

14 – The American Community Survey and Margin of Error

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Outline

What is the American Community Survey?

How to Download the Data?

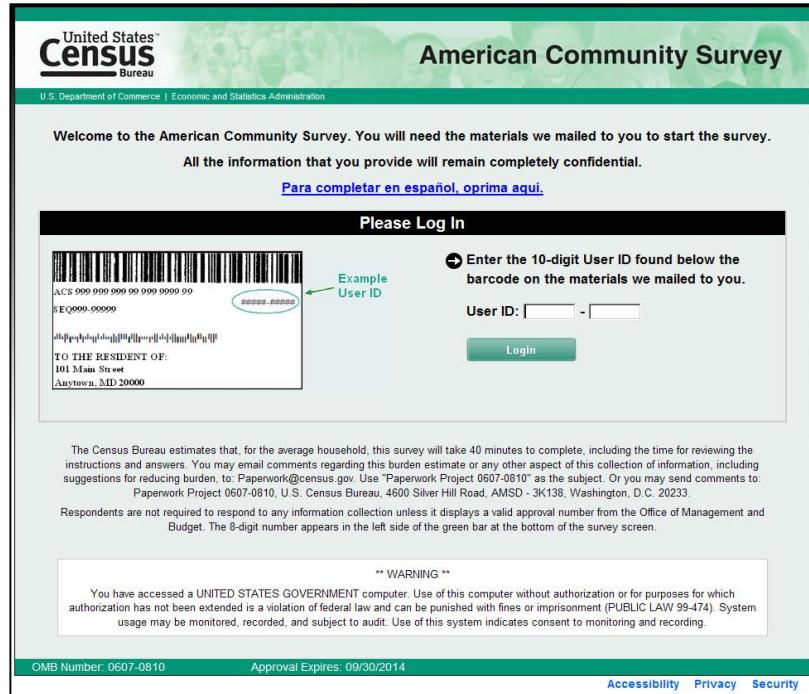
Review of Margin of Error

ACS Extension and Capabilities

What is the American Community Survey?

A large, continuous survey that:

- produces characteristics of population and housing (similar to Census 2000 long form)
- produces estimates for small areas and small population groups
- samples approximately 3.54 million resident addresses per year (about 290,000 per month)



Census 2000

In Census 2000, the census used 2 forms

1. **“Short” form** – asked for basic demographic and housing information, such as age, sex, race, how many people lived in the housing unit, and if the housing unit was owned or rented by the resident
2. **“Long” form** – collected the same information as the short form but also collected more in-depth information such as income, education, and language spoken at home

Only a small portion of the population, called a sample, received the long form.

2010 Census and ACS

- 2010 Census focused on counting the U.S. population
- The “long” form data are now collected by the ACS
- Puerto Rico is the only U.S. territory where the ACS is conducted
- 2010 Census had a long form for U.S. territories such as Guam and U.S. Virgin Islands
- 2010 Census had same “short form” questions as the ACS

ACS Estimates Are NOT the 2010 Census Population Counts

- The 2010 Census **counts the population** to support apportionment and redistricting
- The ACS supplements this information with annually updated **estimates** on the nation's **population and housing characteristics**
- The purpose of the ACS is not to count every person in a community or town but rather, to provide a portrait of the community's characteristics

ACS Content: Population

- **SOCIAL**

- Ancestry
- Citizenship & Year of Entry
- Disability Status
- Educational Attainment
- Field of Degree
- Health Insurance
- Grandparents
- Fertility
- Language
- Marital Status & History
- Place of Birth
- Migration
- Relationship
- School Enrollment
- Veteran Status

- **ECONOMIC**

- Employment & Work Status
- Income & Earnings
- Industry & Occupation
- Class of Worker
- Commuting
- Poverty Status
- SNAP Receipt

- **DEMOGRAPHIC**

- Age & Sex
- Race & Hispanic Origin

ACS Content: Housing

- Age of Householder
- House Heating Fuel
- Household Size
- Kitchen Facilities
- Occupancy and Vacancy
- Owner Statistics
- Plumbing Facilities
- Race of Householder
- Renter Statistics
- Rooms and Bedrooms
- Telephone Service
- Tenure
- Units in Structure
- Value of Home
- Vehicles Available
- Year Householder Moved Into Unit
- Year Structure Built

Data Products

ACS 1-Year

- Data Profile
- Narrative Profile
- Comparison Profile
- Selected Population Profile
- Ranking Tables
- Subject Tables
- Detailed Tables
- Geographic Comparison Tables
- Public Use Microdata Sample File

ACS 3-Year

- Data Profile
- Narrative Profile
- Selected Population Profile
- Subject Tables
- Detailed Tables
- Geographic Comparison Tables
- Public Use Microdata Sample File

ACS 5-Year

- Data Profile
- Subject Tables
- Detailed Tables
- Geographic Comparison Tables
- Public Use Microdata Sample File

How to Download the Data

Step 1. Go to www.census.gov->Data->American Factfinder

U.S. Department of Commerce

United States Census Bureau

People | Business | Geography | **Data** | Research | Newsroom

Home | Blogs | About Us | Index A to Z | Glossary | FAQs

Search Go

New Census App Helps Users Find Local Statistics on the Go

Download dwellr, the new U.S. Census Bureau mobile app that delivers on-the-go access to key demographic, socio-economic and housing statistics for thousands of places across the nation.

See More

< 1 2 3 4 5 6 7 8 9 >

Quick Facts

American FactFinder

Census Explorer

Easy Stats

My Congressional District

Population Finder

American Community Survey

2010 Census

Economic Census

Interactive Maps

Data Visualizations

Training & Workshops

Data Tools

Catalogs

Publications

Census Bureau Economic Indicators

	Value	Change	Significance
Advance Report Durable Goods	\$229.4 B	↑ 2.2%	○
Residential Sales	440,000	↓ -3.3%	*
Quarterly Profits - Retailers'	\$26.1 B	↑	○
Quarterly Profits - Manufacturers'	\$159.4 B	↑	○

* change not statistically significant
○ significance not reported / applicable

QuickFacts

Race Reporting Among Hispanics: 2010

Energy Boom Fuels Rapid Population Growth in Parts of Great Plains; Gulf Coast Also Has High Growth Areas, Says Census Bureau

Quarterly Survey of Public Pensions: Fourth Quarter 2013

Census News

Learn about the American Community Survey

Stat of the Day

Population Estimates

The Week Ahead

factfinder2.census.gov

Step 2. Select the Advanced Search Tab

The screenshot shows the homepage of the American FactFinder website. At the top, there's a navigation bar with links for "MAIN", "COMMUNITY FACTS", "GUIDED SEARCH", "ADVANCED SEARCH" (which is highlighted in yellow), and "DOWNLOAD CENTER". Below the navigation, there's a sidebar with sections for "Community Facts", "Guided Search", "Advanced Search" (which is expanded to show a sub-section for "Search all data in American FactFinder, with access to all geographic types and datasets"), and "Download Center". To the right of the sidebar, there's a large graphic of a person interacting with a futuristic touch screen interface, surrounded by icons representing data analysis and technology. The main content area below the sidebar contains text about the service, links to "Using American FactFinder" and "What We Provide", and a "News and Notes" section.

