Wisconsin MPOs  Sept. 18, 2013

Latest Happenings with the ACS?
Where is my CTPP 5-year data?
Finding the Right CTPP Table Exercise (take home test)

http://edthefed.com/WI-MPO

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What is the American Community Survey?

A large, continuous survey

• samples approximately **3.5 million** resident addresses per year (about 295,000 per month)
• produces characteristics of population and housing
• produces estimates for small areas and small population groups (Tracts and Block Groups)
Sampling Improvements

Sample expanded from 2.9 million to 3.54 million addresses per year starting in June 2011

Reallocation of Sample Changed (January 2011)

To improve small area estimates
Increased sampling rates for small tracts and governmental units
Slightly decreased sampling rates in larger tracts
Data Collection Operations (housing units)

<table>
<thead>
<tr>
<th>Online</th>
<th>Mail</th>
<th>Telephone</th>
<th>Personal Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Online Method" /></td>
<td><img src="image" alt="Mail Method" /></td>
<td><img src="image" alt="Telephone Method" /></td>
<td><img src="image" alt="Personal Visit Method" /></td>
</tr>
</tbody>
</table>

Do any of these methods look new from what you knew about ACS?
Internet Response Mode Implemented

Internet response option started in January 2013
Not all households are eligible to respond by internet

ACS initial mail package includes internet response URL

Later mail package provides choice to respond by internet or by a paper questionnaire

Basic telephone support is available

Initial response indicates that about half of self-response is coming from the internet mode
## Monthly Housing Samples

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 2013</td>
<td>Web/Mail</td>
<td>Phone</td>
<td>In-person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb 2013</td>
<td></td>
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<td></td>
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<tr>
<td>Mar 2013</td>
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<tr>
<td>Apr 2013</td>
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<td></td>
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</tr>
<tr>
<td>May 2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Web/Mail</td>
<td>Phone</td>
</tr>
<tr>
<td>June 2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Web/Mail</td>
</tr>
</tbody>
</table>
ACS produces PERIOD ESTIMATES

Describe the average characteristics over a specific period of time

Contrasts with point-in-time estimates that describe characteristics for a specific date

Period is 1 year, 3 years, or 5 years, and data are combined for 12 months, 36 months, or 60 months

<table>
<thead>
<tr>
<th>Release Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-year Sept</td>
</tr>
<tr>
<td>3-year Oct</td>
</tr>
<tr>
<td>5-year Dec</td>
</tr>
</tbody>
</table>
## Population Limits for ACS Estimate Types

<table>
<thead>
<tr>
<th>ACS Period Estimates Released</th>
<th>Estimated Population of Geographic Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-year, 3-year, 5-year</td>
<td>65,000 or more</td>
</tr>
<tr>
<td>3-year, 5-year</td>
<td>20,000 to 64,999</td>
</tr>
<tr>
<td>5-year</td>
<td>Less than 20,000</td>
</tr>
</tbody>
</table>

*If your area is over 70k people, which vintage data should you use?*
Boundary Vintage

Legal areas reflect January 1st boundary for the final year of the estimate

Legal area boundaries updated through the Boundary and Annexation Survey (BAS)

Statistical areas reflect boundaries at the time of their delineation

Statistical area boundaries are updated once a decade in association with the decennial census

Multi-year estimates use the latest geography available associated with the last year of the multi-year estimate
## Vintage of Geographic Boundaries

<table>
<thead>
<tr>
<th>ACS Estimates</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Release year</td>
<td>2011</td>
<td>2012</td>
<td>2013</td>
</tr>
<tr>
<td>Census Tracts</td>
<td>2010 Census</td>
<td>2010 Census</td>
<td>2010 Census</td>
</tr>
<tr>
<td>Public Use Micro-data Areas (PUMAs)</td>
<td>Census 2000</td>
<td>Census 2000</td>
<td>2010 Census</td>
</tr>
<tr>
<td>Census Designated Places</td>
<td>2010 Census</td>
<td>2010 Census*</td>
<td>2010 Census*</td>
</tr>
<tr>
<td>ZIP Code Tabulation Areas (ZCTAs)</td>
<td>Not included</td>
<td>2010 Census</td>
<td>2010 Census</td>
</tr>
</tbody>
</table>

