

Using ACS Data to Create Data Visualizations

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U.S. Census Bureau

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2019 ACS Data Users Conference

Washington, DC

The American Community Survey

The American Community Survey is on the leading edge of survey design, continuous improvement, and data quality

- The nation's most current, reliable, and accessible data source for local statistics on critical planning topics such as age, children, veterans, commuting, education, income, and employment
- Surveys **3.5 million** addresses and informs over **\$675 billion** of Federal government spending each year
- Covers **40+ topics**, supports over **300** evidence-based Federal government uses, and produces **11 billion** estimates each year
- Three key annual data releases:
 - 1-year Estimates (for large populations)
 - 1-year Supplemental Estimates (for small populations)
 - 5-year Estimates (for very small populations)

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U.S. DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. CENSUS BUREAU

THE American Community Survey

This booklet shows the content of the American Community Survey questionnaire.

Start Here

Respond online today at:
<https://respond.census.gov/acs>
OR
Complete this form and mail it back as soon as possible.

This form asks for information about the people who are living or staying at the address on the mailing label and about the house, apartment, or mobile home located at the address on the mailing label.

If you need help or have questions about completing this form, please call 1-800-354-7271. The telephone call is free.

Telephone Device for the Deaf (TDD):
Call 1-800-582-8330. The telephone call is free.

¿NECESITA AYUDA? Si usted habla español y necesita ayuda para completar su cuestionario, llame sin cargo alguno al 1-877-833-5625. Usted también puede completar su entrevista por teléfono con un entrevistador que habla español. O puede responder por Internet en: <https://respond.census.gov/acs>

For more information about the American Community Survey, visit our web site at: <http://www.census.gov/acs/www/>

Please print today's date.
Month Day Year

Please print the name and telephone number of the person who is filling out this form. We may contact you if there is a question.
Last Name First Name MI Area Code + Number

How many people are living or staying at this address?
• **INCLUDE** everyone who is living or staying here for more than 2 months.
• **INCLUDE** yourself if you are living here for more than 2 months.
• **INCLUDE** anyone else staying here who does not have another place to stay, even if they are here for 2 months or less.
• **DO NOT INCLUDE** anyone who is living somewhere else for more than 2 months, such as a college student living away or someone in the Armed Forces on deployment.

Number of people

Fill out pages 2, 3, and 4 for everyone, including yourself, who is living or staying at this address for more than 2 months. Then complete the rest of the form.

FORM ACS-1(INFO)(2015)
(9C-17-2014)

OMB No. 0607-0910
OMB No. 0607-0936

Types of Data Products

Summary Products

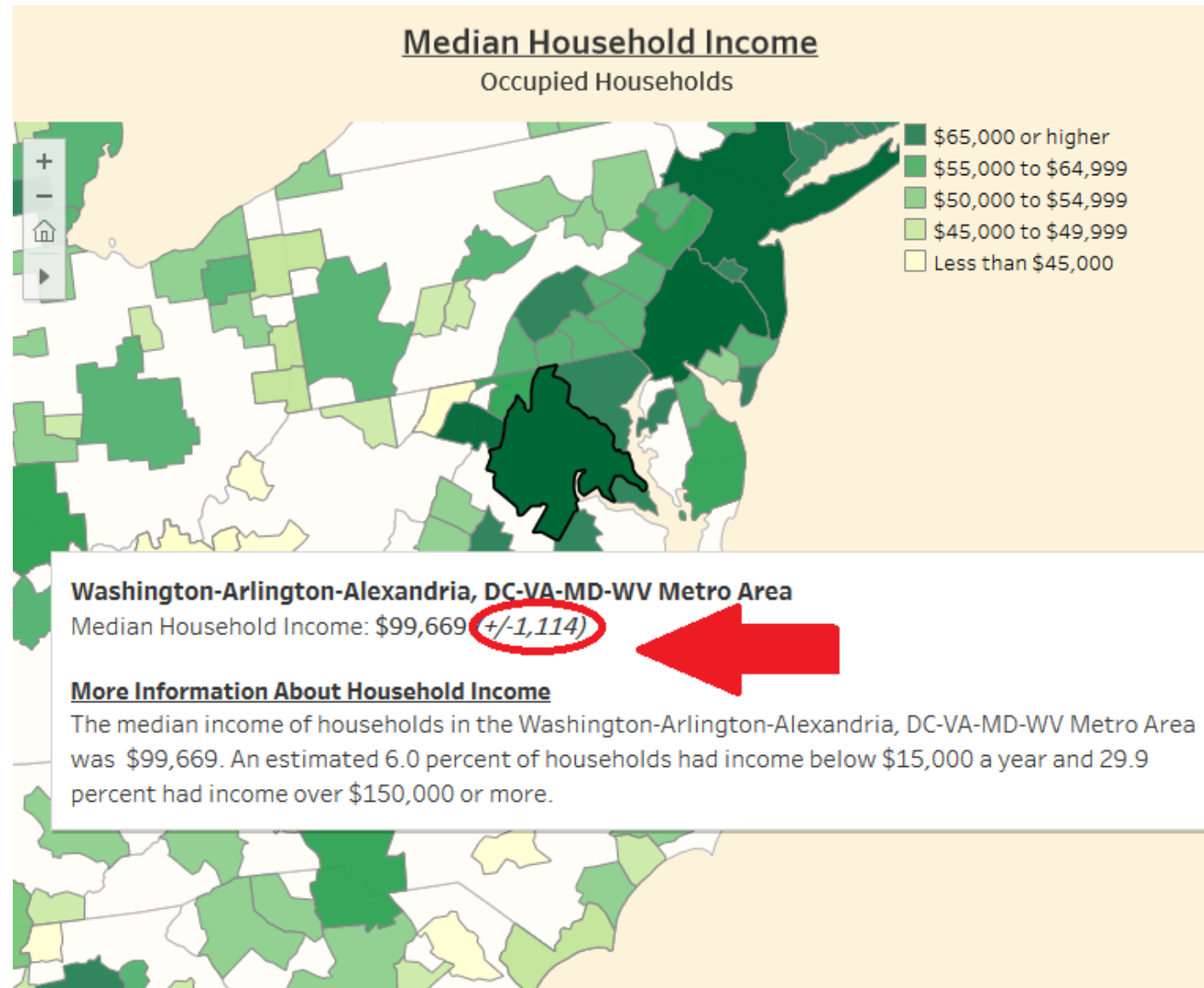
- Tables and profiles
- Generated by Census Bureau with input from subject matter experts
- Available from:
 - data.census.gov
 - American FactFinder
 - Many other tools and apps