American FactFinder provides access to data about the United States, Puerto Rico and the Island Areas. The data in American FactFinder come from several censuses and surveys. For more information see [Using FactFinder](#) and [What We Provide](#).

Using American FactFinder

Learn about American FactFinder's functions and features.

What We Provide

The following data are available on American FactFinder:

- American Community Survey [more »](#) | [get data »](#)
- American Housing Survey [more »](#) | [get data »](#)
- Annual Economic Surveys [more »](#)
- Annual Surveys of Governments [more »](#)
- Census of Governments [more »](#) | [get data »](#)
- Decennial Census [more »](#) | [get data »](#)
- Economic Census [more »](#) | [get data »](#)
- Equal Employment Opportunity (EEO) Tabulation [more »](#) | [get data »](#)
- Population Estimates Program [more »](#) | [get data »](#)
- Puerto Rico Community Survey [more »](#) | [get data »](#)

News and Notes

[GET EMAIL UPDATES](#)



Mar 27, 2014

Advance Report for Selected Characteristics of the U.S...



[view all news, release schedules, and more »](#)

Address Search



Find Census data by entering a street address.

Reference Maps

Reference Maps show selected geographic boundaries for an area along with orienting features, such as roads.

United States ▾

GO

Load Query

Step 3. Open the Race and Ethnic Groups Tab

U.S. Department of Commerce
United States Census Bureau

MAIN COMMUNITY FACTS GUIDED SEARCH ADVANCED SEARCH DOWNLOAD CENTER

Search - Use the options on the left (topics, geographies, ...) to narrow your search results

Your Selections
'Your Selections' is empty

To search for tables and other files in American FactFinder:

1 Enter search terms and an optional geography and click GO

Select Race and Ethnic Groups

CLOSE

Basic Groups Detailed Groups

Select basic race and ethnic groups to add to Your Selections [?](#)

Note: For detailed race, ancestry, or tribe data from the Decennial Census (SF2, SF4, and AIAN) and the American Community Survey (Selected Population Profiles and AIAN tables), select the 'Detailed Groups' tab.

Race & Ethnicity

- Alaska Native (2,308)
- American Indian (2,315)
- Ancestry (378)
- Asian (2,366)
- Black or African American (2,320)
- Hispanic or Latino (2,007)
- Native Hawaiian and Pacific Islander (2,344)
- Race/Ethnicity of Householder (4,416)
- Race/Ethnicity of Individual (9,568)
- Some Other Race (2,217)
- Two or More Races (2,280)
- White (2,164)
- White, Not Hispanic or Latino (2,027)

Step 4. Open the Detailed Groups Tab

MAIN | COMMUNITY FACTS | GUIDED SEARCH | **ADVANCED SEARCH** | DOWNLOAD CENTER

Search - Use the options on the left (topics, geographies, ...) to narrow your search results

Your Selections
'Your Selections' is empty

To search for tables and other files in American FactFinder:

1 Enter search terms and an optional geography and click GO

Select Race and Ethnic Groups

Basic Groups | **Detailed Groups**

Enter a race, ancestry, or tribe, or use the Race and Ethnic Group Filter Options below:

Enter a race or ethnic group (Asian, Black, Cherokee, ...)

GO ?

Select population groups to add to Your Selections ?

Race and Ethnic Group Results: 1-25 of 2,671

Selected: Add | Check All | Clear All |

Code	Population Group Name	Code Base	Population Group Type
-00	All available races	2000, 2010, ACS	Race and Hispanic Origin
001	Total population	2000, 2010, ACS	Race and Hispanic Origin
-01	All available basic races alone	2000, 2010, ACS	Race and Hispanic Origin
-02	All available basic races alone or in combination	2000, 2010, ACS	Race and Hispanic Origin
002	White alone	2000, 2010, ACS	Race and Hispanic Origin
003	White alone or in combination with one or more other races	2000, 2010, ACS	Race and Hispanic Origin
004	Black or African American alone	2000, 2010, ACS	Race and Hispanic Origin
005	Black or African American alone or in combination with one or more other races	2000, 2010, ACS	Race and Hispanic Origin
006	American Indian and Alaska Native alone (300, A01-Z99)	2000, 2010, ACS	Race and Hispanic Origin
009	American Indian and Alaska Native alone or in combination with one or more other races (300, A01-Z99) & (100-299) or (300, A01-Z99) or (400-999)	2000, 2010, ACS	Race and Hispanic Origin
012	Asian alone (400-499)	2000, 2010, ACS	Race and Hispanic Origin
031	Asian alone or in combination with one or more other races (400-499) & (100-299) or (300, A01-Z99) or (400-999)	2000, 2010, ACS	Race and Hispanic Origin
050	Native Hawaiian and Other Pacific Islander alone (500-599)	2000, 2010, ACS	Race and Hispanic Origin
060	Native Hawaiian and Other Pacific Islander alone or in combination with one or more other races (500-599) & (100-299) or (300, A01-Z99) or (400-999)	2000, 2010, ACS	Race and Hispanic Origin
070	Some other race alone	2000, 2010, ACS	Race and Hispanic Origin
071	Some other race alone or in combination with one or more other races	2000, 2010, ACS	Race and Hispanic Origin
-03	All available basic race combinations		Race and Hispanic Origin
100	Two or more races	2000, 2010, ACS	Race and Hispanic Origin
-0D	All available two race combinations		Race and Hispanic Origin
105	White; Black or African American	2000, 2010, ACS	Race and Hispanic Origin
106	White; American Indian and Alaska Native	2000, 2010, ACS	Race and Hispanic Origin
107	White; Asian	2000, 2010, ACS	Race and Hispanic Origin
108	White; Native Hawaiian and Other Pacific Islander	2000, 2010, ACS	Race and Hispanic Origin
109	White; Some other race	2000, 2010, ACS	Race and Hispanic Origin
110	Black or African American; American Indian and Alaska Native	2000, 2010, ACS	Race and Hispanic Origin

Selected: Add | Check All | Clear All |

Step 5. Select your Ethnic Groups

MAIN | COMMUNITY FACTS | GUIDED SEARCH | **ADVANCED SEARCH** | DOWNLOAD CENTER

Search - Use the options on the left (topics, geographies, ...) to narrow your search results

Your Selections
"Your Selections" is empty

To search for tables and other files in American FactFinder:

1 Enter search terms and an optional geography and click GO

Select Race and Ethnic Groups

Basic Groups Detailed Groups

Enter a race, ancestry, or tribe, or use the Race and Ethnic Group Filter Options below:

Enter a race or ethnic group (Asian, Black, Cherokee, ...)

