

June 2, 2008

Christa D. Jones
Chief, Office of Analysis & Executive Support
U.S. Census Bureau
4600 Silver Hill Road
Washington, DC 20233

Dear Ms. Jones:

On behalf of the American Association of State Highway and Transportation Officials (AASHTO), we request a review and evaluation of recent decisions made by the Disclosure Review Board (DRB) regarding the 3-year American Community Survey (ACS) custom tabulations for transportation.

DRB Chair, Laura Zyatz recently shared with us a new set of disclosure requirements for transportation data tabulations. Specifically, she cited:

“For all tables where means of transportation is shown and is crossed with one or more other variables, there must be at least 3 unweighted cases for each category of means of transportation in a given geographic area for the data to be shown. Categories and/or geographic areas should be collapsed to meet this threshold.” (see attached memorandum from Laura Zayatz to Celia Boertlein)

If applied, we estimate that these requirements will suppress critically needed data on means of transportation to work for over 80 percent of the places in the country. This egregious level of suppression will leave states and local governments without fundamental data to respond to Federally mandated transportation planning and policy analysis requirements. Additionally, local transportation policy decisions will be significantly impacted by lack of data on single passenger auto, transit, carpool, bike and pedestrian commuting. Restriction and suppression of these data are especially problematic in an era of unparalleled emphasis on gasoline prices, air quality, congestion management, safety, and emergency management.

We appeal to you for support and assistance in striking an appropriate balance that preserves basic utility of the data with adequate protection provisions. Over the last four decades, billions of dollars of transportation investments have been made supported by special census data tabulations for transportation. The special data tabulations on means of transportation to work are the core of our partnership with the Census Bureau. We want to stress that these are data that have been provided in the past. Furthermore, National Academy of Sciences research and the technical experts we have consulted concur that risks of disclosure are minimal for the 3-year ACS data tabulations we are requesting for large geographic places with 20,000 or more residents.

DRB arguments for imposing the new disclosure requirements appear to be anecdotal and arbitrary. No statistical analyses or research documentation have been offered by DRB in support of the new requirements. Further, it appears that the DRB has not fully considered the design features already incorporated into the ACS to effectively minimize disclosure risks. In the ACS, data are swapped, imputed and rounded as part of the design process. In addition, the population being sampled is continually aging, changing residence, changing workplaces, and means of travel to and from work.

In an attachment to this letter we identify substantive reasons why ACS design features obviate the need for additional data suppression. We stress again that all research and statistical analysis we have seen concur that the probability of associating records with individuals in large geographic areas of over 20,000 people is insufficient to warrant the substantive data suppression that will result from the DRB decision.

I am requesting your help in working toward a solution that will allow us to continue to use and apply the ACS for transportation planning purposes. Among our members we have 50 states and 380 metropolitan planning organization partners throughout the nation who have relied on census transportation planning data for over four decades. They have committed an unprecedented \$5.9 million for a new Census Transportation Planning Products (CTPP) program of data, training, research and technical assistance. Over half of these funds have been set aside to work directly with the Census Bureau on special data tabulations. If the disclosure rules are not changed, we will not be able to use the census data for transportation planning purposes. As a result, it will be difficult to justify going forward with funding for 3-year data products and potentially all products associated with the ACS.

We are hopeful that you will take our appeal into consideration and support our efforts to negotiate a more balanced approach that can preserve our partnership. I look forward to hearing from you and working with the Census Bureau on reasonable alternatives and options. If you have specific questions, please do not hesitate to contact Mr. Ronald D. McCreedy, Program Director for Planning and Policy, AASHTO t 202/624-5807 or by email at rmccreedy@ashto.org.

Sincerely,



Deb Miller
Secretary of Kansas DOT and
Chair, AASHTO Standing Committee on
Planning

Attachment enclosed

Copies To:

Laura V. Zayatz, Chairperson, Disclosure Review Board, Census Bureau
Robert A. Kominski, Assistant Division Chief, HHES for Social Statistics, Census Bureau
Allison K. Fields, Branch Chief, HHES for Journey to Work and Migration, Statistics Branch,
Census Bureau
Melissa Chiu, Census Bureau
Kai T. Wu, Branch Chief, ACSO for Data Requirements Branch, Census Bureau

Deb Miller, Secretary Kansas Dot and Chair of the AASHTO Standing Committee on Planning
Elaine Murakami, Community Planner, Office of Planning, Federal Highway Administration
Ed Christopher, Resource Center Planning Team, Federal Highway Administration
Gloria Shepherd, Associate Administrator for Planning, Environment and Real Estate, Federal
Highway Administration
James Cheatham, Director of the Office of Planning, Federal Highway Administration
Ed Weiner, Office of the Secretary/Policy Office, US DOT

Attachment A.
Christa D. Jones
Chief, Office of Analysis & Executive Support
U.S. Census Bureau
May 28, 2008

Design Features that Minimize Disclosure Risks for ACS 3-Year Special Data Tabulations for Transportation

The following outlines substantive reasons why ACS 3-year data which produce period estimates are different than point-in-time data. Statistical probability analysis concurs that these data should be viewed differently when it come to disclosure.

