

CTPP Crash Course – With More Cool Mapping!

Census Transportation Planning Products program

Phil Mescher
CTPP Board Member
Iowa DOT
4/21/2015
GIS-T



What is the CTPP?

An AASHTO sponsored data program funded by member State transportation agencies

Operates with support from FHWA, OST-R, 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
Arash Mirzaei, NCTCOG
Guy Rousseau, ARC
Clara Reschovsky, MWCOG
Tom Faella, LAPC
MaryAnn Waldinger, COMPASS
Jim Hubbell, MARC

Chair: Tracy Larkin-Thomason, NV (Region IV)
Vice Chair: Susan Gorski, MI (Region III)
AASHTO Liaison: Penelope Weinberger

17 voting members: 9 states and 8 MPOs

States

Laine Heltebride, PA (Region I)
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)

Non-voting Members

Ken Cervenka, FTA
Ed Christopher, FHWA
Transportation Director, AMPO
Alison Fields, Census Bureau
Matt Hardy, AASHTO
Jonette Kreideweis, Consultant
Brian McKenzie, Census Bureau
Elaine Murakami, FHWA
Julie Parker, BTS
Alan Pisarski, Consultant
Steven Polzin, USF. CUTR
Erich Zimmermann, NARC
and
JJ Zang – Cambridge Systematics



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**
- **Policy Impact Analysis**
- **Livability analysis**
- **Corridor planning**
- **Air quality modeling**
- **Trend analysis**
- **Descriptive statistics**
- **Travel forecasting**
- **Title IV**
- **Factoring/Adjusting surveys**

CTPP Data Concepts

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



Custom Geography (**Local TAZs**)

Unique Universes (**e.g. workers in HHs**)



Some Key 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

5-year Geography and Flows

FROM / Residence	TO / Workplace
State	State
State-County	State-County
State-County-MCD	State-County-MCD
State-County-Place	State-County-Place
MSA	MSA
State-County	State-Place
State-County-MCD	State-Place
State PUMA (2000)	State-Place
PUMA (2000)	POW PUMA (2000)
Tract	Tract
TAD	TAD
Locally Defined Small Area	Locally Defined Small Area
TAD	Locally Defined Small Area
Locally Defined Small Area	TAD
State-Place	Locally Defined Small Area
Locally Defined Small Area	State-Place

- **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
- MCD Only States

CT	ME	MA
MI	MN	NH
NJ	NY	PA
RI	VT	WI



So, How do I get my hands on this data?

- **The whole 380 GB of data are housed in a Data Access Software**
- **The portal is at:**
 - **ctpp.transportation.org/Pages/5-Year-Data.aspx**
- **Where you can also find a link to a .pdf tutorial and some low budget instructional clips on such fascinating topics as “how to log in,” “picking geography,” “opening a table” and others.**

I heard there are some groovy mapping capabilities in the software, designed mostly with smaller agencies in mind, that are useful for creating on-the-fly maps and graphics, is it true?

You betcha! Let me show you!

- I'm going to skip ahead and skip around a little...



Data set: 2006-2010

Selected Geography:



RESIDENCE:

(new set)

WORKPLACE

WORKPLACE

Save selection set...

Members *

Members by map

Totals

Percentages

Custom groups

Calculated members

Select level:

Clear full selection

Nation (US Total) (0 of 10 selected)

POW State (0 of 499 selected)

POW State-County (0 of 3,221 selected)

POW State-County-MCD (for 12 strong MCD states) (0 of 11,767 selected)

POW State-Place

POW Metropolitan Statistical Area (0 of 374 selected)

POW Metropolitan Statistical Area – EACH Principal City (0 of 692 selected)

POW State-POWPUMA (0 of 1,263 selected)

Worked Outside United States (0 of 3 selected)

State-County-Tract (0 of 73,092 selected)

TAD (0 of 10,848 selected)

TAZ (0 of 188,996 selected)

