 150 community planners and leaders, local government officials, and National Association of Planning Council members attended the morning session which focused on educating users about the ACS and how to use ACS estimates. The smaller afternoon breakout session with about 20 participants focused on the more detailed discussion of key issues. Similarly, the session we conducted in Puerto Rico involved about 95 participants and time was taken to provide a detailed Puerto Rico Community Survey (PRCS) overview before probing about 5-year estimates issues.¹

In several sites the moderators developed PowerPoint presentations to explain ACS basics and illustrate some of the major issues we wanted to discuss. They defined concepts such as reliability and sample size and explained how the Census Bureau aggregates data across years to produce ACS 5-year estimates. The North Dakota moderator used examples from the ACS Omaha test site to illustrate the consequences of

¹ The PRCS is the ACS in Puerto Rico.

small sample sizes with respect to reliability. This background was critical to ensuring the participants understood the type of estimates they would receive from the ACS and the limitations of some of those estimates.

The second half of the session attempted to solicit feedback from attendees on a number of specific questions, including:

- Should data for multiyear averages be provided every year or should we consider providing data at some other frequency? Is there too much data being released or not enough?
- Will you be able to effectively use averaged, rather than point-in-time, estimates for program administration and other uses? How will small town officials and planners use data based on multiyear averages?
- What should be done about less reliable estimates? Would users prefer the Census Bureau not publish estimates with low reliability? Should the Census Bureau publish the estimates but include some additional information to flag less reliable estimates?
- Given the frequency, volume, and reliability concerns, what would you think about changing the approach to increase the reliability with more sample, but to provide the data less frequently, say twice a decade?
- How would you like ACS estimates to be disseminated? Should all estimates come from the American FactFinder website?
- Do you have any suggestions or final comments on anything we have discussed today?

Census staff summarized their notes from the meetings which were supplemented on some occasions with summaries submitted by the moderators. We provided all session participants with forms to complete with their specific responses to these questions but we received few completed forms. We based the results below on the combined feedback received as a consequence of these sessions. Detailed records were not always produced and for some sites we had to base this report on limited summarized information.

4. RESULTS

Do small area data users believe they can effectively use ACS multiyear estimates?

Attendees were excited about an alternative to the “old” Census 2000 estimates they were still using. The idea of receiving data each year was appealing. Vermont session users understood period estimates and felt confident they could use them for their applications. They acknowledged outreach and education were important to explain period estimates to many users. Participants echoed this theme in most sessions. For example, North

Carolina participants felt they could use the multiyear estimates properly but they also believed a lot of explaining was needed before other users, such as the media, interpreted the estimates correctly. Some users in the Texas session acknowledged they don't have any other alternative but to use these estimates. No other survey provides information for areas with small populations. Texas participants recognized that working with 5-year estimates would be difficult but agreed they could use the estimates for their program needs. Concerns were raised in several sessions about the quality of the survey estimates and the potential for misuse.

Small area data users noted their concerns about the inability of 5-year estimates to capture sudden changes in trends. One North Dakota user asked if the use of multiyear estimates means it will be impossible to identify when changes take place. Users understood and were concerned about the "dampening effect" or "lag" associated with multiyear estimates. Users questioned how great of an effect they should expect. If the effect was minor, they didn't want to worry about it. It was clear 5-year data users would need some additional guidance when they have overlapping estimates. Texas participants recognized that yearly 5-year estimates would begin to provide information that could be used to model estimates over time to better understand change.

North Dakota participants were interested in receiving annual single-year (or 3-year) estimates, despite the small sample sizes. Suggestions were made that agencies such as the SDCs could use these estimates to informally track changes that might offer insights into changes that might not be apparent in the aggregate estimate. Some suggestions were similar to early requests for research data sets that might be useful to help more sophisticated users understand the workings of a 5-year estimate. Probing to better understand this request revealed that for the most basic information, the estimates might actually be sufficiently reliable. Many good questions were raised about the real impact of multiyear estimates and whether the potential changes were likely to be all that different.

Participants in every session expressed concern about equity or fairness if state or federal programs use ACS data for fund distribution and use 5-year estimates for their areas but 1- or 3-year estimates for other areas. Small area data users wanted all places (large and small) to use the same vintage data when programs are being implemented and decisions made. Maryland session participants wanted to be sure comparisons were "apples to apples." They desired consistency across all geographic areas. They wanted to be sure they wouldn't miss out on funds because their estimates were based on 5-year aggregations whereas estimates for large localities were based on data for a single year. In Texas a participant voiced concern that larger areas could choose whichever estimate (1-, 3-, or 5-year) works best for their community while small areas have no option other than the 5-year estimates. The Census Bureau has stressed the need to use consistent series for such program or policy applications but conceded they cannot monitor if the information is being used fairly.

Generally the shortcomings of multiyear estimates were accepted as an improvement over the out-of-date estimates they would have if there was no ACS. Participants

challenged the Census Bureau to develop tools that might help data users better understand how to work with and interpret 5-year estimates.

Do small area data users want to receive ACS 5-year estimates every year?

Participants in every session desired more frequent estimates. The Vermont session clearly wanted to receive ACS 5-year estimates every year. The moderator noted, “They want everything they can get!” If reduced frequency of releases had other benefits, like improved precision or larger sample sizes, some data users considered it a worthwhile tradeoff. No one spoke of receiving too much information. As a matter of fact in the Vermont session one participant said, “There is no such thing as too much data.” North Dakota users emphatically rejected the notion of receiving ACS estimates every five years. These comments were motivated in part by concerns about a level playing field with local entities receiving 1-year or 3-year estimates every year. In Texas all users wanted multiyear estimates every year.