A. Survey Methodology Offers Protection

- 1. Addressed Based Housing Unit Sample:** The ACS is a housing unit sample, and not a sample of persons. This offers natural protection for individual disclosure because the sample rate of persons is lower than the sample rate of housing units. In an address-based housing survey like ACS, the population in a tabulation of geography like a County or Place is constantly changing.¹
- 2. The ACS sample size is small with a wide variance of weights and a high margin of error.** With residential migration, the number of persons potentially in the sample frame is much larger, with the result being a smaller percent of all persons being sampled.²
- 3. The sample frame undergoes changes over the course of 3 years (36 months of survey data collection).** Over 15 percent of persons move each year and over 5 years that number can quickly approach 45 percent. This contributes to a changing sample frame. Meanwhile, individual attributes within the frame such as a person's age and income have a 100 percent probability of changing over the 3 ACS years.³
- 4. The actual date when the data is collected is unknown.** With the accumulation of data over time either 3 or 5 years, the actual date when the data is collected is "masked" in final data tabulations. One may think that they have identified someone in a 2008 household but the person could have easily been sampled in a 2006 household which further clouds the identity of the household or person.

¹ Email from Celia Boertlein, using Census 2000. Fifteen percent of persons (ages 5 and over) move their residence in one year, and nearly 45 percent of persons (ages 5 and over) move in five years.

U.S. Census Bureau website on Census 2000 -- Table 1. Gross Migration for the Population 5 Years and Over for the United States, Regions, States, Counties, New England Minor Civil Divisions, and Metropolitan Areas: 2000 <http://www.census.gov/population/cen2000/phc-t22/tab01.pdf>

²U.S. Census Bureau, "ACS Design and Methodology" Technical Paper 67. U.S. Government Printing Office, Washington, DC, 2006. <http://www.census.gov/acs/www/Downloads/tp67.pdf> (large file 7.4 mg)

³ National Research Council (2007). **Using the American Community Survey: Benefits and Challenges.** Panel on the Functionality and Usability of Data from the American Community Survey, Constance F. Citro and Grapham Kalton, Editors. Committee on National Statistics, Division of Behavioral and Social Sciences and Education. Washington, D.C. National Academies Press.

- 5. Identifying a single record in a sample is NOT the same as identifying an individual.** Assuming the possibility of a few tables being strung together, an “intruder” may only be able to guess “categorical” data for up to 5 or 6 dimensions. The data could perhaps be tied to a survey record. However, this is only a survey record. Because survey uniques are seldom population uniques, the probability of this being tied to an individual is low.

B. Data Tabulation and Processing offers disclosure protection

- 6. Many variables are not clearly specified in the ACS data.** For example, ACS does not publish the sample year a person’s age or income is from. In addition, these variables are tabulated in CTPP in bins or cohorts which further obscure their identity. Many variables are subject to other changes before publication. For example, data on income is subject to imputation and is adjusted by the CPI to a current year estimate before publication.
- 7. Some variables used in CTPP have high imputation rates.** For example approximately 25 percent of the workplaces are imputed at the sub-county level while the geocoding of the remaining workplaces is far from being 100 percent accurate.
- 8. The Census Bureau already adds disclosure proofing** to the data in the form of data swapping, imputation, data modification and complex weighting. This is not to mention all the safeguards built in by the ACS methodology itself.

C. Changes in Chief CTPP Variables over time offer disclosure protection

- 9. People change their workplace, or shift in and out of the workplace.** Workplace locations also change over time further reducing any risk of disclosure for ACS “period” estimates. The average worker tenure in the US is 4 years with longer tenure in the middle ages and shorter tenures at both ends of the age spectrum.⁴

⁴ **Current Population Survey (2006): Employee Tenure** <http://www.bls.gov/news.release/tenure.nr0.htm>

“The median time that wage and salary workers had been with their current employer was 4.0 years in January 2006, unchanged from January 2004... Variations by age: Older workers tend to have more years of tenure than their younger counterparts. For example, median tenure for employees ages 55 to 64 was 9.3 years in January 2006, about three times the tenure for workers ages 25 to 34 (2.9 years)”

Canadian Workplace and Employment Survey (WES) Custom tabulations prepared by Yves Decady, Yves.Decady@statcan.ca Email April 11, 2008 to E Murakami. For the 2001/2002 period, 24 percent of workers made some change in one year: 9 percent different employer; 9 percent not a paid worker anymore; 6 percent same employer, but different job

Gottschalck, Alfred O. “Dynamics of Economic Well-Being: Labor Force Turnover, 1996-1999.” **Current Population Reports, P70-96**. U.S. Census Bureau, Washington, DC. 2004.
<http://www.sipp.census.gov/sipp/p70s/p70-96.pdf>

Using SIPP, “in an average month over the March 1996–November 1999 period, 6.3 million workers (5.5 percent of the workforce) experienced a job turnover event.” Does not include an annual rate.

