

# Enriched Census Data from IPUMS

## Microdata, Time Series, & GIS Data

Jonathan Schroeder

*Applying Census Data for Transportation Conference  
November 15, 2017*

# IPUMS

[ABOUT](#) | 
 [SUPPORT](#) | 
 [PROJECTS](#) | 
 [BIBLIOGRAPHY](#) | 
 [BLOG](#)

IPUMS provides census and survey data from around the world integrated across time and space. IPUMS integration and documentation makes it easy to study change, conduct comparative research, merge information across data types, and analyze individuals within family and community context. Data and services available free of charge.



U.S. Census and American Community Survey microdata from 1850 to the present.

[VISIT SITE](#)



Current Population Survey microdata including basic monthly surveys and supplements from 1962 to the present.

[VISIT SITE](#)



Census microdata covering 82 countries from 1960 to the present. [IPUMS NAPP](#) offers microdata from the 19th and early 20th centuries.

[VISIT SITE](#)



Demographic and Health Surveys integrated for analysis across time and space from 1980 to the present.

[VISIT SITE](#)



Tabular U.S. Census data and GIS boundary files from 1790 to the present.

[VISIT SITE](#)



Integrated data on population and the environment from 1960 to the present.

[VISIT SITE](#)



Historical and contemporary time use data from 1965 to the present.



Health survey data from the National Health Interview Survey from the 1960s to the present.



Survey data on the science and engineering workforce in the U.S. from 1993 to the present.

## RESEARCH AWARDS

Submissions for IPUMS Research Award are now closed.

[BROWSE PREVIOUS AWARD WINNERS](#)

## SUPPORT IPUMS

Your financial support helps us bring research data to you.

[DONATE TODAY](#)

## CALENDAR

APRIL 27, 2017

Population Association of America

Hilton Chicago

JUNE 25-27, 2017

Academy Health

Hyatt Regency, New Orleans, LA

JULY 16-21, 2017

61st ISI World Statistics Congress (WSC)



## DATA

[BROWSE AND SELECT DATA](#)  
[DOWNLOAD OR REVISE EXTRACTS](#)  
[ANALYZE DATA ONLINE](#)  
[IPUMS REGISTRATION](#)

## DOCUMENTATION

[VARIABLES](#)  
[SAMPLES](#)  
[USER'S GUIDE](#)  
[GEOGRAPHIC TOOLS](#)  
[FAQ](#)

## RESOURCES

[ENUMERATION FORMS](#)  
[PUBLISHED CENSUS VOLUMES](#)  
[ERRATA AND REVISIONS](#)

## RESEARCH

[CITATION AND USE](#)  
[BIBLIOGRAPHY](#)  
[RELATED SITES](#)

## CONTACT US

[HELP](#)  
[USER FORUM](#)  
[IPUMS STAFF](#)

## U.S. CENSUS DATA FOR SOCIAL, ECONOMIC, AND HEALTH RESEARCH

IPUMS USA collects, preserves and harmonizes U.S. census microdata and provides easy access to this data with enhanced documentation. Data includes decennial censuses from 1790 to 2010 and American Community Surveys (ACS) from 2000 to the present.

Use it for GOOD -- never for EVIL

— [CREATE YOUR CUSTOM DATA SET](#) —

[GET DATA](#)

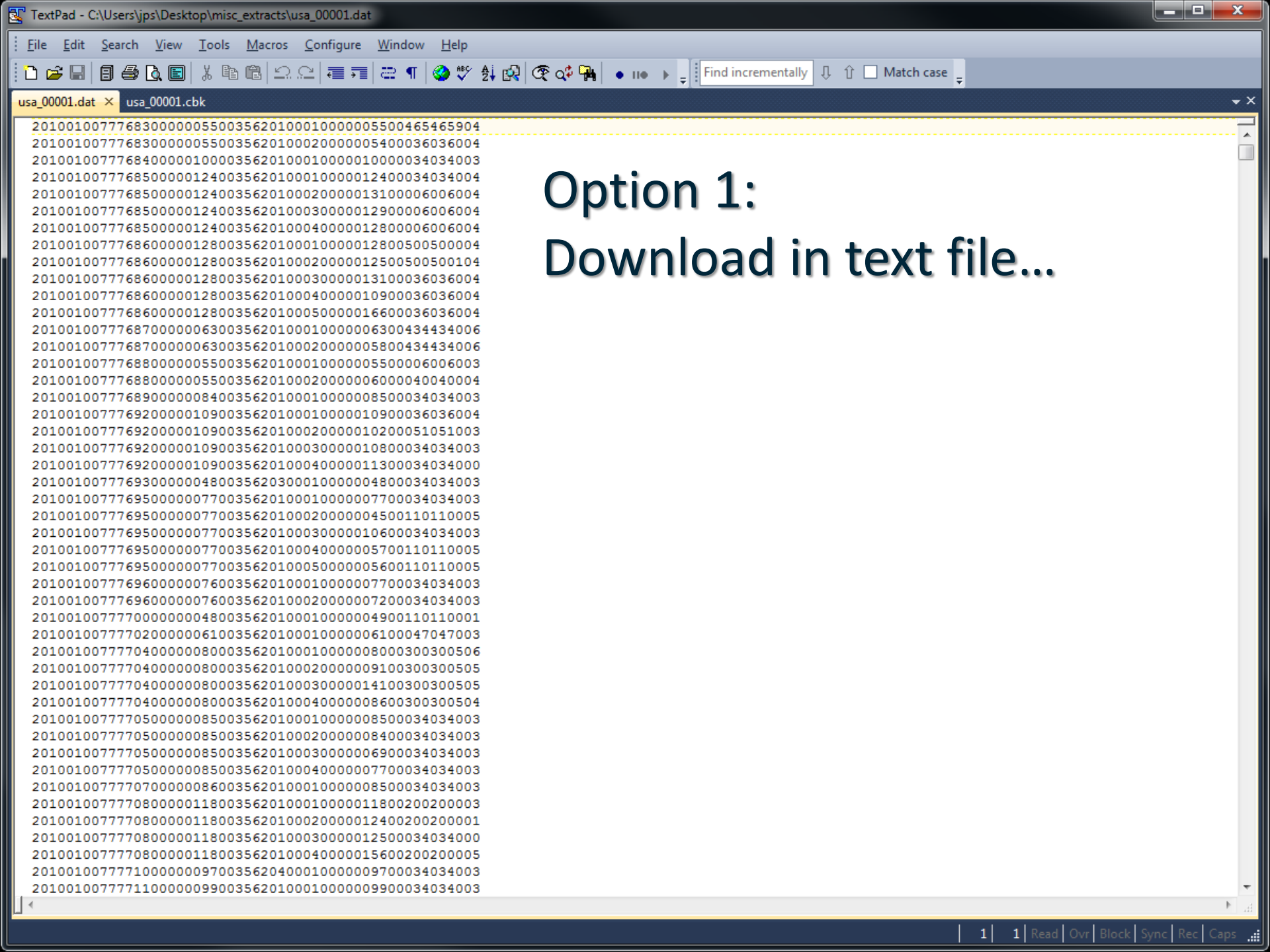
— [USE OUR ONLINE TOOL FOR ANALYSIS](#) —

[ANALYZE DATA ONLINE](#)

### WHAT IS IPUMS?

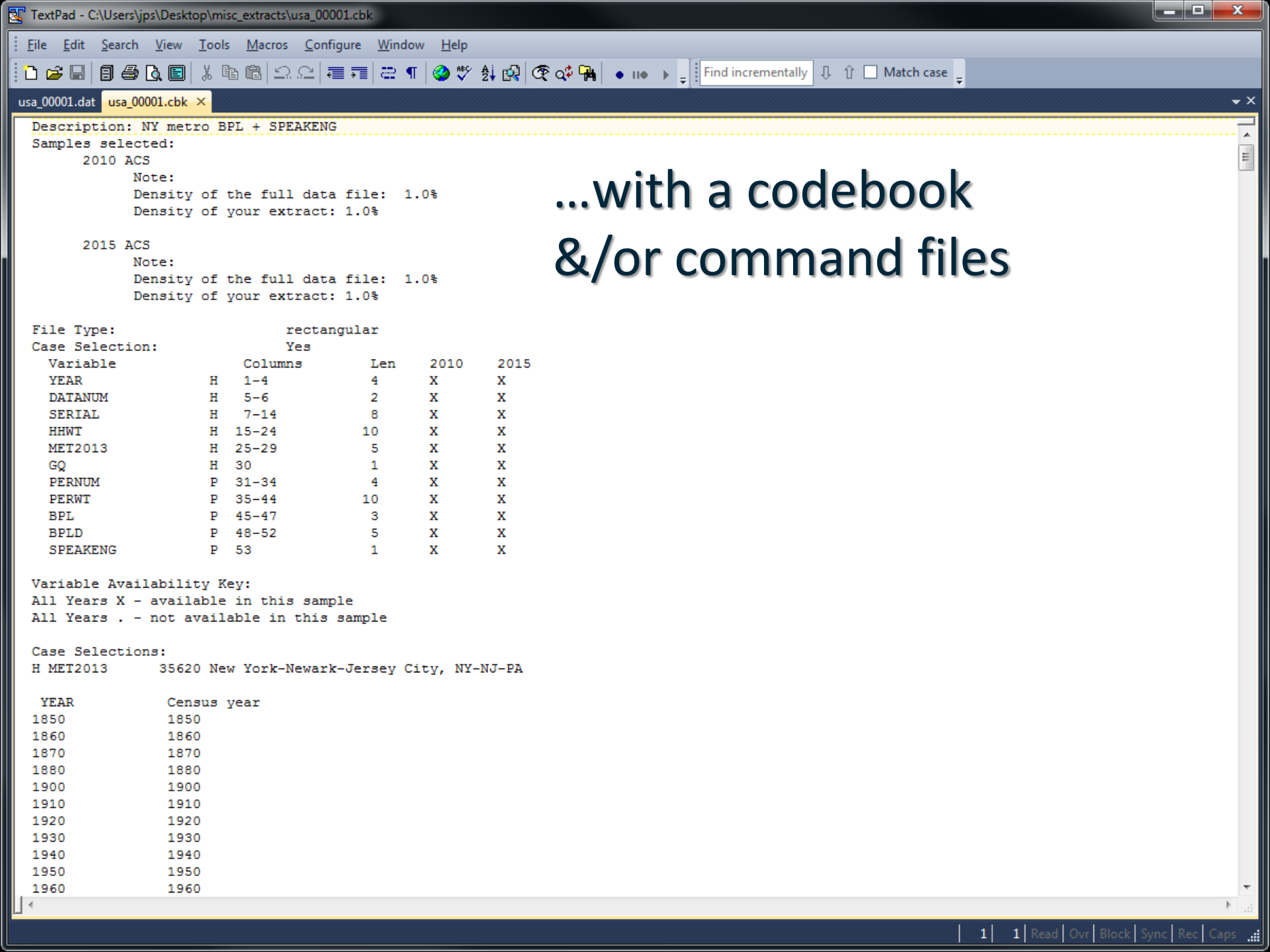
IPUMS provides census and survey data from around the world integrated across time and space. IPUMS integration and documentation makes it easy to study change, conduct comparative research, merge information across data types, and analyze individuals within family and community context. Data and services available free of charge.

### IPUMS-USA DATA UPDATES



Option 1:  
Download in text file...

```
20100100777683000000550035620100010000005500465465904
20100100777683000000550035620100020000005400036036004
20100100777684000001000035620100010000010000034034003
20100100777685000001240035620100010000012400034034004
20100100777685000001240035620100020000013100006006004
20100100777685000001240035620100030000012900006006004
20100100777685000001240035620100040000012800006006004
20100100777686000001280035620100010000012800500500004
20100100777686000001280035620100020000012500500500104
20100100777686000001280035620100030000013100036036004
20100100777686000001280035620100040000010900036036004
20100100777686000001280035620100050000016600036036004
20100100777687000000630035620100010000006300434434006
20100100777687000000630035620100020000005800434434006
20100100777688000000550035620100010000005500006006003
20100100777688000000550035620100020000006000040040004
20100100777689000000840035620100010000008500034034003
20100100777692000001090035620100010000010900036036004
20100100777692000001090035620100020000010200051051003
20100100777692000001090035620100030000010800034034003
20100100777692000001090035620100040000011300034034000
20100100777693000000480035620300010000004800034034003
20100100777695000000770035620100010000007700034034003
20100100777695000000770035620100020000004500110110005
20100100777695000000770035620100030000010600034034003
20100100777695000000770035620100040000005700110110005
20100100777695000000770035620100050000005600110110005
20100100777696000000760035620100010000007700034034003
20100100777696000000760035620100020000007200034034003
20100100777700000000480035620100010000004900110110001
20100100777702000000610035620100010000006100047047003
20100100777704000000800035620100010000008000300300506
20100100777704000000800035620100020000009100300300505
20100100777704000000800035620100030000014100300300505
20100100777704000000800035620100040000008600300300504
20100100777705000000850035620100010000008500034034003
20100100777705000000850035620100020000008400034034003
20100100777705000000850035620100030000006900034034003
20100100777705000000850035620100040000007700034034003
20100100777707000000860035620100010000008500034034003
20100100777708000001180035620100010000011800200200003
20100100777708000001180035620100020000012400200200001
20100100777708000001180035620100030000012500034034000
20100100777708000001180035620100040000015600200200005
20100100777710000000970035620400010000009700034034003
20100100777711000000990035620100010000009900034034003
```