Members 1-1 of 1

Show all members



Washington

Selected members

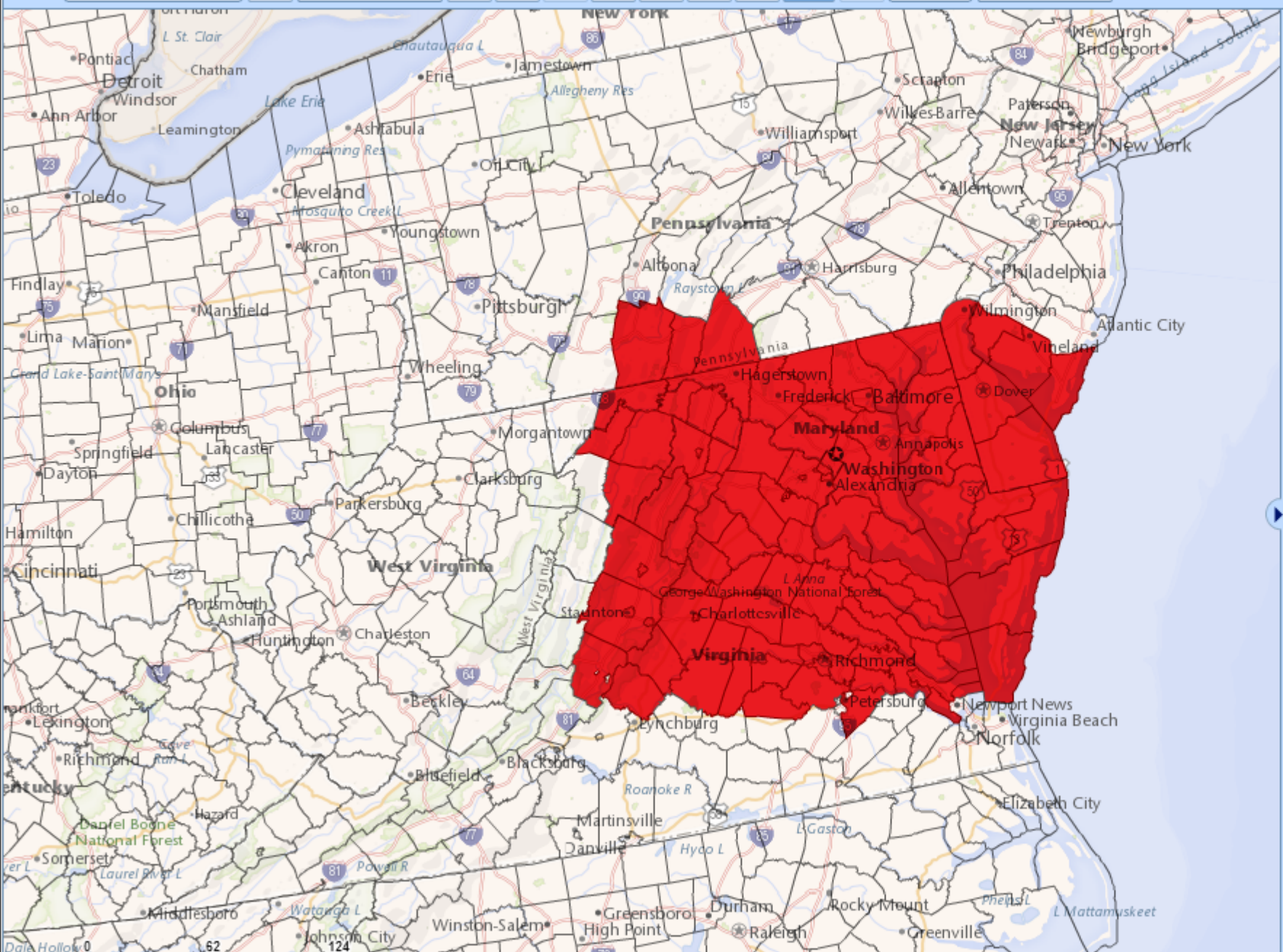
United States

District of Columbia



Washington city, District of Columbia

check/uncheck



ADD:


SELECTION


- ☒ RESIDENT
- ☐ STATE-COUNTY

▼ STATE-COUNTY

- Accomack Co
- Albemarle Co
- Alexandria Co
- Allegheny Co
- Amelia Coun
- Amherst Co
- Anne Arund
- Arlington Co
- Augusta Co
- Baltimore ci
- Baltimore Co
- Bedford Co
- Berkeley Co
- Buckingham
- Calvert Coun
- Cape May C
- Caroline Co
- Caroline Co
- Carroll Coun
- Cecil County
- Charles City
- Charles Cou
- Charlottesvi
- Chesterfield
- Clarke Coun

[Public reports](#)
[My reports](#)
[My selection sets](#)




[Show all reports](#)