In North Carolina some users acknowledged that while they may not use ACS estimates every year they wanted access to the most current estimates whenever they did need information. They felt having updated annual estimates was the most reasonable solution. Maryland participants voiced support for annual releases of estimates for towns, places, and counties but noted they might not require annual updates to the census tract and block group level estimates. In Maryland participants asked if many data users would have the resources to analyze tract and block group estimates every year.

Data users remarked on the value of current data to support decision-making. The aging of the Census 2000 data was cited as problematic, especially for areas experiencing great change. The ACS estimates were an improvement over old Census 2000 estimates. Data users welcomed refreshed 5-year estimates each year but were worried about the lack of a “reliable baseline” such as the Census 2000 long form given the ACS reduced sample size.

One Texas participant suggested the Census Bureau consider releasing different data sets or data products in odd and even years. In Puerto Rico a participant suggested only releasing 3-year estimates every 3 years to avoid overlapping period estimates. These were minority opinions as most participants wanted everything that could be produced, produced as soon as possible.

What do small area data users think the Census Bureau should do with less reliable survey estimates? Do they expect (or prefer) unreliable estimates to be screened out?

Users did not support the Census Bureau suppressing estimates with reliability issues but acknowledged education was central to being certain that survey estimates were used appropriately. Participants in Maryland did not like the idea of withholding survey

estimates for their localities based on reliability concerns. North Carolina data users also did not support data suppression. Participants felt “unreliable estimates were better than no estimates at all.” Data users wanted to make their own decisions about whether or not to use an estimate but wanted guidance from the Census Bureau. In Texas the participants were not averse to the Census Bureau issuing “reliability warnings” but they did not want the estimates to be eliminated or suppressed due to reliability shortcomings.

Everyone agreed that the Census Bureau needs to do more to provide quality indicators and emphasize how they should be used. In Puerto Rico participants requested the Census Bureau provide both margins of error and coefficients of variation. Session participants expressed great interest in the Census Bureau providing thresholds for when an estimate was sufficiently reliable for use. Some users suggested that since 5-year estimates are available, why would the Census Bureau release unreliable 1-year and 3-year estimates for the same topics/areas? In Texas the group discussed the need to help data users create margins of error for derived measures (aggregations of block group or census tract estimates, for example.) All sessions desired more educational materials, especially on the topic of reliability.

Data users wanted assurances that someone (Census Bureau, SDCs, others) would ensure that only sufficiently reliable estimates were used as the basis for program decision-making.

Some data users were resigned about the reliability and utility of ACS estimates. In Puerto Rico, for example, participants noted the PRCS was the only source of municipio-level information and they would have to use the PRCS regardless of its reliability.

Should the Census Bureau pursue tools or methods of presentation to address reliability concerns?

Discussion of topic 3 (use of a confidence indicator) presented a possible technique to help users gauge the reliability of survey estimates. See pages 8 and 9 of Attachment 1. Many participants liked the idea of “color-coding” estimates to highlight less reliable estimates and flagging estimates that should only be used as building blocks to create more reliable estimates. This “reliability stoplight” approach or other American FactFinder tools were appealing as ways to assist data users in knowing when the estimates may not be fit for use. North Carolina and Maryland participants supported the concept behind the “stoplight” approach but didn’t like the negative labels such as “bad.” They suggested that the Bureau look for a more positive approach.

One data user in North Dakota noted she didn’t like the idea of someone else applying a standard to the data for her area and indicating when the estimates should and shouldn’t be used. She saw this as problematic. In Vermont many admitted they would still use estimates that were coded red if those were the only available estimates. In Vermont and other sessions some users admitted they (and other users they work with) often ignore the margins of error and would also ignore color-coded estimates.

Would small area data users support a limited release of survey estimates in American FactFinder as long as the full set of estimates were available in another form such as files on an FTP site?

Vermont participants thought this was reasonable – users should be able to get to all of the estimates but maybe it should be harder to get to some estimates. When North Carolina participants were asked their opinions on an option that would include only the most robust estimates in American FactFinder and the full set of estimates, including less robust or "ugly" estimates, on an FTP site they indicated this was the wrong approach. They preferred to have equal access to all estimates – “the good, the bad, and the ugly.”

What additional concerns or ideas do small area data users have about the ACS?

In Vermont, when asked about longer aggregations as a way to improve reliability, participants did not want period estimates to exceed 5 years.

The session participants wanted time to think more about some of the issues and for continued opportunities to provide such feedback to the Census Bureau. They agreed that education and the development of tools and “best practices” would go a long way in helping users transition to using ACS multiyear estimates.

In North Dakota data users asked if the Census Bureau might develop a methodology to adjust for the lag effect in multiyear estimates. They asked if there is a way to convert a 5-year estimate into a 1-year estimate using data from other sources and noted the concept of “triangulating” ACS data with data from other sources such as population estimates and administrative records data. Users accepted that the ACS estimates would not be the only data set they would have to rely on.

A participant in North Dakota suggested that certain detailed tables only be released in the form of 5-year estimates. If for most areas the 1-year and 3-year versions of these tables are unreliable, why is the Census Bureau releasing them?

Concern about never having a reliable baseline led to a recommendation that jurisdictions could request a special census.

In Puerto Rico concerns were noted about the lack of address updating capability and the implied housing coverage errors because the PRCS uses an old address frame. Participants wanted to know when the Census Bureau planned to update the sampling frame.

5. SUMMARY

These outreach sessions were a valuable vehicle to understand some of the challenges data users face in using ACS estimates for small geographic areas. Participating in these sessions highlighted the lack of knowledge the data user community had about the census

long form's demise and the ACS and its products. This was the concern that motivated Director Murdock to request these sessions. Our observations confirmed that many local small area data users were unfamiliar with the ACS.