...with a codebook  
&/or command files

```
Description: NY metro BPL + SPEAKENG
Samples selected:
  2010 ACS
  Note:
  Density of the full data file: 1.0%
  Density of your extract: 1.0%

  2015 ACS
  Note:
  Density of the full data file: 1.0%
  Density of your extract: 1.0%

File Type:                rectangular
Case Selection:          Yes
Variable      Columns      Len      2010      2015
YEAR          H 1-4          4        X        X
DATANUM       H 5-6          2        X        X
SERIAL        H 7-14         8        X        X
HHWT          H 15-24        10       X        X
MET2013       H 25-29        5        X        X
GQ            H 30           1        X        X
PERNUM        P 31-34        4        X        X
PERWT         P 35-44        10       X        X
BPL           P 45-47        3        X        X
BPLD          P 48-52        5        X        X
SPEAKENG      P 53           1        X        X

Variable Availability Key:
All Years X - available in this sample
All Years . - not available in this sample

Case Selections:
H MET2013      35620 New York-Newark-Jersey City, NY-NJ-PA

YEAR          Census year
1850          1850
1860          1860
1870          1870
1880          1880
1900          1900
1910          1910
1920          1920
1930          1930
1940          1940
1950          1950
1960          1960
```



# Option 2: online analysis tool

## Variable Selection: [Help](#)

Selected: hispan

Copy to:

Mode:  Append  Replace

- 2011-2015, ACS 5-year sample
  - Household - Technical
  - Household - Geographic
  - Household - Group Quarters
  - Household - Economic Characteristic
  - Household - Dwelling Characteristic
  - Household - Appliances, Mechanical, Other
  - Household - Household Composition
  - Household - Housing Data Quality Flags
  - Person - Technical
  - Person - Family Interrelationship
  - Person - Demographic
  - Person - Race, Ethnicity, and Nativity
    - race - Race
    - raced - Race
    - hispan - Hispanic origin
    - hispanid - Hispanic origin
    - bpl - Birthplace
    - bpld - Birthplace
    - ancestr1 - Ancestry, first response
    - ancestr1d - Ancestry, first response
    - ancestr2 - Ancestry, second response
    - ancestr2d - Ancestry, second response
    - citizen - Citizenship status
    - ymatur - Year naturalized
    - yrimmig - Year of immigration
    - yrusa1 - Years in the United States
    - yrusa2 - Years in the United States, intervalled
    - language - Language spoken

REQUIRED Variable names to specify

Row:

OPTIONAL Variable names to specify

Column:

Control:

Selection Filter(s):  Example: age(18-50)

Weight:

### TABLE OPTIONS

- Percentaging:**
- Column  Row  Total
- Confidence intervals Level:
- Standard error of each percent
- N of cases to display:**
- Unweighted  Weighted
- Summary statistics
- Question text  Suppress table
- Color coding  Show Z-statistic
- Include missing-data values

### CHART OPTIONS

- Type of chart:**
- Bar chart options:**
- Orientation:  Vertical  Horizontal
- Visual Effects:  2-D  3-D
- Show percents:**  Yes
- Palette:**  Color  Grayscale
- Size** - width:  height:

Title:

### Change number of decimal places to display

- For percents and confidence intervals:
- For std. errors (relative to percents):
- For DEFT:
- For weighted N's:
- For summary statistics and Z-statistic:

**SDA 3.5: Tables**

2011-2015, ACS 5-year sample

May 04, 2017 (Thu 11:29 AM CDT)

Variables					
Role	Name	Label	Range	MD	Dataset
Row	<b>met2013</b>	Metropolitan area, 2013 OMB delineations	0-49740		1
Column	<b>hispan</b>	Hispanic origin	0-4		1
Weight	<b>hhwt</b>	Household weight	1.00-502.00		1

**Frequency Distribution**

Cells contain: -Row percent -Weighted N		hispan					
		0 Not Hispanic	1 Mexican	2 Puerto Rican	3 Cuban	4 Other	<b>ROW TOTAL</b>
0: Not in identifiable area		<b>92.3</b> 61,086,339.0	<b>5.9</b> 3,895,918.0	<b>.5</b> 336,127.0	<b>.1</b> 85,463.0	<b>1.2</b> 808,154.0	<b>100.0</b> 66,212,001.0
10420: Akron, OH		<b>98.2</b> 665,972.0	<b>.9</b> 5,993.0	<b>.4</b> 2,890.0	<b>.0</b> 250.0	<b>.4</b> 2,929.0	<b>100.0</b> 678,034.0
10580: Albany-Schenectady-Troy, NY		<b>95.5</b> 754,566.0	<b>.6</b> 4,896.0	<b>2.4</b> 18,624.0	<b>.2</b> 1,473.0	<b>1.4</b> 10,890.0	<b>100.0</b> 790,449.0
10740: Albuquerque, NM		<b>52.3</b> 434,242.0	<b>27.5</b> 228,719.0	<b>.5</b> 4,301.0	<b>.4</b> 2,959.0	<b>19.3</b> 160,720.0	<b>100.0</b> 830,941.0
10780: Alexandria, LA		<b>98.0</b> 22,550.0	<b>1.8</b> 416.0	<b>.0</b> .0	<b>.1</b> 12.0	<b>.1</b> 33.0	<b>100.0</b> 23,011.0
10900: Allentown-Bethlehem-Easton, PA-NJ		<b>85.3</b> 691,767.0	<b>1.0</b> 8,466.0	<b>8.5</b> 68,519.0	<b>.2</b> 1,976.0	<b>4.9</b> 40,035.0	<b>100.0</b> 810,763.0
11020: Altoona, PA		<b>98.7</b> 25,853.0	<b>.0</b> 11.0	<b>1.0</b> 251.0	<b>.0</b> .0	<b>.3</b> 89.0	<b>100.0</b> 26,204.0
11100: Amarillo, TX		<b>72.3</b>	<b>25.4</b>	<b>.2</b>	<b>.1</b>	<b>1.9</b>	<b>100.0</b>

# Microdata in IPUMS USA

- U.S. decennial censuses (1850–2010)
- American Community Survey (2000–2016 *ff.*)
- Samples from Puerto Rico (1910–2016 *ff.*)
- Complete-count datasets:
  - 1790–1840 households
  - 1850, 1880, 1910–1940 individuals & households
  - Still to come: 1860, 1870, 1900



# ACS microdata samples

- 1-year 1% samples since 2005
  - 2000–2004: smaller, limited 1-year samples
- 5-year 5% samples since 2005–2009
- Suppression for confidentiality
  - Names, addresses
  - Income top coding
  - Geographic limitations

**PLACE OF WORK AND TRAVEL TIME VARIABLES -- PERSON [TOP]**

Add to cart	Variable	Variable Label	Type	Codes	2016 acs	2005 acs	2001 acs	2000 5pct	1990 5pct	1980 5pct	1970 met2
	PWSTATE1	Place of work: relative to state of residence	P	<a href="#">codes</a>	.	.	.	.	.	.	X
	PWSTATE2	Place of work: state	P	<a href="#">codes</a>	X	X	X	X	X	X	.
	PWMETRO	Place of work: metropolitan area	P	<a href="#">codes</a>	.	X	.	X	X	X	.
	PWCITY	Place of work: city	P	<a href="#">codes</a>	.	X	.	X	X	X	.
	PWTYPE	Place of work: metropolitan status	P	<a href="#">codes</a>	.	X	.	X		X	X
	PWTYPE00	Place of work: metropolitan status, 2000	P	<a href="#">codes</a>	.	.	.	X	.	.	.
	PWCNTYGP	Place of work: county group	P	<a href="#">codes</a>	.	.	.	.	.	X	.
	PWPUMA	Place of work: PUMA	P	<a href="#">codes</a>	.	.	.	.	X	.	.
	PWPUMA00	Place of work: PUMA, 2000 onward	P	<a href="#">codes</a>	X	X	.	X	.	.	.
	PWPUMAS	Super-PUMA of work	P	<a href="#">codes</a>	.	X	.	X	.	.	.
	PWMET98	Place of work: metropolitan status, 1980	P	<a href="#">codes</a>	.	.	.	.	.	X	.
	TRANWORK	Means of transportation to work	P	<a href="#">codes</a>	X	X	X	X	X	X	X
	CARPOOL	Carpooling	P	<a href="#">codes</a>	X	X	X	X	X	X	.
	RIDERS	Vehicle occupancy	P	<a href="#">codes</a>	X	X	X	X	X	X	.
	TRANTIME	Travel time to work	P	<a href="#">codes</a>	X	X	X	X	X	X	.
	DEPARTS	Time of departure for work	P	<a href="#">codes</a>	X	X	X	X	X	.	.
	ARRIVES	Time of arrival at work	P	<a href="#">codes</a>	X	X	.	.	.	.	.
	PWURBTYP	Place of work: urbanized area	P	<a href="#">codes</a>	.	.	.	.	.		.
	PWSIZE	Place of work: place size	P	<a href="#">codes</a>	.	.	.	.	.		.
	PWMET98E	Place of work: detailed urban/rural categories	P	<a href="#">codes</a>	.	.	.	.	.		.
Add to cart	Variable	Variable Label	Type	Codes	2016 acs	2005 acs	2001 acs	2000 5pct	1990 5pct	1980 5pct	1970 met2
	PWLMA	Place of work: labor market area	P	<a href="#">codes</a>	.	.	.	.			.
	PWCZ	Place of work: LMA commuting zone	P	<a href="#">codes</a>	.	.	.	.	.		.



**SELECT HARMONIZED VARIABLES** **CHANGE SAMPLES**

HARMONIZED VARIABLES [HELP](#)  
 SOURCE VARIABLES [DISPLAY C](#)

HOUSEHOLD ▾ PERSON ▾ A-Z ▾ SEARCH

AN "X" INDICATES THE VARIABLE IS AVAILABLE IN THAT DATASET.

**PLACE OF WORK** - PERSON [TOP]

Add to cart		Variable Label	Type	Codes	2016 acs	2005 acs	2001 acs	2000 5pct	1990 5pct	1980 5pct	1970 met2
<input type="checkbox"/>	PWS	Relative to state of residence	P	<a href="#">codes</a>	.	.	.	.	.	.	X
<input type="checkbox"/>	PWS	...	P	<a href="#">codes</a>	X	X	X	X	X	X	.
<input type="checkbox"/>	PWM	Metropolitan area	P	<a href="#">codes</a>	.	X	.	X	X	X	.
<input type="checkbox"/>	PWC	...	P	<a href="#">codes</a>	.	X	.	X	X	X	.
<input type="checkbox"/>	PWT	Metropolitan status	P	<a href="#">codes</a>	.	X	.	X	<span style="color: blue;">i</span>	X	X
<input type="checkbox"/>	PWT	Metropolitan status, 2000	P	<a href="#">codes</a>	.	.	.	X	.	.	.
<input type="checkbox"/>	PWC	County group	P	<a href="#">codes</a>	.	.	.	.	.	X	.
<input type="checkbox"/>	PWP	Metropolitan area	P	<a href="#">codes</a>	.	.	.	.	X	.	.
<input type="checkbox"/>	PWP	Metropolitan area, 2000 onward	P	<a href="#">codes</a>	X	X	.	X	.	.	.
<input type="checkbox"/>	PWP	Metropolitan area	P	<a href="#">codes</a>	.	X	.	X	.	.	.
<input type="checkbox"/>	PWM	Metropolitan status, 1980	P	<a href="#">codes</a>	.	.	.	.	.	X	.
<input type="checkbox"/>	TRA	Transition to work	P	<a href="#">codes</a>	X	X	X	X	X	X	X
<input type="checkbox"/>	CAR	...	P	<a href="#">codes</a>	X	X	X	X	X	X	.
<input type="checkbox"/>	RIDE	...	P	<a href="#">codes</a>	X	X	X	X	X	X	.
<input type="checkbox"/>	TRA	...	P	<a href="#">codes</a>	X	X	X	X	X	X	.
<input type="checkbox"/>	DEP	... for work	P	<a href="#">codes</a>	X	X	X	X	X	.	.
<input type="checkbox"/>	ARR	... work	P	<a href="#">codes</a>	X	X	.	.	.	.	.
<span style="color: blue;">i</span>	PWURBTYP	Place of work: urbanized area	P	<a href="#">codes</a>	.	.	.	.	.	<span style="color: blue;">i</span>	.
<span style="color: blue;">i</span>	PWSIZE	Place of work: place size	P	<a href="#">codes</a>	.	.	.	.	.	<span style="color: blue;">i</span>	.
<span style="color: blue;">i</span>	PWMET98E	Place of work: detailed urban/rural categories	P	<a href="#">codes</a>	.	.	.	.	.	<span style="color: blue;">i</span>	.

## SELECT HARMONIZED VARIABLES

CHANGE SAMPLES

HARMONIZED VARIABLES [HELP](#)  
 SOURCE VARIABLES [DISPLAY C](#)

- HOUSEHOLD ▾
- PERSON ▾
- A-Z ▾
- SEARCH
- TECHNICAL
- GEOGRAPHIC
- GROUP QUARTERS
- ECONOMIC CHARACTERISTIC
- DWELLING CHARACTERISTIC
- APPLIANCES, MECHANICAL, OTHER
- HOUSEHOLD COMPOSITION
- HISTORICAL OVERSAMPLE
- HISTORICAL TECHNICAL
- 1970 NEIGHBORHOOD

NO DATA IS AVAILABLE IN THAT DATASET.

### TIME VARIABLES -- PERSON [\[TOP\]](#)

Variable Label	Type	Codes	2016 acs	2005 acs	2001 acs	2000 5pct	1990 5pct	1980 5pct	1970 met2
Place of work: relative to state of residence	P	<a href="#">codes</a>	.	.	.	.	.	.	X
Place of work: state	P	<a href="#">codes</a>	X	X	X	X	X	X	.
Place of work: metropolitan area	P	<a href="#">codes</a>	.	X	.	X	X	X	.
Place of work: city	P	<a href="#">codes</a>	.	X	.	X	X	X	.
Place of work: metropolitan status	P	<a href="#">codes</a>	.	X	.	X	<a href="#">i</a>	X	X
Place of work: metropolitan status, 2000	P	<a href="#">codes</a>	.	.	.	X	.	.	.
Place of work: county group	P	<a href="#">codes</a>	.	.	.	.	.	X	.
Place of work: PUMA	P	<a href="#">codes</a>	.	.	.	.	X	.	.
Place of work: PUMA, 2000 onward	P	<a href="#">codes</a>	X	X	.	X	.	.	.
Super-PUMA of work	P	<a href="#">codes</a>	.	X	.	X	.	.	.
Place of work: metropolitan status, 1980	P	<a href="#">codes</a>	.	.	.	.	.	X	.
Means of transportation to work	P	<a href="#">codes</a>	X	X	X	X	X	X	X
Carpooling	P	<a href="#">codes</a>	X	X	X	X	X	X	.
Vehicle occupancy	P	<a href="#">codes</a>	X	X	X	X	X	X	.
Travel time to work	P	<a href="#">codes</a>	X	X	X	X	X	X	.
Time of departure for work	P	<a href="#">codes</a>	X	X	X	X	X	.	.
Time of arrival at work	P	<a href="#">codes</a>	X	X	.	.	.	.	.
Place of work: urbanized area	P	<a href="#">codes</a>	.	.	.	.	.	<a href="#">i</a>	.
Place of work: place size	P	<a href="#">codes</a>	.	.	.	.	.	<a href="#">i</a>	.
Place of work: detailed urban/rural categories	P	<a href="#">codes</a>	.	.	.	.	.	<a href="#">i</a>	.