Search results for: MEANS11 or MEANS18

-  A102106 - Means of transportation (18) (Workers 16 years and over) 
-  A202105 - Means of Transportation (18) (Workers 16 years and over) 
-  A302103 - Means of transportation (18) (Workers 16 years and over) 
-  B102201 - Minority Status (3) by Means of Transportation (11) (Workers 16 years and over) 
-  B102203 - Age of Worker (8) by Means of transportation (11) (Workers 16 years and over) 
-  B102216 - Time leaving home (17) by Means of transportation (11) (Workers 16 years and over) 
-  B102217 - Travel time (12) by Means of transportation (11) (Workers 16 years and over) 
-  B103200 - Presence of Children (3) by Means of Transportation (11) (Workers 16 and over in households) 
-  B103201 - Number of Workers in household (3) by Means of Transportation (11) (Workers 16 years and over in households) 
-  B103202 - Median Household Income in the last 12 months (2010\$) (1) by Means of Transportation (11) for Workers (Workers 16 years and over in households) 
-  B103203 - Household income in the past 12 months (2010\$) (26) by Means of transportation (11) (Workers 16 years and over in households) 
-  B103206 - Vehicles available (6) by Means of transportation (11) (Workers 16 years and over in households) 
-  B106200 - Aggregate Travel time (1) by Means of transportation (18) (Workers 16 years and over who did not work at home) 
-  B106200C - Aggregate Travel time (1) by Means of transportation (11) (Workers 16 years and over who did not work at home) 
-  B106202 - Mean Travel time (1) by Means of transportation (18) (Workers 16 years and over who did not work at home) 
-  B106202C - Mean Travel time (1) by Means of transportation (11) (Workers 16 years and over who did not work at home) 
-  B106203 - Median Travel time (1) by Means of transportation (18) (Workers 16 years and over who did not work at home) 
-  B106203C - Median Travel time (1) by Means of transportation (11) (Workers 16 years and over who did not work at home) 
-  B106300 - Aggregate Travel time (1) by Means of transportation (11) by Time leaving home (17) (Workers 16 years and over who did not work at home) 
-  B106301 - Mean Travel time (1) by Means of transportation (11) by Time leaving home (17) (Workers 16 years and over who did not work at home) 
-  B106302 - Median Travel time (1) by Means of transportation (11) by Time leaving home (17) (Workers 16 years and over who did not work at home) 
-  B202200 - Minority Status (3) by Means of Transportation (11) (Workers 16 years and over) 

A302103 - Means of transportation (18) (Workers 16 years and over) ⓘ

Current date: 10/15/2013 3:17:20 PM (Eastern Daylight Time)

U.S. Census Bureau, American Community Survey 2006-2010 Five-year estimates. Special Tabulation: Census T