When moderators and Census staff explained the ACS to participants, and they better understood what they would be receiving, they endorsed its value and utility to their work. This held in every outreach session. Census observers identified the following issues warranting user education:

- Users need to understand that ACS estimates are not the population estimates. They need more information about the relationship between the ACS and the population estimates.
- The Census Bureau needs to be clear that the sampling variability associated with ACS estimates will be larger than the variability associated with census long form estimates, but that increase in error is offset by providing more current data.
- In selected sessions the ACS residence rules were misunderstood, causing undue alarm to some users.
- Users need to be reminded the Census 2000 long form was also based on a sample and had sampling error associated with its estimates.
- The Census Bureau should better explain the interpretation of period estimates in areas with seasonal populations and in areas experiencing major changes.

The overwhelming feedback favored the more current ACS estimates, despite the expected challenges with respect to reliability and interpretability. More education and support was a common request and all Census Bureau observers were struck by the need for user education. Most observers felt if the Census Bureau can do a better job educating data users about ACS limitations and utility they will be willing to use ACS estimates on an ongoing and routine basis.

It was also clear that until these areas had a chance to work with the real 5-year estimates for their areas many of these issues were too abstract. It may be useful to consider holding follow up sessions with these users now that they have had the chance to work with 5-year estimates. This could also provide an opportunity to assess if the various education efforts, notably the Compass series, are a benefit to users in transitioning to using information from the ACS.

6. RECOMMENDATIONS

On the heels of these outreach sessions Census Bureau observers recommended that the Census Bureau:

1. Continue to release 5-year estimates each year to support these users' needs.
2. Not suppress the release of 5-year estimates due to reliability.
3. Develop additional outreach and training materials targeted at users of 5-year estimates.

4. Conduct research to demonstrate that the ACS residence rules do not have major implications for seasonal areas.
5. Research tools (similar to the stoplight) to better communicate the reliability of survey estimates and their fitness for use.
6. Stay in touch with users in small areas to monitor their transition away from long form estimates to ACS 5-year estimates.

Due to staffing changes and resource limitations, this report is written several years after we conducted these outreach sessions. We met some of the above recommendations with the production of the ACS Compass series of user handbooks (U.S. Census Bureau, 2008) and the completion of research on ACS residence rules (Baumgardner, 2011). More work remains to be done to meet the needs of these users. The author offers the following recommendations today, based on the review of the notes from these sessions and recognition of the events that have taken place in the past three years. ACS management should consider these recommendations relative to available resources and the priorities that are defined in the ACS strategic plan.

1. The Census Bureau should produce an additional ACS Compass handbook (or on-line guide) designed specifically for small area data users that work with 5-year estimates. It should include specific case studies and demonstrate how to interpret multiyear estimates in times of change.
2. The Census Bureau should conduct follow up outreach sessions with users in areas similar to these to determine if the optimism for 5-year estimates continues and to identify issues warranting attention.
3. Data users and Census Bureau staff should discuss the value and feasibility of a restricted release of a limited set of 1-year or 3-year estimates for small local governments that might assist them in interpreting 5-year estimates. This would be similar to ideas that designers proposed early last decade for a research data set that might allow some sense of the makeup of the 5-year estimates.
4. When we review possible changes to the data release strategy, we should take this feedback into account; specifically noting consensus among users about annual releases of 5-year estimates (possible exception of annual block group data) and continued releases without suppression based on the reliability of survey estimates.
5. The Census Bureau should develop additional tools or guidance for users on how to interpret margins of error and when they should and shouldn't use ACS estimates. We should pursue methods to allow users to view confidence intervals, standard errors, and coefficients of variation in addition to margins of error.
6. The Census Bureau should continue to educate state and federal agencies to use common datasets when distributing funds to address small area users' concerns about equity in funds distribution.

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ACKNOWLEDGEMENTS

Susan Schechter and Cynthia Davis Hollingsworth were responsible for the design, coordination and implementation of these outreach sessions. We couldn't have conducted these sessions without the efforts of the SDC representatives, especially those that volunteered to moderate individual sessions. This report was based largely on notes received from Richard Rathge, Chip Sawyer, Jane Traynham, Michael Beaghen, Frank Ambrose, Bob Kominski, Nicole Scanniello, Debbie Griffin, David Raglin, Gary Chappell, and Enid Santana-Ortiz.

Outreach Session Moderator Materials

Using American Community Survey Data

Background for Moderator

The purpose of these meetings is to obtain input from small town officials on the usefulness of ACS 5-year estimates, some of which will have low levels of reliability.

Data Reliability: Currently, ACS estimates are released with margins of error that indicate the reliability (or precision) of the estimate. Given that some estimates for small areas are expected to have high levels of sampling error, would small town users prefer that

The Census Bureau not publish estimates with low reliability?
Publish the estimates but include some indication other than margin of error (footnotes, color-coding; asterisks)

Use of Multiyear Data: How will small town officials and planners use data based on multiyear averages? Specifically, since the estimates for small areas will be averaged over the entire time period covered rather than for any one specific year, will this affect usage?

Frequency of Data Released: Should the Census Bureau provide data annually to small towns based on 5-year estimates or should we consider providing these data at some other frequency?

Data Dissemination: There are several ways the Census Bureau can disseminate data to the public. One is through the American FactFinder. A second is through a 'FTP' site usually accessed by researchers and other more advanced data users. Given that some estimates would have high levels of sampling error, would small towns prefer that:

The Census Bureau only release a key set of reliable statistics on the AFF and release other data to researchers on the FTP site?
Release all data on AFF regardless of reliability?

Volume of Data: For participants who have used ACS data, is there too much data being released or not enough?

Using American Community Survey Data Moderator's Guide

Welcome

- Purpose of the meeting is to help us better understand data user needs and concerns.
- We are here primarily to listen and want to have time to hear from you.
- We want to obtain information from you about your concerns, reactions, and suggestions for potential improvements to the current plan regarding the release of data from the American Community Survey.
- You may not know much or anything about the American Community Survey. I'll give you some background about the survey after we introduce ourselves.