- [+](#) [PWPUMA00](#) Place of work: PUMA, 2000 onward
- [+](#) [PWPUMAS](#) Super-PUMA of work
- [+](#) [PWMET98](#) Place of work: metropolitan status, 1980
- [+](#) [TRANWORK](#) Means of transportation to work
- [+](#) [CARPOOL](#) Carpooling
- [+](#) [RIDERS](#) Vehicle occupancy
- [+](#) [TRANTIME](#) Travel time to work
- [+](#) [DEPARTS](#) Time of departure for work
- [+](#) [ARRIVES](#) Time of arrival at work
- [i](#) [PWURBTYP](#) Place of work: urbanized area
- [i](#) [PWSIZE](#) Place of work: place size
- [i](#) [PWMET98E](#) Place of work: detailed urban/rural categories

# Geography in PUMS

- Regions, divisions, states & ...
- ***Public Use Microdata Areas (PUMAs):***
  - At least 100,000 residents
    - 2010 average: 131,000, max: 269,000
  - In use since 1970\*
    - \*Called “county groups” in 1970 & 1980
    - \*1970 units have > 250,000 residents
  - IPUMS has also defined 1960 PUMAs & “mini-PUMAs” (> 50,000 residents)



# Problems with PUMA

1. Limited spatial precision
2. Not consistent with counties, cities, metro areas, *etc.*
3. Boundaries are revised after each census
  - Change in ACS PUMAs between 2011 & 2012...
    - Inconsistent *within* 5-year samples

# IPUMS-USA geographic resources

- Supplementary variables, based on PUMAs
  - Counties, cities, metro areas, metro status
  - “ConsPUMAs”: Sets of PUMAs with *consistent* extents across time
- GIS shapefiles & online maps
  - PUMAs
  - Migration & **Place of Work** PUMAs
  - ConsPUMAs
- Detailed documentation & composition files



## DATA

[BROWSE AND SELECT DATA](#)  
[DOWNLOAD OR REVISE EXTRACTS](#)  
[ANALYZE DATA ONLINE](#)  
[IPUMS REGISTRATION](#)

## DOCUMENTATION

[VARIABLES](#)  
[SAMPLES](#)  
[USER'S GUIDE](#)  
[GEOGRAPHIC TOOLS](#)  
[FAQ](#)

## RESOURCES

[ENUMERATION FORMS](#)  
[PUBLISHED CENSUS VOLUMES](#)  
[ERRATA AND REVISIONS](#)

## RESEARCH

[CITATION AND USE](#)  
[BIBLIOGRAPHY](#)  
[RELATED SITES](#)

## CONTACT US

[HELP](#)  
[USER FORUM](#)  
[IPUMS STAFF](#)

## U.S. CENSUS DATA FOR SOCIAL, ECONOMIC, AND HEALTH RESEARCH

IPUMS USA collects, preserves and harmonizes U.S. census microdata and provides easy access to this data with enhanced documentation. Data includes decennial censuses from 1790 to 2010 and American Community Surveys (ACS) from 2000 to the present.

Use it for GOOD -- never for EVIL

— [CREATE YOUR CUSTOM DATA SET](#) —

[GET DATA](#)

— [USE OUR ONLINE TOOL FOR ANALYSIS](#) —

[ANALYZE DATA ONLINE](#)

### WHAT IS IPUMS?

IPUMS provides census and survey data from around the world integrated across time and space. IPUMS integration and documentation makes it easy to study change, conduct comparative research, merge information across data types, and analyze individuals within family and community context. Data and services available free of charge.

### IPUMS-USA DATA UPDATES

## DATA

BROWSE AND SELECT DATA  
DOWNLOAD OR REVISE EXTRACTS  
ANALYZE DATA ONLINE  
IPUMS REGISTRATION

## DOCUMENTATION

VARIABLES  
SAMPLES  
USER'S GUIDE

## GEOGRAPHIC TOOLS

FAQ

## RESOURCES

ENUMERATION FORMS  
PUBLISHED CENSUS VOLUMES  
ERRATA AND REVISIONS

## RESEARCH

CITATION AND USE  
BIBLIOGRAPHY  
RELATED SITES

## CONTACT US

HELP  
USER FORUM  
IPUMS STAFF  
HOW TO HELP  
DONATE TO IPUMS

# GEOGRAPHIC TOOLS

*Boundary files, maps, component lists, and relationship files for geographic areas identified in IPUMS-USA samples*

## GIS BOUNDARY FILES

We provide GIS-compatible boundary files for the most commonly used geographic units.

- [All IPUMS-USA boundary files](#)

## RESOURCES FOR PUBLIC USE MICRODATA AREAS (PUMAS) & COUNTY GROUPS

2010 Census and 2012-onward ACS/PRCS

- [2010 PUMAs](#)
- [2010 Migration PUMAs](#)
- [2010 Place of Work PUMAs](#)

2000 Census and 2005-2011 ACS/PRCS

- [2000 PUMAs and Super-PUMAs](#)
- [2000 Migration PUMAs and Super-PUMAs](#)
- [2000 Place of Work PUMAs and Super-PUMAs](#)

1960-1990 Samples

- [1990 PUMAs](#) - 1% and 5% sample versions
- [1980 County Groups](#) - 1% and 5% sample versions
- [1970 County Groups](#) - Metro samples
- [1960 PUMAs and mini-PUMAs](#) - 5% sample

Consistent PUMAs (ConsPUMAs)

- [1980-1990-2000 ConsPUMAs](#) - 1980-2011 samples
- [2010 ConsPUMAs](#) - 2000-onward samples

## RESOURCES FOR METROPOLITAN AREAS

- 1960-2011: [Incompletely identified metropolitan areas](#)
- 1900-2011: [Components of metropolitan areas that existed in 2000](#)
- 1850-2011: [Components of metropolitan areas that existed in 1900](#)

## RESOURCES FOR OTHER AREAS





## DATA

BROWSE AND SELECT DATA  
 DOWNLOAD OR REVISE EXTRACTS  
 ANALYZE DATA ONLINE  
 IPUMS REGISTRATION

## DOCUMENTATION

VARIABLES  
 SAMPLES  
 USER'S GUIDE  
 GEOGRAPHIC TOOLS  
 FAQ

## RESOURCES

ENUMERATION FORMS  
 PUBLISHED CENSUS VOLUMES  
 ERRATA AND REVISIONS

## RESEARCH

CITATION AND USE  
 BIBLIOGRAPHY  
 RELATED SITES

## CONTACT US

HELP  
 USER FORUM  
 IPUMS STAFF  
 HOW TO HELP  
 DONATE TO IPUMS

## 2010 PUMA DEFINITIONS

[Back to Geographic Tools](#)

The 2010 version of Public Use Microdata Areas ([PUMAs](#)) is the lowest level of geography identified in 2010 census samples and in samples from the American Community Survey (ACS) and Puerto Rico Community Survey (PRCS) for 2012 and later years.

The Census Bureau redraws PUMA boundaries every 10 years based on population information gathered from the most recent decennial census. ACS/PRCS samples incorporate the new PUMAs within a few years of the Decennial Census. 2012 was the first ACS/PRCS sample to use the 2010 PUMAs. Detailed maps of each individual 2010 PUMA can be downloaded from the [Census Bureau's Reference Map](#) page.

In [Multi-Year](#) ACS/PRCS files, the version of PUMAs identified depends on the year of interview (see [MULTYEAR](#)). For example, in the 2010-2012 3-year ACS sample, 2000 PUMA codes are reported for 2010 and 2011 respondents, and 2010 PUMA codes are reported for 2012 respondents.

Relationships between 2000 and 2010 PUMAs:

- [2000-2010 PUMA Crosswalk](#) (Excel spreadsheet)
  - Includes 2000 population, 2010 population, land area, and [0010 ConsPUMA](#) codes for each area of intersection

The map below shows both the 2010 (in blue) and 2000 (in yellow) PUMA definitions. Clicking on the map will highlight and identify the county, 2000 PUMA, and 2010 PUMA for the selected location. You can select which boundaries you want to view using the Layers menu at the top of the map. There is also a [larger map](#) containing the same information.





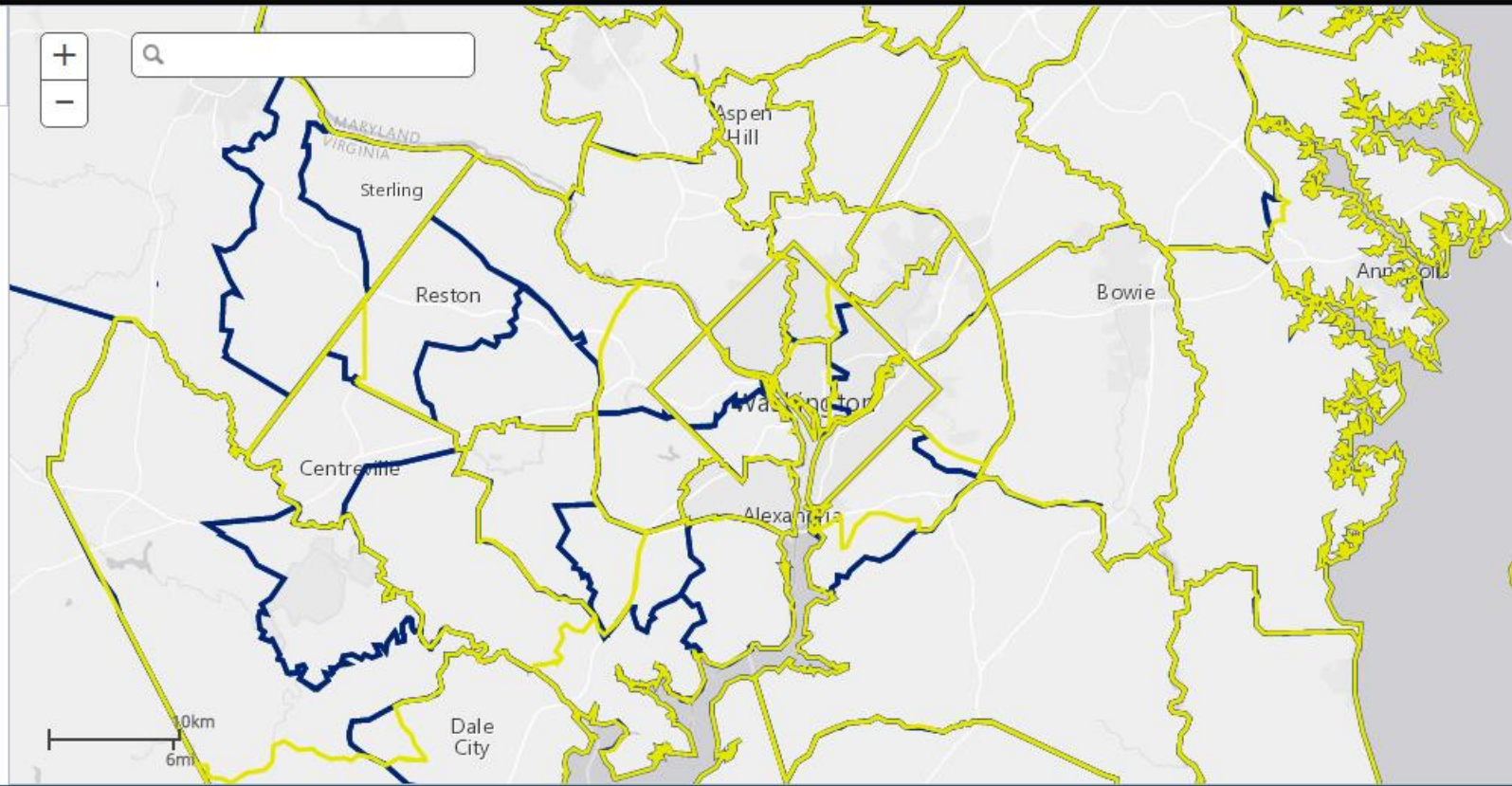
IPUMS.ORG | SELECT DATA | FAQ | HELP | LOGIN

### CHANGE IN PUMA BOUNDARIES, 2000 TO 2010

Layers

Switch Basemap

Click to select feature(s)