* CDP boundaries may be modified as a result of annexations by adjacent incorporated places, or if the community incorporates
www.census.gov/acs/www/data_documentation/geography
Computer and internet usage

• Ownership or use of computers
• Subscribe to internet service
• Internet service subscription type
ACS data Products

Profiles
- Data Profiles
- Narrative Profiles
- Comparison Profiles
- Selected Population Profiles

Tables
- Detailed Tables
- Subject Tables
- Ranking Tables
- Geographic Comparison Tables

Downloadable Datasets
- Summary File
- Public Use Microdata Sample (PUMS) Files

All ACS Estimates include a Margin of Error measure
Set of comma-delimited text files
All Detailed Tables available
Only source for Block Group estimates
Available via FTP site or DataFerrett Summary File Retrieval Tool

http://www.census.gov/acs/www/data_documentation/summary_file/
Public Use Microdata Sample (PUMS)

Individual-level data on about 1 percent of the population – subsample of ACS microdata

Enables custom tables and analyses

PUMA is the lowest level of geography available

Minimum population size of 100,000+

http://www.census.gov/acs/www/data_documentation/public_use_microdata_sample/
TIGER/Line Shapefiles
Released before ACS data

The Geography Division releases its TIGER/Line shapefiles about one year ahead of the corresponding ACS data release.

2012 TIGER/Line shapefiles have been available for almost a year, but the first 2012 ACS data did not come out until Sept 2013.

Shapefiles with pre-joined ACS data available for download

http://www.census.gov/geo/maps-data/data/data/tiger.html
Mapping ACS Data and MOEs

ACS estimates are sample data

Sample data has an associated Margin of Error (MOE)

Comparisons of sample data estimates must incorporate a test of statistical significance

Comparison of sample data estimates may not be statistically significantly different, because of MOE

The Census Bureau provided funding to develop an extension for ArcGIS® which accounts for MOE

The ACS Mapping Extension is available to download at

http://gesg.gmu.edu/census/download.htm
For More Information

http://www.census.gov/acs

Contact by telephone: 301-763-1405

Contact by email: acso.users.support@census.gov

http://www.census.gov/acs/www/about_the_survey/acs_information_guide/

http://www.census.gov/acs/www/documentation/summary_file/
Where is my CTPP Data?

Census Transportation Planning Products program

Offers a set of Data Tables designed and paid for by transportation planners for transportation planners
What is the CTPP?

An AASHTO sponsored *Technical Services* data program funded by member state transportation agencies

Operates with support from FHWA, RITA, FTA, Census Bureau, MPOs and TRB

The program includes:
- Data products
- Training and technical assistance
- Research

Designed for the transportation community
Guided by an AASHTO Oversight Board

**MPOs**
- Shimon Israel, MTC
- Brian Lasagna, BCAG
- Mell Henderson, MARC
- Arash Mirzaei, NCTCOG
- Guy Rousseau, ARC
- Clara Reschovsky, MWCOG
- Tom Faella, LAPC
- MaryAnn Waldinger, COMPASS

**States**
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- Greg Slater, MD (Region I)
- Regina Colson, FL (Region II)
- Juyin Chen, VA (Region II)
- Phillip Mescher, IA (Region III)
- Cory Pope, UT (Region IV)
- Erik Sabina, CO (Region IV)

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- Brian McKenzie, Census Bureau
- Elaine Murakami, FHWA
- Janet Oakley, AASHTO
- Alan Pisarski, Consultant
- Steven Polzin, USF, CUTR
- Melanie Rapino, Census
- Nanda Srinivasan, TRB
- Transportation Director, NARC
- Liang Long, Technical Adjunct
CTPP Data Products

CTPP data products use data from the US Census Bureau American Community Survey (ACS)

The ACS replaced the decennial census “long form” and requires accumulation of data over multiple years for small area tabulation

1 Year of data for places with 65,000+ people
3 Years of data for places with 20,000 + people
5 Years of data for smaller geographic areas, e.g. Tracts and Block Groups
Applications of CTPP Data Products

- Performance measurement
- Modal share analysis
- Environmental justice
- FTA New Starts/Small Starts
- Travel Demand Modeling

- Livability analysis
- Corridor planning
- Air quality modeling
- Trend analysis
- Descriptive statistics
- Travel forecasting
Some Key CTPP Data Items Include

