# Accessing American Community Survey Block Group Data

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American Community Survey Office

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#### **Outline**

- American Community Survey (ACS) basics
- Tracts and block groups
- AFF Download Center
- Overview of ACS Summary File (ACS SF)
- Ways to access the ACS SF
  - Summary File Retrieval Tool
  - DataFerrett
  - FTP site
  - Other
- Wrap up

#### **ACS Basics**

- Ongoing monthly survey sent to 3.5 million addresses per year to produce detailed population and housing estimates each year
  - Visit 20,000 Group Quarter facilities and sample approximately 194,000 residents each year
- Designed to produce critical information on small areas and small population groups previously collected on the decennial long form
- Covers 35+ topics and supports over 300 known Federal Government uses
- Data released twice annually
  - 1-year estimates (12 months of data)
  - 5-year estimates (60 months of data)



#### **ACS Content**

#### Social

Ancestry
Citizenship
Disability
Educational Attainment
Fertility
Grandparents
Language
Marital Status
Migration
School Enrollment
Veterans

#### **Demographic**

Age
Hispanic Origin
Race
Relationship
Sex

#### **Economic**

Class of Worker
Commuting
Employment Status
Food Stamps (SNAP)
Health Insurance
Hours/Week, Weeks/Year
Income
Industry & Occupation

#### Housing

Computer & Internet Use
Costs (Mortgage, Taxes, Insurance)
Heating Fuel
Home Value
Occupancy
Plumbing/Kitchen Facilities
Structure
Tenure (Own/Rent)
Utilities
Vehicles
Year Built/ Year Moved In

35+ Topics → 1000+ Tables → 11 Billion Estimates

#### **Availability of ACS Data Products**

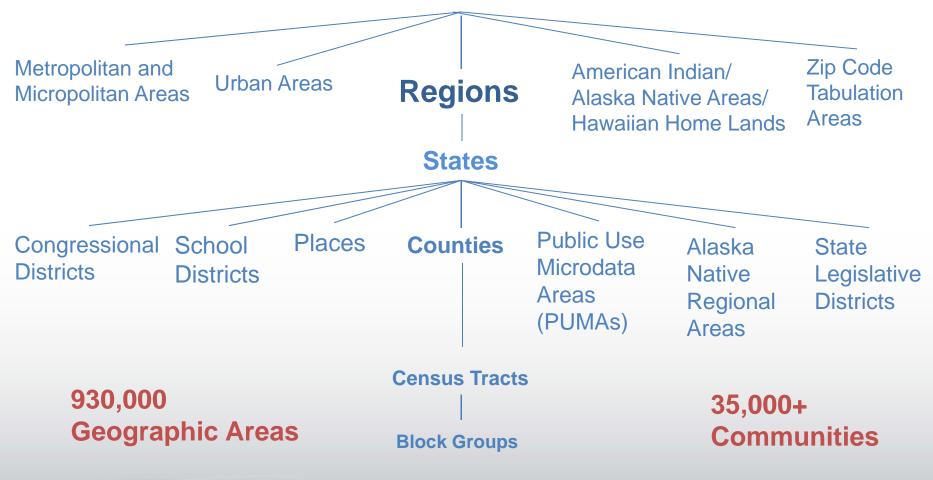
Estimated Population of Geographic Area	1-Year Estimates	3-Year Estimates	5-Year Estimates
65,000 or more	X	X	X
20,000 to 64,999		X	X
Less than 20,000			X
Planned Release Date	September 2016	N/A	December 2016

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#### **Selected Census Geographic Concepts**

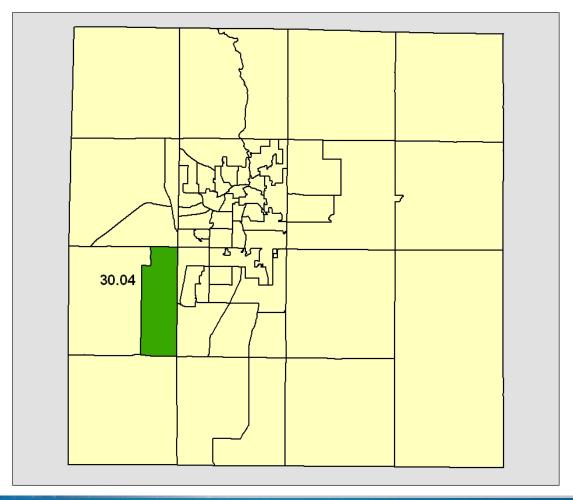




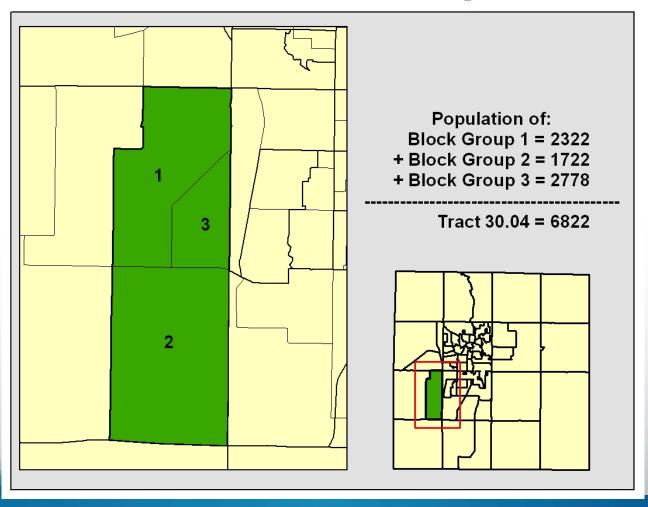
#### **Tracts and Block Groups**

- Block group estimates are available in American FactFinder (2009-2013 ACS 5-year to present) & ACS Summary File (all years)
- Block groups and tracts are available only in the ACS 5-year estimates

