Microdata Access on data.census.gov

Center for Enterprise Dissemination

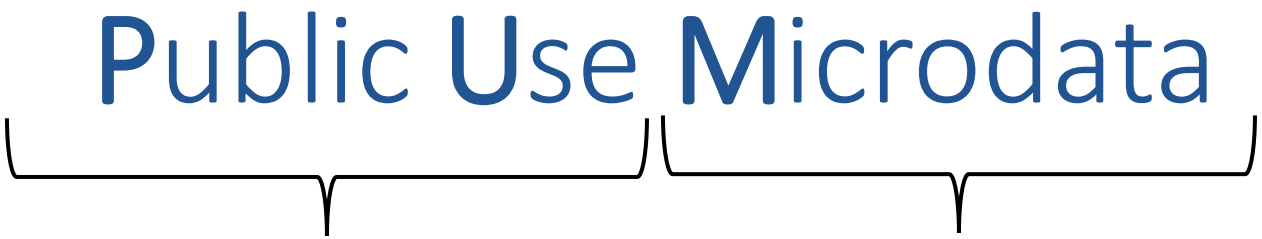
U.S. Census Bureau

April 2, 2020

Outline

- **Microdata Access Basics**
- Microdata Access Demo
- Questions

What is Public Use Microdata?



Anonymized

- No personally identifiable information
- Edits to protect confidentiality

Accessible

- data.census.gov/mdat
- Application Programming Interface (API)
- Download through FTP sites

Individual Responses

- Must be tabulated and weighted by user

Data.census.gov Summary Data vs. Microdata What's the Difference?

	Louisiana	
	Estimate	Margin of Error
Total:	2,020,951	+/-14,211
Male:	1,029,736	+/-9,995
Management, business, science, and arts occupations:	289,129	+/-6,989
Management, business, and financial occupations:	126,805	+/-5,330
Management occupations:	99,359	+/-4,708
Business and financial operations occupations:	27,446	+/-2,465
Computer, engineering, and science occupations:	57,290	+/-4,110
Computer and mathematical occupations:	18,459	+/-2,169
Architecture and engineering occupations:	30,797	+/-3,039

Aggregated tables for a geography:
"In 2016 in Louisiana, approximately 18,459 males worked in computer and mathematical occupations."

Microdata (a set of edited survey responses):
"This male in Louisiana is a web developer."

RT	SERIALNO	SPORDER	ST	SEX	OCCP
P	267855	2	22	1	6600
P	267870	1	22	2	1020
P	267870	2	22	1	1030
P	267913	1	22	2	430
P	267913	2	22	1	9620
P	268097	1	22	2	4110
P	268097	2	22	1	6260

Why Use Public Use Microdata through Microdata Access?

You can use Public Use Microdata when your data needs are not supported by prefabricated tables on data.census.gov.

- Example: occupation by sex by marital status ("married female actuaries")

Advantages of Microdata	Limitations of Microdata
• More detail by topic	• Less detail by geography
• Create custom tables	• More complex to create your own table rather than search for existing tables • Less accurate estimates compared to premade tables. Use premade tables if they exist

Census Programs in the Microdata Access Tool

Data Available

- **American Community Survey (ACS)**
  - ACS 1-Year Public Use Microdata Sample (PUMS): 2004-2018
  - ACS 5-Year Public Use Microdata Sample (PUMS): 2009-2018
- **Puerto Rico Community Survey (PRCS)**
  - PRCS 1-Year Public Use Microdata Sample (PUMS) 2005-2018
  - PRCS 5-Year Public Use Microdata Sample (PUMS): 2009-2018
- **Current Population Survey (CPS)**
  - CPS Annual Social and Economic (March) Supplement: 2014-2019
  - CPS Basic Monthly: 1994-2020