#### Map Information

#### Legend

2000 PUMA



2010 PUMA







### CHANGE IN PUMA BOUNDARIES, 2000 TO 2010



Layers Switch Basemap

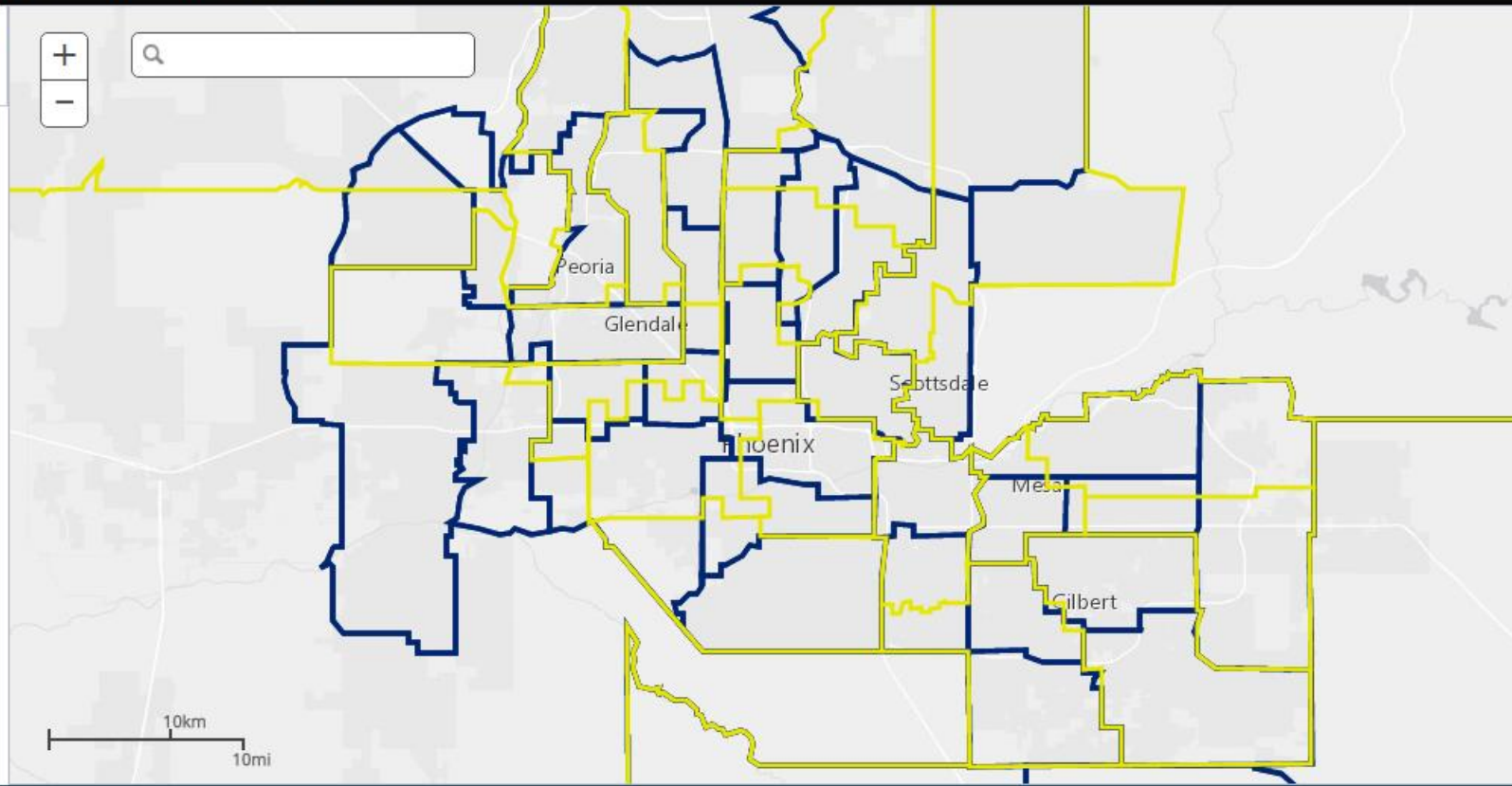
Click to select feature(s)



Map Information

Legend

- 2000 PUMA 
- 2010 PUMA 



ANALYZE DATA ONLINE  
IPUMS REGISTRATION

## DOCUMENTATION

VARIABLES  
SAMPLES  
USER'S GUIDE  
GEOGRAPHIC TOOLS  
FAQ

## RESOURCES

ENUMERATION FORMS  
PUBLISHED CENSUS VOLUMES  
ERRATA AND REVISIONS

## RESEARCH

CITATION AND USE  
BIBLIOGRAPHY  
RELATED SITES

## CONTACT US

HELP  
USER FORUM  
IPUMS STAFF  
HOW TO HELP  
DONATE TO IPUMS

# 0010 CONSPUMA DEFINITIONS

The [CPUMA0010](#) variable supplies codes for the 0010 version of ConsPUMAs (Consistent Public Use Microdata Areas). Each 0010 ConsPUMA is an aggregation of one or more 2010 PUMAs (Public Use Microdata Areas) that, in combination, align closely (within a 1% population error tolerance) with a corresponding set of 2000 PUMAs.

The 0010 ConsPUMAs are effectively the smallest geographic units that can be consistently identified from the geographic codes available in U.S. Census PUMS from 2000 and later (until 2020 PUMAs take effect sometime after the 2020 Census).

A separate variable, [CONSPUMA](#), identifies sets of 1980, 1990, and 2000 PUMAs that comprise comparable populations for samples from 1980 through 2011.

## INTERACTIVE MAPS

- [0010 ConsPUMAs and 2010 PUMAs](#)
- [0010 ConsPUMAs and 2000 PUMAs](#)

## COMPOSITION AND RELATIONSHIP FILES

Details on the composition of 0010 ConsPUMAs are provided in Excel spreadsheets via the following links. Each file contains two worksheets: the first contains the main table, and a second "data\_dictionary" sheet describes the data fields in the main table.

- [CPUMA0010 Summary](#): Summary of 0010 ConsPUMAs, including counts of associated 2000 and 2010 PUMAs, 2000 and 2010 populations, and population mismatch errors
- [CPUMA0010 2010 PUMA Components](#): Complete listing of the 2010 PUMAs that comprise each 0010 ConsPUMA
- [CPUMA0010 2000 PUMA Assignments](#): Complete listing of the 2000 PUMAs that are assigned to each 0010 ConsPUMA
- [2000-2010 PUMA Crosswalk](#): Crosswalk of 2000 PUMAs to 2010 PUMAs, including 2000 population, 2010 population, land area, and 0010 ConsPUMA codes for each area of intersection

For the specific counties, places, and tracts that comprise each PUMA, see the composition pages for [2000 PUMAs](#) and [2010 PUMAs](#).

## BOUNDARY FILE

- [0010 ConsPUMAs](#) (shapefile within a .ZIP file)

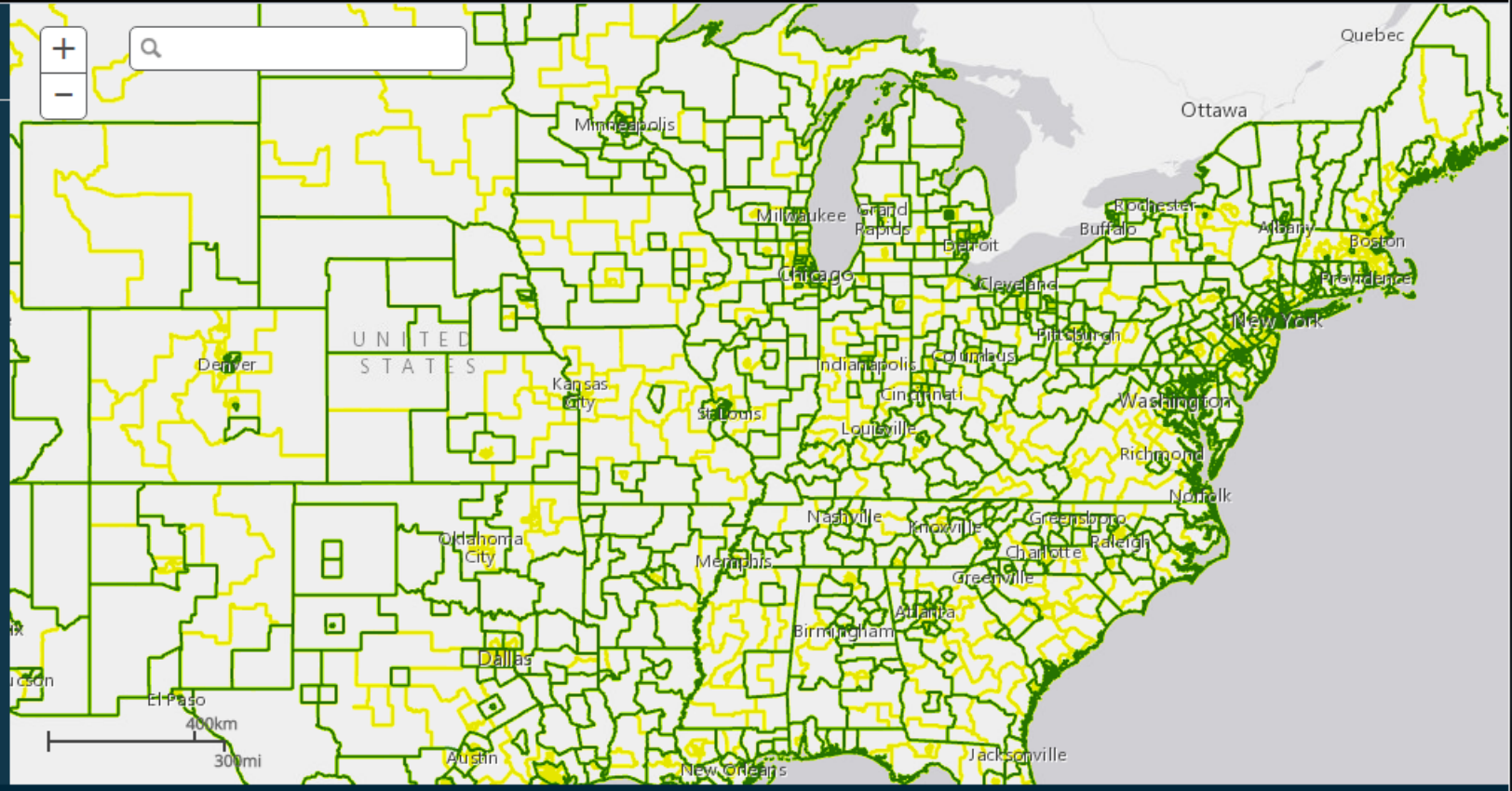
## BASIS



# CPUMA0010 BOUNDARY, 2000

Layers Switch Basemap

Click to select feature(s)



**Map Information**

**Legend**

- CPUMA0010\_tile
- CPUMA0010
- 2000 PUMA
- US\_puma00\_2010

# Problems with *Place of Work* PUMAs

1. Limited spatial precision
2. Not consistent with counties, cities, metro areas, *etc.*
3. Boundaries are revised after each census
  - Change in ACS PUMAs between 2011 & 2012

→ ***Same problems as PUMAs, only worse!***

2000-2011: 2,071 PUMAs → 1,238 PW PUMAs

2012-2016: 2,351 PUMAs → 980 PW PUMAs



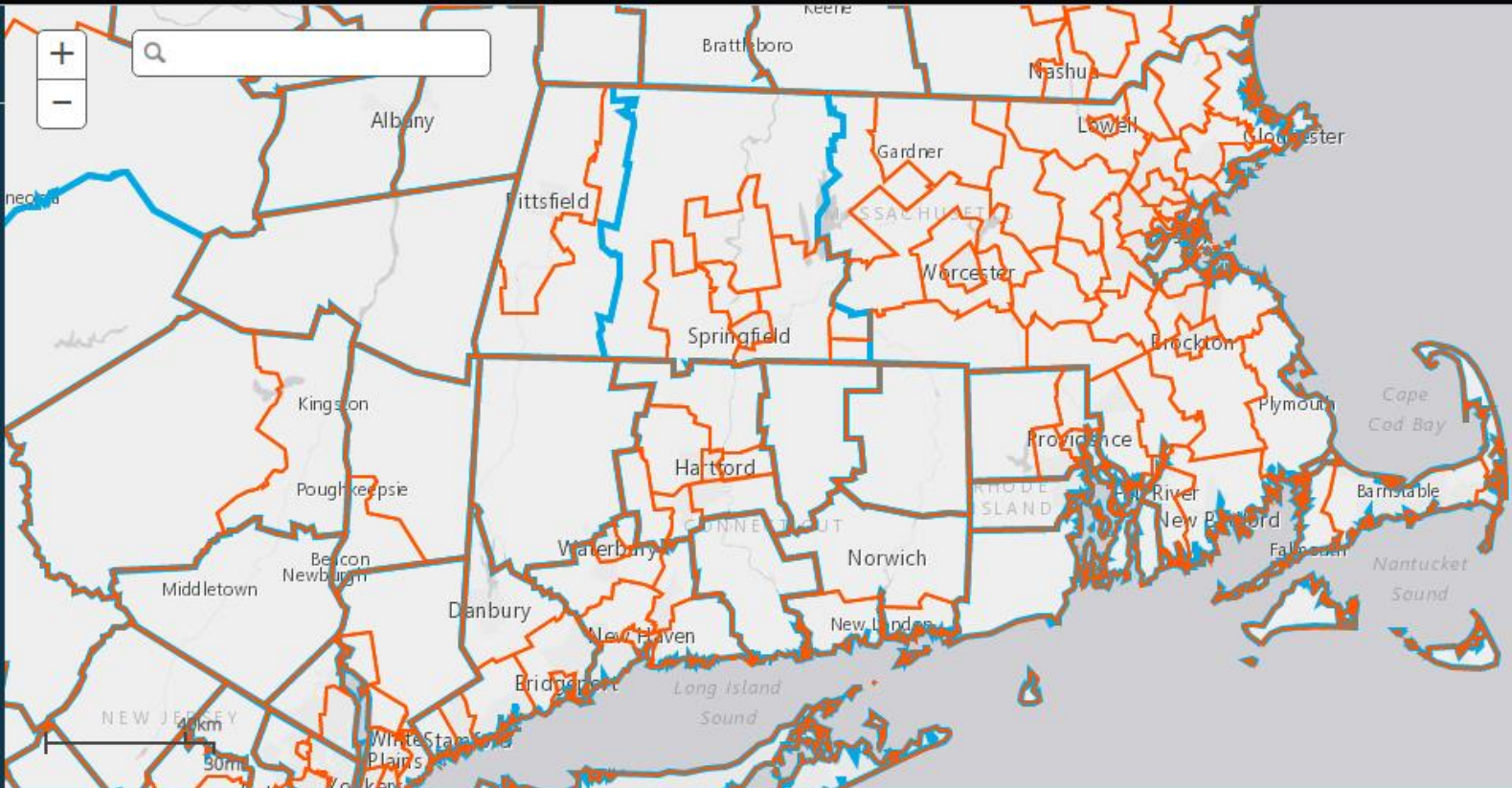


### CHANGE IN PWPUMA BOUNDARIES, 2000 TO 2010

Layers

Switch Basemap

Click to select feature(s)