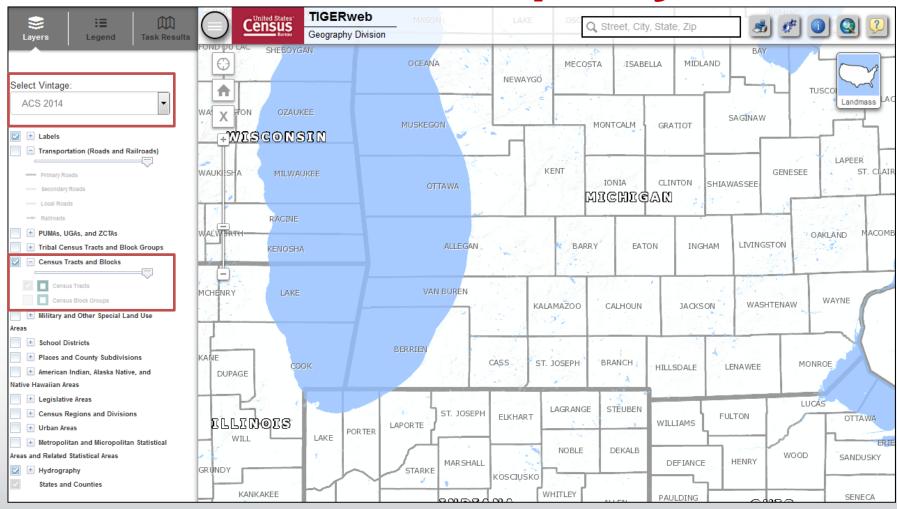
## Kalamazoo County, MI - Census Tract 30.04



#### Kalamazoo County, MI - Census Tract 30.04, Block Groups 1, 2, & 3

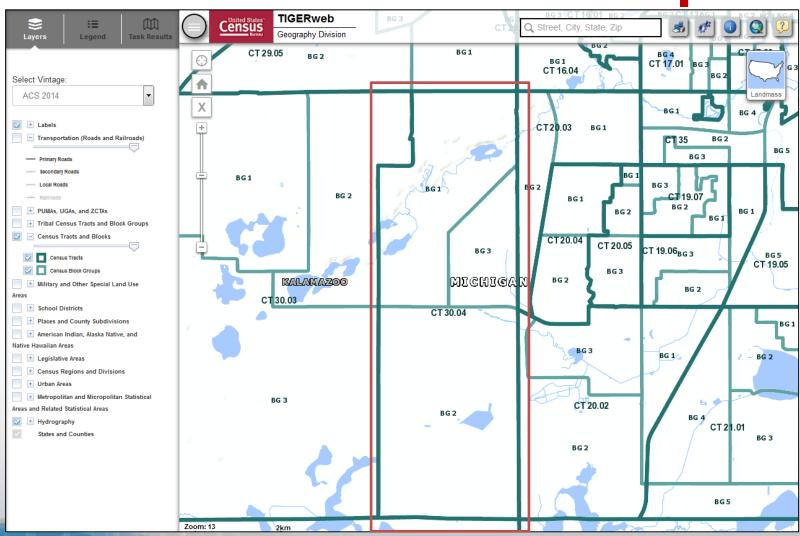


#### **TIGERweb-Map Layers**



tigerweb.geo.census.gov/tigerweb/

## **TIGERweb-Block Groups**



#### **Outline**

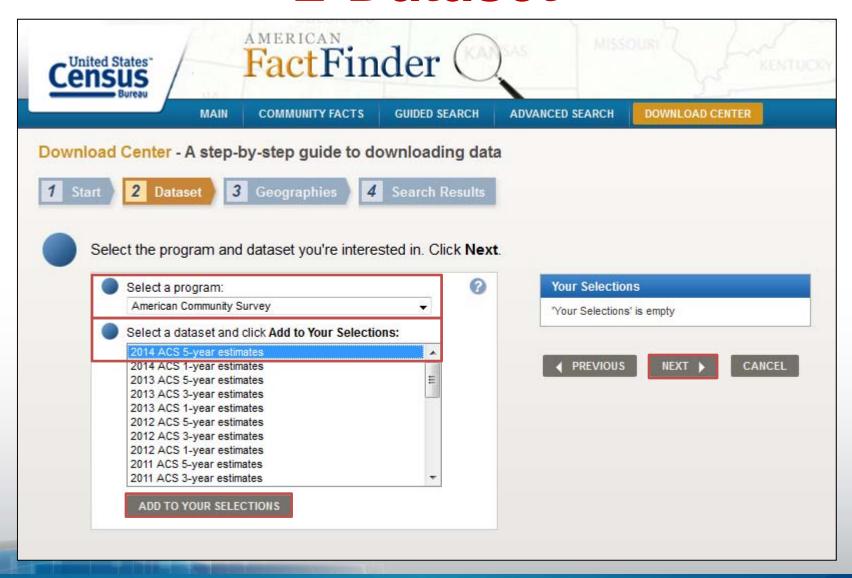
- American Community Survey (ACS) basics
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#### **AFF Download Center**