Introductions

- Go around the room. Ask each person to introduce him or herself and sign the sign-in sheet before leaving.
 - Ask each person to say a little about their job and their familiarity with Census data.
 - Ask if they were aware that in Census 2000, there was a long form and a short form.
 - Ask if they have ever heard of the ACS.

Overview of the ACS – Key Points to Cover

- In the past, decennial censuses not only counted the population for apportionment, but collected data on characteristics of the population.
- In Census 2000, there was a short form and a long form. The long form went to 1 in 6 households.
- Data from the long form have always been important because they describe the characteristics of the population.
- The ACS has replaced the long form.
- There will be no long form in 2010.
- We want to talk to you about the ACS and how you will use it as the replacement for the long form.
- Explain that the ACS sample size is smaller than the Census 2000 long form.

- Point out that the US, states, all Congressional Districts, and big counties and MSAs will get annual data from the ACS.
- For small communities less than 20,000 in population, data must be accumulated over a 5-year period. We call these multiyear estimates and will talk more about them.
- Multiyear estimates are very different from the kind of data released from Census 2000.
- Describe the population thresholds for 1, 3, and 5-year estimates.
 - For areas that have population sizes larger than 65,000, one year estimates will be provided annually. For example, just this past September, the Census Bureau released 2007 ACS data. These data were collected from January 2007 through December 2007 for roughly 7,000 geographic areas that met the population threshold of 65,000.
 - However, for areas with population sizes less than 65,000 but more than 20,000, the values – or estimates -- provided from the ACS will be based on three-year averages.
 - For areas with fewer than 20,000 people, only estimates based on five-year averages will be provided.
- For small towns and communities, the estimates provided will be obtained by combining all the sample interviews over five years. What will be presented will be the average value of the characteristic over the five-year period.
- For areas with **minor** changes over the time period, a multiyear estimate will be pretty similar to a single year estimate.
- But if there has been a **marked** change in a single year of the time period, this change will be muted or not as apparent because it will be mixed in with data from other years. For example, the economic downturn we are experiencing in 2008 won't be very apparent for estimates that are based on a 5 year average that includes 2005, 2006, 2007, 2008, and 2009.

Main points for participants to understand before opening the discussion:

Concept of multiyear estimate: A multiyear average won't give you a clear picture of what has happened in one specific year because it is affected by including data from the other years.

Concept of smaller sample size: The size of the ACS sample, even for these combined multiyear periods, is smaller than the sample size for the long form used in previous decennial censuses.

Concept of lower reliability: Although the ACS estimates will be available more frequently than once a decade, they will also generally be less precise; that is, they are more likely on average to have larger margins of sampling error around the survey estimates.

Topic 1: Data release schedule and understanding that only multiyear estimates will be available for small towns

Refer to Slide 1: The ACS Data Release Schedule

Thinking about the release plan:

- Do you think that the release of five year averaged data every year is a good idea?
- Will the existence of data released every year make you feel the need to use it, to update your databases or projections or will you be able to ignore it and just use it when you need it?
- Would you prefer data on another schedule, for example every 2 years or 5 years?
- What do you think of the idea of releasing the full set of data periodically (maybe every 3 or 5 years) and releasing a small subset in the other years?
- Does the fact that these data are averages based on 5 years of data and not point in time estimates affect how or whether you will use the data?
- Do you currently combine or compare different data such as state population estimates and administrative data to census data?
- What is the impact of annually updating databases that include census information and current geographic boundaries?

Topic 2: Reliability of data for small towns

In general, the larger the margin of error relative to the size of the estimate, the less reliable is the estimate. The margin of error provides a concise measure of the precision of an ACS sample estimate.

Refer to Handout for Topic 2 (next page)– Example of data with margins of error.

Let's say you are the Mayor of Port St Lucie in Florida – its population is big enough for ACS data to be published every year so I can show you a real example.

Say you need information on the percent of grandparents who are responsible for grandchildren that live with them. You look on American FactFinder and see the following:

Obviously the ACS can give you the number of grandparents responsible for grandchildren in Port St. Lucie – its 917. It's important for you to know that back when the Census 2000 data were released, the Census Bureau would only have published the numbers and percents – not the margins of error. So margins of error have become a new concept for our data users to learn and get used to.

In this example, the margin of error for the number reported (917) is plus or minus 558 which means that you could be 90 percent confident that the number of grandparents responsible for grandchildren lies somewhere between 359 and 1,475. This is the confidence interval. Similarly, if you wanted the proportion of all grandparents living with children who are responsible for those children, the percent is 34.6 percent, plus or minus 16.9 which means that you could be 90 percent confident that the percent of grandparents responsible for grandchildren lies between 17.7 percent and 51.5 percent.

An easy use of these data is the following: If you wanted to know if at least 10 percent of all grandparents living with children in Port St. Lucie are responsible for them, this ACS data would tell you yes. But if you needed to know whether 40 percent or more of the grandparents living with grandchildren are responsible for them, the answer is a bit trickier. The percent reported—34.6 percent falls below that threshold but, the value could be as high as 51.5 percent or as low as 17.7, the data do not provide a clear answer to your question.

Looking at the numbers, percents, and margins of errors for each

- Do you find this easy or hard to understand?
- Are data with large margins of error still useful?
- If you were filling out a grant application and it required you to enter the percent of grandparents responsible for raising children, what percent would you use?
- Would you prefer that (like the long form) no measures of sampling error (such as the margin of error) be included in the ACS products?

Handout for Topic 2 – Example of Margin of Error

GRANDPARENTS				
Number of grandparents living with own grandchildren under 18 years	2,651	+/-838	100%	(X)
Responsible for grandchildren	917	+/-558	34.6%	+/-16.9

Topic 3: Use of a confidence indicator

Given the reliability issues just discussed, there are other ways we can help users interpret data. Some people have suggested that in addition to the margins of error, we provide a ‘confidence indicator’ of some sort. Let me show you an example of this concept (next page) and then we can discuss it.