- **Data on Households**
  - Size, income, vehicles per household

- **Data on Workers**
  - Age and gender, occupations, earnings

- **Data on Journey to Work**
  - Usual mode to work, commuting time, work departure time

- **Data on Workplaces**
  - Work locations, times of arrival at work
CTPP Data Concepts

Summarized data by
- Place of Residence
- Place of Work
- Flows from Home to Work

Custom Geography (Local TAZs and TADs)

Unique Universes (e.g. workers in HHs)
CTPP Data Products

CTPP Has three main data products but our focus today is only on one

Data Profiles
CTPP 3-year Tables
CTPP 5-year Tables

The CTPP 5-year Tables
5-year CTPP Data Product (2010 CTPP5)

Product Structure

3-Parts
- Part 1 - Residence
- Part 2 - Workplace
- Part 3 - Flows between Home and Work

On-Line Data Retrieval
- Extraction Software
- Raw Data Download

CTPP 5-Year Main Product

Summer 2013
Small Areas
(TAD, Tract, TAZ, Block Group)
New TAZs and TADS
Modeled and Actual Data and Flows

Requires Disclosure Proofing
<table>
<thead>
<tr>
<th>Highlights</th>
<th>Low Lights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on CTPP2000 Tables</td>
<td>Rounded</td>
</tr>
<tr>
<td>Many NEW 1-way Tables</td>
<td>Limited Number of Crosstabs with Mode</td>
</tr>
<tr>
<td>More Age Tables</td>
<td>-- Travel time</td>
</tr>
<tr>
<td>Streamlined Race Tables</td>
<td>-- Household income</td>
</tr>
<tr>
<td>More HH and HH Lifecycle Tables</td>
<td>-- Vehicle availability</td>
</tr>
<tr>
<td>More Geographic breakdowns or levels</td>
<td>-- Age</td>
</tr>
<tr>
<td>New TADs</td>
<td>-- Time leaving home</td>
</tr>
<tr>
<td>Way more Flows Tables</td>
<td>-- Minority status</td>
</tr>
<tr>
<td></td>
<td>-- Presence of children</td>
</tr>
</tbody>
</table>

Tables will have Disclosure Proofing

Large MOEs (@ 90%)
Disclosure Rules Eliminated

NCHRP 08-79 ($550K)
Web Report 180
Producing Transportation Data Products from the ACS that Comply With Disclosure Rules

NCHRP is funded by State DOTs SP&R

Table Summary using 5-year Table list

<table>
<thead>
<tr>
<th>TAZ/BG</th>
<th>Tract</th>
<th>TAD</th>
<th>Place</th>
<th>County</th>
<th>PUMA</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part 1</strong></td>
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<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Regular</td>
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<td>Disc. Proofed</td>
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<td><strong>Part 2</strong></td>
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<tr>
<td>Disc. Proofed</td>
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</tr>
<tr>
<td><strong>Part 3</strong></td>
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<tr>
<td>Regular</td>
<td>2</td>
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<tr>
<td>Disc. Proofed</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tables Using Disclosure Proofed Data Set

- Means of transportation
- Aggregate Travel Time
- Aggregate HH Income
- Almost all Part 3 Tables
- Aggregate Vehicles Used
- Mean HH Income
- Aggregate Carpools

## 5-year Geography and Flows

- **Asymmetrical Flows (in red)**
- **Small Areas defined by MPOs in MPO areas and States Elsewhere**
- **Tracts are Defaults for Small Areas**
- **Default TADs defined by AASHTO**
- **UZA tables for Part 1 ONLY**

### FROM / Residence vs. TO / Workplace

<table>
<thead>
<tr>
<th>FROM / Residence</th>
<th>TO / Workplace</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>State</td>
</tr>
<tr>
<td>State-County</td>
<td>State-County</td>
</tr>
<tr>
<td>State-County-MCD</td>
<td>State-County-MCD</td>
</tr>
<tr>
<td>State-County-Place</td>
<td>State-County-Place</td>
</tr>
<tr>
<td>MSA</td>
<td>MSA</td>
</tr>
<tr>
<td>State-County</td>
<td>State-Place</td>
</tr>
<tr>
<td>State-County-MCD</td>
<td>State-Place</td>
</tr>
<tr>
<td>State PUMA (2000)</td>
<td>State-Place</td>
</tr>
<tr>
<td>Tract</td>
<td>Tract</td>
</tr>
<tr>
<td>TAD</td>
<td>TAD</td>
</tr>
<tr>
<td>Locally Defined Small Area</td>
<td>Locally Defined Small Area</td>
</tr>
<tr>
<td>TAD</td>
<td>Locally Defined Small Area</td>
</tr>
<tr>
<td>Locally Defined Small Area</td>
<td>TAD</td>
</tr>
<tr>
<td>State-Place</td>
<td>Locally Defined Small Area</td>
</tr>
<tr>
<td>Locally Defined Small Area</td>
<td>State-Place</td>
</tr>
</tbody>
</table>
What is a POW PUMA?