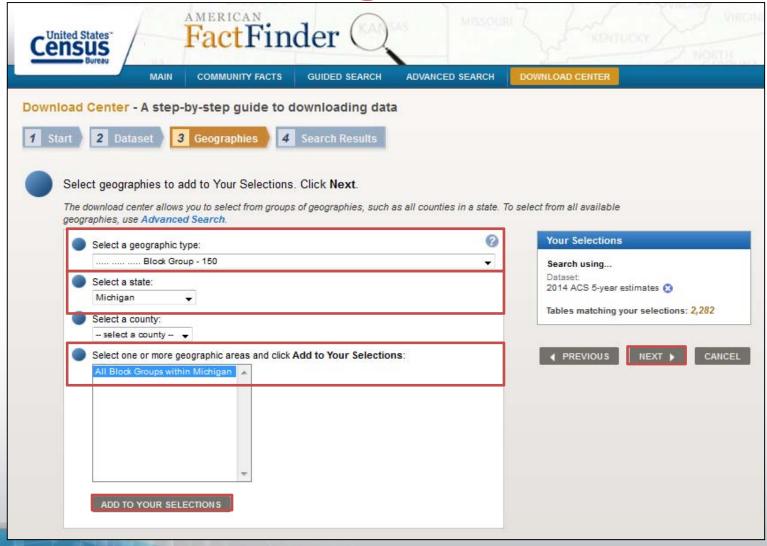


factfinder.census.gov

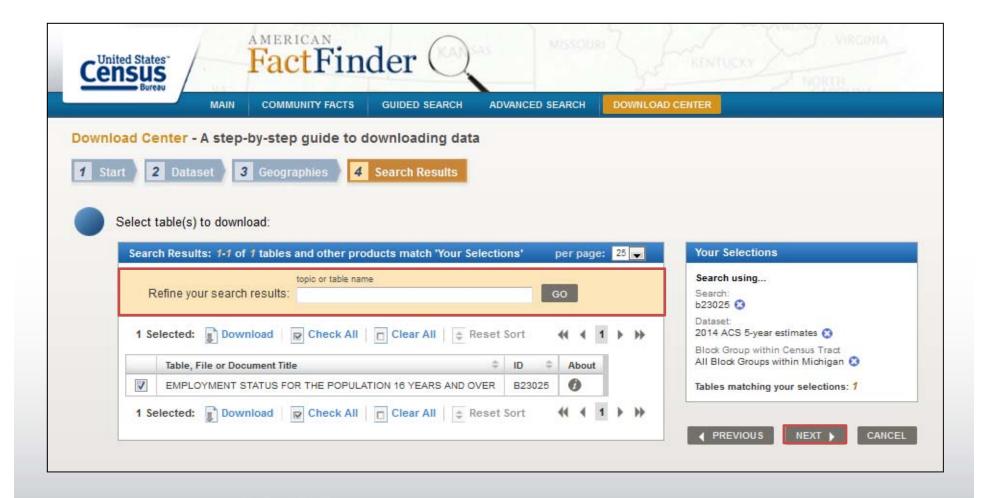
#### 2-Dataset



## 3-Geographies



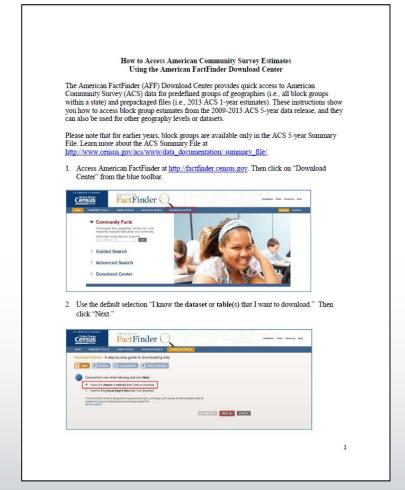
#### 4-Search Results



#### **Table B23025**

4	Α	В	С	D	Е	F	G
1	GEO.id	GEO.id2	GEO.display-label	HD01_VD01	HD02_VD01	HD01_VD02	HD02_VD02
2	Id	Id2	Geography	Estimate; Total:	Margin of Error; Total:	Estimate; In labor force:	Margin of Error; In labor force:
3	150000005	2.6E+11	Block Group 1, Census Tract 1, Alcona County, Michigan	595	74	174	41
4	15000000	2.6E+11	Block Group 2, Census Tract 1, Alcona County, Michigan	1040	100	365	60
5	1500000US	2.6E+11	Block Group 1, Census Tract 9701, Alcona County, Michigan	959	79	375	52
6	150000005	2.6E+11	Block Group 2, Census Tract 9701, Alcona County, Michigan	1136	99	442	65
7	1500000US	2.6E+11	Block Group 1, Census Tract 9704, Alcona County, Michigan	1191	111	523	77
8	1500000US	2.6E+11	Block Group 2, Census Tract 9704, Alcona County, Michigan	1228	118	627	93
9	1500000US	2.6E+11	Block Group 1, Census Tract 9705, Alcona County, Michigan	610	121	250	74
10	1500000US	2.6E+11	Block Group 2, Census Tract 9705, Alcona County, Michigan	528	78	213	50
11	1500000US	2.6E+11	Block Group 3, Census Tract 9705, Alcona County, Michigan	707	87	215	51
12	1500000US	2.6E+11	Block Group 1, Census Tract 9706, Alcona County, Michigan	859	101	313	75
13	1500000US	2.6E+11	Block Group 2, Census Tract 9706, Alcona County, Michigan	571	90	299	61
14	1500000US	2.6E+11	Block Group 0, Census Tract 9900, Alcona County, Michigan	0	10	0	10

#### **Complete Instructions**



census.gov/programs-surveys/acs/technical-documentation/summary-file-documentation.html

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  - FTP site
  - Other
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#### What is the ACS Summary File?

- Set of comma-delimited text files that contain all of the Detailed Tables
- Stored in a series of files on the FTP site
- Files contain only the data from the tables (no information such as table title, description of the rows, etc)
- Data have already been tabulated for specific geographic areas

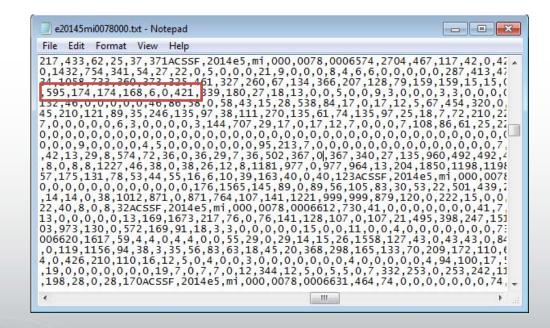
#### AFF vs. Summary File

B23025

EMPLOYMENT STATUS FOR THE POPULATION 16 YEARS AND OVER Universe: Population 16 years and over **1** 2010-2014 American Community Survey 5-Year Estimates

#### << 1 - 18 of 24 >>>

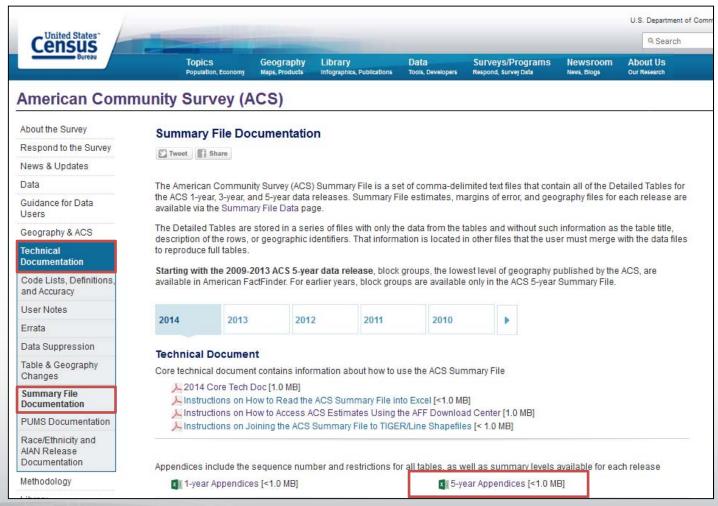
		Block Group 1, Census Tract 1, Alcona County, Michigan	
of 7 × ×		Estimate	Margin of Error
_	Total:	595	+/-74
	In labor force:	174	+/-41
	Civilian labor force:	174	+/-41
	Employed	168	+/-40
	Unemployed	6	+/-6
	Armed Forces	0	+/-10
	Not in labor force	421	+/-55



#### How to Use the ACS SF

- 1—Verify table is available at block group level (not all tables are published for this geography)
- 2—Use appropriate tool to access ACS SF Summary File Retrieval Tool DataFerrett FTP site