Refer to Handout for Topic 3 – Confidence indicator

First explain the handout: Each estimate labeled with either a green, yellow or red flag to indicate if the estimate’s reliability is ‘good’, ‘fair’ or ‘poor’

- Do you think that this type of confidence indicator would be useful or helpful to you? Why or why not?
- When would you use an estimate that was labeled “fair”? How about “poor”?
- Would you prefer to use this confidence indicator or the margin of error to evaluate the reliability of an estimate? Why?
- Would you prefer that the Census Bureau not release data that not reliable or release as much data as possible but with confidence indicators?
- If you do think it would be better to not release these data, what would data users do if a lot of data for a town—say half of all estimates—were not released?
- So looking at this example, if none of the red and yellow data were released in the table, would the table still be useful to you?

Handout for Topic 3 – Confidence Indicator

Selected Social Characteristics in the United States: 2006			
Selected Social Characteristics in the United States: 2006	Estimate	Reliability	Margin of Error
HOUSEHOLDS BY TYPE			
Total households	30,491	good	+/-1,731
Family households (families)	19,539	good	+/-1,639
With own children under 18 years	9,430	good	+/-1,448
Married-couple families	13,318	good	+/-1,572
With own children under 18 years	6,446	good	+/-1,216
Male householder, no wife present	1,152	good	+/-492
With own children under 18 years	548	fair	+/-388
Female householder, no husband present	4,066	good	+/-747
With own children under 18 years	2,438	good	+/-702
Nonfamily households	11,959	good	+/-1,434
Householder living alone	9,777	good	+/-1,216
65 years and over	4,515	good	+/-804
Households with one or more people under 18 years	10,923	good	+/-1,423
Households with one or more people 65 years and over	8,099	good	+/-908
Average household size	2.66	good	+/-0.14
Average family size	3.48	good	+/-0.22
RELATIONSHIP			
Household population	81,113	good	+/-5,974
Householder	30,491	good	+/-1,731
Spouse	13,607	good	+/-1,650
Child	25,607	good	+/-3,061
Other relatives	6,208	good	+/-2,044
Nonrelatives	5,110	good	+/-1,690
Unmarried partner	2,344	good	+/-883
MARITAL STATUS			
Males 15 years and over	31,288	good	+/-2,521
Never married	11,417	good	+/-1,678
Now married, except separated	14,389	good	+/-1,589
Separated	779	fair	+/-466
Widowed	963	good	+/-415
Divorced	3,710	good	+/-889
Females 15 years and over	32,957	good	+/-2,576
Never married	7,661	good	+/-1,332
Now married, except separated	14,482	good	+/-1,817
Separated	1,462	good	+/-680
Widowed	4,653	good	+/-804
Divorced	4,689	good	+/-1,104
FERTILITY			
Number of women 15 to 50 years old who had a birth in the past 12 months	1,840	good	+/-661
Unmarried women (widowed, divorced, and never married)	564	fair	+/-389
Per 1,000 unmarried women	54	fair	+/-37
Per 1,000 women 15 to 50 years old	90	good	+/-31
Per 1,000 women 15 to 19 years old	16	poor	+/-29
Per 1,000 women 20 to 34 years old	178	good	+/-59
Per 1,000 women 35 to 50 years old	25	fair	+/-25
GRANDPARENTS			
Number of grandparents living with own grandchildren under 18 years	N		N
Responsible for grandchildren	N		N
Years responsible for grandchildren			

Reliability Legend based on the Coefficient of Variation (CV)

Range	Reliability
CV <= 0.30	good
0.30 < CV <= 0.61	fair
CV > 0.61	poor

The coefficient of variation (CV) is defined as the standard error of an estimate divided by the mean of that estimate, measured as a percentage. Relatively, a lower CV means a more reliable estimate.

Topic 4 – Which ACS topics are most important to you?

Refer to Handout for Topic 4 – List of ACS Subjects

Your packet includes an ACS questionnaire that has questions that measure social, economic and housing characteristics. Federal agencies as well as many state and local governments use these data for a variety of programmatic purposes as well as for policy making and funding decisions.

Looking at this list of ACS subjects that I'm handing out, what specific characteristics of data do you need the most?

Handout for Topic 4 – List of ACS Subjects

Characteristic	Subject	Used often (mark all that apply)	Comments?
Basic	Age		
	Sex		
	Hispanic Origin		
	Race		
	Relationship		
Social	Marital Status and History		
	Fertility		
	Grandparents as Caregivers		
	Ancestry		
	Place of Birth, Citizenship, and Year of Entry		
	Language Spoken at Home		
	Educational Attainment and School Enrollment		
	Residence 1 Year Ago		
	Veteran Status, Period of Military Service, VA Service Connected Disability Rating		
	Disability		
Economic	Income		
	Food Stamps Benefit		
	Labor Force Status		
	Industry, Occupation, and Class of Worker		
	Place of Work and Journey to Work		
	Work Status Last Year		
	Vehicles Available		
	Health Insurance Coverage		
Physical	Year Structure Built		
	Units in Structure		
	Year Moved Into Unit		
	Rooms		
	Bedrooms		
	Kitchen Facilities		
	Plumbing Facilities		
	House Heating Fuel		
	Telephone Service Available		
	Farm Residence		
Financial	Tenure		
	Value		
	Rent		
	Selected Monthly Owner Costs		

Topic 5: Discussion on Data Dissemination

I'd like to shift the discussion to the Census Bureau's plan for disseminating ACS data.

There are two basic ways the Census Bureau releases ACS data to the public. One is by American FactFinder (AFF) and the second is through a File Transfer protocol –or FTP site. Researchers and advanced data users generally use the FTP sites, while AFF is designed for easy use by the general public.