GO ?

Select population groups to add to Your Selections ?

Race and Ethnic Group Results: 1-25 of 102

3 Selected: Add | Check All | Clear All |

Code	Population Group Name	Code Base	Population Group Type
-A0	All available ancestries		Ancestry Group
501	Afghan (600)		Ancestry Group
502	Albanian (100)		Ancestry Group
573	American (939-994)		Ancestry Group
503	Alsatian (000-001)		Ancestry Group
504	Arab (400-415, 417-418, 421-430, 435-481, 490-499)		Ancestry Group
300	Algerian (400)		Ancestry Group
506	Egyptian (402-403)		Ancestry Group
507	Iraqi (417-418)		Ancestry Group
508	Jordanian (421-422)		Ancestry Group
302	Kurdish (442)		Ancestry Group
509	Lebanese (425-426)		Ancestry Group
510	Moroccan (406-407)		Ancestry Group
511	Palestinian (465-467)		Ancestry Group
512	Syrian (429-430)		Ancestry Group
301	Yemeni (435)		Ancestry Group
505	Arabi/Arabic (495-499)		Ancestry Group
513	Armenian (431-433)		Ancestry Group
514	Assyrian/Chaldean/Syriac (482-489)		Ancestry Group
515	Australian (800-802)		Ancestry Group
516	Austrian (003-004)		Ancestry Group
517	Basque (005-007)		Ancestry Group
518	Belgian (008-010)		Ancestry Group

Step 6. Select your data

AMERICAN FactFinder KANSAS MISSOURI VIRGINIA VIRGINIA
United States Census Bureau

MAIN COMMUNITY FACTS GUIDED SEARCH ADVANCED SEARCH DOWNLOAD CENTER

Search - Use the options on the left (topics, geographies, ...) to narrow your search results

Your Selections

Search using...
Ancestry Group
Afghan (600)
Iraqi (417-418)
Syrian (429-430)

clear all selections and start a new search

load search | save search

Search using the options below:

Topics (age, income, year, dataset, ...)

Geographies (states, counties, places, ...)

Race and Ethnic Groups (race, ancestry, tribe)

Industry Codes (NAICS industry, ...)

EEO Occupation Codes (executives, analysts, ...)

Search Results: 1-25 of 1,069 tables and other products match 'Your Selections'

Refine your search results: topic or table name state, county or place (optional) GO ?

L topics race/ancestry industries occupations

Selected: View Download Compare Clear All Reset Sort ?

ID	Table, File or Document Title	Dataset	About
S0201	SELECTED POPULATION PROFILE IN THE UNITED STATES	2015 ACS 1-year estimates	
S0201PR	SELECTED POPULATION PROFILE IN PUERTO RICO	2015 ACS 1-year estimates	
S0201	SELECTED POPULATION PROFILE IN THE UNITED STATES	2014 ACS 1-year estimates	
S0201PR	SELECTED POPULATION PROFILE IN PUERTO RICO	2014 ACS 1-year estimates	
S0201	SELECTED POPULATION PROFILE IN THE UNITED STATES	2013 ACS 3-year estimates	
S0201	SELECTED POPULATION PROFILE IN THE UNITED STATES	2013 ACS 1-year estimates	
S0201PR	SELECTED POPULATION PROFILE IN PUERTO RICO	2013 ACS 3-year estimates	
S0201PR	SELECTED POPULATION PROFILE IN PUERTO RICO	2013 ACS 1-year estimates	
S0201	SELECTED POPULATION PROFILE IN THE UNITED STATES	2012 ACS 3-year estimates	
S0201	SELECTED POPULATION PROFILE IN THE UNITED STATES	2012 ACS 1-year estimates	
S0201PR	SELECTED POPULATION PROFILE IN PUERTO RICO	2012 ACS 3-year estimates	
S0201PR	SELECTED POPULATION PROFILE IN PUERTO RICO	2012 ACS 1-year estimates	
S0201	SELECTED POPULATION PROFILE IN THE UNITED STATES	2011 ACS 3-year estimates	
S0201	SELECTED POPULATION PROFILE IN THE UNITED STATES	2011 ACS 1-year estimates	
S0201PR	SELECTED POPULATION PROFILE IN PUERTO RICO	2011 ACS 3-year estimates	
S0201PR	SELECTED POPULATION PROFILE IN PUERTO RICO	2011 ACS 1-year estimates	
B01001	SEX BY AGE	2010 ACS 5-year Selected Population Tables	
B01002	MEDIAN AGE BY SEX	2010 ACS 5-year Selected Population Tables	
B01003	TOTAL POPULATION	2010 ACS 5-year Selected Population Tables	
B05001	CITIZENSHIP STATUS IN THE UNITED STATES	2010 ACS 5-year Selected Population Tables	
B05002	PLACE OF BIRTH BY CITIZENSHIP STATUS	2010 ACS 5-year Selected Population Tables	
B05003	SEX BY AGE BY CITIZENSHIP STATUS	2010 ACS 5-year Selected Population Tables	
B05005	YEAR OF ENTRY BY CITIZENSHIP STATUS IN THE UNITED STATES	2010 ACS 5-year Selected Population Tables	
B05005PR	YEAR OF ENTRY BY CITIZENSHIP STATUS IN PUERTO RICO	2010 ACS 5-year Selected Population Tables	
B05006	PLACE OF BIRTH FOR THE FOREIGN-BORN POPULATION IN THE UNITED STATES	2010 ACS 5-year Selected Population Tables	

Selected: View Download Compare Clear All Reset Sort ?