Map Information

Legend

2000 PWPUMA



2010 PWPUMA



## DATA

- BROWSE AND SELECT DATA
- DOWNLOAD OR REVISE EXTRACTS
- ANALYZE DATA ONLINE
- IPUMS REGISTRATION

## DOCUMENTATION

- VARIABLES
- SAMPLES
- USER'S GUIDE
- GEOGRAPHIC TOOLS
- FAQ

## RESOURCES

- ENUMERATION FORMS
- PUBLISHED CENSUS VOLUMES
- ERRATA AND REVISIONS

## RESEARCH

- CITATION AND USE
- BIBLIOGRAPHY
- RELATED SITES

## CONTACT US

- HELP
- USER FORUM
- IPUMS STAFF
- HOW TO HELP
- DONATE TO IPUMS

# 2010 PLACE OF WORK PUMA DEFINITIONS

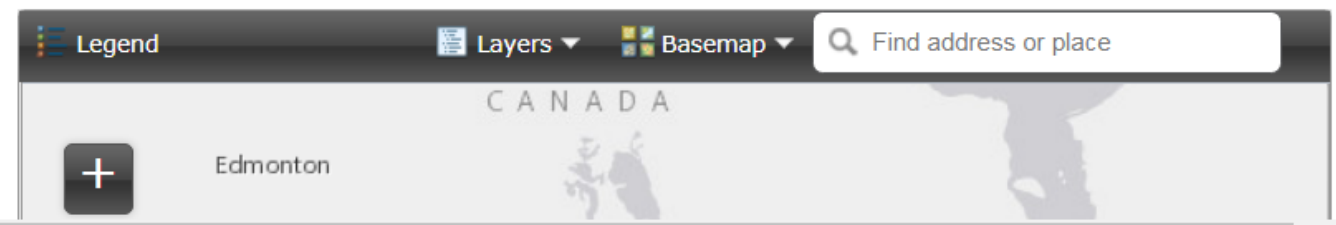
[Back to Geographic Tools](#)

The map below displays the boundaries and codes for Place of Work Public Use Microdata Areas (PWPUMAs), as identified by [PWPUMA00](#) in ACS and PRCS samples. 2005-2011 ACS samples use the 2000 PWPUMA definitions while 2012 and later ACS samples use the 2010 definitions. Each PWPUMA corresponds exactly to one or more [PUMAs](#).

The [2000 PWPUMAs resource page](#) provides the relationships between 2000 PUMAs and PWPUMAs. The relationships between 2010 PUMAs and PWPUMAs are given in this Excel spreadsheet: [2010 PUMA-MIGPUMA-PWPUMA Relationships](#). (2010 migration PUMAs and place of work PUMAs are identical, so their relationships to 2010 PUMAs are the same.)

In [Multi-Year](#) ACS/PRCS files, PUMA boundaries depend on the original year the respondent was interviewed (see [MULTIYEAR](#)). For example in the 2010-2012 3-year ACS sample, respondents from 2010 and 2011 correspond to the Census 2000 based PUMAs, while respondents from 2012 correspond to the Census 2010 based PUMAs.

Zooming into an area of interest on the map below will show both the 2010 (in blue) and 2000 (in orange) based Place of Work PUMAs. Gray lines represent County boundaries. Clicking on an area will highlight and describe the 2010 Place of Work PUMA, 2000 Place of Work PUMA, and County boundaries associated with the selected area. You can select which boundaries you want to view using the Layers menu at the top of the map. There is also a [larger map](#) containing the same information.





PWPUMA00 identifies the location of the respondent's primary workplace, in terms of the Public Use Microdata Area (see [PUMA](#)), a Census Bureau-defined area of contiguous territory containing 100,000+ residents. The codes for PUMAs are state-dependent, so PWPUMA00 can only be interpreted in combination with [PWSTATE2](#).

PUMAs defined for place of work (PWPUMA00) differ slightly from PUMAs defined for place of current residence (PUMA). In most cases, the two are identical. For a few cases, however, multiple PUMAs of residence are combined to form a larger PUMA of work. See Codes and Frequencies for the relationship between PWPUMA00 codes and PUMA codes.

#### USER WARNING:

- The 2012 and 2013 ACS samples contain known POWPUMA coding errors on the original Census Bureau PUMS files for Wisconsin and Georgia. In Wisconsin the PWPUMA00 code of 00100 was mistakenly assigned to both Dane County and the group of Ashland, Bayfield, Burnett, Douglas, Iron, Price, Rusk, Sawyer, Taylor, and Washburn counties. Similarly, PWPUMA00 04000 in Georgia mistakenly identifies both Gwinnett County and Richmond County. The Census Bureau corrected this issue by assigning Gwinnett County a code of 04007 and Dane County a code of 00104 starting with the 2014 ACS.
- The 2012, 2013, and 2014 ACS samples contain known POWPUMA coding errors on the original Census Bureau PUMS files for Virginia and South Carolina. In Virginia, the PWPUMA00 code of 51000 was mistakenly assigned to both the Charlottesville area (Albemarle, Fluvanna, Greene, Louisa, Nelson Counties, and Charlottesville city) and the Roanoke area (Alleghany, Botetourt, Craig, Franklin, and Roanoke Counties; and Covington, Roanoke, and Salem cities). Starting with the 2015 ACS, the Charlottesville area has a PWPUMA00 code of 51001. Similarly, in South Carolina, the PWPUMA00s for Lexington and Saluda Counties and for Calhoun, Fairfield, Kershaw, and Richland Counties were assigned duplicate codes of 00600. Starting with the 2015 ACS, Lexington and Saluda Counties has a PWPUMA00 code of 00606.

**SELECT HARMONIZED VARIABLES**

HOUSEHOLD ▾ PERSON ▾ A-Z ▾ SEARCH

**CHANGE SAMPLES**

HARMONIZED VARIABLES [HELP](#)  
[DISPLAY OPTIONS](#)

SOURCE VARIABLES

AN "X" INDICATES THE VARIABLE IS AVAILABLE IN THAT DATASET.

**PLACE OF WORK AND TRAVEL TIME VARIABLES -- PERSON [TOP]**

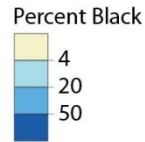
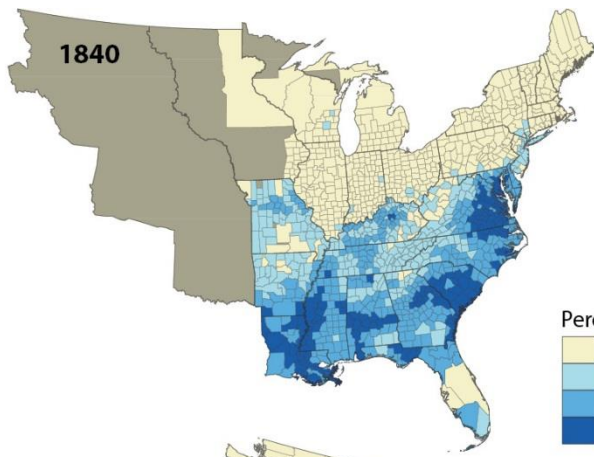
Add to cart	Variable	Variable Label	Type	Codes	2016	2012	2011	2005	2004	2000	2000	1990	1980	1970	1970	1960
					acs	acs	acs	acs	acs	acs	5pct	5pct	5pct	met2	met1	5pct
<input type="checkbox"/>	<a href="#">PWSTATE1</a>	Place of work: relative to state of residence	P	<a href="#">codes</a>	.	.	.	.	.	.	.	.	.	X	.	<input type="checkbox"/>
<input type="checkbox"/>	<a href="#">PWSTATE2</a>	Place of work: state	P	<a href="#">codes</a>	X	X	X	X	X	X	X	X	X	.	.	X
<input type="checkbox"/>	<a href="#">PWMETRO</a>	Place of work: metropolitan area	P	<a href="#">codes</a>	.	.	X	X	.	X	X	X	.	.	.	.
<input type="checkbox"/>	<a href="#">PWCITY</a>	Place of work: city	P	<a href="#">codes</a>	.	.	X	X	.	X	X	X	.	.	.	.
<input type="checkbox"/>	<a href="#">PWTYPE</a>	Place of work: metropolitan status	P	<a href="#">codes</a>	.	.	X	X	.	X	<input type="checkbox"/>	X	X	.	.	<input type="checkbox"/>
<input type="checkbox"/>	<a href="#">PWTYPE00</a>	Place of work: metropolitan status, 2000	P	<a href="#">codes</a>	.	.	.	.	.	X	.	.	.	.	.	.
<input type="checkbox"/>	<a href="#">PWCNTYGP</a>	Place of work: county group	P	<a href="#">codes</a>	.	.	.	.	.	.	.	X	.	.	.	.
<input type="checkbox"/>	<a href="#">PWPUMA</a>	Place of work: PUMA	P	<a href="#">codes</a>	.	.	.	.	.	.	.	X	.	.	.	.
<input type="checkbox"/>	<a href="#">PWPUMA00</a>	Place of work: PUMA, 2000 onward	P	<a href="#">codes</a>	X	X	X	X	.	X	.	.	.	.	.	.
<input type="checkbox"/>	<a href="#">PWPUMAS</a>	Super-PUMA of work	P	<a href="#">codes</a>	.	.	X	X	.	X	.	.	.	.	.	.
<input type="checkbox"/>	<a href="#">PWMET98</a>	Place of work: metropolitan status, 1980	P	<a href="#">codes</a>	.	.	.	.	.	.	.	X	.	.	.	.
<input type="checkbox"/>	<a href="#">TRANWORK</a>	Means of transportation to work	P	<a href="#">codes</a>	X	X	X	X	X	X	X	X	X	X	.	X
<input type="checkbox"/>	<a href="#">CARPOOL</a>	Carpooling	P	<a href="#">codes</a>	X	X	X	X	X	X	X	X	X	.	.	.
<input type="checkbox"/>	<a href="#">RIDERS</a>	Vehicle occupancy	P	<a href="#">codes</a>	X	X	X	X	X	X	X	X	X	.	.	.
<input type="checkbox"/>	<a href="#">TRANTIME</a>	Travel time to work	P	<a href="#">codes</a>	X	X	X	X	X	X	X	X	X	.	.	.
<input type="checkbox"/>	<a href="#">DEPARTS</a>	Time of departure for work	P	<a href="#">codes</a>	X	X	X	X	X	X	X	X	.	.	.	.
<input type="checkbox"/>	<a href="#">ARRIVES</a>	Time of arrival at work	P	<a href="#">codes</a>	X	X	X	X	.	.	.	.	.	.	.	.
<input type="checkbox"/>	<a href="#">PWURBTYP</a>	Place of work: urbanized area	P	<a href="#">codes</a>	.	.	.	.	.	.	.	.	<input type="checkbox"/>	.	.	.
<input type="checkbox"/>	<a href="#">PWSIZE</a>	Place of work: place size	P	<a href="#">codes</a>	.	.	.	.	.	.	.	.	<input type="checkbox"/>	.	.	.
<input type="checkbox"/>	<a href="#">PWMET98E</a>	Place of work: detailed urban/rural categories	P	<a href="#">codes</a>	.	.	.	.	.	.	.	.	<input type="checkbox"/>	.	.	.

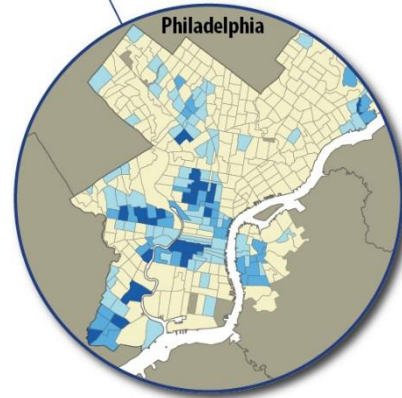
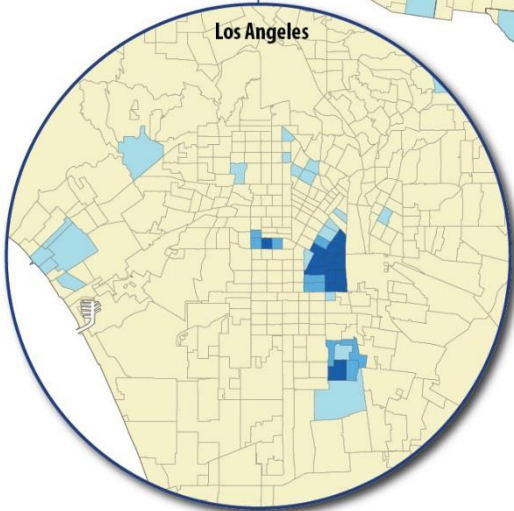
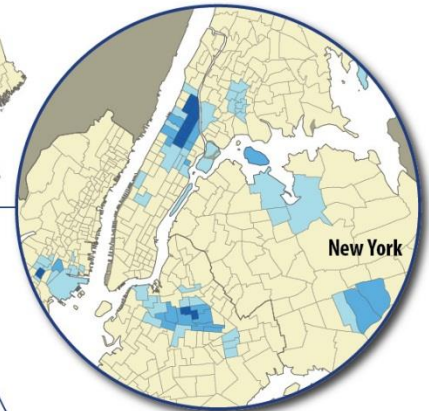
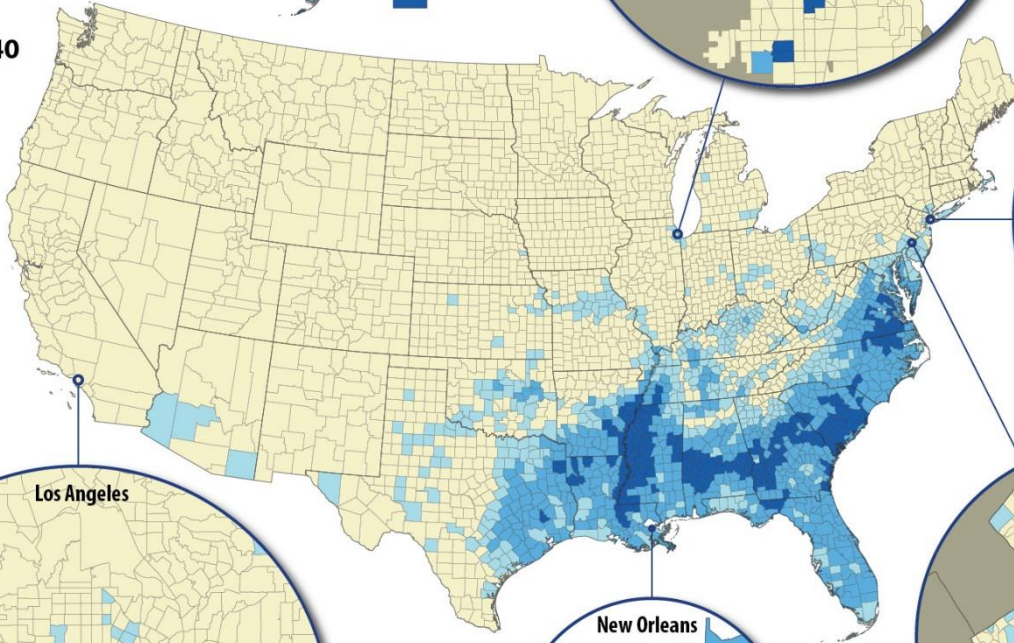
Add to cart	Variable	Variable Label	Type	Codes	2016	2012	2011	2005	2004	2000	2000	1990	1980	1970	1970	1960
					acs	acs	acs	acs	acs	acs	5pct	5pct	5pct	met2	met1	5pct
<input type="checkbox"/>	<a href="#">PWLMA</a>	Place of work: labor market area	P	<a href="#">codes</a>	.	.	.	.	.	.	.	<input type="checkbox"/>	<input type="checkbox"/>	.	.	.
<input type="checkbox"/>	<a href="#">PWCZ</a>	Place of work: LMA commuting zone	P	<a href="#">codes</a>	.	.	.	.	.	.	.	.	<input type="checkbox"/>	.	.	.