## **Summary File Page**



census.gov/programs-surveys/acs/technical-documentation/summary-file-documentation.html

## **Check Appendix for Table**

	А	В	С	D	E
				Summary File	Summary File
1	Table Number	Table Title	Geography Restrictions	Sequence Number	Starting and Ending
680	B23025	Employment Status For The Population 16 Years And Over		0078	38-44
		Sex By Work Status In The Past 12 Months By Usual Hours Worked Per Week In The			
		Past 12 Months By Weeks Worked In The Past 12 Months For The Population 65			
681	B23026	Years And Over		0078	45-93
		Full-Time, Year-Round Work Status In The Past 12 Months By Age For The			
682	B23027	Population 16 Years And Over		0078	94-129
		Occupation By Median Earnings In The Past 12 Months (In 2014 Inflation-Adjusted			
683	B24011	Dollars) For The Civilian Employed Population 16 Years And Over	No Blockgroups	0079	7-42

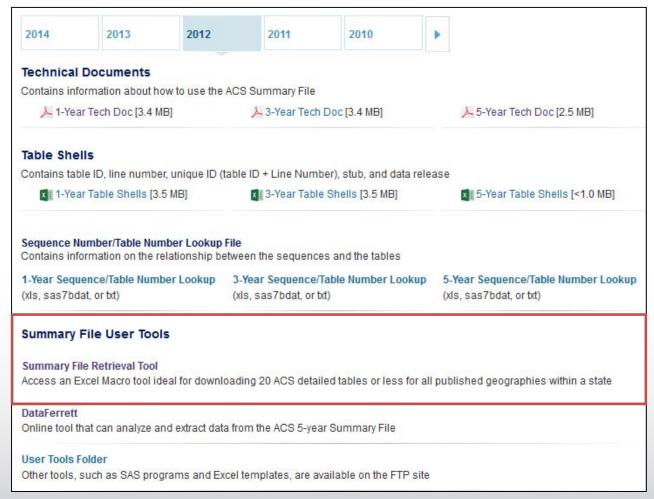
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### **Summary File Retrieval Tool**

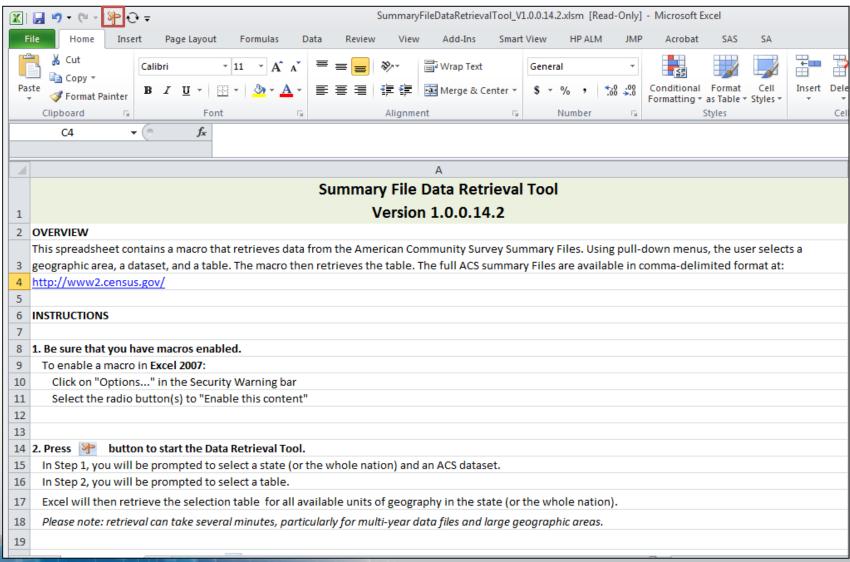
- Includes datasets through 2012 (i.e., 2008-2012 ACS 5-year estimates)
- Allows users to load tables from the ACS
   SF into an Excel spreadsheet
- Must have Excel 2007 or newer to run tool
- You can access all tracts and block groups per table per state

## **Summary File Page**

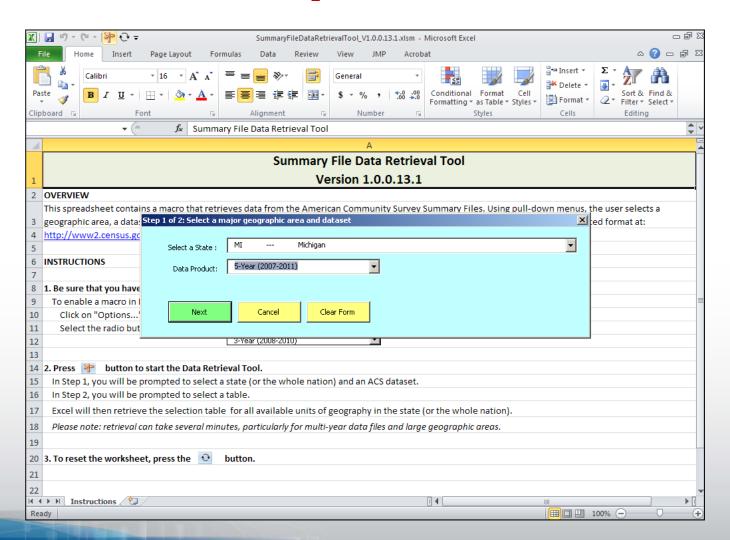


census.gov/programs-surveys/acs/technical-documentation/summary-file-documentation.2012.html