Step 7. Review the results and download the data

AMERICAN FactFinder KANSAS MISSOURI VIRGINIA VIRGINIA
United States Census Bureau MAIN COMMUNITY FACTS GUIDED SEARCH ADVANCED SEARCH DOWNLOAD CENTER

Advanced Search - Search all data in American FactFinder

1 Advanced Search **2 Table Viewer**

S0201 | SELECTED POPULATION PROFILE IN THE UNITED STATES ⓘ
2015 American Community Survey 1-Year Estimates

Table View

Actions: Modify Table | Add/Remove Geographies | Bookmark/Save | Print | Download | Create a Map

This table is displayed with default geographies. ⓘ
Click Back to Search to select other geographies using the search options on the left.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for t

Subject	United States					
	Afghan (600)		Iraqi (417-418)		Syrian (429-430)	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
TOTAL NUMBER OF RACES REPORTED						
Total population	96,089	+/-8,875	145,279	+/-13,366	170,552	+/-12,019
One race	52.2%	+/-5.0	91.2%	+/-2.5	96.1%	+/-1.5
Two races	47.7%	+/-5.0	8.6%	+/-2.6	3.9%	+/-1.5
Three races	0.1%	+/-0.1	0.2%	+/-0.2	0.0%	+/-0.1
Four or more races	0.0%	+/-0.2	0.0%	+/-0.1	0.0%	+/-0.1
SEX AND AGE						
Total population	96,089	+/-8,875	145,279	+/-13,366	170,552	+/-12,019
Male	51.8%	+/-2.5	54.6%	+/-2.2	50.0%	+/-2.0
Female	48.2%	+/-2.5	45.4%	+/-2.2	50.0%	+/-2.0
Under 5 years	9.3%	+/-1.7	8.1%	+/-1.4	6.6%	+/-1.0
5 to 17 years	21.8%	+/-2.5	22.2%	+/-2.0	18.8%	+/-2.1
18 to 24 years	13.8%	+/-2.3	9.9%	+/-1.5	8.8%	+/-1.2
25 to 34 years	19.5%	+/-2.4	17.9%	+/-2.0	15.7%	+/-1.4
35 to 44 years	12.9%	+/-2.1	16.7%	+/-1.8	13.1%	+/-1.2
45 to 54 years	11.1%	+/-1.9	10.7%	+/-1.1	13.7%	+/-1.4
55 to 64 years	5.7%	+/-1.4	7.7%	+/-1.3	11.1%	+/-1.2
65 to 74 years	4.5%	+/-1.1	3.8%	+/-0.9	7.3%	+/-1.1
75 years and over	1.4%	+/-0.7	3.1%	+/-0.8	4.9%	+/-0.8
Median age (years)	27.4	+/-1.4	30.8	+/-1.2	35.1	+/-1.4

Versions of this table are available for the following years:
2015 ►
2014
2013
2012
2011
2010
2009
2008

Step 8. Ethnicity for Hispanics is found in a different place

AMERICAN
FactFinder

KANSAS MISSOURI VIRGINIA
KENTUCKY NORTH...

MAIN COMMUNITY FACTS GUIDED SEARCH ADVANCED SEARCH DOWNLOAD CENTER

Search - Use the options on the left (topics, geographies, ...) to narrow your search results

Your Selections
Your Selections' is empty
[load search](#) | [save search](#)

Search using the options below:

- [Topics
\(age, income, year, dataset, ...\)](#)
- [Geographies
\(states, counties, places, ...\)](#)
- Race and Ethnic Groups
(race, ancestry, tribe)**
- [Industry Codes
\(NAICS industry, ...\)](#)
- [EEO Occupation Codes
\(executives, analysts, ...\)](#)

To search for tables and other files in American FactFinder:

1 Enter search terms and an optional geography and click GO

Select Race and Ethnic Groups

Basic Groups Detailed Groups

Enter a race, ancestry, or tribe, or use the Race and Ethnic Group Filter Options below:

Enter a race or ethnic group (Asian, Black, Cherokee, ...) [GO](#) ?

Your Race and Ethnic Group Filters

Population Group Type:
Race and Hispanic Origin

Hispanic Origin:
Hispanic

[clear all filters](#)

Race/Ethnic Group Filter Options

Code Base
 Race
 Hispanic Origin by Race
 Basic/Detailed Groups
 Race alone/alone or in any combination

Include in results:
 All population groups
 Individual population groups
 Collections of population groups

Select population groups to add to Your Selections ?

Race and Ethnic Group Results: 1-25 of 40

Code	Population Group Name	Code Base	Population Group Type
-09	All available Hispanic Origin	2000, 2010, ACS	Race and Hispanic Origin
400	Hispanic or Latino (of any race) (200-299)	2000, 2010, ACS	Race and Hispanic Origin
-06	All available detailed Hispanic	2000, 2010, ACS	Race and Hispanic Origin
401	Mexican (210-220)	2000, 2010, ACS	Race and Hispanic Origin
402	Puerto Rican (260-269)	2000, 2010, ACS	Race and Hispanic Origin
403	Cuban (270-274)	2000, 2010, ACS	Race and Hispanic Origin
404	Other Hispanic or Latino (200-209, 221-259, 275-299)	2000, 2010, ACS	Race and Hispanic Origin
405	Dominican (Dominican Republic) (275-279)	2000, 2010, ACS	Race and Hispanic Origin
406	Central American (excludes Mexican) (221-230)	2000, 2010, ACS	Race and Hispanic Origin
407	Costa Rican (221)	2000, 2010, ACS	Race and Hispanic Origin
408	Guatemalan (222)	2000, 2010, ACS	Race and Hispanic Origin
409	Honduran (223)	2000, 2010, ACS	Race and Hispanic Origin
410	Nicaraguan (224)	2000, 2010, ACS	Race and Hispanic Origin
411	Panamanian (225)	2000, 2010, ACS	Race and Hispanic Origin
412	Salvadoran (226)	2000, 2010, ACS	Race and Hispanic Origin
413	South American (231-249)	2000, 2010, ACS	Race and Hispanic Origin
414	Argentinean (231)	2000, 2010, ACS	Race and Hispanic Origin
415	Bolivian (232)	2000, 2010, ACS	Race and Hispanic Origin
416	Chilean (233)	2000, 2010, ACS	Race and Hispanic Origin
417	Colombian (234)	2000, 2010, ACS	Race and Hispanic Origin
418	Ecuadorian (235)	2000, 2010, ACS	Race and Hispanic Origin
419	Paraguayan (236)	2000, 2010, ACS	Race and Hispanic Origin
420	Peruvian (237)	2000, 2010, ACS	Race and Hispanic Origin
421	Uruguayan (238)	2000, 2010, ACS	Race and Hispanic Origin
422	Venezuelan (239)	2000, 2010, ACS	Race and Hispanic Origin