Public Use Microdata Sample

- Untabulated records
- Subsample of population and housing records from the ACS
- Available from:
 - FTP

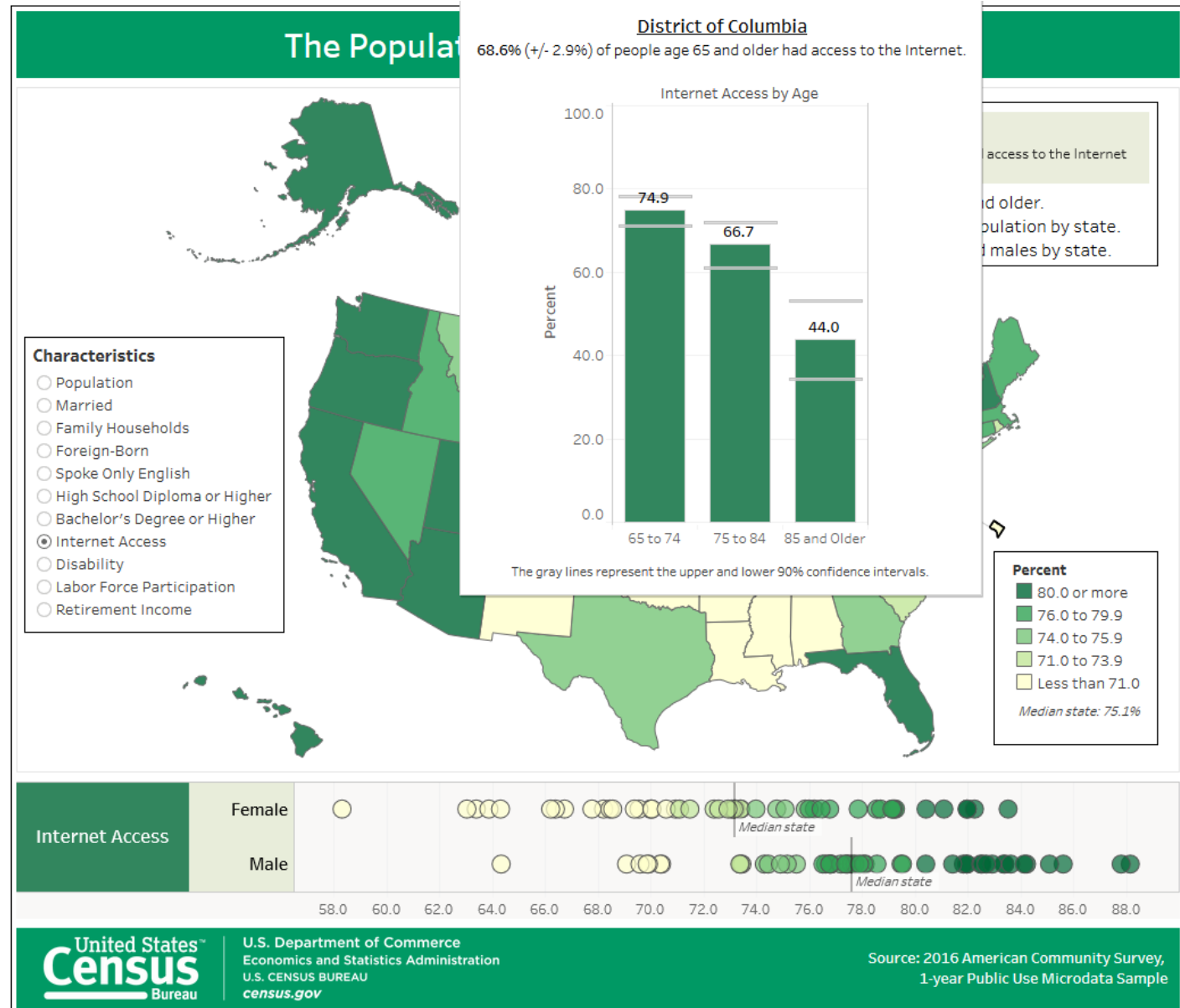
Best Practices to Remember

- Remember Margins of Error
 - Show them
 - Visualize them
 - Ensure reliability
- Use Census tracts and block groups with caution
 - Margins of Error
 - Custom Geographies



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MAP RELIABILITY CALCULATOR

(Fill in boxes to get map reliability* for classification schemes)

STEP 1

Insert estimates & Margins of Error (MOEs)

(Insert up to 2,500 lines)

	Estimates	MOEs
1	0.00	
2	1105.00	222.00
3	2667.00	358.00
4	0.00	
5	4028.00	998.00
6	6463.00	737.00
7	4132.00	619.00
8	1120.00	162.00
9	695.00	110.00
10	1882.00	560.00
11	1709.00	246.00
12	3419.00	400.00
13	1734.00	231.00
14	1470.00	244.00
15	3663.00	390.00

STEP 2

Select number of classes

(Type in number from 2 to 7)

Classes
4

STEP 3

Select class breaks

(Type in lower limit for each class)

User Defined			
	Class Breaks	Count	Reliability *
top class	5,000.00	52	11.9
lowest (2 classes)	2,500.00	384	11.0
lowest (3 classes)	1,000.00	1,241	6.4
lowest (4 classes)	0.00	490	7.3
lowest (5 classes)			
lowest (6 classes)			
lowest (7 classes)			
Total		2,167	7.6

Reliable

*The reliability score is the probability that any given estimate is erroneously classed.