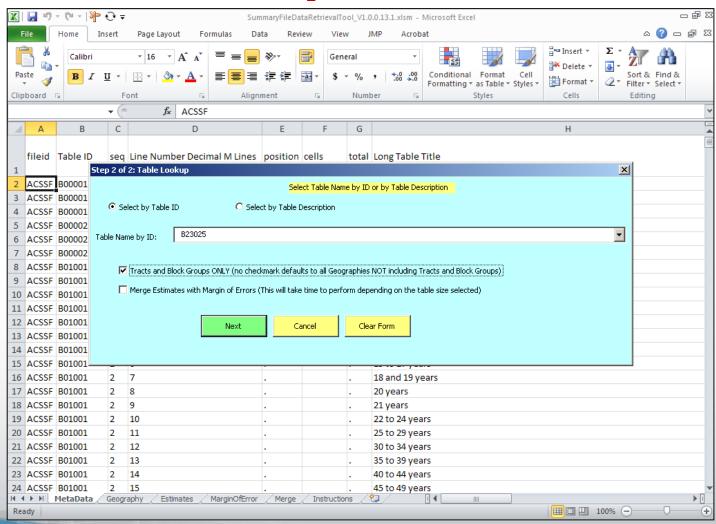
#### **SF Retrieval Tool**



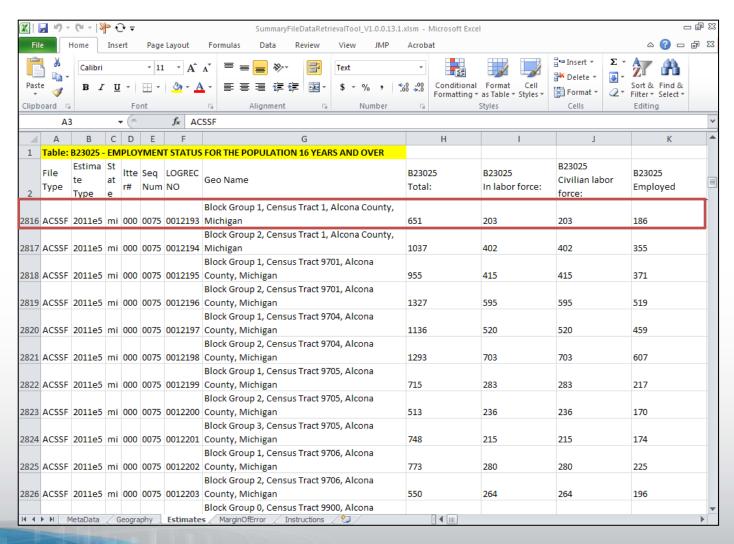
## Step 1 of 2



### Step 2 of 2



#### **Results-Estimates**



#### Video on Using SF Retrieval Tool



youtube.com/user/uscensusbureau

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#### **DataFerrett**



Home About Us Products/Services Collaboration Contact Us

#### **DataFerrett**

DataFerrett is a data analysis and extraction tool to customize federal, state, and local data to suit your requirements. Using DataFerrett, you can develop an unlimited array of customized spreadsheets that are as versatile and complex as your usage demands then turn those spreadsheets into graphs and maps without any additional software.

#### What you should check before getting started:

- ✓ Java Installed: Check your version or Download the latest version.
- ✓ Allow Pop-ups
- ✓ Run in IE/Firefox