3 Selected: [Add](#) | [Check All](#) | [Clear All](#) | [Reset Sort](#)

Step 9. Select your data

AMERICAN FactFinder

KANSAS MISSOURI VIRGINIA
MISSOURI KENTUCKY NORTH CAROLINA

MAIN COMMUNITY FACTS GUIDED SEARCH ADVANCED SEARCH DOWNLOAD CENTER

Advanced Search - Search all data in American FactFinder

1 Advanced Search 2 Table Viewer

S0201 SELECTED POPULATION PROFILE IN THE UNITED STATES ⓘ
2015 American Community Survey 1-Year Estimates

Table View

Actions: [Modify Table](#) | [Add/Remove Geographies](#) | [Bookmark/Save](#) | [Print](#) | [Download](#) | [Create a Map](#)

This table is displayed with default geographies. ⓘ
Click Back to Search to select other geographies using the search options on the left.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the United States.

Subject	United States					
	Mexican (210-220)		Puerto Rican (260-269)		Cuban (270-274)	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
TOTAL NUMBER OF RACES REPORTED						
Total population	35,797,080	+/-91,689	5,372,759	+/-57,569	2,106,501	+/-30,210
One race	96.5%	+/-0.1	91.9%	+/-0.3	96.9%	+/-0.3
Two races	3.2%	+/-0.1	6.8%	+/-0.3	2.6%	+/-0.3
Three races	0.3%	+/-0.1	1.2%	+/-0.1	0.4%	+/-0.1
Four or more races	0.0%	+/-0.1	0.2%	+/-0.1	0.1%	+/-0.1
SEX AND AGE						
Total population	35,797,080	+/-91,689	5,372,759	+/-57,569	2,106,501	+/-30,210
Male	51.0%	+/-0.1	49.4%	+/-0.3	50.7%	+/-0.5
Female	49.0%	+/-0.1	50.6%	+/-0.3	49.3%	+/-0.5
Under 5 years	9.6%	+/-0.1	8.8%	+/-0.2	5.7%	+/-0.2
5 to 17 years	25.0%	+/-0.1	22.2%	+/-0.3	14.5%	+/-0.4
18 to 24 years	12.3%	+/-0.1	11.8%	+/-0.3	8.8%	+/-0.3
25 to 34 years	15.7%	+/-0.1	15.2%	+/-0.3	13.7%	+/-0.4
35 to 44 years	14.4%	+/-0.1	13.8%	+/-0.3	13.5%	+/-0.4
45 to 54 years	10.8%	+/-0.1	11.8%	+/-0.3	15.6%	+/-0.4
55 to 64 years	6.8%	+/-0.1	8.3%	+/-0.2	11.5%	+/-0.4
65 to 74 years	3.4%	+/-0.1	5.0%	+/-0.1	8.1%	+/-0.3
75 years and over	2.1%	+/-0.1	3.1%	+/-0.1	8.7%	+/-0.2

Versions of this table are available for the following years:
2015 ►
2014
2013
2012
2011
2010
2009
2008
2007
2006
2005

Step 10. Review your data and download the data

The screenshot shows the American FactFinder website interface. At the top, there's a navigation bar with links for U.S. Department of Commerce, United States Census Bureau, AMERICAN FactFinder, MAIN, COMMUNITY FACTS, GUIDED SEARCH, ADVANCED SEARCH, DOWNLOAD CENTER, Feedback, FAQs, Glossary, and Help. Below the navigation is a search bar with a magnifying glass icon and a map of the United States.

The main content area is titled "Advanced Search - Search all data in American FactFinder". It shows a table titled "SELECTED POPULATION PROFILE IN THE UNITED STATES" for the years 2009-2011, based on the American Community Survey 3-Year Estimates. The table is in "Table View" mode. The subject of the table is "TOTAL NUMBER OF RACES REPORTED".

Actions available include Modify Table, Bookmark, Print, Download, and Create a Map. A note says the table is displayed with default geographies. There are also links to View Geography Notes and View Table Notes.

A detailed table follows:

Subject	United States					
	Mexican (210-220)		Puerto Rican (260-269)		Cuban (270-274)	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
TOTAL NUMBER OF RACES REPORTED						
Total population	32,869,887	+/-51,632	4,749,070	+/-30,170	1,829,495	+/-19,008
One race	96.5%	+/-0.1	92.4%	+/-0.2	97.4%	+/-0.2
Two races	3.3%	+/-0.1	6.6%	+/-0.2	2.3%	+/-0.1
Three races	0.2%	+/-0.1	0.9%	+/-0.1	0.3%	+/-0.1
Four or more races	0.0%	+/-0.1	0.1%	+/-0.1	0.1%	+/-0.1
SEX AND AGE						
Total population	32,869,887	+/-51,632	4,749,070	+/-30,170	1,829,495	+/-19,008
Male	51.4%	+/-0.1	49.0%	+/-0.2	50.0%	+/-0.3
Female	48.6%	+/-0.1	51.0%	+/-0.2	50.0%	+/-0.3
Under 5 years	11.0%	+/-0.1	9.4%	+/-0.2	5.7%	+/-0.2
5 to 17 years	25.8%	+/-0.1	23.7%	+/-0.2	15.4%	+/-0.2
18 to 24 years	12.4%	+/-0.1	12.1%	+/-0.1	9.5%	+/-0.3
25 to 34 years	16.8%	+/-0.1	14.9%	+/-0.1	11.6%	+/-0.3
35 to 44 years	14.3%	+/-0.1	13.7%	+/-0.1	15.1%	+/-0.2
45 to 54 years	9.8%	+/-0.1	11.7%	+/-0.1	15.3%	+/-0.2
55 to 64 years	5.6%	+/-0.1	7.7%	+/-0.1	10.5%	+/-0.2
65 to 74 years	2.7%	+/-0.1	4.1%	+/-0.1	8.5%	+/-0.2
75 years and over	1.8%	+/-0.1	2.7%	+/-0.1	8.4%	+/-0.1
Median age (years)	25.6	+/-0.1	28.3	+/-0.2	40.3	+/-0.3
18 years and over	63.4%	+/-0.1	66.9%	+/-0.2	78.9%	+/-0.3
21 years and over	57.8%	+/-0.1	61.2%	+/-0.2	74.7%	+/-0.3
62 years and over	5.8%	+/-0.1	8.8%	+/-0.1	19.7%	+/-0.3
65 years and over	4.5%	+/-0.1	6.8%	+/-0.1	16.9%	+/-0.2
Under 18 years	12,032,739	+/-22,976	1,569,989	+/-14,664	385,329	+/-7,814
Male	51.1%	+/-0.1	51.3%	+/-0.3	51.5%	+/-0.8
Female	48.9%	+/-0.1	48.7%	+/-0.3	48.5%	+/-0.8