FLOW: State-County -> POW State-Place ▼

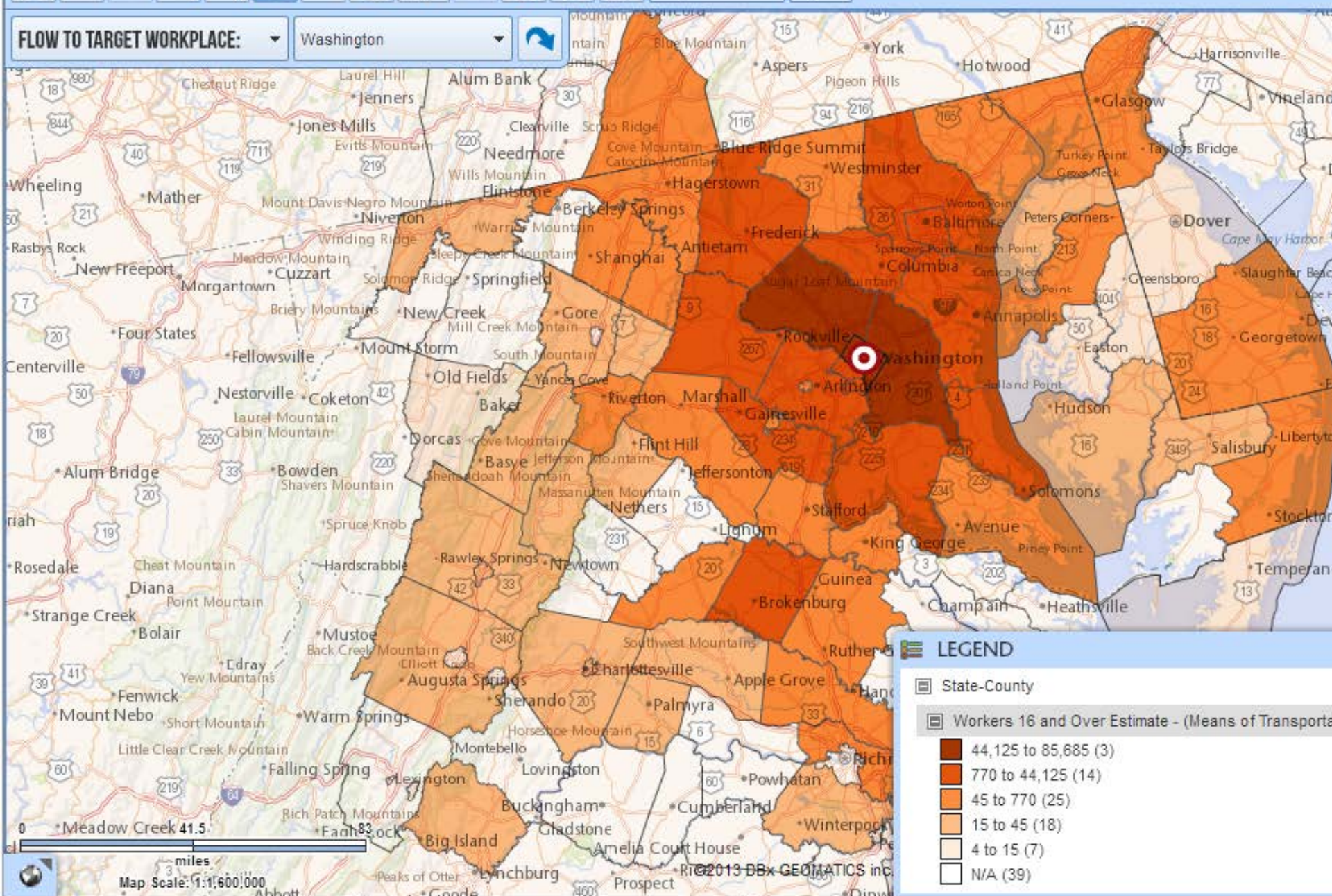
⬆ ⬇ Rows 1-100 of 106 ⬅ ➡ Columns 1-4 of 4

Measures - Workers 16 and Over percent of... WORKPLACE - Washington city, District of C...

<u>Means of Transportation 1...</u>	<u>Total, means of transportation</u>		<u>Public Transportation</u>	
<u>Output</u>	Estimate	Margin of Error	Estimate	Margin of Error
<u>RESIDENCE</u>	⬆ ⬇ [i2] [i3]	⬆ ⬇ [i2] [i3]	⬆ ⬇ [i2] [i3]	⬆ ⬇ [i2] [i3]
District of Columbia, Dis...	100.00		39.84	0.90
Prince George's County, M...	100.00		34.77	1.06
Fairfax County, Virginia	100.00		30.30	1.12
Montgomery County, Maryla...	100.00		41.19	1.16
Arlington County, Virgini...	100.00		51.34	2.03
Prince William County, Vi...	100.00		28.64	2.24
Charles County, Maryland	100.00		23.68	2.33
Alexandria city, Virginia	100.00		40.25	2.44
Anne Arundel County, Mary...	100.00		27.08	2.50
Loudoun County, Virginia	100.00		25.33	2.76
Stafford County, Virginia	100.00		15.68	3.16
Calvert County, Maryland	100.00		17.62	3.23
Howard County, Maryland	100.00		36.09	3.67
Baltimore County, Marylan...	100.00		34.37	4.59
Carroll County, Maryland	100.00		8.96	4.80
Baltimore city, Maryland	100.00		50.76	5.02