#### DATAFERRETT

DataFerrett Home

**Getting Started** 

About the Datasets

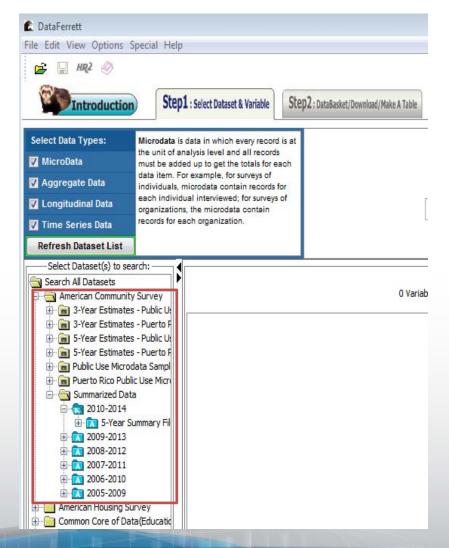
**User Resources** 

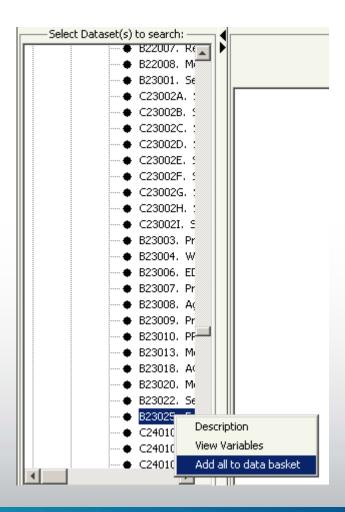
**FAQs** 



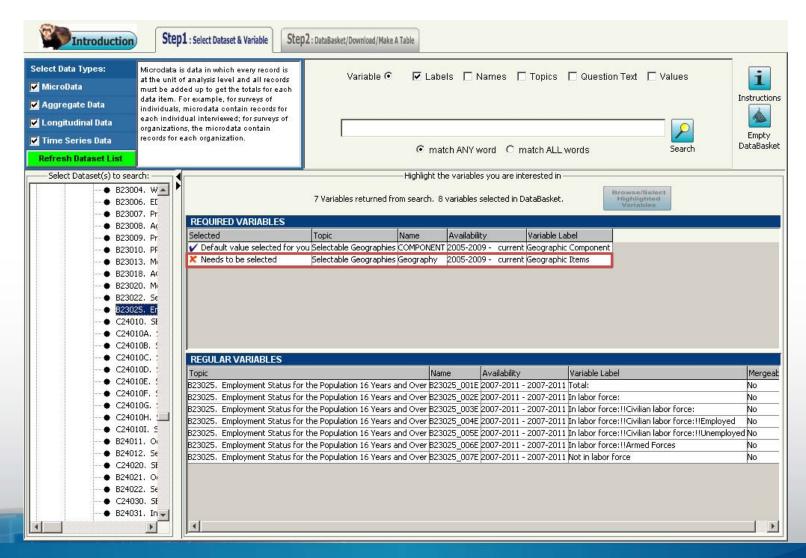
dataferrett.census.gov

## **Finding Summary Data**

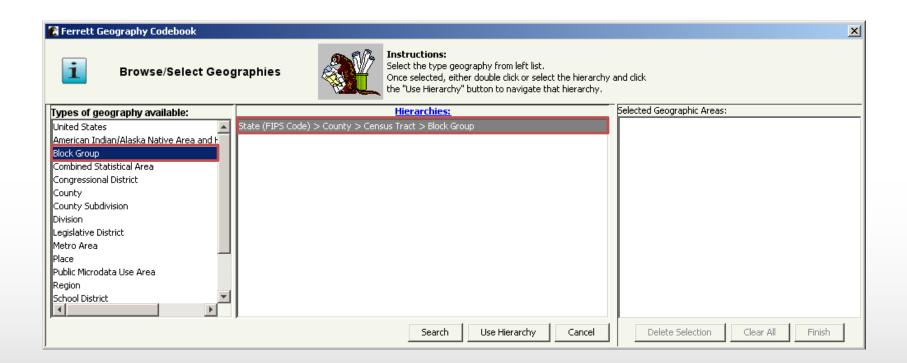




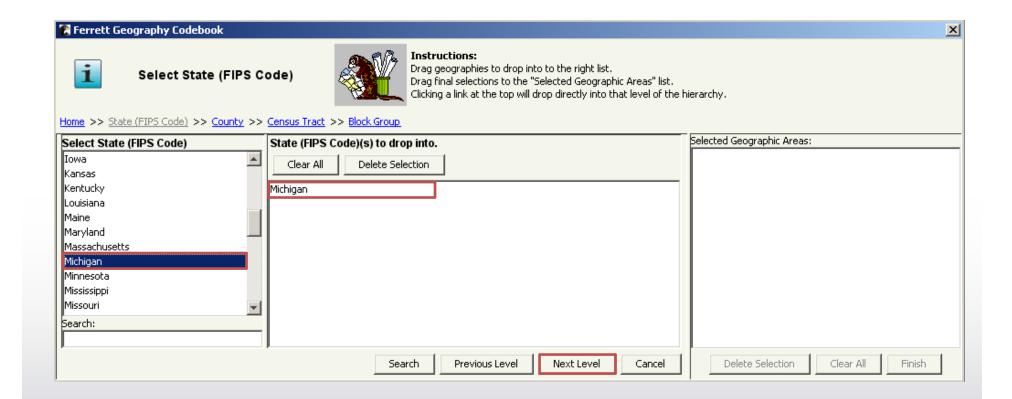
# **Select Geographies**



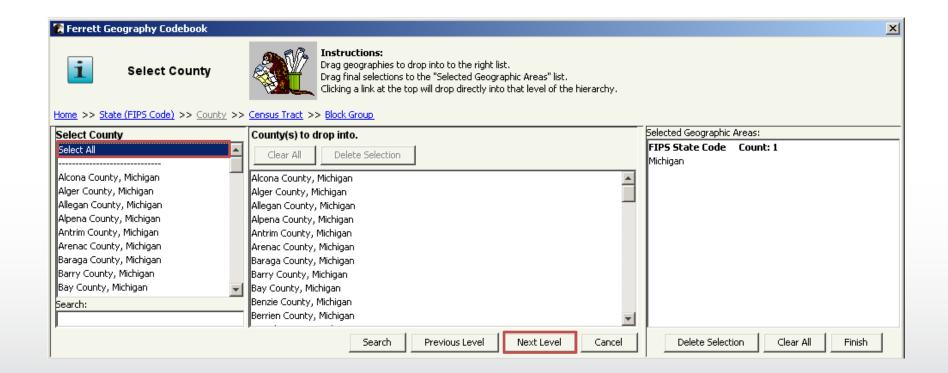
# **Select Geographies**



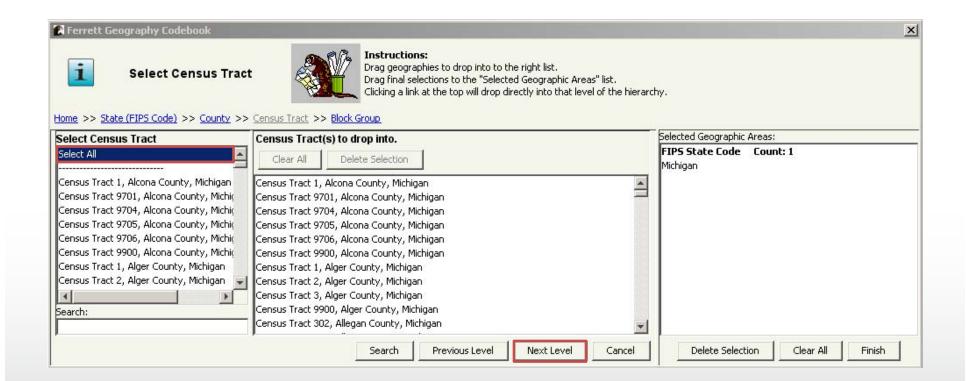
## **Next Level-State**



# **Next Level-County**



### **Next Level-Census Tract**



# **Next Level-Block Group**



# Step 2



Step1: Select Dataset & Variable

Step2: DataBasket/Download/Make A Table

Review your variables then go back to select more variables or go on to get data





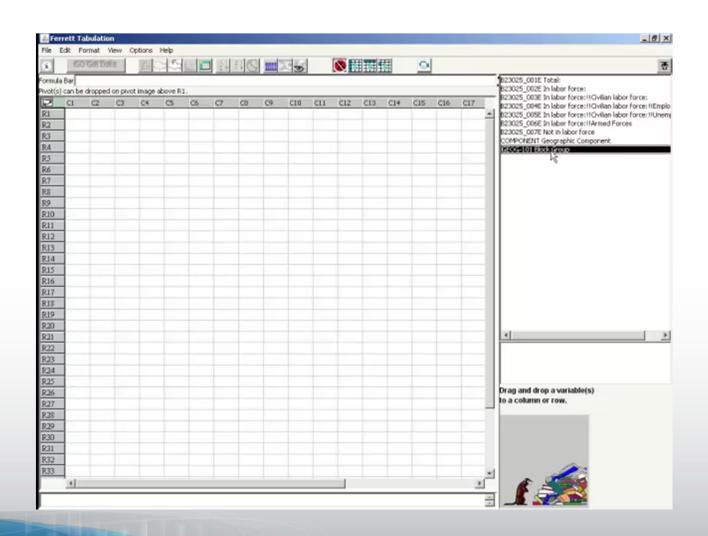




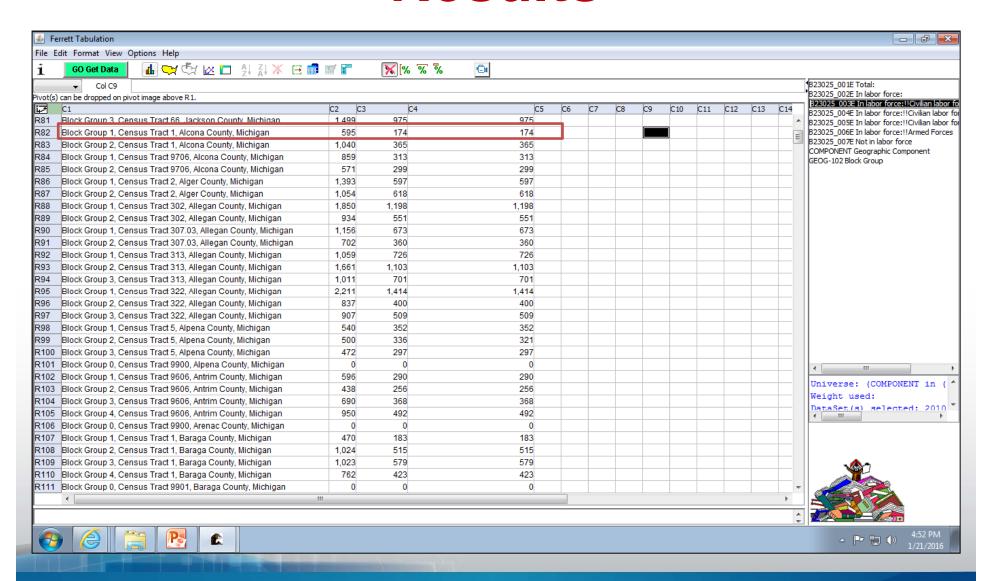
#### Current Query Variables from ACS Summarized Data (5-Year Summary File):