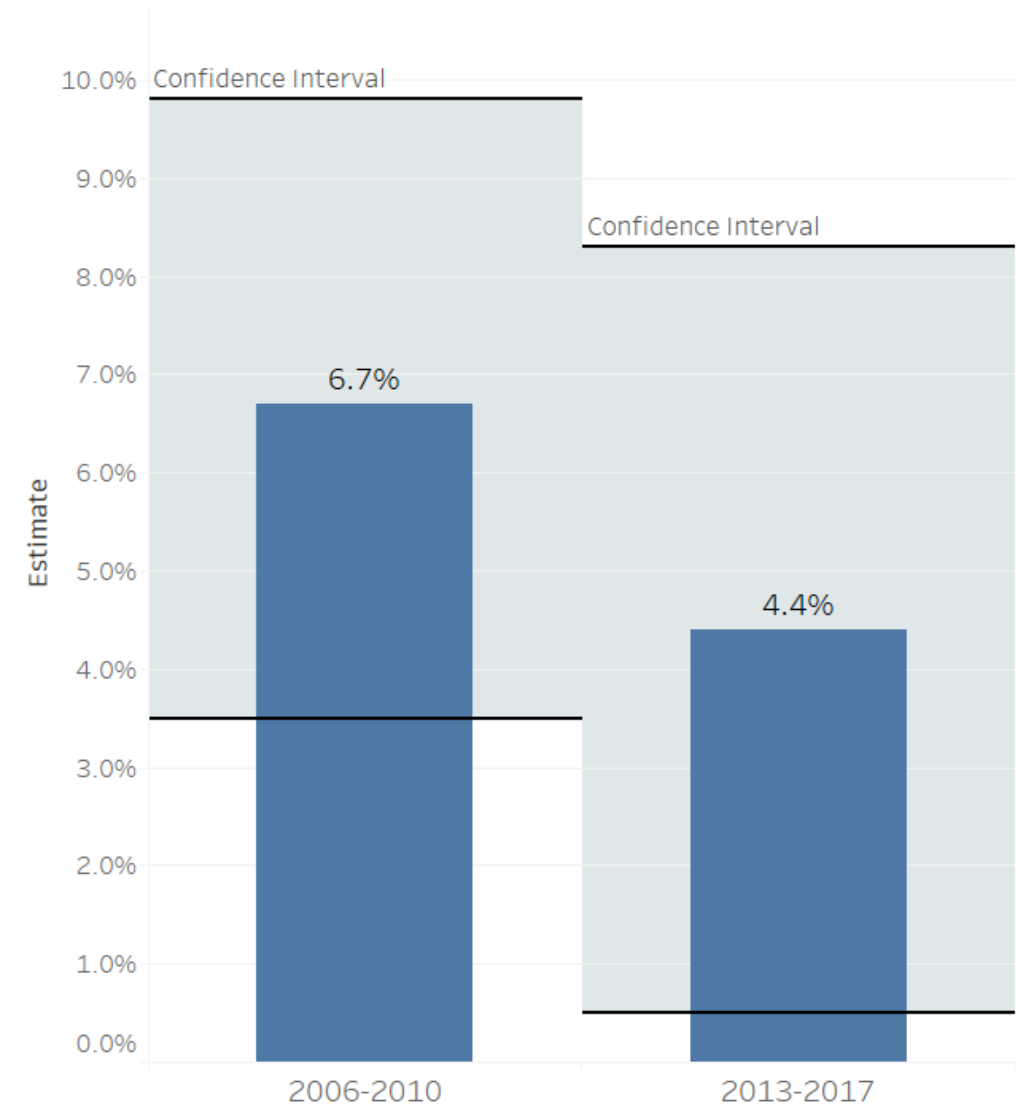
A map classification is considered to be reliable if the total reliability score is less 10% and all individual classes are less than 20%.