FLOW TO TARGET WORKPLACE: Washington



LEGEND

State-County

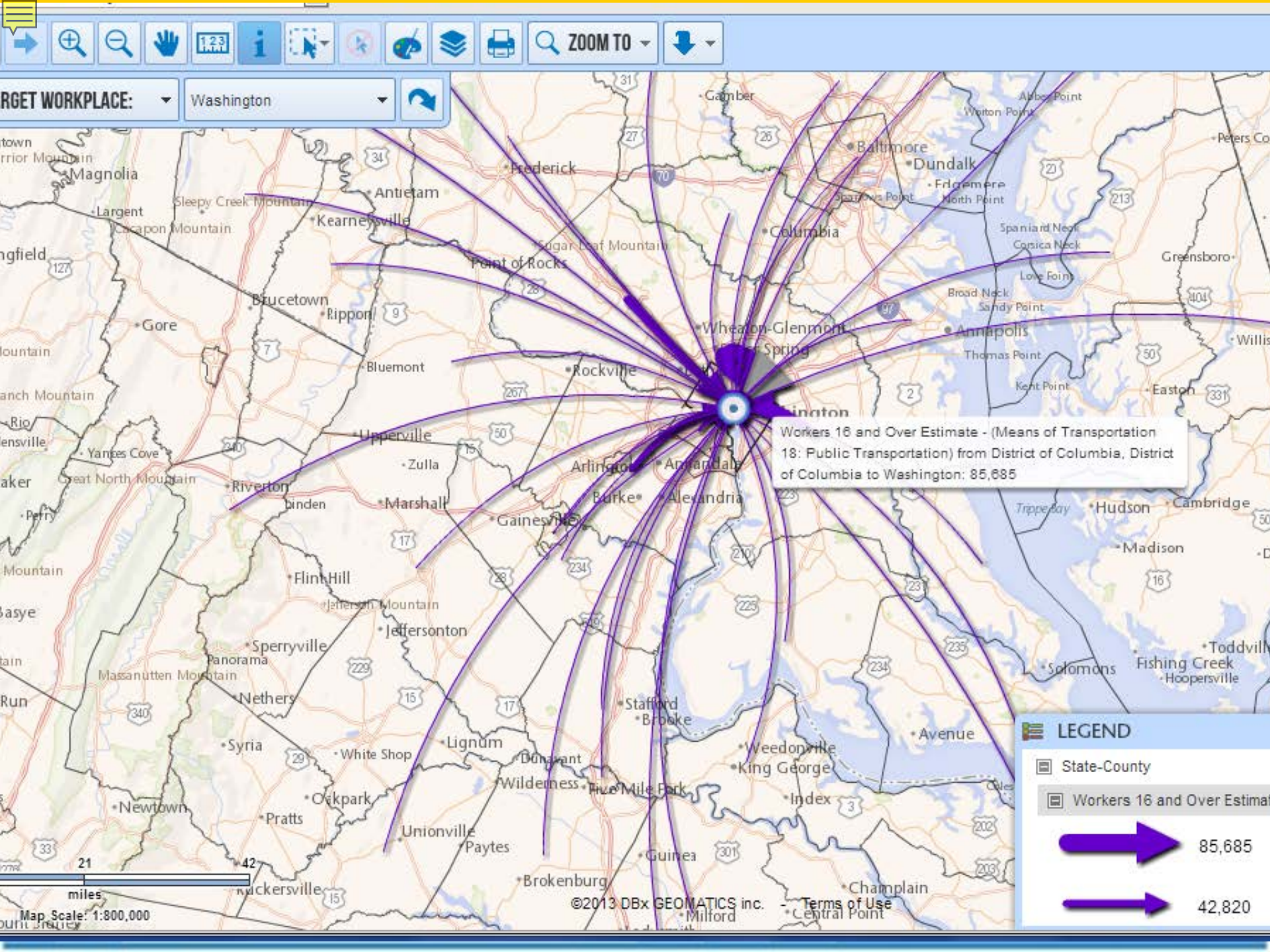
Workers 16 and Over Estimate - (Means of Transportation)

- 44,125 to 85,685 (3)
- 770 to 44,125 (14)
- 45 to 770 (25)
- 15 to 45 (18)
- 4 to 15 (7)
- N/A (39)

0 31 miles

Map Scale: 1:1,600,000

©2013 DBx-GEOMATICS inc.



TARGET WORKPLACE:

Washington

Workers 16 and Over Estimate - (Means of Transportation 18: Public Transportation) from District of Columbia, District of Columbia to Washington: 85,685