Name	Variable Label	Availability	
B23025_001E	Total:	2007-2011 -	current
B23025_002E	In labor force:	2007-2011 -	current
B23025_003E	In labor force:!!Civilian labor force:	2007-2011 -	current
B23025_004E	In labor force:!!Civilian labor force:!!Employed	2007-2011 -	current
B23025_005E	In labor force:!!Civilian labor force:!!Unemployed	2007-2011 -	current
B23025_006E	In labor force:!!Armed Forces	2007-2011 -	current
B23025_007E	Not in labor force	2007-2011 -	current
COMPONENT	Geographic Component	2005-2009 -	current
GEOG-101	Block Group	2007-2011 -	current

## **Make Table**



#### Results



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# **Summary File Organization**

Name	Last modified	Size Description
Parent Directory		-
1_year_by_state/	31-Aug-2015 13:56	-
1_year_entire_sf/	31-Aug-2015 13:56	-
1_year_seq_by_state/	31-Aug-2015 15:16	-
5_year_by_state/	19-Nov-2015 09:19	-
5_year_entire_sf/	19-Nov-2015 09:58	-
5_year_seq_by_state/	20-Nov-2015 11:14	-
2014_1yr_Summary_FileTemplates.zip	14-Jan-2016 08:54	1.8M
2014_5yr_Summary_FileTemplates.zip	03-Dec-2015 13:44	1.3M

Name	Last modified	Size Description
Parent Directory		-
All_Geographies_Not_Tracts_Block_Groups/	20-Nov-2015 09:31	-
Tracts_Block_Groups_Only/	20-Nov-2015 09:27	-

www2.census.gov/programs-surveys/acs/summary\_file/2014/data

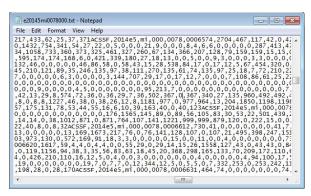
# File Naming

```
20145mi0075000.zip 20-Nov-2015 09:24 1.1M
20145mi0076000.zip 20-Nov-2015 09:24 1.1M
20145mi0077000.zip 20-Nov-2015 09:25 3.6M
20145mi0078000.zip 20-Nov-2015 09:24 2.3M
20145mi0079000.zip 20-Nov-2015 09:27 2.8M
20145mi0080000.zip 20-Nov-2015 09:25 2.1M
20145mi0081000.zip 20-Nov-2015 09:25 2.3M
20145mi0082000.zip 20-Nov-2015 09:25 1.4M
20145mi0083000.zip 20-Nov-2015 09:24 1.9M
20145mi0084000.zip 20-Nov-2015 09:25 69K
20145mi0085000.zip 20-Nov-2015 09:24 69K
20145mi0086000.zip 20-Nov-2015 09:24 59K
20145mi0087000.zip 20-Nov-2015 09:25 69K
20145mi0088000.zip 20-Nov-2015 09:24 69K
20145mi0089000.zip 20-Nov-2015 09:24 59K
20145mi0090000.zip 20-Nov-2015 09:25 69K
```

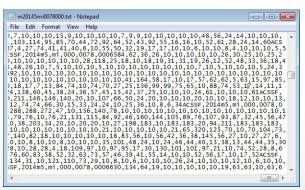
2014 5 mi 0078 000.zip

- 2014=reference year
- 5=period covered
- mi=state level
- 0078=sequence number
- 000=iteration ID

## Estimate, MOE, Geography Files



Estimate file e20145mi0078000.txt

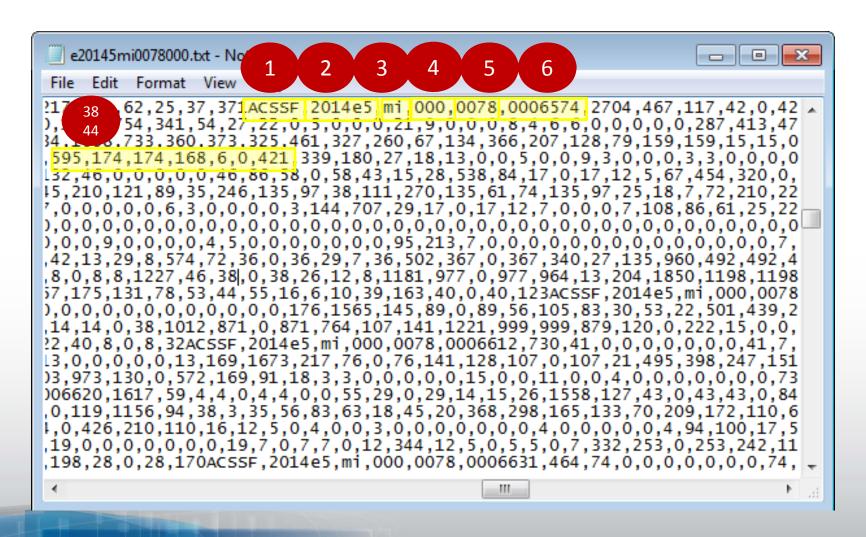


Margin of error file m20145mi0078000.txt

14000US26165380800 Census Tract 3808, Wexford County, Michigan 15000US260010001001 Block Group 1, Census Tract 1, Alcona County, Michigan 15000US260010001002 Block Group 2, Census Tract 1, Alcona County, Michigan 15000US260019701001 Block Group 1, Census Tract 9701, Alcona County, Michigan 15000US260019701002 Block Group 2, Census Tract 9701, Alcona County, Michigan 15000US260019704001 Block Group 1, Census Tract 9704, Alcona County, Michigan 15000US260019704002 Block Group 2, Census Tract 9704, Alcona County, Michigan Block Group 1, Census Tract 9705, Alcona County, Michigan Block Group 2, Census Tract 9705, Alcona County, Michigan Block Group 3, Census Tract 9705, Alcona County, Michigan Block Group 1, Census Tract 9706, Alcona County, Michigan Block Group 2, Census Tract 9706, Alcona County, Michigan