# IPUMS NHGIS

Census tables *and*  
GIS boundary files,  
1790 to the present



1940







**DATA**

- SELECT DATA
- DOWNLOAD/REVISE EXTRACTS

**USER RESOURCES**

- ABOUT NHGIS
- FAQ
- DATA AVAILABILITY
- USER'S GUIDE
- OVERVIEW OF DATASETS
- MAPPING OPTIONS

**DOCUMENTATION**

- TABULAR DATA SOURCES
- TIME SERIES TABLES
- GIS BOUNDARY FILES
- RELEASE LOG

**RESEARCH**

- CITATION AND USE
- RELATED SITES
- MPC BIBLIOGRAPHY

**CONTACT US**

## U.S. GEOGRAPHIC SUMMARY DATA AND BOUNDARY FILES

The National Historical Geographic Information System (NHGIS) provides population, housing, agricultural, and economic data, along with GIS-compatible boundary files, for geographic units in the United States from 1790 to the present.

[CREATE AN EXTRACT](#) [GET DATA](#)

### WHAT IS IPUMS?

IPUMS stands for data integrated across time, space and scientific domains. IPUMS makes it easy to study change and conduct comparative research--by imposing consistent codes, supplying detailed documentation, and creating customized datasets. Data and services are available free of charge. [Learn more about IPUMS.](#)

### IPUMS NHGIS NEWS

[NEW ARTICLE ON NHGIS STANDARDIZED TIME SERIES](#) | [2011-2015 ACS 5-YEAR SUMMARY FILE & 2015 BOUNDARY FILES NOW AVAILABLE](#) | [2015 ACS 1-YEAR SUMMARY FILE NOW AVAILABLE](#) | [MORE NEWS...](#)



SIGN IN | IPUMS.ORG | EXIT DATA FINDER

**DATA CART**

- 0 SOURCE TABLES
- 0 TIME SERIES TABLES
- 0 GIS BOUNDARY FILES

SHOW SELECTIONS CONTINUE

FILTER >> OPTIONS >> REVIEW

APPLY FILTERS ?

HOW TO USE THE DATA FINDER

- GEOGRAPHIC LEVELS
- YEARS
- TOPICS
- DATASETS

No filters selected.



SIGN IN | IPUMS.ORG | EXIT DATA FINDER

**DATA CART**

- 0 SOURCE TABLES
- 0 TIME SERIES TABLES
- 0 GIS BOUNDARY FILES

SHOW SELECTIONS CONTINUE

FILTER >> OPTIONS >> REVIEW

APPLY FILTERS ?

HOW TO USE THE DATA FINDER

**GEOGRAPHIC LEVELS**

**YEARS**

**TOPICS**  INCLUDES Journey to Work

**DATASETS**

RESET FILTERS

SELECT DATA ?

1786 SOURCE TABLES | **7 TIME SERIES TABLES** | 818 GIS BOUNDARY FILES

PAGE 1 OF 90 20

VIEW 1 - 20 OF 1,786

POPULARITY	TABLE NAME	UNIVERSE	CLASSIFICATIONS	YEAR - DATASET	BREAKDOWNS
	<a href="#">NT51. Working Persons 14 and Over by Means of Transportation to Work</a>	Workers 14 Years and Over (includes Armed Forces)	<a href="#">Means of Transportation to Work (8)</a>	1960_tPH	
	<a href="#">N8T37. Employed Population by Means of Transportation to Work [from printed report]</a>	Employed Persons	<a href="#">Means of Transportation to Work (8)</a>	1960_tPH	
	<a href="#">NT36. Means of Transportation to Work</a>	Workers	<a href="#">Means of Transportation to Work (9)</a>	1970_Cnt4Pb	<a href="#">Race/Ethnicity, Spatial</a>
	<a href="#">NTLOC. Location of Work</a>	Locations of Workplace for Workers 16 Years and Over in Commuter Flow		1980_JTW	<a href="#">Work Location</a>
	<a href="#">NT001. Workers 16 Years of Age and Older in Commuter Flow</a>	Workers 16 Years and Over in Commuter Flow		1980_JTW	<a href="#">Work Location</a>
	<a href="#">NT014. Means of Transportation</a>	Workers 16 Years and Over	<a href="#">Means of Transportation to Work (13)</a>	1980_JTW	<a href="#">Work Location</a>
	<a href="#">NT015. Aggregate Travel Time to Work in Minutes</a>	Workers 16 Years and Over	<a href="#">Means of Transportation to Work (3)</a>	1980_JTW	<a href="#">Work Location</a>
		Workers 16 Years and Over in			





SIGN IN | IPUMS.ORG | EXIT DATA FINDER

**DATA CART**

- 0 SOURCE TABLES
- 0 TIME SERIES TABLES
- 0 GIS BOUNDARY FILES

SHOW SELECTIONS CONTINUE

FILTER >> OPTIONS >> REVIEW

APPLY FILTERS ?

HOW TO USE THE DATA FINDER

- GEOGRAPHIC LEVELS
- YEARS
- TOPICS
- DATASETS

INCLUDES Journey to Work

RESET FILTERS

SELECT DATA ?

1786 SOURCE TABLES   7 TIME SERIES TABLES   818 GIS BOUNDARY FILES

PAGE 1 OF 90 20

VIEW 1 - 20 OF 1,786

POPULARITY	TABLE NAME	UNIVERSE	CLASSIFICATIONS	YEAR - DATASET	BREAKDOWNS
+	308301. Means of Transportation to Work	Workers 16 years and over	<a href="#">Means of Transportation to Work (20)</a>	<a href="#">2011_2015_ACS5a</a>	<a href="#">Spatial</a>
+	308303. Travel Time to Work	Workers 16 years and over who did not work at home	<a href="#">Travel Time to Work (12)</a>	<a href="#">2011_2015_ACS5a</a>	<a href="#">Spatial</a>
+	308134. Means of Transportation to Work by Travel Time to Work	Workers 16 years and over who did not work at home	<a href="#">Means of Transportation to Work (12). Travel Time to Work (9)</a>	<a href="#">2011_2015_ACS5a</a>	<a href="#">Spatial</a>
+	308303. Travel Time to Work	Workers 16 years and over who did not work at home	<a href="#">Travel Time to Work (12)</a>	<a href="#">2006_2010_ACS5a</a>	<a href="#">Spatial</a>
+	NP030A. Means of Transportation to Work	Workers 16 Years and Over	<a href="#">Means of Transportation to Work (7)</a>	<a href="#">2000_SF3a</a>	<a href="#">Spatial</a>
+	308301. Means of Transportation to Work	Workers 16 years and over	<a href="#">Means of Transportation to Work (20)</a>	<a href="#">2006_2010_ACS5a</a>	<a href="#">Spatial</a>
+	308301. Means of Transportation to Work	Workers 16 years and over	<a href="#">Means of Transportation to Work (20)</a>	<a href="#">2010_2014_ACS5a</a>	<a href="#">Spatial</a>
-		Workers 16 years and over	<a href="#">Time Leaving Home to Go</a>		

### GEOGRAPHIC LEVELS

MOST POPULAR	NATION GIS + Nation
ALL	STATE GIS + State
STANDARD LARGE AREA UNITS	COUNTY GIS + County (by State)
SMALL AREA STATISTICAL UNITS	CENSUS TRACT GIS + Census Tract (by State--County)
PLACES / CITIES	BLOCK GROUP GIS + Block Group (by State--County--Census Tract)
COUNTY SUBDIVISIONS	BLOCK GIS + Block (by State--County--Census Tract)
METROPOLITAN AND URBAN / RURAL	COUNTY SUBDIVISION GIS + County Subdivision (by State--County)
ZIP CODE AREAS	PLACE GIS + Place (by State)
SCHOOL AREAS	CONSOLIDATED CITY GIS + Consolidated City (by State)
LEGISLATIVE / ELECTION AREAS	CORE BASED (METROPOLITAN/MICROPOLITAN) STATISTICAL AREA [2003-PRESENT] GIS + Metropolitan Statistical Area/Micropolitan Statistical Area
NATIVE AMERICAN / ALASKAN / HAWAIIAN	METROPOLITAN STATISTICAL AREA/CONSOLIDATED METROPOLITAN STATISTICAL AREA [1990-2000] GIS + Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area
NHGIS TIME SERIES LEVELS	URBAN AREA [1970-PRESENT] GIS + Urban Area
	5-DIGIT ZIP CODE TABULATION AREA [2000-PRESENT] GIS + 5-Digit ZIP Code Tabulation Area
	5-DIGIT ZIP CODE [1980-2002] + 5-Digit ZIP Code

CANCEL

SUBMIT



[SIGN IN](#) | [IPUMS.ORG](#) | [EXIT DATA FINDER](#)

**DATA CART**

0 SOURCE TABLES

0 TIME SERIES TABLES

0 GIS BOUNDARY FILES

[SHOW SELECTIONS](#)
[CONTINUE](#)

[FILTER](#) >> [OPTIONS](#) >> [REVIEW](#)

APPLY FILTERS ?

[HOW TO USE THE DATA FINDER](#)

- GEOGRAPHIC LEVELS
- YEARS
- TOPICS ✓
- DATASETS

**INCLUDES** Journey to Work

[RESET FILTERS](#)

SELECT DATA ?

- 1786 SOURCE TABLES
- 7 TIME SERIES TABLES
- 818 GIS BOUNDARY FILES

PAGE 1 OF 41 ▶▶ ▶ 20

VIEW 1 - 20 OF 818

	POPULARITY	YEAR	GEOGRAPHIC LEVEL	EXTENT	BASIS
+	<div style="width: 10%; background-color: #008000;"></div>	1960	Census Tract	United States	<a href="#">2000 TIGER/Line</a>
+	<div style="width: 10%; background-color: #008000;"></div>	1960	Census Tract	United States	<a href="#">2008 TIGER/Line</a>
+	<div style="width: 10%; background-color: #008000;"></div>	1970	State	United States	<a href="#">2000 TIGER/Line</a>
+	<div style="width: 10%; background-color: #008000;"></div>	1970	County	United States	<a href="#">2000 TIGER/Line</a>
+	<div style="width: 10%; background-color: #008000;"></div>	1970	County	United States	<a href="#">2008 TIGER/Line</a>
+	<div style="width: 20%; background-color: #008000;"></div>	1970	Census Tract	United States	<a href="#">2000 TIGER/Line</a>
+	<div style="width: 10%; background-color: #008000;"></div>	1970	Census Tract	United States	<a href="#">2008 TIGER/Line</a>
+	<div style="width: 10%; background-color: #008000;"></div>	1970	Place (Points)	United States	<a href="#">GNIS, TIGER/Line &amp; Census Maps</a>
+	<div style="width: 10%; background-color: #008000;"></div>	1970	Standard Metropolitan Statistical Area (by State)	United States	<a href="#">2000 TIGER/Line</a>



SIGN IN | IPUMS.ORG | EXIT DATA FINDER

**DATA CART**

- 0 SOURCE TABLES
- 0 TIME SERIES TABLES
- 0 GIS BOUNDARY FILES

SHOW SELECTIONS CONTINUE

FILTER >> OPTIONS >> REVIEW

APPLY FILTERS ?

HOW TO USE THE DATA FINDER

- GEOGRAPHIC LEVELS
- YEARS
- TOPICS
- DATASETS

INCLUDES Journey to Work

RESET FILTERS

SELECT DATA ?