Step 11. You can get this data for different geographic scales

MAIN COMMUNITY FACTS GUIDED SEARCH **ADVANCED SEARCH** DOWNLOAD CENTER

Search - Use the options on the left (topics, geographies, ...) to narrow your search results

Your Selections

Search using...
Race and Hispanic Origin
Cuban (270-274) ⓘ
Mexican (210-220) ⓘ
Puerto Rican (260-269) ⓘ

clear all selections and start a new search

Search using the options below:

Topics (age, income, year, dataset, ...)

Geographies (states, counties, places, ...)

Race and Ethnic Groups (race, ancestry, tribe)

Industry Codes (NAICS industry, ...)

EEO Occupation Codes (executives, analysts, ...)

Search Results: 1-25 of 1,194 tables and other products match 'Your Selections'

Select Geographies

List Name Address Map

Select geographies to add to Your Selections ⓘ

Select from: most requested geographic types all geographic types

Select a geographic type:
-- select a geographic type --
United States - 010
Region - 020
Division - 030
State - 040
County - 050
County Subdivision - 060
Census Tract - 140
Block Group - 150
Equal Employment Opportunity County Set - 902
Place - 160
Estimates Universe Place - 162
Economic Place - E60
County (or part) - E65
Consolidated City - 170
Place within Consolidated City (or part) - 172
Congressional District - 500
School District (Elementary)/Remainder - 950
School District (Secondary)/Remainder - 960
School District (Unified)/Remainder - 970
QT-H2 Tenure, Household Size, and Age of Householder: 2010
QT-H3 Household Population and Household Type by Tenure: 2010
QT-P1 Age Groups and Sex: 2010
QT-P11 Households and Families: 2010
QT-P12 Household Relationship and Group Quarters Population: 2010
QT-P13 Group Quarters Population by Sex, Age, and Type of Group Quarters: 2010
QT-P2 Single Years of Age and Sex: 2010
S0201 SELECTED POPULATION PROFILE IN THE UNITED STATES
S0201 SELECTED POPULATION PROFILE IN THE UNITED STATES
S0201PR SELECTED POPULATION PROFILE IN PUERTO RICO
S0201PR SELECTED POPULATION PROFILE IN PUERTO RICO
B01001 SEX BY AGE

Selected: View | Download | Compare | Clear All ⓘ

Step 12. Select your data

MAIN | COMMUNITY FACTS | GUIDED SEARCH | **ADVANCED SEARCH** | DOWNLOAD CENTER

Search - Use the options on the left (topics, geographies, ...) to narrow your search results

Your Selections

Search using...
Race and Hispanic Origin
Cuban (270-274) 
Mexican (210-220) 
Puerto Rican (260-269) 
Place within State
Chicago city, Illinois 
Omaha city, Nebraska 
St. Louis city, Missouri 
[clear all selections and start a new search](#)

Search using the options below:

Topics (age, income, year, dataset, ...)

Geographies (states, counties, places, ...)

Race and Ethnic Groups (race, ancestry, tribe)

Industry Codes (NAICS industry, ...)

EEO Occupation Codes (executives, analysts, ...)

Search Results: 1-25 of 744 tables and other products match 'Your Selections'

Refine your search results: topic or table name state, county or place (optional) GO ?

L topics race/ancestry industries occupations

Selected: [View](#) | [Download](#) | [Compare](#) | [Clear All](#) ?

ID	Table, File or Document Title	Dataset	About
S0201	SELECTED POPULATION PROFILE IN THE UNITED STATES	2012 ACS 1-year estimates	
S0201	SELECTED POPULATION PROFILE IN THE UNITED STATES	2011 ACS 1-year estimates	
DP-1	Profile of General Population and Housing Characteristics: 2010	2010 SF2 100% Data	
DP02	SELECTED SOCIAL CHARACTERISTICS IN THE UNITED STATES	2010 ACS 5-year Selected Population Tables	
DP03	SELECTED ECONOMIC CHARACTERISTICS	2010 ACS 5-year Selected Population Tables	
DP04	SELECTED HOUSING CHARACTERISTICS	2010 ACS 5-year Selected Population Tables	
QT-H2	Tenure, Household Size, and Age of Householder: 2010	2010 SF2 100% Data	
QT-H3	Household Population and Household Type by Tenure: 2010	2010 SF2 100% Data	
QT-P1	Age Groups and Sex: 2010	2010 SF2 100% Data	
QT-P11	Households and Families: 2010	2010 SF2 100% Data	
QT-P12	Household Relationship and Group Quarters Population: 2010	2010 SF2 100% Data	
QT-P13	Group Quarters Population by Sex, Age, and Type of Group Quarters: 2010	2010 SF2 100% Data	
QT-P2	Single Years of Age and Sex: 2010	2010 SF2 100% Data	
B01001	SEX BY AGE	2010 ACS 5-year Selected Population Tables	
B01002	MEDIAN AGE BY SEX	2010 ACS 5-year Selected Population Tables	
B01003	TOTAL POPULATION	2010 ACS 5-year Selected Population Tables	
B05001	CITIZENSHIP STATUS IN THE UNITED STATES	2010 ACS 5-year Selected Population Tables	
B05002	PLACE OF BIRTH BY CITIZENSHIP STATUS	2010 ACS 5-year Selected Population Tables	
B05003	SEX BY AGE BY CITIZENSHIP STATUS	2010 ACS 5-year Selected Population Tables	
B05005	YEAR OF ENTRY BY CITIZENSHIP STATUS IN THE UNITED STATES	2010 ACS 5-year Selected Population Tables	
B05006	PLACE OF BIRTH FOR THE FOREIGN-BORN POPULATION IN THE UNITED STATES	2010 ACS 5-year Selected Population Tables	
B05007	PLACE OF BIRTH BY YEAR OF ENTRY BY CITIZENSHIP STATUS FOR THE FOREIGN-BORN POPULATION	2010 ACS 5-year Selected Population Tables	
B06003	PLACE OF BIRTH BY SEX IN THE UNITED STATES	2010 ACS 5-year Selected Population Tables	
B07003	GEOGRAPHICAL MOBILITY IN THE PAST YEAR BY SEX FOR CURRENT RESIDENCE IN THE UNITED STATES	2010 ACS 5-year Selected Population Tables	
B07204	GEOGRAPHICAL MOBILITY IN THE PAST YEAR FOR CURRENT RESIDENCE--STATE, COUNTY AND PLACE LEVEL IN THE UNITED STATES	2010 ACS 5-year Selected Population Tables	

Selected: [View](#) | [Download](#) | [Compare](#) | [Clear All](#) ?