Geography file g20145mi.csv or g20145mi.txt

# Starting and Ending Position



# **Templates**

	Α	В	С	D	E	F	AL	AM	AN	AO	AP	AQ	AR
1	FILEID	FILETYPE	STUSAB	CHARITER	SEQUENCE	LOGRECNO	B23025_001	B23025_002	B23025_003	B23025_004	B23025_005	B23025_006	B23025_007
											EMPLOYME		
											NT STATUS		
											FOR THE		
										EMPLOYMEN	POPULATIO		
										T STATUS	N 16 YEARS	EMPLOYMEN	
									EMPLOYMENT	FOR THE	AND	T STATUS	
									STATUS FOR	POPULATION	OVER% In	FOR THE	EMPLOYME
								EMPLOYMENT	THE	16 YEARS	labor	POPULATIO	NT STATUS
							EMPLOYMENT	STATUS FOR	POPULATION	AND OVER%	force:%	N 16 YEARS	FOR THE
							STATUS FOR THE	THE	16 YEARS AND	In labor	Civilian	AND OVER%	POPULATIO
							POPULATION 16	POPULATION	OVER% In	force:%	labor	In labor	N 16 YEARS
							YEARS AND OVER	16 YEARS AND	labor force:%	Civilian labor	force:%	force:%	AND OVER%
							for Population 16	OVER% In	Civilian labor	force:%	Unemploye	Armed	Not in labor
2	FILEID	FILETYPE	STUSAB	CHARITER	SEQUENCE	LOGRECNO	years and over	labor force:	force:	Employed	d	Forces	force
2816	ACSSF	2.01E+08	mi	0	78	6581	595	174	174	168	6	0	421
2817	ACSSF	2.01E+08	mi	0	78	6582	1040	365	365	315	50	0	675
2818	ACSSF	2.01E+08	mi	0	78	6583	959	375	375	341	34	0	584
2819	ACSSF	2.01E+08	mi	0	78	6584	1136	442	442	412	30	0	694
2820	ACSSF	2.01E+08	mi	0	78	6585	1191	523	523	453	70	0	668
2821	ACSSF	2.01E+08	mi	0	78	6586	1228	627	627	535	92	0	601
2822	ACSSF	2.01E+08	mi	0	78	6587	610	250	250	205	45	0	360
2823	ACSSF	2.01E+08	mi	0	78	6588	528	213	213	170	43	0	315

www2.census.gov/programs-surveys/acs/summary\_file/2014/data/ 2014\_5yr\_Summary\_FileTemplates.zip

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# TIGER/Line Shapefiles Pre-joined with Demographic Data

#### TIGER/Line® with Selected Demographic and Economic Data

A limited set of TIGER/Line Shapefiles are available pre-joined with data in geodatabase and shapefile format.

We continue to work with our data providers to ensure there are easy links between the geographic products and the data products.



#### American Community Survey 5-Year Estimates — Geodatabase Format

**→ 2009 - 2013 Detailed Tables** 

→ 2008 - 2012 Detailed Tables

→ 2007 - 2011 Block Group Data

+ 2007 - 2011 Data Profiles

→ 2006 - 2010 Block Group Data

→ 2006 - 2010 Data Profiles

census.gov/geo/maps-data/data/tiger-data.html

## **Census API**

#### **Developers**

API Forum

About this Section

App Gallery

Available APIs

Geography

News

Terms of Service

Updates

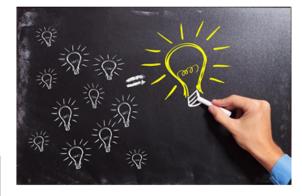
The Census Bureau has begun rolling out our datasets via APIs. Check out our Discovery Tool. Sign up for our newsletter to get the latest updates and newest dataset addition. We also invite you to make requests for features / data via our forum.

Read More











#### Latest

Available APIs

News

Updates



New ACS 5-Year Estimates: See How Young Adults Today Compare

December 04, 2014

Young adults today are more likely to be foreign born and speak a language other than English at home, compared with young adults in 1980.

census.gov/developers

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# Recap

- Tracts and block groups are only available as 5-year estimates (not 1-year or 3-year)
- 2009-2013 ACS 5-year to future block group level estimates are available in American FactFinder
- All years of block group level estimates are available in the ACS Summary File
- You can access the ACS SF using the SF Retrieval Tool, DataFerrett, or FTP site

# **Availability of Block Groups**

Dataset	American FactFinder	SF Retrieval Tool	DataFerrett	FTP Site
2005-2009 ACS		$\overline{\checkmark}$	$\overline{\checkmark}$	$\overline{\checkmark}$
2006-2010 ACS		$\overline{\checkmark}$	$\overline{\checkmark}$	$\overline{\checkmark}$
2007-2011 ACS		$\overline{\mathbf{V}}$	$\overline{\mathbf{V}}$	$\overline{\square}$
2008-2012 ACS		$\overline{\checkmark}$	$\overline{\checkmark}$	
2009-2013 ACS	$\overline{\checkmark}$		$\overline{\checkmark}$	$\overline{\checkmark}$
2010-2014 ACS	$\overline{\checkmark}$		$\overline{\checkmark}$	

#### **Continue the Conversation #ACSdata**



Sign up for and manage alerts at <a href="https://public.govdelivery.com/accounts/USCENSUS/subscriber/new">https://public.govdelivery.com/accounts/USCENSUS/subscriber/new</a>



facebook.com/uscensusbureau



twitter.com/uscensusbureau



More information on the American Community Survey: http://www.census.gov/acs



youtube.com/user/uscensusbureau



(800) 923-8282 or (301) 763-1405



instagram.com/uscensusbureau



pinterest.com/uscensusbureau



#### • Purpose:

- Improve understanding of the value and utility of ACS data.
- Promote information sharing among data users about key ACS data issues and applications
- Membership is free and open to all interested ACS data users
- Webinars and special sessions at professional meetings planned
- Users group website and online community

http://www.acsdatausers.org/

### **Need Local Stats?**

Assistance Near You!

Our regional data staff can help you access local statistics from the ACS or offer training to help build your skills. Contact us at the following address: clmso.ddb.questions@census.gov



# **Questions?**