1786 SOURCE TABLES 7 TIME SERIES TABLES 818 GIS BOUNDARY FILES

PAGE 1 OF 1 20

VIEW 1 - 7 OF 7

POPULARITY	TABLE NAME	GEOGRAPHIC INTEGRATION	YEARS	GEOGRAPHIC LEVELS
	<a href="#">Workers of Working Age* by Means of Transportation to Work [9]</a>	Nominal	1970, 1980, 1990, 2000, 2008-2012	STATE, COUNTY, CTY_SUB, PLACE
	<a href="#">Workers 16 Years and Over by Means of Transportation to Work [18]</a>	Nominal	1980, 1990, 2000, 2008-2012	STATE, COUNTY, CTY_SUB, PLACE
	<a href="#">Workers 16 Years and Over by Means of Transportation to Work [20]</a>	Nominal	1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
	<a href="#">Total Commuters (Workers 16 Years and Over Who Did Not Work at Home)</a>	Nominal	1980, 1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
	<a href="#">Commuters by Travel Time to Work [8]</a>	Nominal	1980, 1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
	<a href="#">Commuters by Travel Time to Work [12]</a>	Nominal	1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
	<a href="#">Aggregate Travel Time to Work for Commuters</a>	Nominal	1980, 1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE



### TIME SERIES TABLE DETAILS

[About time series tables](#)

**Table:** ac2. Workers 16 Years and Over by Means of Transportation to Work [18]

**Years:** 1980, 1990, 2000, 2008-2012

**Geographic integration:** Nominal

**Time series in table (18) :**

- Persons: Worker ~ 16 years and over ~ Car, truck, or van
- Persons: Worker ~ 16 years and over ~ Car, truck, or van--Drove alone
- Persons: Worker ~ 16 years and over ~ Car, truck, or van--Carpooled
- Persons: Worker ~ 16 years and over ~ Car, truck, or van--Carpooled--In 2-person carpool
- Persons: Worker ~ 16 years and over ~ Car, truck, or van--Carpooled--In 3-person carpool
- Persons: Worker ~ 16 years and over ~ Car, truck, or van--Carpooled--In 4-person carpool
- Persons: Worker ~ 16 years and over ~ Car, truck, or van--Carpooled--In 5- or 6-person carpool
- Persons: Worker ~ 16 years and over ~ Car, truck, or van--Carpooled--In 7-or-more-person carpool
- Persons: Worker ~ 16 years and over ~ Public transportation (excluding ferryboat and taxicab)
- Persons: Worker ~ 16 years and over ~ Public transportation (excluding ferryboat and taxicab)--Bus or streetcar
- Persons: Worker ~ 16 years and over ~ Public transportation (excluding ferryboat and taxicab)--Subway or elevated train
- Persons: Worker ~ 16 years and over ~ Public transportation (excluding ferryboat and taxicab)--Railroad
- Persons: Worker ~ 16 years and over ~ Taxicab
- Persons: Worker ~ 16 years and over ~ Motorcycle
- Persons: Worker ~ 16 years and over ~ Bicycle
- Persons: Worker ~ 16 years and over ~ Walked
- Persons: Worker ~ 16 years and over ~ Other means (including ferryboat)
- Persons: Worker ~ 16 years and over ~ Worked at home

**Available geographic levels (4) :**

State

Aggregate Travel Time to Work for Commuters	Nominal	1980, 1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
---	---------	-----------------------------	--

### TIME SERIES TABLE DETAILS ✕

[About time series tables](#)

**Table:** cs4. Workers of Working Age\* by Means of Transportation to Work [9]

**Years:** 1970, 1980, 1990, 2000, 2008-2012

**Geographic integration:** Nominal

**Time series in table (9) :**

- Persons: Worker ~ Of working age\* ~ Private auto (1970) or car, truck, or van (since 1980)
- Persons: Worker ~ Of working age\* ~ Public transportation (excluding ferryboat and taxicab)
- Persons: Worker ~ Of working age\* ~ Public transportation (excluding ferryboat and taxicab)--Bus or streetcar
- Persons: Worker ~ Of working age\* ~ Public transportation (excluding ferryboat and taxicab)--Subway or elevated train
- Persons: Worker ~ Of working age\* ~ Public transportation (excluding ferryboat and taxicab)--Railroad
- Persons: Worker ~ Of working age\* ~ Taxicab
- Persons: Worker ~ Of working age\* ~ Walked
- Persons: Worker ~ Of working age\* ~ Other means (including ferryboat, motorcycle, and bicycle)
- Persons: Worker ~ Of working age\* ~ Worked at home

**Available geographic levels (4) :**

- State
- County
- County Subdivision
- Place

**Data sources:**

Dataset	Table
1970 Census: Count 4Pb - Sample-Based Population Data with Race/Ethnicity Breakdown	т336. Means of Transportation to Work
1980 Census: STF 3 - Sample-Based Data	т40. Means of Transportation

Aggregate Travel Time to Work for Commuters	Nominal	1980, 1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
---	---------	-----------------------------	--

**TIME SERIES TABLE DETAILS**

Data sources:

Dataset	Table
1970 Census: Count 4Pb - Sample-Based Population Data with Race/Ethnicity Breakdown	NP36. Means of Transportation to Work
1980 Census: STF 3 - Sample-Based Data	NP40. Means of Transportation to Work
1980 Census: STF 4Pb - Sample-Based Detailed Population Data with Race/Ethnicity Breakdown	NP839. Means of Transportation to Work
1990 Census: STF 3 - Sample-Based Data	NP49. Means of Transportation to Work
2000 Census: SF 3a - Sample-Based Data [Areas Larger Than Block Groups]	NP030A. Means of Transportation to Work
2000 Census: SF 3a - Sample-Based Data [Areas Larger Than Block Groups]	NP030C. Means of Public Transportation
2012 American Community Survey: 5-Year Data [2008-2012, Block Groups & Larger Areas]	B08301. Means of Transportation to Work

Notes:

**1970 Negative Values:** The 1970 data for this table may include some negative values, which indicate suppressed data. For more information on 1970 suppression codes, see pp. 3-5 in the Electronic Data Processing (EDP) Series section of the *1970 Census Users' Guide*.

Measured features:

Persons

Classification dimensions:

Labor Force and Employment Status

No known comparability issues for this time period.

Aggregate Travel Time to Work for Commuters	Nominal	1980, 1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
---	---------	-----------------------------	--

FILTER > OPTI

APPLY FIL

GEOGRAP

YE

TO

DAT

RESET FILTER

SELECT DA

1786 SOURCE

POPULAR

+ [ ]

+ [ ]

+ [ ]

+ [ ]

+ [ ]

+ [ ]

+ [ ]

### TIME SERIES TABLE DETAILS

#### Age

- **\*Working Age:** Since 1980, census tables providing means of transportation counts have explicitly been limited to workers 16 years and over. The primary 1970 Census documentation does not explicitly identify the age range for 1970 Means of Transportation counts, but available evidence suggests that the universe is workers age 14 years and over.

The 1970 documentation states that "most labor force tabulations will be presented for persons 16 years and over" (*1970 Census Users' Guide: Census Users' Dictionary*, p. 103), but it also states that means of transportation was "ascertained for persons 14 years of age and over who reported working during the reference week, including Armed Forces personnel" (p. 107). The universe description for Table 36, which provides 1970 means of transportation counts, says nothing about age, but the sum of the table's state counts is 2.6% greater than the sum of workers age 16 years and over from Table 115, suggesting that the means of transportation counts cover a larger universe including workers of age 14 and 15.

#### Means of Transportation to Work

- **1970 Private Autos:** The 1970 census questionnaire did not separately identify car, truck, and van as options under the means of transportation question, as did later questionnaires. Instead, the 1970 options included "Driver, private auto" and "Passenger, private auto" as options covering this range of vehicles. Accordingly, 1970 tables provide no counts specifically for workers commuting by car, truck, or van, as there were in later years.

In NHGIS time series, 1970 private auto counts are matched with later counts for car, truck, or van, and 1970 counts for "Other means" are matched with combined counts for motorcycle, bicycle, ferryboat, and other means in later years. Given that "Motorcycle" was not a listed option on the 1970 questionnaire, some motorcyclists may have selected the "Private auto" option that year, in which case they would be counted in the "Private auto" time series and not the "Other means" time series. This

	Aggregate Travel Time to Work for Commuters	Nominal	1980, 1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
--	---	---------	-----------------------------	--



### TIME SERIES TABLE DETAILS

Forces personnel" (p. 107). The universe description for Table 36, which provides 1970 means of transportation counts, says nothing about age, but the sum of the table's state counts is 2.6% greater than the sum of workers age 16 years and over from Table 115, suggesting that the means of transportation counts cover a larger universe including workers of age 14 and 15.

#### Means of Transportation to Work

- **1970 Private Autos:** The 1970 census questionnaire did not separately identify car, truck, and van as options under the means of transportation question, as did later questionnaires. Instead, the 1970 options included "Driver, private auto" and "Passenger, private auto" as options covering this range of vehicles. Accordingly, 1970 tables provide no counts specifically for workers commuting by car, truck, or van, as there were in later years.

In NHGIS time series, 1970 private auto counts are matched with later counts for car, truck, or van, and 1970 counts for "Other means" are matched with combined counts for motorcycle, bicycle, ferryboat, and other means in later years. Given that "Motorcycle" was not a listed option on the 1970 questionnaire, some motorcyclists may have selected the "Private auto" option that year, in which case they would be counted in the "Private auto" time series and not the "Other means" time series. This discrepancy should have affected only a small fraction of the overall counts, given that in 1980, the total number of workers commuting by motorcycle was only 0.5% as large as the number commuting by car, truck, or van.

#### Relevant source documentation:

- [1970 Census Users' Guide: Electronic Data Processing \(EDP\) Series](#)
- [1970 Census Users' Guide: Census Users' Dictionary](#)
- [1980 Census of Population and Housing: Summary Tape File 4--Technical Documentation: Appendix A. Glossary](#)
- [1990 Census of Population and Housing: Guide, Part B. Glossary](#)
- [2000 Census of Population and Housing: Summary File 3--Technical Documentation: Appendix B. Definitions of Subject Characteristics American Community Survey and Puerto Rico Community Survey: 2012 Subject Definitions](#)

POPULATION				
+ [Progress Bar]				
+ [Progress Bar]				
+ [Progress Bar]				
+ [Progress Bar]				
+ [Progress Bar]				
+ [Progress Bar]				
+ [Progress Bar]				
+ [Progress Bar]				
+ [Progress Bar]				
+ [Progress Bar]	Aggregate Travel Time to Work for Commuters	Nominal	1980, 1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE



SIGN IN | IPUMS.ORG | EXIT DATA FINDER

**DATA CART**

- 0 SOURCE TABLES
- 0 TIME SERIES TABLES
- 0 GIS BOUNDARY FILES

SHOW SELECTIONS CONTINUE

FILTER >> OPTIONS >> REVIEW

APPLY FILTERS ?

HOW TO USE THE DATA FINDER

- GEOGRAPHIC LEVELS
- YEARS
- TOPICS
- DATASETS

INCLUDES Journey to Work

RESET FILTERS

SELECT DATA ?

1786 SOURCE TABLES | 7 TIME SERIES TABLES | 818 GIS BOUNDARY FILES

PAGE 1 OF 1 | 20 | VIEW 1 - 7 OF 7

POPULARITY	TABLE NAME	GEOGRAPHIC INTEGRATION	YEARS	GEOGRAPHIC LEVELS
	<a href="#">Workers of Working Age* by Means of Transportation to Work [9]</a>	Nominal	1970, 1980, 1990, 2000, 2008-2012	STATE, COUNTY, CTY_SUB, PLACE
	<a href="#">Workers 16 Years and Over by Means of Transportation to Work [18]</a>	Nominal	1980, 1990, 2000, 2008-2012	STATE, COUNTY, CTY_SUB, PLACE
	<a href="#">Workers 16 Years and Over by Means of Transportation to Work [20]</a>	Nominal	1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
	<a href="#">Total Commuters (Workers 16 Years and Over Who Did Not Work at Home)</a>	Nominal	1980, 1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
	<a href="#">Commuters by Travel Time to Work [8]</a>	Nominal	1980, 1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
	<a href="#">Commuters by Travel Time to Work [12]</a>	Nominal	1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
	<a href="#">Aggregate Travel Time to Work for Commuters</a>	Nominal	1980, 1990, 2000, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE



SIGN IN | IPUMS.ORG | EXIT DATA FINDER

**DATA CART**

- 0 SOURCE TABLES
- 0 TIME SERIES TABLES
- 0 GIS BOUNDARY FILES

SHOW SELECTIONS CONTINUE

FILTER >> OPTIONS >> REVIEW

APPLY FILTERS ?

HOW TO USE THE DATA FINDER

- GEOGRAPHIC LEVELS** ✓
- YEARS
- TOPICS
- DATASETS

TRACT

RESET FILTERS

SELECT DATA ?