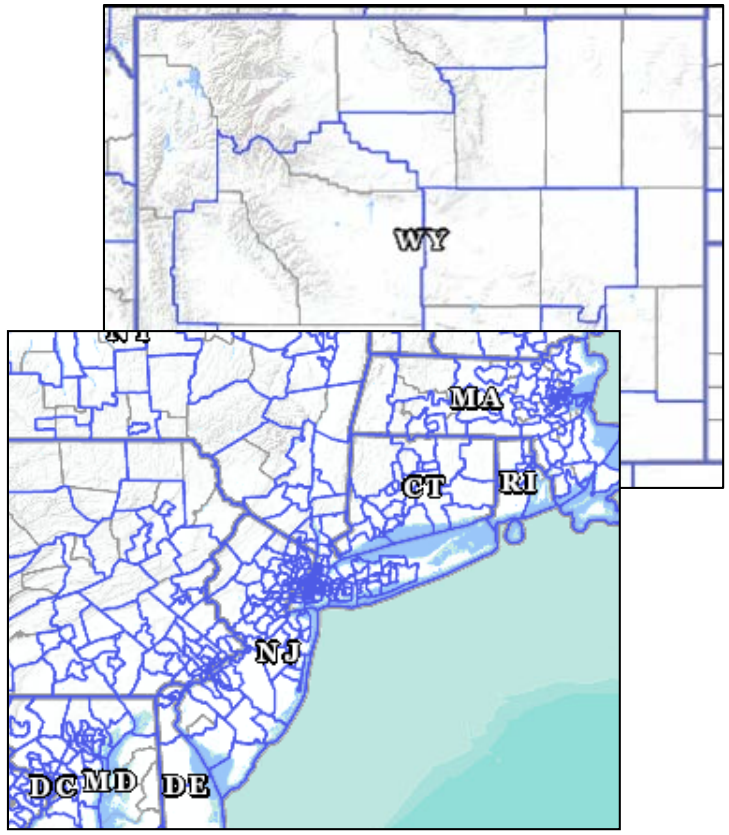
Available Geographic Areas

ACS Available Geographies
Nation
Region
Division
State
Public Use Microdata Area (PUMA)

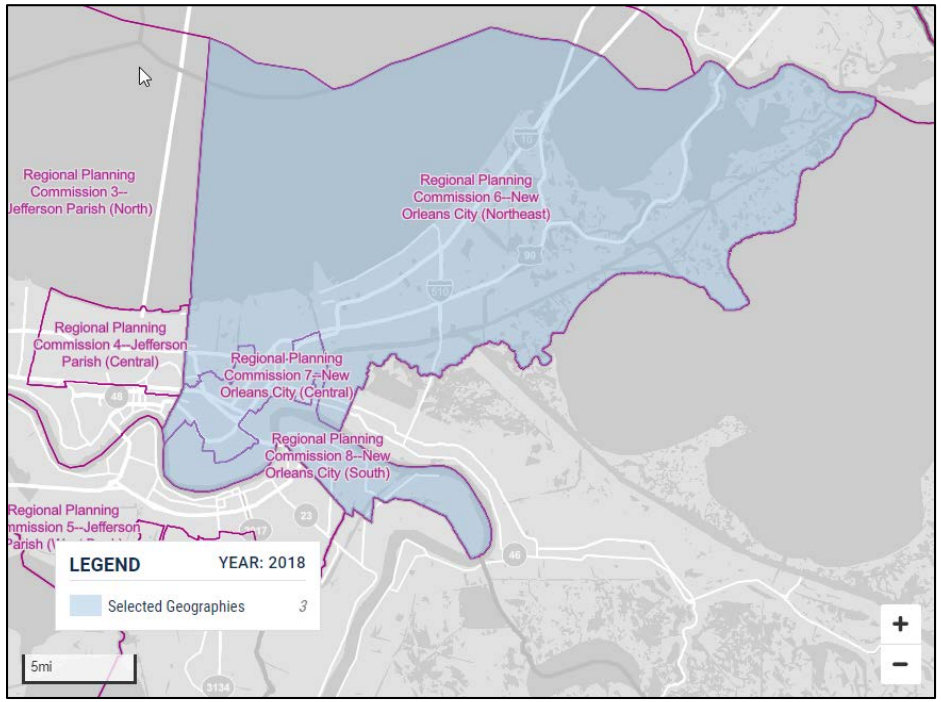
CPS Available Geographies
Nation
State
County (available only for the basic CPS)

Public Use Microdata Area (PUMA)

- An area with 100,000+ population
  - PUMAs (or collections of PUMAS) can be used to identify most cities of 100,000+ and many metro areas, but not all
- Identified by five-digit code (unique within each state)
- Nest within states and cover the entire nation
- Defined after each decennial census
  - Census tracts and counties are the building blocks