Step 13. Review your data and download the data

The screenshot shows the American FactFinder interface. At the top, there's a navigation bar with links for MAIN, COMMUNITY FACTS, GUIDED SEARCH, ADVANCED SEARCH, and DOWNLOAD CENTER. A magnifying glass icon is positioned over the word 'KANSAS' on a map of the central United States. Below the navigation bar, a title reads 'Advanced Search - Search all data in American FactFinder'. There are two tabs: '1 Advanced Search' (selected) and '2 Table Viewer'. The main content area displays a 'SELECTED POPULATION PROFILE IN THE UNITED STATES' for the '2015 American Community Survey 1-Year Estimates'. It includes a 'Table View' button and several action buttons: Modify Table, Add/Remove Geographies, Bookmark/Save, Print, Download, and Create a Map. A note at the bottom states: 'Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, and counties.' On the left, a sidebar lists 'Versions of this table are available for the following years: 2015, 2014, 2013'. The main data table has three columns: Subject, Chicago-Naperville-Elgin, IL-IN-WI Metro Area, and Omaha-Council Bluffs, NE-IA Metro Area. The table includes sections for 'TOTAL NUMBER OF RACES REPORTED' and 'SEX AND AGE'.

Subject	Chicago-Naperville-Elgin, IL-IN-WI Metro Area		Omaha-Council Bluffs, NE-IA Metro Area	
	Mexican (210-220)		Puerto Rican (260-269)	
	Estimate	Margin of Error	Estimate	Margin of Error
TOTAL NUMBER OF RACES REPORTED				
Total population	1,665,424	+/-17,295	193,069	+/-11,413
One race	97.6%	+/-0.3	93.2%	+/-1.2
Two races	2.2%	+/-0.3	6.0%	+/-1.1
Three races	0.2%	+/-0.1	0.7%	+/-0.4
Four or more races	0.0%	+/-0.1	0.1%	+/-0.1
SEX AND AGE				
Total population	1,665,424	+/-17,295	193,069	+/-11,413
Male	50.9%	+/-0.3	49.9%	+/-1.6
Female	49.1%	+/-0.3	50.1%	+/-1.6

Review of Margin of Error

American Fact Finder - 2009-2013

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is not a census — official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units and of Census characteristics for geographic entities known as "places" are produced only for the once-a-decade census.

Versions of this table are available for the following years:

- [2013](#) ►
- [2012](#)
- [2011](#)
- [2010](#)
- [2009](#)

St. Louis, MO-IL Metro Area		
	Estimate	Margin of Error
Total	2,792,127	*****

Source: U.S. Census Bureau, 2009-2013 5-Year American Community Survey

B01001: SEX BY AGE - Universe: Total population

St. Louis, MO-IL Metro Area

	Estimate	Margin of Error		Estimate	Margin of Error
Total:	2,792,127	*****			
Male:	1,351,614	+/-516	Female:	1,440,513	+/-516
Under 5 years	89,254	+/-251	Under 5 years	84,632	+/-297
5 to 9 years	91,086	+/-1,658	5 to 9 years	88,274	+/-1,453
10 to 14 years	96,116	+/-1,636	10 to 14 years	90,589	+/-1,488
15 to 17 years	59,797	+/-175	15 to 17 years	56,834	+/-181
18 and 19 years	37,650	+/-180	18 and 19 years	36,154	+/-275
20 years	17,856	+/-983	20 years	17,178	+/-961
21 years	18,239	+/-1,000	21 years	19,112	+/-979
22 to 24 years	53,534	+/-1,153	22 to 24 years	55,109	+/-1,019
25 to 29 years	93,386	+/-240	25 to 29 years	96,751	+/-274
30 to 34 years	88,809	+/-257	30 to 34 years	92,477	+/-217
35 to 39 years	82,797	+/-1,469	35 to 39 years	88,147	+/-1,426
40 to 44 years	88,827	+/-1,446	40 to 44 years	92,826	+/-1,431
45 to 49 years	100,130	+/-288	45 to 49 years	105,820	+/-207
50 to 54 years	105,852	+/-252	50 to 54 years	111,213	+/-168
55 to 59 years	91,792	+/-1,439	55 to 59 years	99,862	+/-1,460
60 and 61 years	33,192	+/-1,156	60 and 61 years	35,957	+/-1,140
62 to 64 years	42,219	+/-1,013	62 to 64 years	47,301	+/-1,128
65 and 66 years	23,860	+/-834	65 and 66 years	27,130	+/-878
67 to 69 years	30,542	+/-909	67 to 69 years	35,459	+/-881
70 to 74 years	38,566	+/-977	70 to 74 years	48,504	+/-1,046
75 to 79 years	29,073	+/-822	75 to 79 years	38,923	+/-817
80 to 84 years	21,748	+/-810	80 to 84 years	34,288	+/-926
85 years and over	17,289	+/-594	85 years and over	37,973	+/-934

Social Explorer 2009-2013

Statistics	St. Louis	
SE:T5. Sex By Age		
Total Population:	2,792,127	
Male:	1,351,614	48.4%
Under 5 Years	89,254	3.2%
5 to 9 Years	91,086	3.3%
10 to 14 Years	96,116	3.4%
15 to 17 Years	59,797	2.1%
18 to 24 Years	127,279	4.6%
25 to 34 Years	182,195	6.5%
35 to 44 Years	171,624	6.2%
45 to 54 Years	205,982	7.4%
55 to 64 Years	167,203	6.0%
65 to 74 Years	92,968	3.3%
75 to 84 Years	50,821	1.8%
85 Years and over	17,289	0.6%
Female:	1,440,513	51.6%
Under 5 Years	84,632	3.0%
5 to 9 Years	88,274	3.2%
10 to 14 Years	90,589	3.2%
15 to 17 Years	56,834	2.0%
18 to 24 Years	127,553	4.6%
25 to 34 Years	189,228	6.8%
35 to 44 Years	180,973	6.5%
45 to 54 Years	217,033	7.8%
55 to 64 Years	183,120	6.6%
65 to 74 Years	111,093	4.0%
75 to 84 Years	73,211	2.6%
85 Years and over	37,973	1.4%