11783 SOURCE TABLES    291 TIME SERIES TABLES    28 GIS BOUNDARY FILES

PAGE 1 OF 15    20    VIEW 1 - 20 OF 291

POPULARITY	TABLE NAME	GEOGRAPHIC INTEGRATION	YEARS	GEOGRAPHIC LEVELS
	Total Population	Nominal	1970, 1980, 1990, 2000, 2010, 2008-2012	STATE, COUNTY, TRACT, CTY_SUB, PLACE
	Total Population	Nominal	1980, 1990, 2000, 2010, 2008-2012	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
	Total Population	Standardized to 2010	1990, 2000, 2010	STATE, COUNTY, TRACT, BLCK_GRP, CTY_SUB, PLACE, CD110TH-112TH, CBSA, URB_AREA, ZCTA
	Persons by Urban/Rural Status [4]	Nominal	1980, 1990, 2000, 2010	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
	Persons by Urban/Rural Status [4]	Standardized to 2010	1990, 2000, 2010	STATE, COUNTY, TRACT, BLCK_GRP, CTY_SUB, PLACE, CD110TH-112TH, CBSA, URB_AREA, ZCTA
	Persons by Sex [2]	Nominal	1970, 1980, 1990, 2000, 2010, 2008-2012	STATE, COUNTY, TRACT, CTY_SUB, PLACE
	Persons by Sex [2]	Standardized to 2010	1990, 2000, 2010	STATE, COUNTY, TRACT, BLCK_GRP, CTY_SUB, PLACE, CD110TH-112TH,

# Nominal integration

	A	B	C	D	E	F	G	H	I	J
1	GISJOIN	STATE	STATEA	BL1AA1970	BL1AA1980	BL1AA1990	BL1AA2000	BL1AA125	BL1AA125M	BL1AB1970
	GIS Join Match Code	State Name	State Code	1970: Persons: Male ~ Never married	1980: Persons: Male ~ Never married	1990: Persons: Male ~ Never married	2000: Persons: Male ~ Never married	2008-2012: Persons: Male ~ Never married	2008-2012: Persons: Male ~ Never married	1970: Persons: Male ~ Now married
2									Margin of error:	
3	G010	Alabama	10	324572	375515	406140	444450	584355	4261	792229
4	G020	Alaska	20	38428	53423	67827	78955	105333	1532	69046
5	G040	Arizona	40	170463	286183	409976	581715	876661	5440	410438
6	G050	Arkansas	50	170171	200864	209851	245874	330745	3312	464000
7	G060	California	60	2102965	2938148	4034185	4343790	5778554	18439	4611973
8	G080	Colorado	80	230115	341985	373157	516816	678866	4145	510105
9	G090	Connecticut	90	306085	369471	412921	385888	496941	3768	706908
10	G100	Delaware	100	52624	67052	76997	87154	122851	1650	126479
11	G110	District Of Co	110	99908	112013	118273	112516	142162	1558	142605
12	G120	Florida	120	596651	950049	1336469	1702648	2553294	14356	1687636
13	G130	Georgia	130	446917	564696	716125	940487	1299191	7312	1050444
14	G150	Hawaii	150	104625	137448	152188	166715	205985	2060	169920
15	G160	Idaho	160	69395	86794	91380	128613	172169	2427	169553
16	G170	Illinois	170	1115952	1318480	1395167	1495795	1838840	9371	2542632
17	G180	Indiana	180	477592	541264	569459	643222	814989	5228	1222896
18	G190	Iowa	190	271540	301518	281081	318000	375129	2818	665781
19	G200	Kansas	200	223168	241362	244866	281338	345753	3010	542632
20	G210	Kentucky	210	318856	358353	361278	401465	518929	4039	757239
21	G220	Louisiana	220	370838	450684	464285	514633	633702	4170	793188
22	G230	Maine	230	97253	116576	126930	132473	163254	1650	227135
23	G240	Maryland	240	392646	501319	587368	610852	814952	4997	906860
24	G250	Massachuset	250	622162	743825	832633	817954	981462	5728	1243732
25	G260	Michigan	260	872687	1036241	1078995	1159693	1352844	6714	2021198
26	G270	Minnesota	270	403762	484050	504483	591866	716441	4620	849440
27	G280	Mississippi	280	222569	252992	275422	319922	388559	3394	480663



# Nominal integration

	M	N	O	P	Q	R	S	T	U	
1	NAME1980	NAME1990	NAME2000	NAME2010	NAME2012	B78AA198	B78AA199	B78AA200	B78AA201	B78AA202
						1980:	1990:	2000:	2010:	2012:
2	Area Name, 1980	Area Name, 1990	Area Name, 2000	Area Name, 2010	Area Name, 2012	Persons: Total	Persons: Total	Persons: Total	Persons: Total	Persons: Total
14728	BLAINE CITY	Blaine city	Blaine city	Blaine city	Blaine city, Anoka C	28558	38975	44942	57186	
14729	BURNS TOWNSHIP	Burns township	Burns township			1976	2401	3557		
14730	CENTERVILLE CITY	Centerville city	Centerville city	Centerville city	Centerville city, An	734	1633	3202	3792	
14731	CIRCLE PINES CITY	Circle Pines city	Circle Pines city	Circle Pines city	Circle Pines city, An	3321	4704	4663	4918	
14732	COLUMBIA HEIGHTS	Columbia Heights ci	Columbia Heights ci	Columbia Heights ci	Columbia Heights ci	20029	18910	18520	19496	
14733	COLUMBUS TOWNSH	Columbus township	Columbus township	Columbus city	Columbus city, Anok	3232	3690	3957	3914	
14734	COON RAPIDS CITY	Coon Rapids city	Coon Rapids city	Coon Rapids city	Coon Rapids city, Ar	35826	52978	61607	61476	
14735	EAST BETHEL CITY	East Bethel city	East Bethel city	East Bethel city	East Bethel city, An	6626	8050	10941	11626	
14736	FRIDLEY CITY	Fridley city	Fridley city	Fridley city	Fridley city, Anoka C	30228	28335	27449	27208	
14737	HAM LAKE CITY	Ham Lake city	Ham Lake city	Ham Lake city	Ham Lake city, Anok	7832	8924	12710	15296	
14738	HILLTOP CITY	Hilltop city	Hilltop city	Hilltop city	Hilltop city, Anoka C	817	749	766	744	
14739	LEXINGTON CITY	Lexington city	Lexington city	Lexington city	Lexington city, Anok	2150	2279	2214	2049	
14740	LINO LAKES CITY	Lino Lakes city	Lino Lakes city	Lino Lakes city	Lino Lakes city, Ano	4966	8807	16791	20216	
14741	LINWOOD TOWNSH	Linwood township	Linwood township	Linwood township	Linwood township,	2839	3588	4668	5123	
14742				Nowthen city	Nowthen city, Anoka County, Minnesota				4443	
14743			Oak Grove city	Oak Grove city	Oak Grove city, Anoka County, Minnesot			6903	8031	
14744	OAK GROVE TOWNS	Oak Grove township				3926	5441			
14745	RAMSEY CITY	Ramsey city	Ramsey city	Ramsey city	Ramsey city, Anoka	10093	12408	18510	23668	
14746	SPRING LAKE PARK	Spring Lake Park city	Spring Lake Park city	Spring Lake Park city	Spring Lake Park city	6368	6429	6667	6234	
14747	ST. FRANCIS CITY	St. Francis city	St. Francis city	St. Francis city	St. Francis city, Anok	1184	2538	4910	7218	
14748	ATLANTA TOWNSHI	Atlanta township	Atlanta township	Atlanta township	Atlanta township, B	162	141	113	119	
14749	AUDUBON CITY	Audubon city	Audubon city	Audubon city	Audubon city, Becke	383	411	445	519	
14750	AUDUBON TOWNSH	Audubon township	Audubon township	Audubon township	Audubon township,	453	420	416	548	

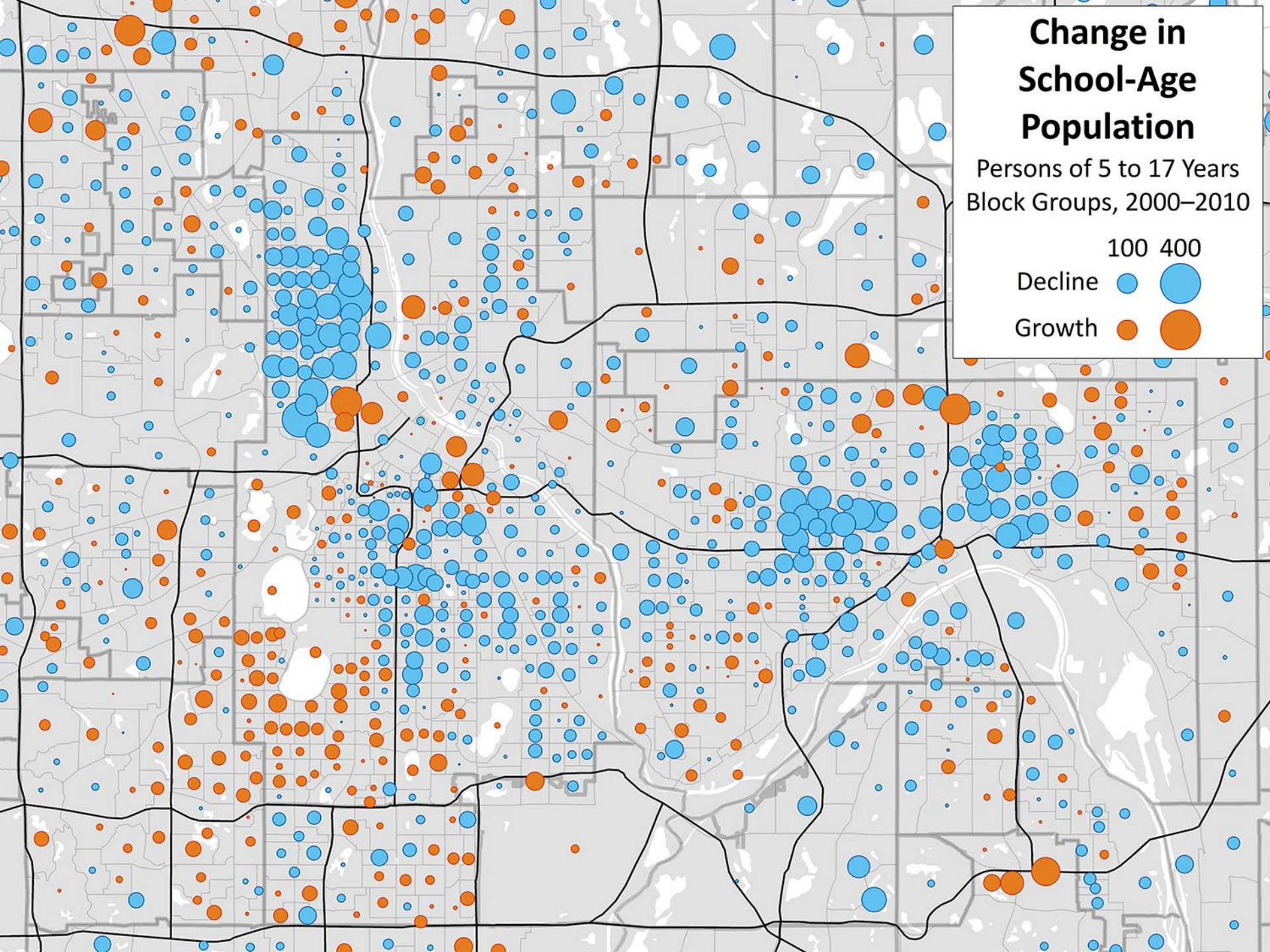
# Geographic standardization

	A	B	C	E	G	I	J	K	L
1	GISJOIN	GEOGYEAR	STATE	COUNTY	CTY_SUB	CL8AA2000	CL8AA2000L	CL8AA2000U	CL8AA2010
2	GIS Join Match Code	Geography Year	State Name	County Name	County Subdivision Name	2000: Persons: Total	Lower bound: 2000: Persons: Total	Upper bound: 2000: Persons: Total	2010: Persons: Total
13494	G270003006382	2010	Minnesota	Anoka County	Blaine city	45009.24	44836	45064	57186
13495	G270003010648	2010	Minnesota	Anoka County	Centerville city	3199.65	3111	3251	3792
13496	G270003011494	2010	Minnesota	Anoka County	Circle Pines city	4663	4663	4663	4918
13497	G270003012700	2010	Minnesota	Anoka County	Columbia Heights city	18514.56	18475	18520	19496
13498	G270003012718	2010	Minnesota	Anoka County	Columbus city	3956.91	3299	3964	3914
13499	G270003013114	2010	Minnesota	Anoka County	Coon Rapids city	61551.9	61365	61607	61476
13500	G270003017486	2010	Minnesota	Anoka County	East Bethel city	10933.74	10822	10941	11626
13501	G270003022814	2010	Minnesota	Anoka County	Fridley city	27449	27449	27449	27208
13502	G270003026738	2010	Minnesota	Anoka County	Ham Lake city	12714.27	12668	12952	15296
13503	G270003029258	2010	Minnesota	Anoka County	Hilltop city	771.44	766	811	744
13504	G270003036836	2010	Minnesota	Anoka County	Lexington city	2147.39	2108	2214	2049
13505	G270003037322	2010	Minnesota	Anoka County	Lino Lakes city	16793.37	16742	16965	20216
13506	G270003037376	2010	Minnesota	Anoka County	Linwood township	4668	4668	5251	5123
13507	G270003047536	2010	Minnesota	Anoka County	Nowthen city	3553.31	3425	3704	4443
13508	G270003047690	2010	Minnesota	Anoka County	Oak Grove city	6926.76	6828	7077	8031
13509	G270003053026	2010	Minnesota	Anoka County	Ramsey city	18504.81	18422	18510	23668
13510	G270003056950	2010	Minnesota	Anoka County	St. Francis city	4902.22	4731	5066	7218
13511	G270003061996	2010	Minnesota	Anoka County	Spring Lake Park city	6667.62	6659	6697	6234
13512	G270005002674	2010	Minnesota	Becker County	Atlanta township	113	113	113	119
13513	G270005002728	2010	Minnesota	Becker County	Audubon city	446.81	390	448	519
13514	G270005002746	2010	Minnesota	Becker County	Audubon township	414.19	413	471	548

# Geographically standardized time series

- 1990, 2000 & 2010 data for 2010 units
- 10 geographic levels:
  - states, counties, tracts, block groups,
  - county subdivisions, places,
  - congressional districts, CBSAs, urban areas, ZCTAs
- ~1,600 time series in 109 tables
- “Short-form” counts only
  - Race, ethnicity, age, sex, household size & relationships, housing occupancy & tenure
  - *Not* income, education, employment, ...







# Nominally integrated time series

- ~5,700 time series in 271 tables
- 8 geographic levels:  
nation, regions, divisions, states, counties, tracts,  
county subdivisions, places
- Years mainly in 1970-2010 range
  - *Total Population* back to 1790 &  
*Persons by Sex* back to 1820
  - “Long-form” tables use 2008-2012 ACS

# Unique to NHGIS

- Historical census tables & GIS files
- Time series tables
- Block data
- Universal data filtering & selection
  - All years, levels & data types accessible at once
- Nationwide extent available for all levels
- Agriculture, businesses, religious bodies...
- **FREE**

# Acknowledgements

*Funding:*

Eunice Kennedy Shriver National Institute of  
Child Health & Human Development  
[NIH-R01HD043392,  
NIH-R01HD057929]

National Science Foundation  
[SES-1324875]



(NIH/NICHD R24HD041023)