census.gov/programs-surveys/acs/guidance/handbooks/state-local.html

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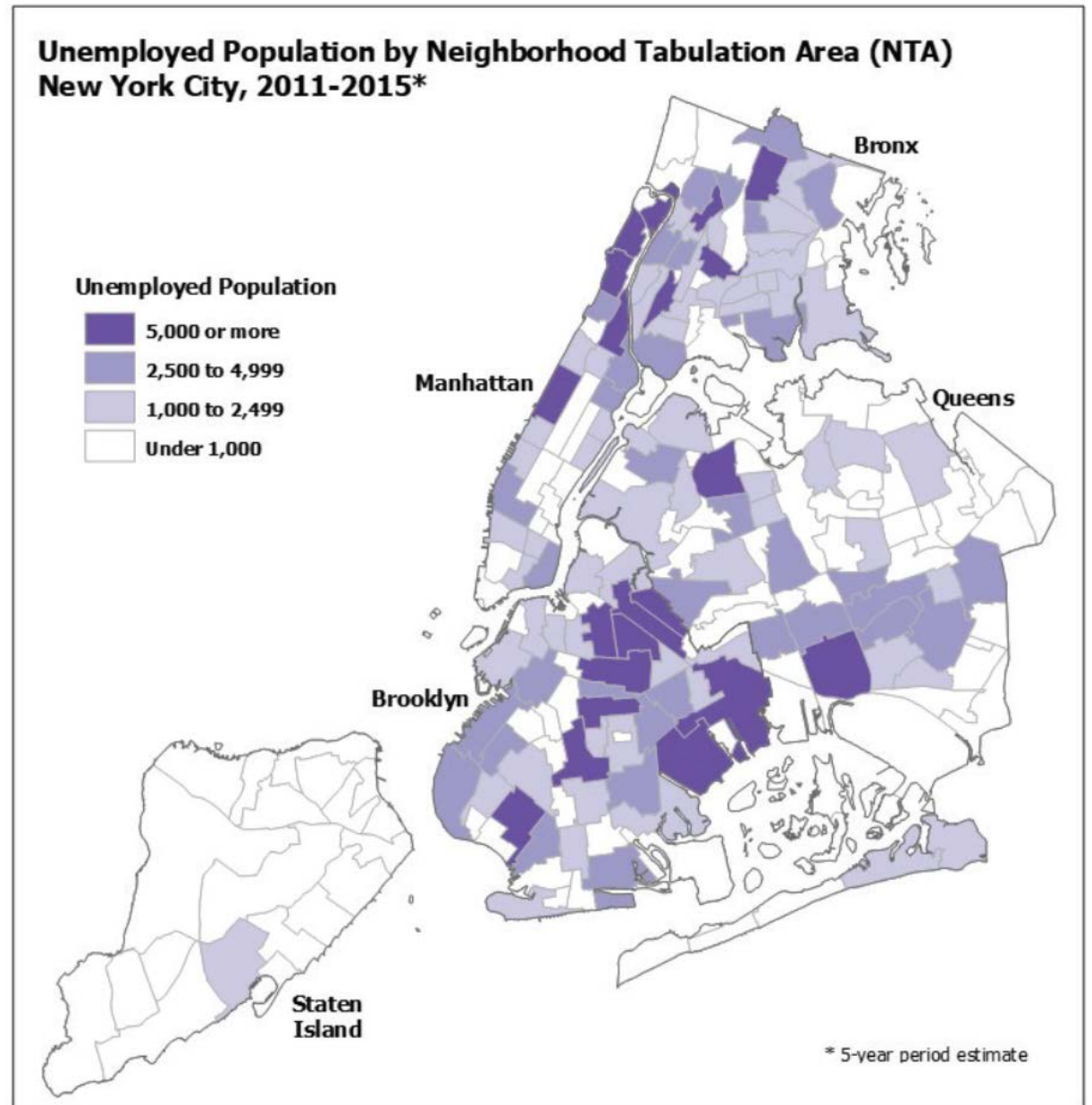
Unemployment Rate (%)



Source U.S. Census Bureau's 2006-2010 and 2013-2017 5-Year Estimates for Census Tract 32007.07 Maricopa County, Arizona

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Public Use Microdata Sample

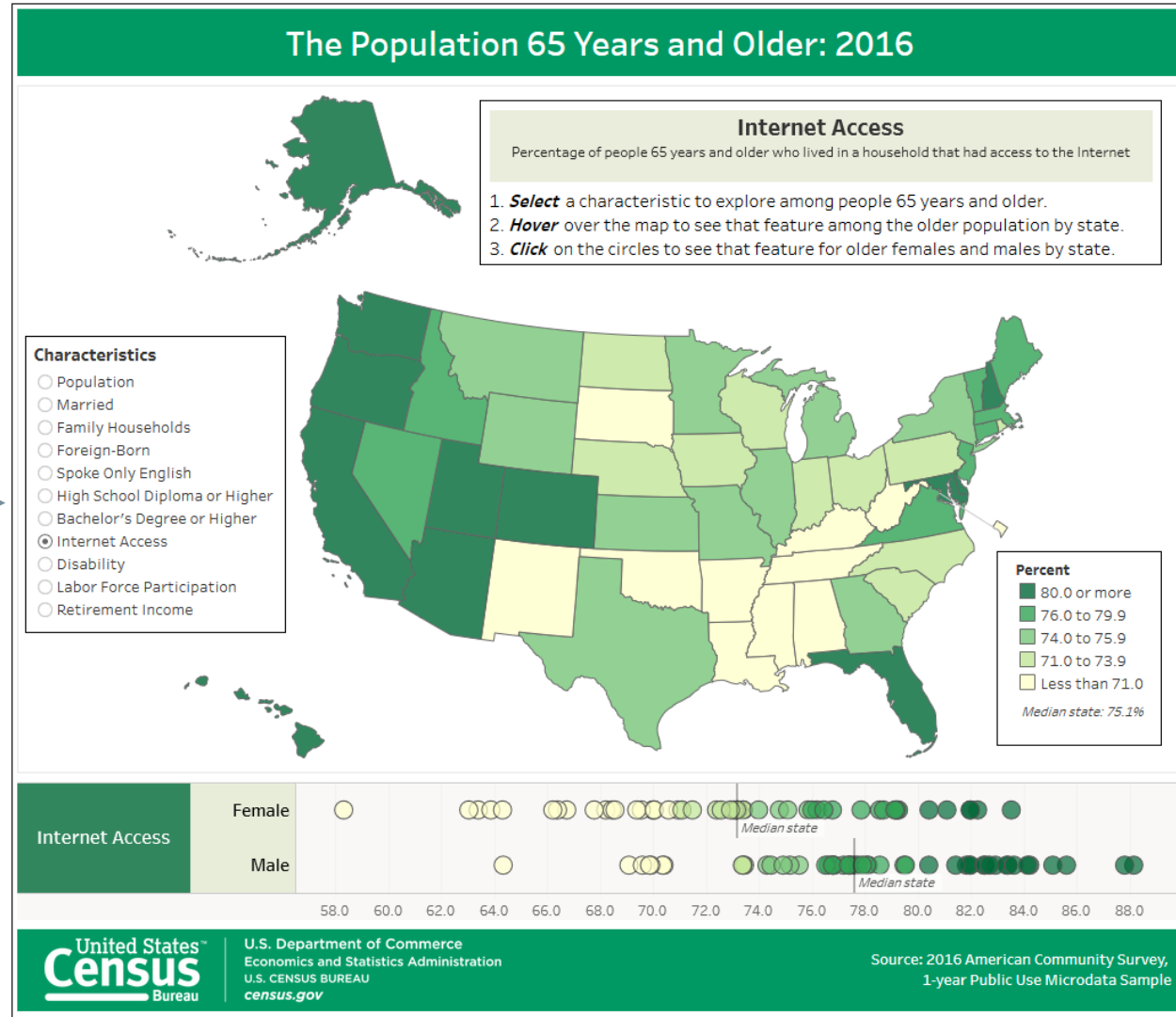
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Questions Not Answered by Summary Products