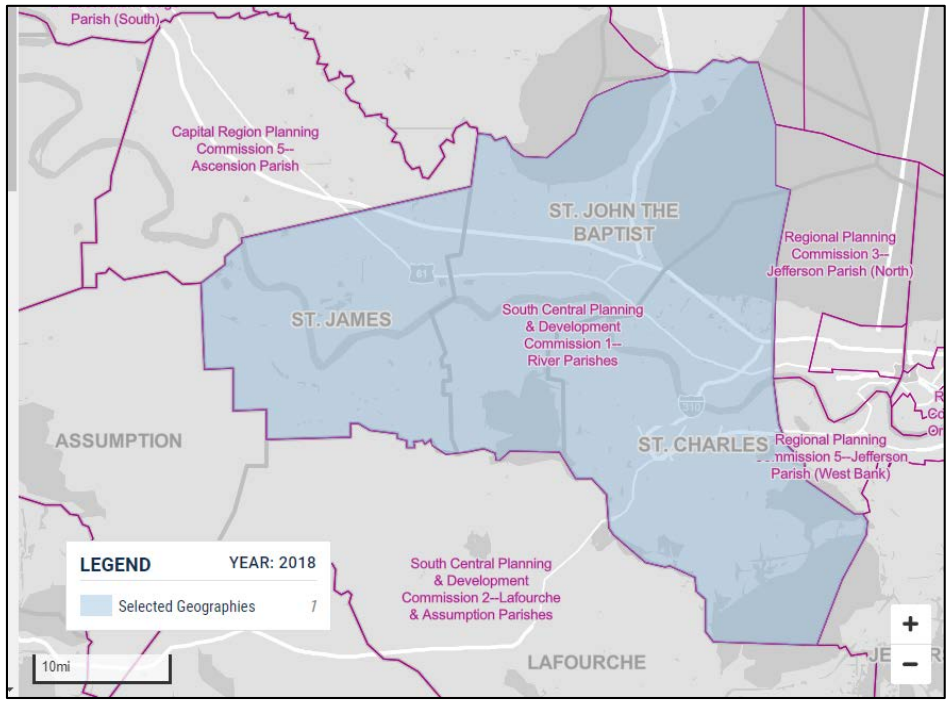


Visualizing PUMAs through data.census.gov



Three PUMAs cover the city of New Orleans:

- PUMA 02400
- PUMA 02401
- PUMA 02402

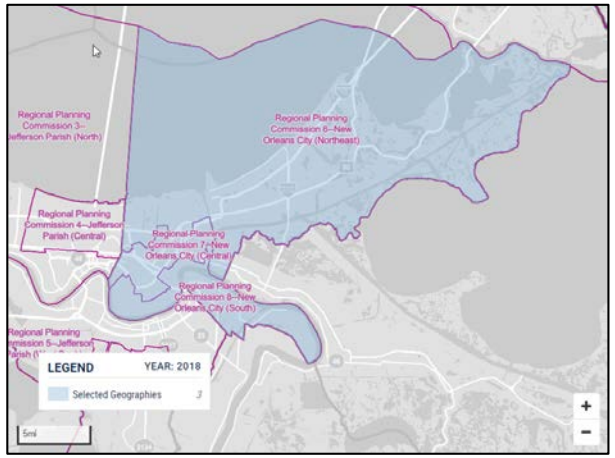


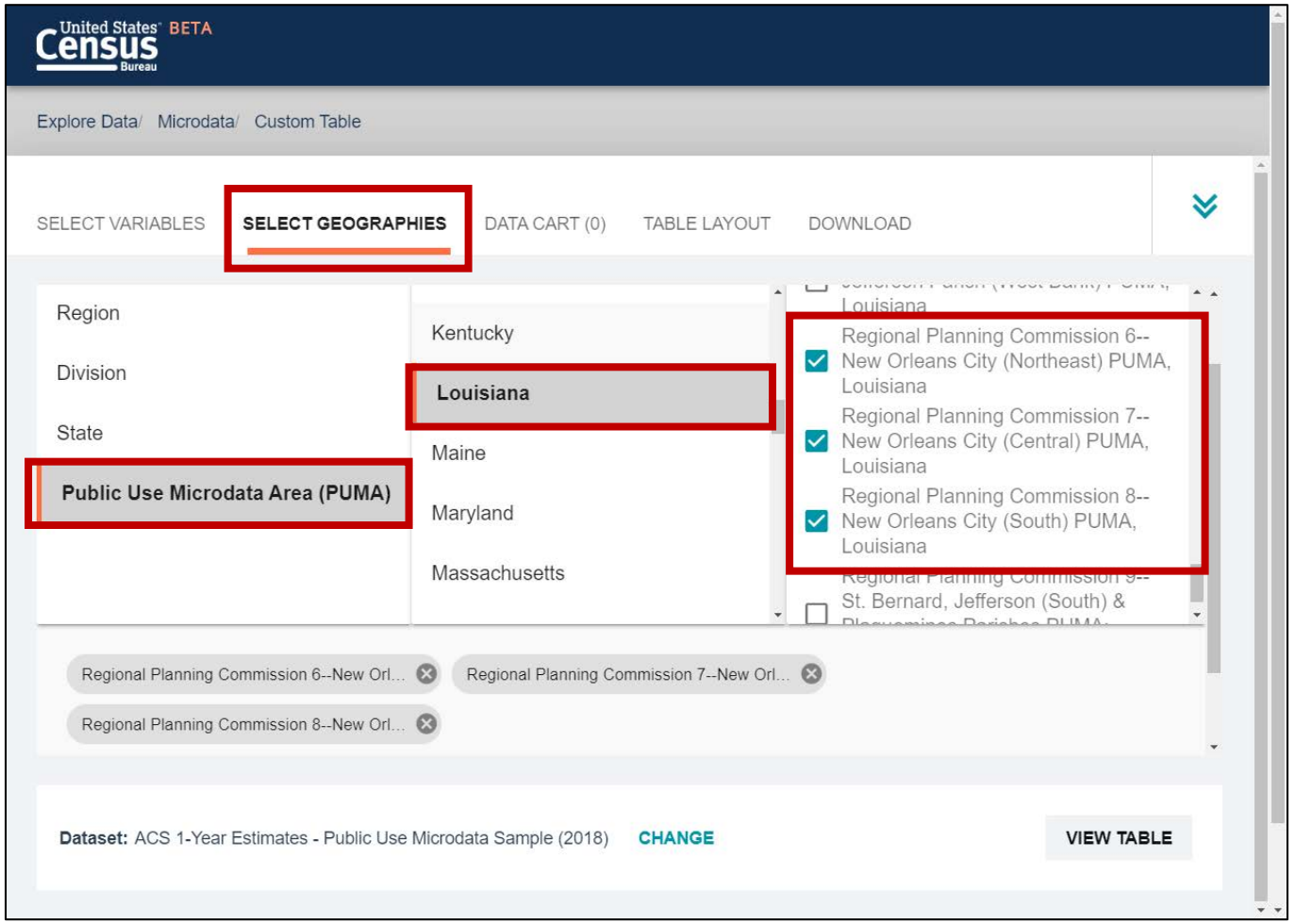
Louisiana PUMA 01900 covers 3 county equivalents:

- St James Parish
- St John the Baptist Parish
- St Charles Parish

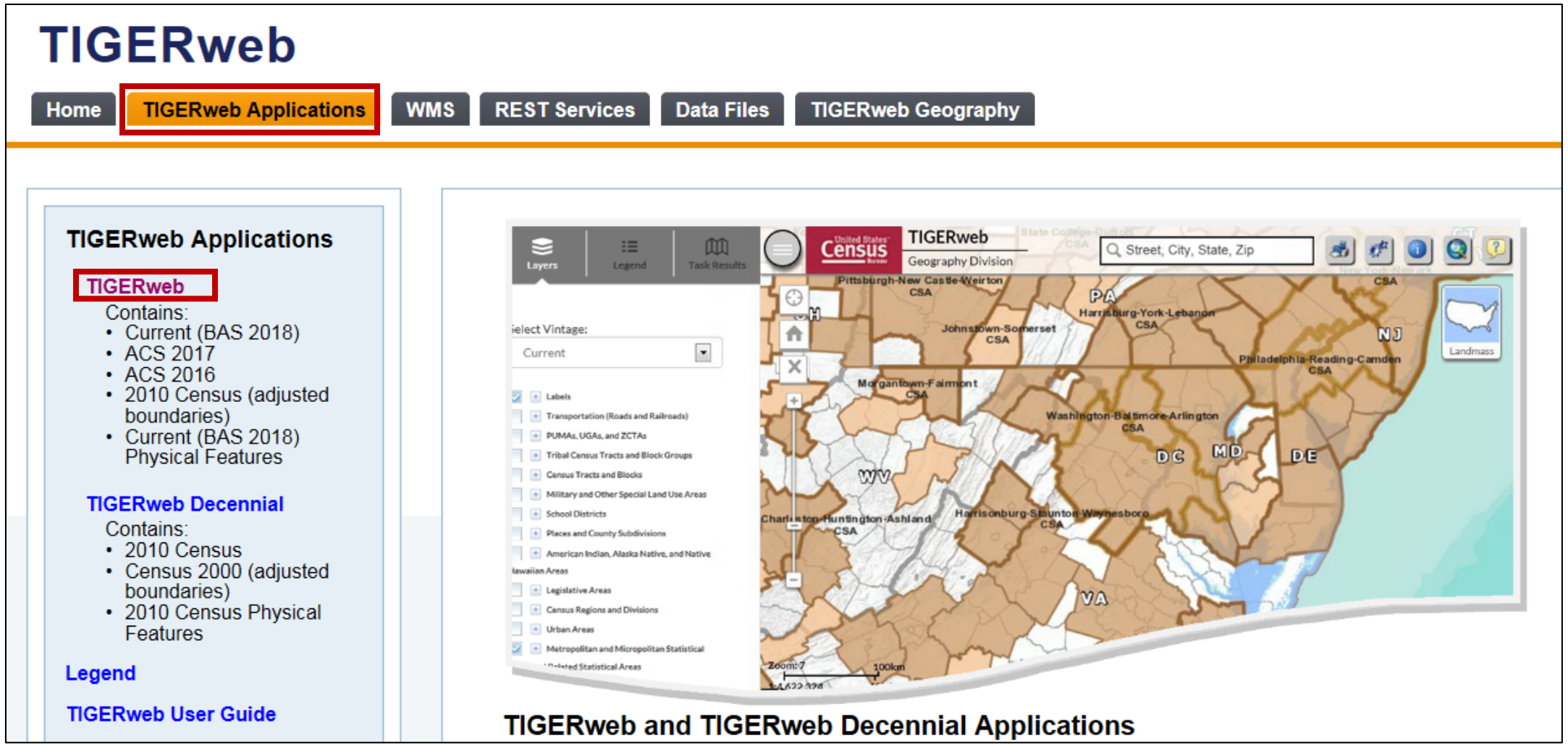
Selecting PUMAs in Microdata Access

Today's examples will use state-level geographies, but if you want lower level geographic areas it's easy to select your PUMAs on Microdata Access.





TIGERweb: Visualize PUMA Boundaries for Your Area



TIGERweb and TIGERweb Decennial Applications

tigerweb.geo.census.gov

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Learning Objectives

At the end of this training you will be able to:

- Create custom tables using Microdata Access
- Select, edit, and categorize your variables
- Restrict your table universe
- Customize your table layout
- Download a custom table and microdata

Demo

1. **Employment status by sex for the Mexican population in:**
    - **Louisiana**
    - **All 3 PUMAs in New Orleans**

2. Hispanic by age (0-49; 50+) in Louisiana

Table S0201 – Selected Population Profile

	Maryland	
	Mexican (210-220)	
	Estimate	Margin of Error
Language other than English	68.5%	+/-3.4
Speak English less than "very well"	27.1%	+/-2.9
EMPLOYMENT STATUS		
Population 16 years and over	70,797	+/-6,198
In labor force	73.4%	+/-2.5
Civilian labor force	71.3%	+/-2.8
Employed	67.5%	+/-2.9
Unemployed	3.8%	+/-1
Unemployment Rate	5.4%	+/-1.4
Armed Forces	2%	+/-0.8
Not in labor force	26.6%	+/-2.5

Annually released prefabricated ACS tables do not provide detailed employment status broken down for the male Mexican population, but we can create a custom table by using Microdata Access

Demo

1. Employment status by sex for the Mexican population in:
    - Louisiana
    - All 3 PUMAs in New Orleans

2. **Hispanic by age (0-49; 50+) in Louisiana**

Table B01001I – Sex By Age (Hispanic or Latino)

	Maryland	
	Estimate	Margin of Error
Total:	628,435	*****
Male:	324,871	+/-2,082
Under 5 years	33,800	+/-1,243
5 to 9 years	29,745	+/-2,597
10 to 14 years	31,347	+/-2,698
15 to 17 years	15,175	+/-1,160
18 and 19 years	10,301	+/-1,076
20 to 24 years	23,571	+/-1,419
25 to 29 years	23,956	+/-883
30 to 34 years	25,387	+/-812
35 to 44 years	56,856	+/-1,432
45 to 54 years	40,851	+/-1,331
55 to 64 years	21,175	+/-629
65 to 74 years	8,473	+/-652
75 to 84 years	3,759	+/-623
85 years and over	475	+/-334