- Are you familiar with American FactFinder and the ACS data products?
- Are you familiar with the ACS Summary File and Public Use Microdata Sample (PUMS)?
- What do you think of the idea of restructuring the data dissemination strategy so that only estimates with at least fair reliability are available on American FactFinder, knowing that the full set of ACS data would be accessible via FTP?
- Would you learn to use the FTP site in order to access the additional data?
- Do you think the Census Bureau should develop special products for American FactFinder that include only those estimates that meet at least fair levels of reliability?
- Would you prefer that (like the long form) no measures of sampling error be included in the ACS products?

Concluding Questions - Moderator should use as a check to see if key topics have been discussed:

- Should data for multi-year averages be provided every year or should we consider providing such data at some other frequency?
- Will you be able to effectively use averaged rather than point in time estimates for program administration and other uses?
- What should be done about highly variable data? Don't report it or label it?
- Given the frequency, volume, and reliability concerns, what would you think about changing the approach to increase the reliability with more sample but to provide the data less frequently, say twice a decade?
- Do you have any suggestions or final comments on anything that we have discussed today?

Comments and Thoughts From Today's Discussion

Please feel free to provide the Census Bureau with additional information on the topics we discussed today. In addition, if you'd like to address more fully the following questions, please do:

1. Should data for multiyear averages be provided every year or should we consider providing such data at some other frequency?
2. Will you be able to effectively use averaged rather than point in time estimates for program administration and other uses?
3. What should be done about data that are less reliable?
4. Given the frequency, volume, and reliability concerns, what would you think about changing the approach to increase the reliability with more sample, but to provide the data less frequently, say twice a decade?
5. Do you have any suggestions or final comments on anything that we have discussed today?

Contact Information:

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PowerPoint Presentation used in Bismarck, ND Outreach Session

<p>Using the American Community Survey</p> <hr/> <p>Focus Group Meeting Bismarck, ND Dec. 5, 2008</p> <p>Dr. Richard Rathge Professor and Director North Dakota State Data Center</p> <p><small>Prepared by the North Dakota State Data Center July 2008</small></p> <p>1</p>	<p>Purpose:</p> <hr/> <ol style="list-style-type: none">1. Help Census Bureau better understand data user needs and concerns.2. Gain feedback about potential improvements to current plan for releasing ACS data.
<p>Discussion Topics</p> <hr/> <ul style="list-style-type: none">○ Prior use of census data?○ Meaning of period estimates?○ Usefulness of period estimates?○ Concerns about too much data?○ Expectations of reliability and what the Census Bureau should and shouldn't release? <p>3</p>	<p>Background: Decennial Census</p> <hr/> <ul style="list-style-type: none">○ In Census 2000, the census used 2 forms<ol style="list-style-type: none">1 "short" form – asked for basic demographic and housing information, such as age, sex, race, how many people lived in the housing unit, and if the housing unit was owned or rented by the resident2 "long" form – collected the same information as the short form but also collected more in-depth information such as income, education, and language spoken at home○ Only a small portion of the population, called a sample, received the long form. <p>4</p>
<p>Background: American Community Survey Similarities with Census 2000</p> <hr/> <ul style="list-style-type: none">• Same questions and many of the same basic statistics• However, the sample size is smaller therefore must use period estimates<ul style="list-style-type: none">• period estimates will be produced for same broad set of geographic areas including census tracts and block groups <p>6</p>	<p>Background: American Community Survey (Annual Data Collection)</p> <hr/> <ul style="list-style-type: none">• Sample includes about 3 million addresses each year• Both households and group quarters are included• Every county in the US is included in the sample• Data are collected continuously throughout the year <p>5</p>

What is a Period Estimate?

- **Definition**
 - An estimate that describes the average characteristics of an area over a specific time period
 - Period for ACS 1-year estimates is the 12 months that make up the calendar year
 - Very different from a point-in-time estimate

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Period Estimates ... ACS vs. Census

- Census (conceptually point in time April 1st)
- ACS accumulates
 - 12 months (1-year estimate)
 - 36 months (3-year estimate)
 - 60 months (5-year estimate)
- Think of shutter speed on camera

Table 1. Major Types of Geographic Areas for Which 1-Year, 3-Year, and 5-Year Period Estimates Are Available from the American Community Survey

Area Type	Numbers of Areas by Estimate Type		
	1-Year Period	3-Year Period	5-Year Period
States and District of Columbia	51	51	51
Congressional Districts	436	436	436
Public Use Microdata Areas (PUMAs)	2,071	2,071	2,071
Metropolitan & Micropolitan Statistical Areas	492	905	936
Urban Areas	363	809	3,607
County & County Equivalents	775	1,812	3,141
Cities, Towns, & Census Designated Places	492	2,062	25,112
Townships & Villages (MCDs) recognized for publication in 28 States	186	984	21,200
School Districts	878	3,257	14,394
American Indian & Alaska Native Areas	14	36	603
Census Tracts	0	0	65,433
Census Block Groups	0	0	208,790

Source: Table 2-5 in Citro & Kalton, 2007. Because of changes in population and geographic boundaries, the actual numbers of areas with estimates published may differ from the numbers shown.

American Community Survey Data Products Release Schedule

Data Product	Population Threshold	Year of Data Release							
		2006	2007	2008	2009	2010	2011	2012	
Years of Data Collection									
1 - year Estimates	65,000+	2005	2006	2007	2008	2009	2010	2011	2012
3 - year Estimates	20,000+			2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012
5 - year Estimates	All Areas*				2005-2009	2006-2010	2007-2011	2008-2012	

*All legal, administrative and statistical geographic areas down to the tract and block group level.