- What Percentage of Older Americans Have Internet Access at Home?
- What is the Marital Status of Young Adults in College?

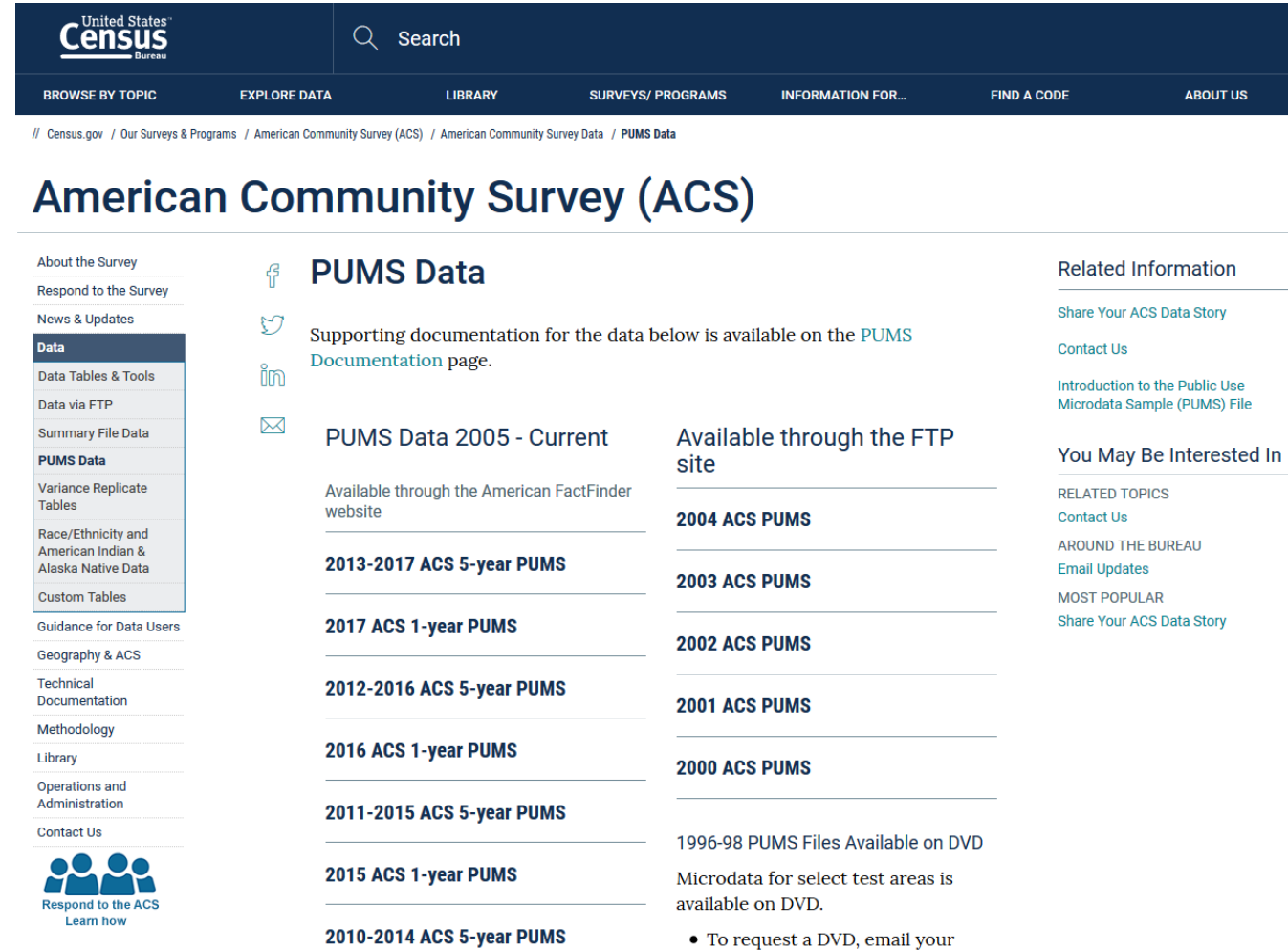
Questions Answered by ACS Public Use Microdata Sample

- What Percentage of Older Americans Have Internet Access at Home?
- What is the Marital Status of Young Adults in College?
 - Upcoming demonstration



Accessing the ACS Public Use Microdata Sample

- Go to the ACS website
- Select the desired PUMS file
- Select format (CSV or SAS)
- Select geography and type
 - (Housing or Population)
- Unzip the files
 - (National will have two files)



The screenshot shows the 'American Community Survey (ACS)' page for 'PUMS Data'. The header includes the United States Census Bureau logo, a search bar, and navigation links: BROWSE BY TOPIC, EXPLORE DATA, LIBRARY, SURVEYS/ PROGRAMS, INFORMATION FOR..., FIND A CODE, and ABOUT US. A breadcrumb trail reads: // Census.gov / Our Surveys & Programs / American Community Survey (ACS) / American Community Survey Data / PUMS Data.