LEGEND

State-County

Workers 16 and Over Estimate

85,685

42,820

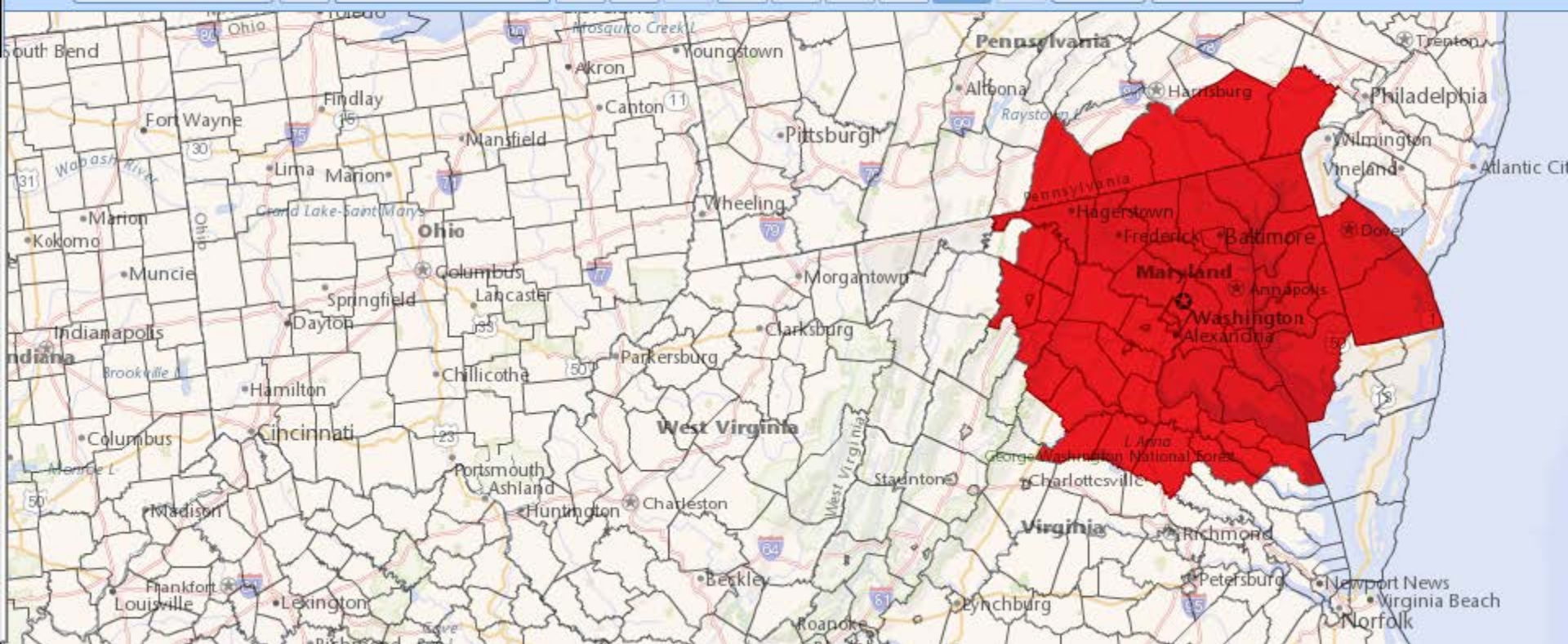


Data set: 2006-2010 (5-year) ▾ **Selected Geography:** ■ **RESIDENCE:** (new set) ▾ ■ **WORKPLACE:** All states ▾

RESIDENCE Save selection set...

[Bulk selection](#) [Selection list](#) [Selection map](#) [Totals](#) [Percentages](#) [Custom groups](#) [Custom calculations](#)

LEVEL: 👁 **STATE-COUNTY** ▾ 🗒 🔍 **AVAILABLE FLOWS** 📏 ⬅ ➡ 🔍 🔍 👤 📄 🔄 🗺 🔍 **ZOOM TO** ▾





Data set: 2006-2010 (5-year) Selected Geography: RESIDENCE: (new set) WORKPLACE: All states

RESIDENCE

Create custom group

LEVEL: State-County

Group name: Geographies 1-100 of 3,221 Jump to member containing:

United States

Alabama

- ☐ Autauga County, Alabama
- ☐ Baldwin County, Alabama
- ☐ Barbour County, Alabama
- ☐ Bibb County, Alabama
- ☐ Blount County, Alabama
- ☐ Bullock County, Alabama
- ☐ Butler County, Alabama
- ☐ Calhoun County, Alabama
- ☐ Chambers County, Alabama
- ☐ Cherokee County, Alabama
- ☐ Chilton County, Alabama
- ☐ Choctaw County, Alabama
- ☐ Clarke County, Alabama