Prefabricated ACS tables in data.census.gov do not provide data for the Hispanic population aged 50 years or older, but we can create a custom table for this using Microdata Access

Questions/Feedback

Media:

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Our Development Depends on YOUR Feedback

Check out data.census.gov/mdat and provide comments at cedsci.feedback@census.gov

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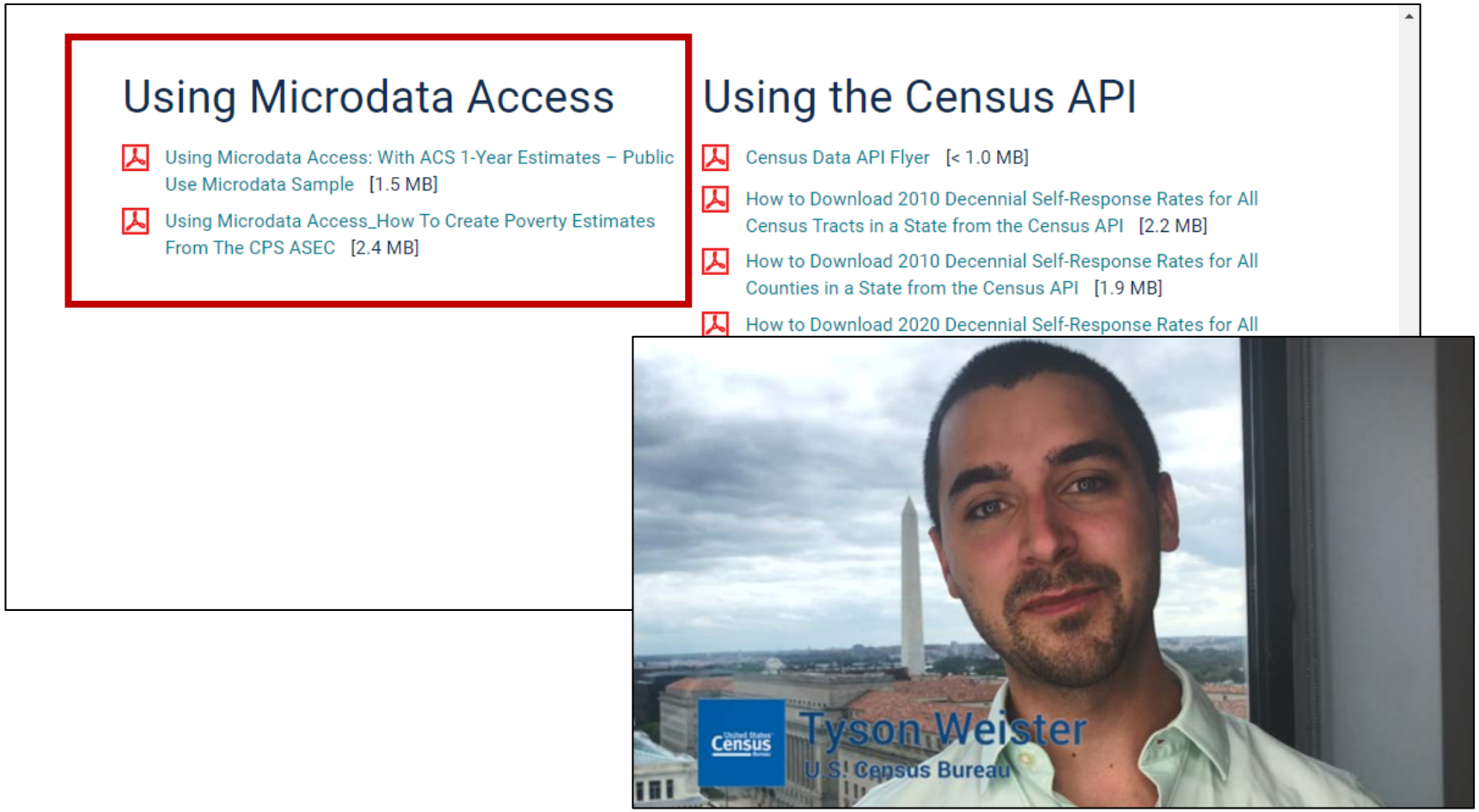
- **Webinars:** Recorded and upcoming webinars on data.census.gov
- **Data Gems**: A series of short "How-To" videos

Feedback: Email comments to
cedsci.feedback@census.gov



Webinar Evaluation

https://questionweb.com/59212/