The main heading is 'American Community Survey (ACS)'. On the left is a sidebar menu with links: About the Survey, Respond to the Survey, News & Updates, Data (highlighted), Data Tables & Tools, Data via FTP, Summary File Data, PUMS Data (highlighted), Variance Replicate Tables, Race/Ethnicity and American Indian & Alaska Native Data, Custom Tables, Guidance for Data Users, Geography & ACS, Technical Documentation, Methodology, Library, Operations and Administration, and Contact Us. Below the menu is a 'Respond to the ACS' button with a 'Learn how' link.

The main content area is titled 'PUMS Data' and includes social media icons for Facebook, Twitter, LinkedIn, and Email. It states: 'Supporting documentation for the data below is available on the [PUMS Documentation](#) page.'

There are two columns of data availability information:

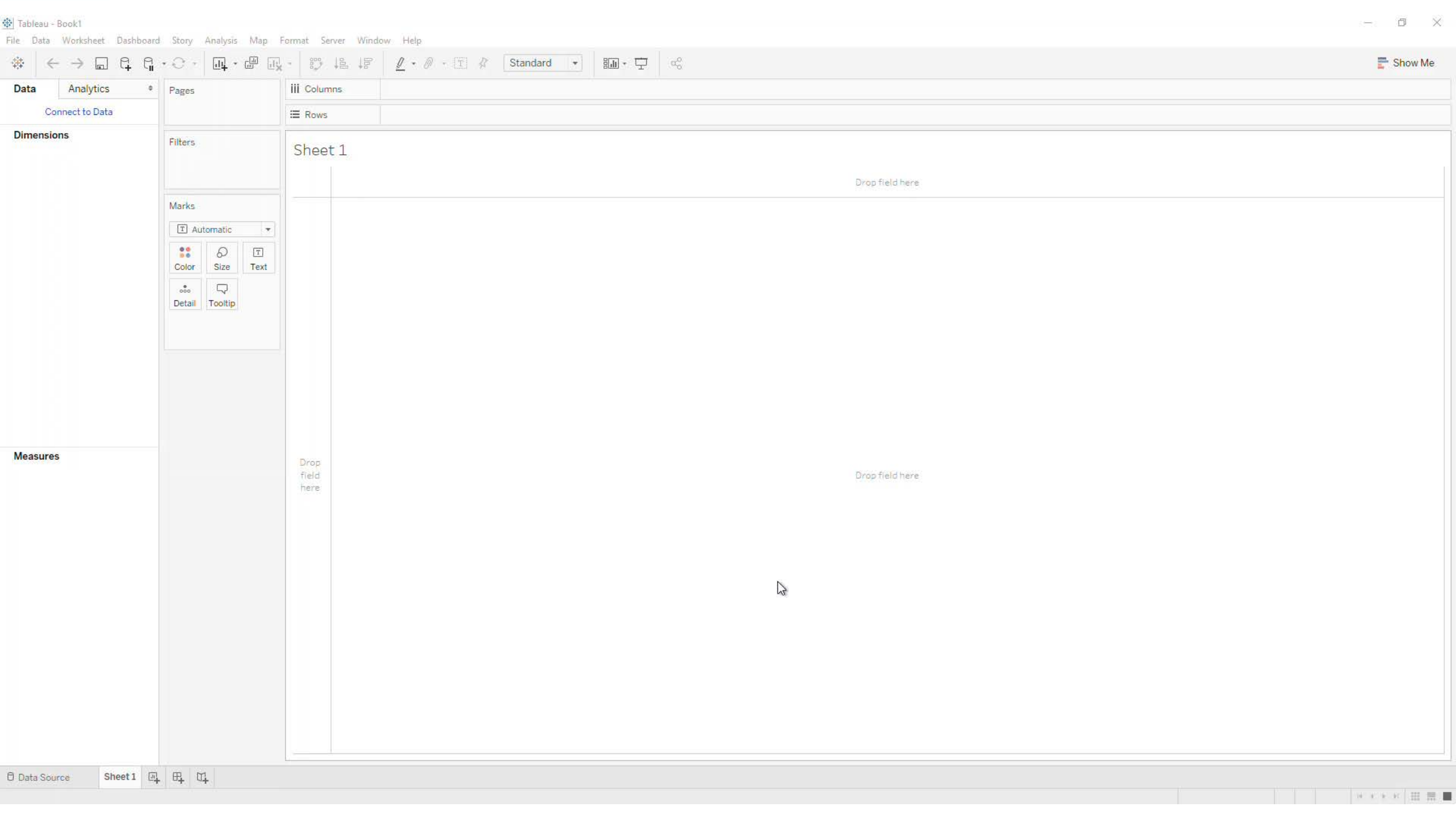
- PUMS Data 2005 - Current**: Available through the American FactFinder website.
- 2013-2017 ACS 5-year PUMS**
- 2017 ACS 1-year PUMS**
- 2012-2016 ACS 5-year PUMS**
- 2016 ACS 1-year PUMS**
- 2011-2015 ACS 5-year PUMS**
- 2015 ACS 1-year PUMS**
- 2010-2014 ACS 5-year PUMS**