Data set: 2006-2010 (5-year) ▼

Selected Geography: RESIDENCE: (new set) ▼

WORKPLACE: All states ▼

RESIDENCE

Create custom group

LEVEL: State-County

Group name: 70 Miles from DC

Geographies 1-55 of 55

Show all geographies



Selected members

United States

Delaware

- ☒ Kent County, Delaware
- ☒ Sussex County, Delaware

District of Columbia

- ☒ District of Columbia, District of Columbia

Maryland

- ☒ Anne Arundel County, Maryland
- ☒ Baltimore County, Maryland
- ☒ Calvert County, Maryland
- ☒ Caroline County, Maryland
- ☒ Carroll County, Maryland
- ☒ Cecil County, Maryland
- ☒ Charles County, Maryland
- ☒ Dorchester County, Maryland



Data set: 2006-2010 (5-year) ▾

Selected Geography: ■ RESIDENCE: (new set) ▾■ WORKPLACE: All states ▾View as: **Table** Chart Map **A102103 - Class of worker (9) (Workers 16 years and over) ⓘ**

Current date: 4/10/2015 1:05:45 PM (Eastern Daylight Time)

U.S. Census Bureau, American Community Survey 2006-2010 Five-year estimates. Special Tabulation: Census Transportation Planning

⬆ ⬇ Rows 1-9 of 9 ⬅ ➡ Columns 1-2 of 2

Measures - Workers 16 and Over Drag dimensions here so they do not show as a row or column in table

RESIDENCE	70 Miles from DC	
Output	Estimate	Margin of Error
Class of Worker 9	⬆ ⬇	⬆ ⬇
Total, all class of worke...	5,574,565	9,428
Private for-profit wage a...	3,363,255	10,413
Private not-for-profit wa...	522,280	5,166
Local government workers	395,920	4,311
State government workers	183,305	3,091
Federal government worker...	616,165	5,758
Self-employed workers in ...	290,480	3,717
Self-employed workers in ...	195,490	3,143
Unpaid family workers	7,643	697



Data set: 2006-2010 (5-year)

Selected Geography: RESIDENCE: (new set)