Seninger, S. and D. Greenberg, “Voluntary and Involuntary Job changes.” University of Maryland.
http://www.sipp.census.gov/sipp/workpapr/wp118_9013.pdf Results from 1983, using caucasian men only, about 35 percent changed jobs in the 10 year period.

10. People often change their mode to work. Transportation surveys show that many people change their mode to work over the course of a year, and vary their travel mode choice even within a week. One survey in Chicago estimates that over 30 percent of transit users changed their mode in one year. Workers are also likely to change the time they leave home to go to work, and their total travel time due to changes listed above.

Prepared by the AASHTO SCOP
Census Data Work Group
May 28, 2008



UNITED STATES DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. Census Bureau
Washington, DC 20233-0001

March 12, 2008

MEMORANDUM FOR Celia Boertlein
Housing and Household Economic Statistics Division

From: Laura V. Zayatz *Laura V. Zayatz*
Chairperson, Disclosure Review Board

Subject: ACS CTPP Special Tabulation --- 3 Years of Data

The Disclosure Review Board (DRB) has reviewed and discussed your February 7, 2008 request to release these data. The Board has approved your request.

The data will be rounded as all ACS special tabulations (see attachment).

DRB rules for means, medians, and other quantiles will be applied (see attachment).

For all tables where means of transportation is shown but is not crossed with any other variable, there is no threshold on the means of transportation categories.

For all tables where means of transportation is shown and is crossed with one or more other variables, there must be at least 3 unweighted cases for each category of means of transportation in a given geographic area for the data to be shown. Categories and/or geographic areas should be collapsed to meet this threshold.

For all flow tables, there must be at least 3 unweighted cases per pair of geographic areas with the exception of Total Workers univariate and Means of Transportation univariate (no required threshold).

cc: DRB (14)



UNITED STATES DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. Census Bureau
Washington, DC 20233-0001

October 25, 2004

MEMORANDUM FOR Distribution List

From: Laura V. Zayatz
 Chair, Disclosure Review Board

Subject: Disclosure Rules for American Community Survey Special Tabulations
 (revised)

The attached document outlines the Disclosure Review Board's rules for American Community Survey special tabulations.

cc: DRB (13)
 Douglas Hillmer (DSD)
 Kristin Wimbrow

Attachment

DRB Rules/Requirements for American Community Survey Special Tabulations

1. All American Community Survey special tabulations must be reviewed by the Disclosure Review Board. After the tabulation has been created, if the program area identifies any potential disclosure problems, they will refer them back to the DRB.
2. All cells in any American Community Survey special tabulation must be rounded. The rounding schematic for all tables is:

0 remains 0

1-7 rounds to 4

8 or greater rounds to nearest multiple of 5 (i.e., 864 rounds to 865, 982 rounds to 980)

Any number that already ends in 5 or 0 stays as is.

Any totals or subtotals needed should be constructed before rounding. This assures that universes remain the same from table to table, and it is recognized that cells in a table will no longer be additive after rounding.

3. Medians or other quantiles may be calculated as
 - A. an interpolation from a frequency distribution of unrounded data (these are not subject to additional rounding), or
 - B. as a point quantile. These must be rounded to two significant digits: 12,345 would round to 12,000; 167,452 would round to 170,000. There must be at least 5 cases on either side of the quantile point.

It is recognized that a quantile may indeed be some individual's response, but it is coincidental, not by design.

4. Thresholds on universes will normally be applied to avoid showing data for very small geographic areas or for very small population groups (often 3 or 50 unweighted cases). Tables may normally not have more than 3 or 4 dimensions, and mean cell size lower limits may also be required (mean cell size of each table is 3 unweighted cases).
5. Percents, rates, etc., should be calculated after rounding, but the DRB has granted exceptions to this rule when the numerator and/or denominator of the percent or rate is not shown.
6. Means and aggregates must be based on at least 3 values.
7. The finest level of detail shown for Group Quarters data will be Institutional/ Noninstitutional.
8. For Demographic Profiles from user-defined geographic areas (neighborhoods), all areas must have at least 300 (weighted) people in them. Using a computer program, the user-defined areas will be compared with standard Census Bureau areas to make sure users cannot obtain data from very small geographic areas by subtraction. If such small areas are found, the boundaries of the user-defined areas must be changed.