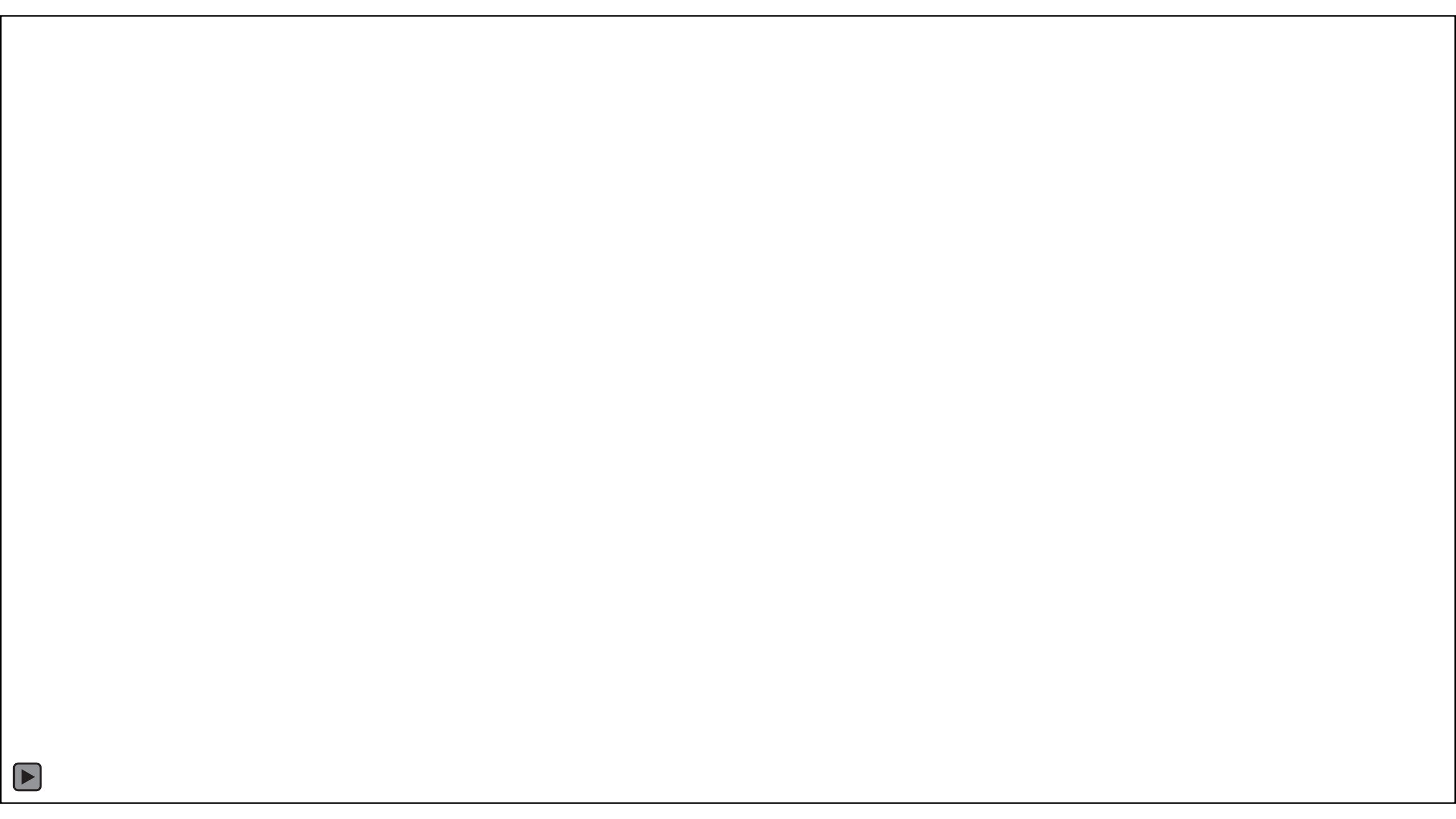
On the right, under 'Available through the FTP site', the following years are listed: **2004 ACS PUMS**, **2003 ACS PUMS**, **2002 ACS PUMS**, **2001 ACS PUMS**, and **2000 ACS PUMS**.

Below these lists, it states: '1996-98 PUMS Files Available on DVD' and 'Microdata for select test areas is available on DVD.' A bullet point indicates: '• To request a DVD, email your'.

On the far right, under 'Related Information', there are links: 'Share Your ACS Data Story', 'Contact Us', and 'Introduction to the Public Use Microdata Sample (PUMS) File'. Under 'You May Be Interested In', there are links: 'RELATED TOPICS', 'Contact Us', 'AROUND THE BUREAU', 'Email Updates', 'MOST POPULAR', and 'Share Your ACS Data Story'.