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American Community Survey Key Differences from Census 2000

- The goal of ACS is to produce data comparable to the Census 2000 long form data
- These estimates will cover the same small areas as Census 2000 but with smaller sample sizes
- Smaller sample sizes for 5-year ACS estimates results in reductions in the reliability of estimates
- 2010 Census will be just "short form"

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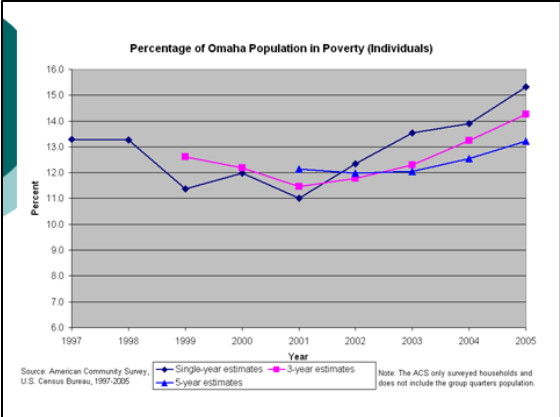
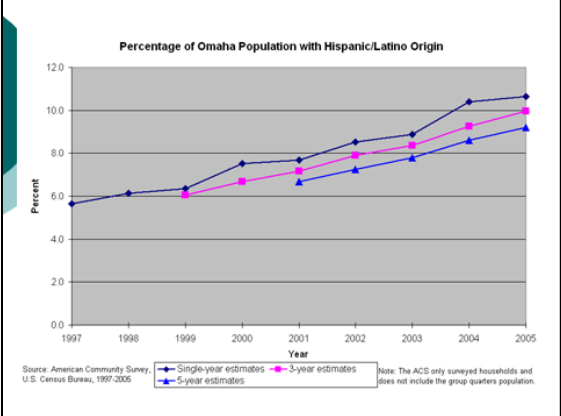
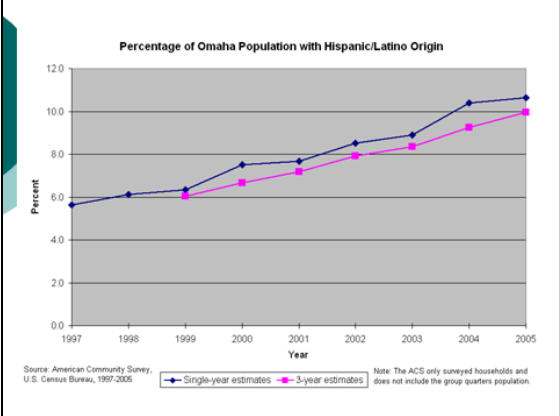
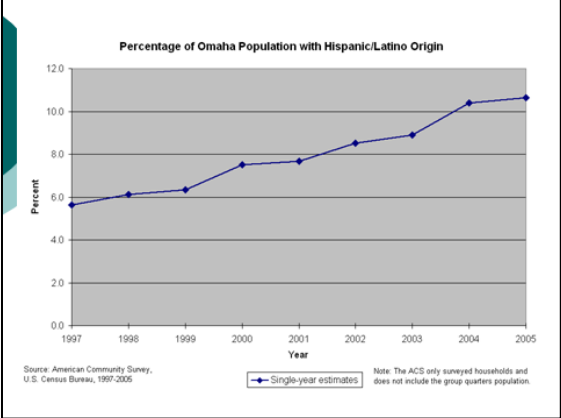
American Community Survey Benefits of ACS to my small town?

- Yes, less reliable than what you received from Census 2000
- But, once we accumulate 5 years of data, you will receive data **every** year – not once every 10 years
- For planners, researchers, and other data users, your small town data can be combined with other small towns nearby to improve reliability
- We want to hear your thoughts and concerns about multiyear estimates

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Key Challenges for Small Areas

- **Effects of longer period estimates**
- **Consequences of smaller sample size**



ACS sample size is smaller than Census

- One-year sample is 2.5 % of HHs vs 16.7% for Census long form
 - Over five-year period, ACS sample size is 12.5 percent
- **Therefore ACS sampling error will be larger**

Cass County, North Dakota (population 132,585)

PERCENTAGE OF FAMILIES AND PEOPLE WHOSE INCOME IN THE PAST 12 MONTHS IS BELOW THE POVERTY LEVEL		
All families	4.5%	+/-1.7
With related children under 18 years	5.5%	+/-2.7
With related children under 5 years only	9.0%	+/-3.9
Married couple families	1.4%	+/-0.8
With related children under 18 years	0.5%	+/-0.4
With related children under 5 years only	0.6%	+/-0.9
Families with female householder, no husband present	20.1%	+/-9.1
With related children under 18 years	21.4%	+/-10.3
With related children under 5 years only	32.7%	+/-12.0
All people	9.0%	+/-1.7
Under 18 years	6.4%	+/-3.0
Related children under 18 years	5.9%	+/-2.9
Related children under 5 years	4.7%	+/-3.2
Related children 5 to 17 years	6.4%	+/-3.7
18 years and over	10.0%	+/-1.7
18 to 64 years	11.1%	+/-1.9
65 years and over	8.5%	+/-3.6
People in families	3.9%	+/-1.5
Unrelated individuals 15 years and over	27.1%	+/-4.4

Source: U.S. Census Bureau, 2006 American Community Survey

Comparison of 1-year, 3-year, and 5-year Estimates of the Percentage of Persons in Poverty for Omaha, NE: 1999-2005 ACS

	1999	2000	2001	2002	2003	2004	2005
Single-year estimate	11.4	12.0	11.0	12.3	13.5	13.9	15.3
Single-year MOE	0.8	1.0	1.0	1.5	1.6	1.5	1.5
Three-year estimate			11.4	11.7	12.1	13.2	14.2
Three-year MOE			0.5	0.7	0.8	0.8	0.8
Five-year estimate					11.9	12.5	13.2
Five-year MOE					0.5	0.5	0.6

- ### Census Bureau Resources
- o ACS website on Census Homepage
 - o Technical documents/user guides being produced by Census Bureau
 - o State Data Center websites

- ### Discussion Questions
1. Should data for multi-year averages be provided every year or at some other interval?
 2. Will you be able to effectively use period estimates rather than point estimates for program administration and other uses?
 3. What should be done about highly variable data?
 4. Would you be willing to get data less often if it meant higher reliability?