WORKPLACE: All states

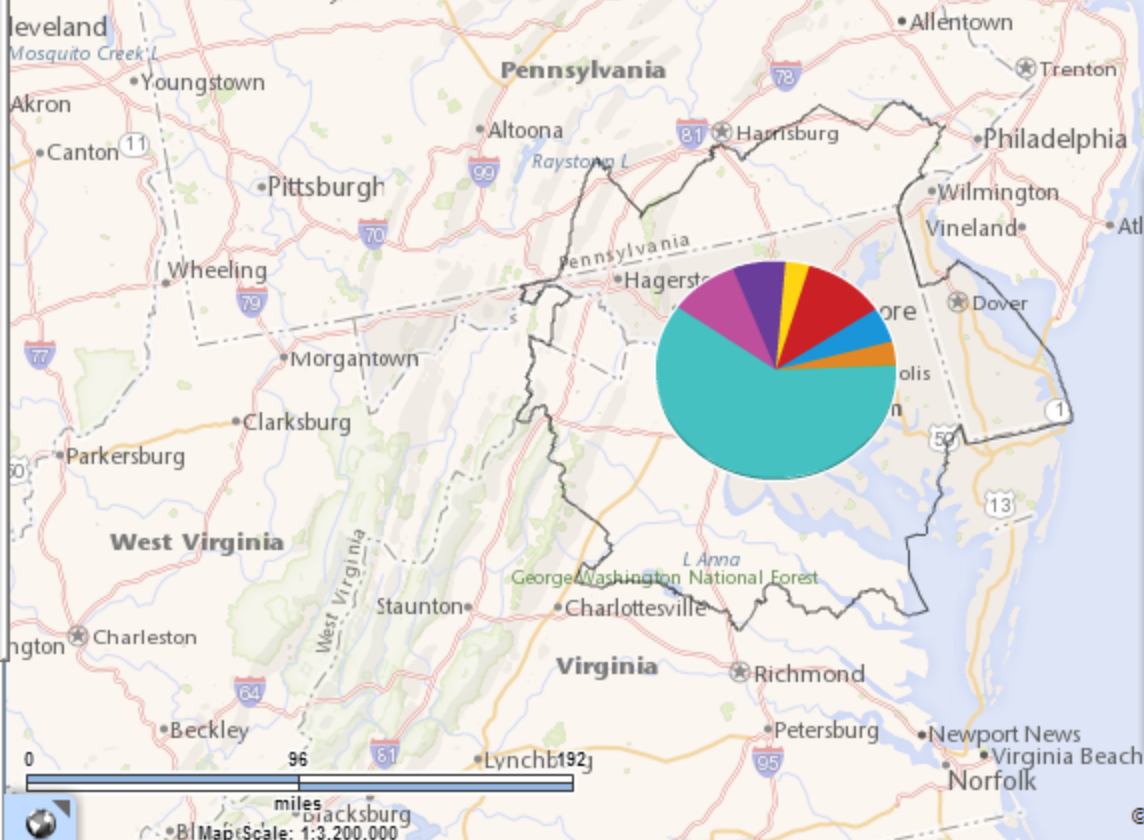
View as: Table Chart Map

A102103 - Class of worker (9) (Workers 16 years and over) ⓘ

Current date: 4/10/2015 1:06:18 PM (Eastern Daylight Time)

U.S. Census Bureau, American Community Survey 2006-2010 Five-year estimates. Special Tabulation: Census Transportation Planning

LEVEL: STATE-COUNTY



LEGEND

State-County

Pie Chart

- Workers 16 and Over Estimate - (Class of Worker 9: Unpaid family worker)
- Workers 16 and Over Estimate - (Class of Worker 9: Self-employed worker)
- Workers 16 and Over Estimate - (Class of Worker 9: Self-employed worker)
- Workers 16 and Over Estimate - (Class of Worker 9: Federal government employee)
- Workers 16 and Over Estimate - (Class of Worker 9: State government employee)
- Workers 16 and Over Estimate - (Class of Worker 9: Local government employee)
- Workers 16 and Over Estimate - (Class of Worker 9: Private not-for-profit)
- Workers 16 and Over Estimate - (Class of Worker 9: Private for-profit)

5,574,538

5,574,538

5,574,538

CTPP List Serve

Census Data for Transportation Planning

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

Encouraging Research and Innovation in Transportation Since 1920



TRB
.org



Site Navigation

[Home](#)

[Calendar](#)

[Notes & News](#)

[CTPP Data Products](#)

[Internet Mailing List](#)

[Newsletters](#)

[AASHTO Oversight](#)

[Links](#)

[TRB Publications](#)

[TAZUP / WORKUP](#)


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>

FHWA website



CTPP Census Transportation Planning Products

American Community Survey

Census Transportation Planning Products (CTPP)

- Data Products
- Training
- Articles
- CTPP Status Report
- FAQ
- Contacts
- Related Links
- Archives

Environmental Justice

Longitudinal Employment and Household Dynamics (LEHD)

Census Urbanized

FHWA → Planning → Census Issues → CTPP → Data Products

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



Census Transportation
Planning Products

CTPP

- CTPP Oversight Board Roster
- 5-Year-Data
- 5-Year-Info
- Commuting in America
- Transportation Profiles ▶
- 2005 TRB Conference Census Data
- Training Resources ▶
- E-Learning Modules
- Transportation Analysis Zones (TAZ) ▶
- CTPP Oversight Board ▶
- CTPP Board Subcommittee Business

Home

AASHTO > CTPP > Home



**WELCOME TO THE
CENSUS TRANSPORTATION PLANNING PRODUCTS PROGRAM
CTPP**

 Find us on
Facebook

Census data on demographic characteristics, home and work locations and journey to work travel flows are key inputs to a variety of state, regional and local transportation policy and planning efforts. They also support corridor and project studies, environmental analyses and emergency operations management.

In 1990, 2000, and again in 2006, AASHTO partnered with all of the states on pooled fund projects to support the development of special census products and data tabulations for transportation. These census transportation data packages have proved invaluable in understanding characteristics about where people live and work, their journey to work commuting patterns and the modes they use for getting to work.

- [5-year Info](#)
- [2006 - 2010 Transportation Profiles](#)
- [CTPP e-Learning Modules](#)
- [TAZ Delineation Webinar](#) from February 25, 2011
- [CTPP 3-Year Data Based On 2006 - 2008 ACS](#)
- [CTPP Mid Program Report](#)
- [Transportation Profiles](#)
- [TAZ FAQs and other TAZ Information](#)
- [2005 TRB Conference Census Data for Transportation Planning](#)
- [CTPP2000 Training Materials](#)
- [Census Transportation Planning Products \(CTPP\) from the American Community Survey - FHWA Transportation](#)

<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>