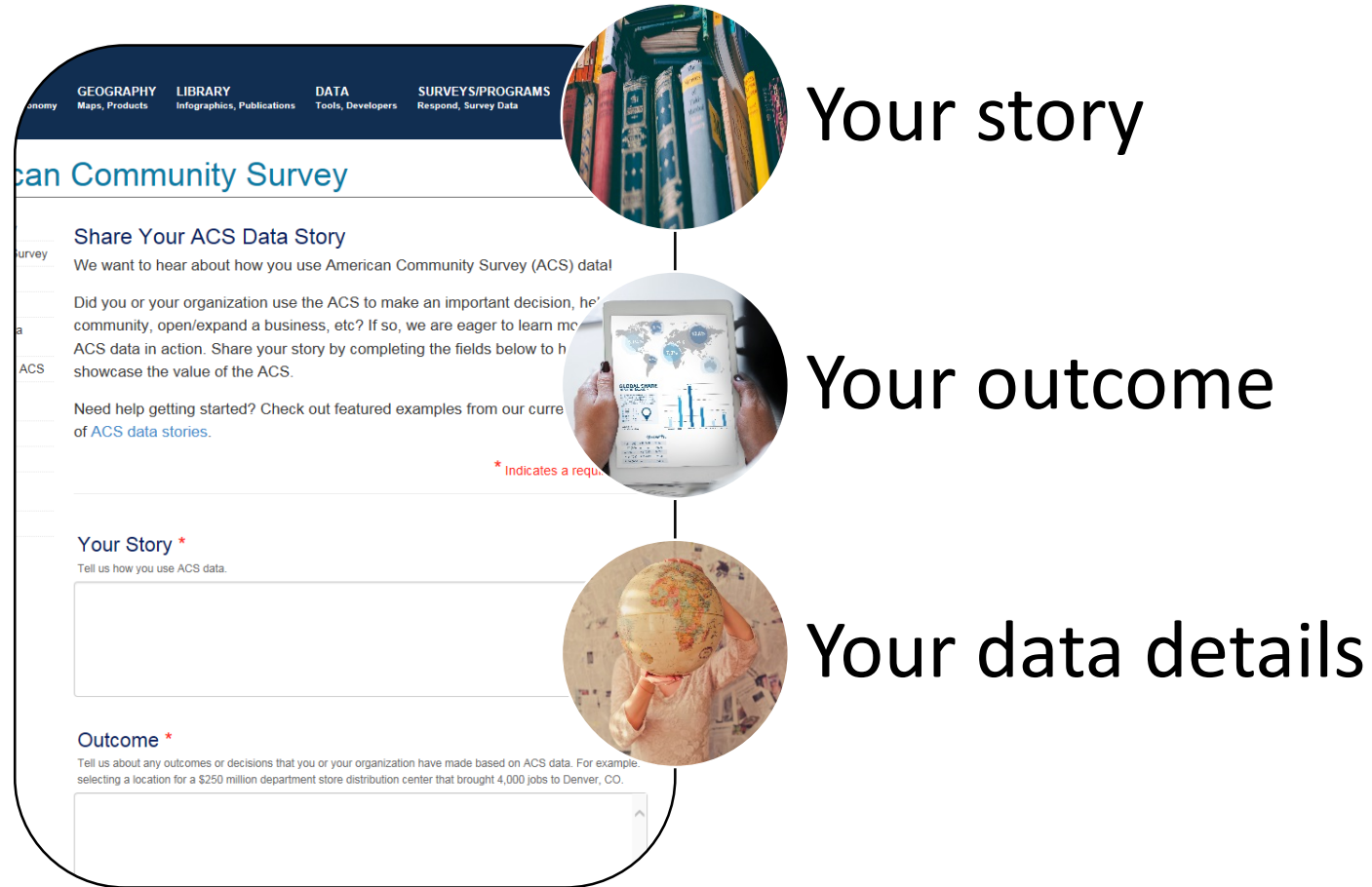
census.gov/programs-surveys/acs/data/pums.html





The American Community Survey

Data Tell Stories. Tell us Yours!



Share Your ACS Data Story

We want to hear about how you use American Community Survey (ACS) data!

Did you or your organization use the ACS to make an important decision, help a community, open/expand a business, etc? If so, we are eager to learn more about how you used ACS data in action. Share your story by completing the fields below to help us showcase the value of the ACS.

Need help getting started? Check out featured examples from our current collection of [ACS data stories](#).

* Indicates a required field

Your Story *

Tell us how you use ACS data.

Outcome *

Tell us about any outcomes or decisions that you or your organization have made based on ACS data. For example, selecting a location for a \$250 million department store distribution center that brought 4,000 jobs to Denver, CO.

census.gov/acs/www/share-your-story

The American Community Survey

Continue the Conversation



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



Social media: @uscensusbureau
#ACSdata



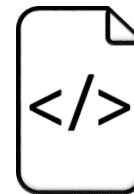
More information online:
<https://www.census.gov/acs>



acso.users.support@census.gov



Census Customer Service Center
800-923-8282



Source Us:
*U.S. Census Bureau's [YYYY – YYYY] American
Community Survey
[1/3/5]-year [estimates/statistics/data release]*

Links to ACS Visualizations

AMERICAN COMMUNITY SURVEY

- census.gov/acs/

2017 AMERICAN COMMUNITY SURVEY (ACS) DATA WHEEL

- census.gov/library/visualizations/interactive/2017-data-wheel.html

WHAT CAN YOU LEARN ABOUT COUNTIES FROM THE AMERICAN COMMUNITY SURVEY?

- census.gov/library/visualizations/interactive/learn-ac.html

WHAT CAN YOU LEARN ABOUT COUNTIES FROM THE AMERICAN COMMUNITY SURVEY?

- census.gov/library/visualizations/interactive/acs-counties.html

HOUSING ADMINISTRATIVE RECORD SIMULATION

- census.gov/library/visualizations/interactive/housing-admin-record-simulation.html

WHAT PEOPLE AND HOUSEHOLDS ARE REPRESENTED IN EACH ACS DATA COLLECTION MODE?

- census.gov/library/visualizations/interactive/acs-collection.html

PRESENTATION: ENGAGING INTERNAL AND EXTERNAL AUDIENCES WITH THE ACS THROUGH DATA VISUALIZATION

- census.gov/content/dam/Census/newsroom/press-kits/2018/aapor/aapor-presentation-interactive-ac.pdf