- ### Focus Group Discussion 2008
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 - URL: www.ndsu.edu/sdc

List of Outreach Session Attendees

Maryland

Jane Traynham - moderator, Maryland SDC

Susan Schechter, Census Bureau

Bob Kominski, Census Bureau

Frank Ambrose, Census Bureau

Stan Ruchlewicz, Town of Westminster, MD

Gail Webb Owens, Director of Planning and Zoning, Kent County, MD

Tom Hamilton, Town of Easton, MD

Another attendee, Town of Easton, MD

Vermont

Chip Sawyer – moderator, Vermont SDC

David Raglin, Census Bureau

Bob Kominski, Census Bureau

Alfredo Navarro, Census Bureau

Frank Ambrose, Census Bureau

Morning session:

Peter Whitney, St. Johnsbury administrator

Todd Odit, Assistant Essex Town manager

Joe Zingale, Rutland Town administrator

Valerie Capels, Waitsfield Town administrator

Claudia Clark, Plainfield Selectboard

Karen Horn, Vermont League of Cities and Towns

Charlie Baker, CCRPC Executive Director

Michael Nyland-Funke, Public Health analyst

Dean Pierce, Shelburne Planning director

Lani Raven, UVM Planning

Bernard Byrne, VTrans Traffic Research

Sara Rabin, Burlington school district

Afternoon session:

Dana Baron, City of Burlington

Ben Pacy, City of Burlington

David Roberts, Senior transportation planner

Dan Lindley, Morristown Town administrator

Josh Hanford, VT Community Development Program

Donna Pidgeon, Town of Leicester

Michael Crane, Crane Associates, Inc.

Cathyann LaRose, South Burlington planner

Maura Collins, Vermont Housing Finance Agency

Brian Pine, Burlington Community Economic Development Office

Margaret Bozik, Burlington Community Economic Development Office

North Dakota

Richard Rathge – moderator, North Dakota SDC

Debbie Griffin, Census Bureau
Gary Chappell, Census Bureau
Michael Beaghen, Census Bureau
Pat Rodriguez, Denver regional office, Census Bureau
Les Snavely, Bowman, ND (Legislator)
Richard Mower, Bismarck-Mandan Development Association
Heather Lemoine, Tourism Division, ND Department of Commerce
Mike Ness, Hazen Public Schools
Joe Lebach, Mandan Public Schools
Mike Anderson, ND Housing Finance Agency
Jerry Hjelmsted, ND League of Cities
Terry Traynor, ND Association of Counties
Leigh Ann Huether, Economic Development, ND Department of Commerce
Duane Broschat, ND Job Services
Jeb Oehlke, ND Chamber of Commerce
John Brawnwell, Job Services
Ed Gerhardt, Bismarck Public Schools
Katie Moor Aitchison, Bismarck-Mandan Chamber of Commerce
Kathy Stombeck, ND Tax Department (Governor's Census Committee)
Rod Bachman, ND EDC (Governor's Census Committee)
Mike Ziesch, ND Job Services (Governor's Census Committee)

Texas

Karl Eschbach – moderator, Texas state demographer

Bob Kominski, Census Bureau
Susan Schechter, Census Bureau
Alfredo Navarro, Census Bureau
Nicole Scanniello, Census Bureau
List of attendees not available

Puerto Rico

Lillian Torres and Mario Marazzi – moderators, Puerto Rico Institute of Statistics

Alfredo Navarro, Census Bureau
Enid Santana-Ortiz, Census Bureau
Participants from the SDC, the statistics offices of all the municipios and governmental offices such as the Department of Health, Department of labor, Department of Education, Department of Justice.
List of attendees not available

Colorado

Elizabeth Garner – moderator, Colorado SDC

Sharon Stern, Census Bureau

Mark Asiala, Census Bureau

Eddie Castro, Census Bureau

Pamela Klein, Census Bureau

Douglas Hillmer, Census Bureau

Patricia Rodriguez, Census Bureau

Affiliations of Colorado attendees not available

Rick Bellis

Robert Zuccaro

Dan Huerter

Linda Briggs

Phyllis Resnick

Linda Venturoni

Jennifer Newcomer

Louis Pino

Martha Sullins

Greg Flebbe

Ryan Gregory

Larry Worth

Rachel Lunney

Robert Valdez

Kirk Bol

Shannon Kerr

Todd Swanson

Catherine Trotter

Suzanne Kelley

Lyn Boswell

Tina Ceresoli

North Carolina

Bob Coats - moderator, North Carolina SDC (North Carolina Office of State Budget and Management)

Pamela Klein, Census Bureau

Steve Hefter, Census Bureau

Mark Asiala, Census Bureau

Frank Ambrose, Census Bureau

Michelle Jiles, Census Bureau

Nelson Colon, Census Bureau

Ken Wright, Census Bureau

Steve Gurley, City of Lincolnton

Jim Byrne, Town of Boone

Mark Donham, City of Oxford

Linda Worth, Warren County

Rich Olson, City of Elizabeth City

Carl Dean, Town of Holly Springs

Steve Biggs, Town of Clayton

Karl Knapp, NC League of Municipalities

Linda Staab, Town of Morehead City

Raymond Allen, City of Albemarle

Troy Lewis, Town of Tarboro

Elizabeth Hayden, State Library of NC

Ron George, City of Morganton

Jennifer Song, NC Office of State Budget and Management