POW PUMAs
Must comprise a whole county or multiple counties

<table>
<thead>
<tr>
<th>State</th>
<th>PUMA</th>
<th>POW PUMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA</td>
<td>233</td>
<td>72</td>
</tr>
<tr>
<td>IL</td>
<td>87</td>
<td>36</td>
</tr>
<tr>
<td>ME</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>NC</td>
<td>58</td>
<td>48</td>
</tr>
<tr>
<td>WA</td>
<td>46</td>
<td>22</td>
</tr>
</tbody>
</table>

If the county contains two PUMAs, then those two PUMAs will be aggregated to form a POW PUMA

If a county contains only a portion of a PUMA, the POW PUMA will encompass the county containing the rest of the PUMA

http://www.census.gov/geo/reference/pdfs/puma/puma_tutorial.pdf
Who delineated the POW PUMAs?
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Resources
CTPP List Serve

Census Data for Transportation Planning
TRB Subcommittee on Census Data for Transportation Planning, ABJ30(1)

Welcome to our web site. We hope you find this site fun, informative and above all useful. We are organized under the Committee on Urban Transportation Data and Information Systems of the Transportation Research Board. We are very interested in census data matters as they relate to transportation planning. As a result, our focus spans the entire spectrum of census related activities including applied uses of the data, the content of censuses, collection procedures and dissemination programs all within the context of past, present and future censuses. This site was developed to help provide a forum for those with an interest in transportation planning and census data.

What's New

- Most recent CTPP Newsletter (PDF only) [01-May-2013]
- Presentations from 2013 Annual Meeting [27-January-2013]

http://trbcensus.com
CTPP Status Report

The "Status Report" is a newsletter developed by the CTPP Planning Group, friends and anyone else wishing to write about the Census Transportation Planning Products, its use or any other census data for transportation planning issues. Its purpose is to inform the transportation planning community on matters relating to the developments of the CTPP and other census data issues of relevance to their needs.

PDF files can be viewed with the Acrobat® Reader®

Index of Articles in the Previous Status Reports

- Current (May 2013) in HTML or PDF (202 KB)
- January 2013 in HTML or PDF (389 KB)
- September 2012 in HTML or PDF (137 KB)
- May 2012 in HTML or PDF (951 KB)
- January 2012 in HTML or PDF (375 KB)
- August 2011 in HTML or PDF (3.7 MB)
- May 2011 in HTML or PDF (468 KB)

http://www.fhwa.dot.gov/planning/census_issues/ctpp/status_report/

http://www.trbcensus.com/newsletters.html
Census Transportation Planning Products (CTPP) 5-Year ACS 2006-2010

Excel files can be viewed with the Excel Viewer

- MS Excel 110 KB
- Read Me File
- Tabulations -- Part 1, Residence-Based Tables
- Tabulations -- Part 2, Workplace-Based Tables
- Tabulations -- Part 3, Worker Home-to-Work Flow Tables
- GEOGRAPHY Summary Levels and Geo-Components Definitions
- Universe Definitions
- Variable Recode Definitions

http://www.fhwa.dot.gov/planning/census_issues/ctpp/
AASHTO website

http://ctpp.transportation.org/
Training Materials

AASHTO CTPP Website

http://ctpp.transportation.org/Pages/trainingresources.aspx

E-Learning

http://ctpp.transportation.org/Pages/elearningmodules.aspx

Recorded Webinars

http://ctpp.transportation.org/Pages/webinardirectory.aspx
CTPP websites

http://www.fhwa.dot.gov/planning/census_issues/ctpp/
http://www.TRBcensus.com
http://ctpp.transportation.org