ACS Extension and Capabilities

Enhancements to GIS Tools and Methods for Mapping American Community Survey Estimates and Data Quality Information

- David Wong @ George Mason University
 - <http://mason.gmu.edu/~dwong2/>
- **Methodological Issues:**
 - American Community Survey (ACS) data have higher degree of unreliability.
 - For each estimate in the ACS data, the Census Bureau provides the margin of error (MOE), an indicator of the reliability of the estimate. Using ACS data should take into consideration of the MOE
 - Most methodologies of spatial analyses assume the data are accurate and the spatial patterns revealed in maps are true.
 - This assumption may not be true when trying to estimate spatial relationships. Working with ACS data in a spatial software package is not as straight-forward as the decennial census data.
 - You need to make informed methodological decisions.
 - Note: You can't work within a Geodatabase, you must move your shapefile to a folder

Solutions and Results:

- An ArcGIS extension was developed to address the methodological issues.
 - “The extension includes detailed instruction to download ACS data and associated boundary data to be used in GIS.”
 - “Several mapping designs are developed in the extension. These designs facilitates the inclusion of reliability information when mapping ACS data.”
 - “These designs also help readers determine if differences in ACS estimates are real or due to sampling error.”
 - Note: You don’t need the extension, but the extension will save you lots of time.

Coefficient of Variation

$$C_v = \left(\frac{\text{Standard Error (SE)}}{\frac{1.645}{\text{Estimate}}} \right) * 100$$

The CV is a measure of relative error in the estimate (i.e., CVs indicate the reliability of the estimates. It measures the amount of sampling error in the estimate relative to the size of the estimate itself. A large amount of sampling error in a small estimate will generally discount the usefulness of the estimate; however, a small amount of sampling error in a large estimate shows that the estimate is reliable

High values indicate that the estimates have a high degree of uncertainty.

Low values indicate that the estimates have a low degree of uncertainty.

Standard Error (SE) = 90% MOEs provided in the ACS data

- **High Reliability:** Small CVs, less than or equal to 12 percent, are flagged green to indicate that the sampling error is small relative to the estimate and the estimate is reasonably reliable.
- **Medium Reliability:** Estimates with CVs between 12 and 40 are flagged yellow—use with caution.
- **Low Reliability:** Large CVs, over 40 percent, are flagged red to indicate that the sampling error is large relative to the estimate. The estimate is considered very unreliable.

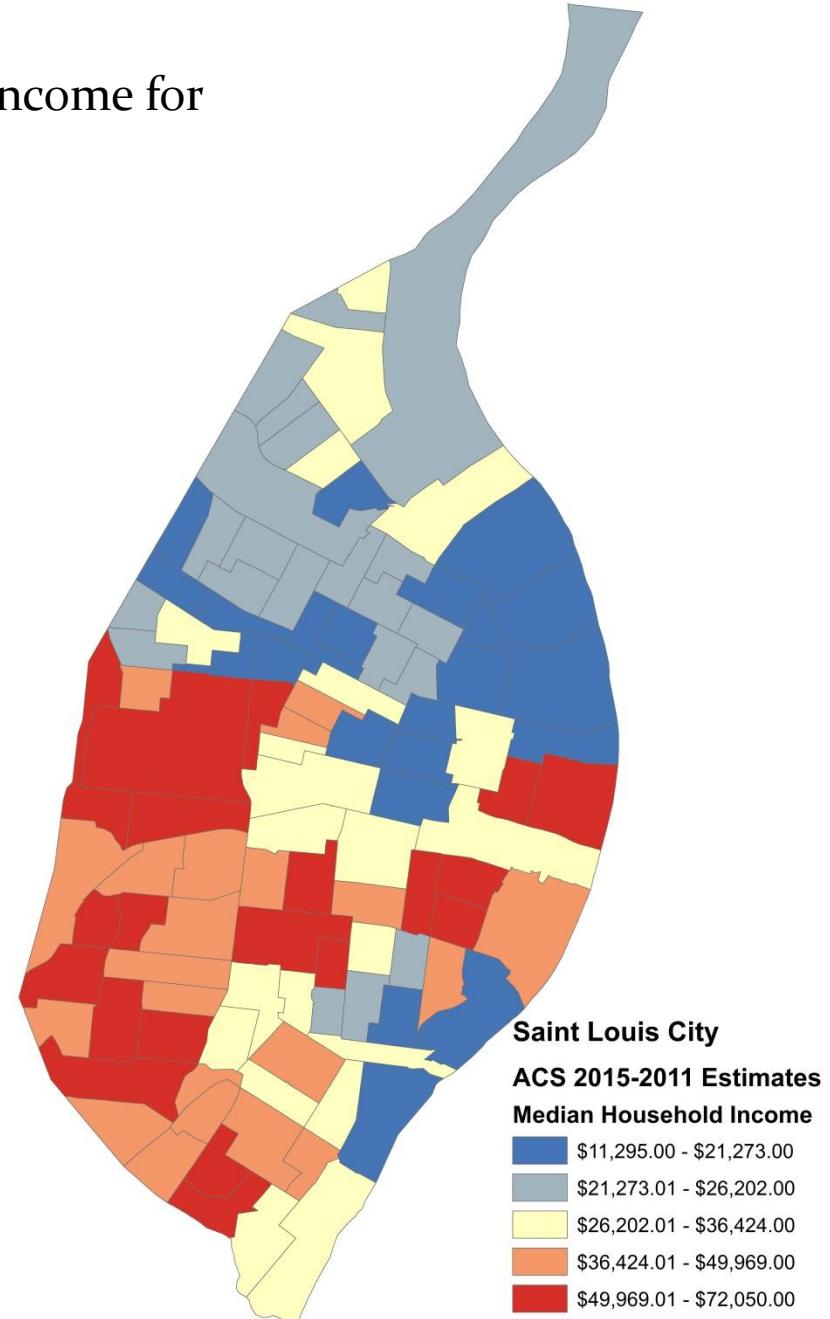
This is a typical map of median household income for Saint Louis City using 2011-2015 ACS

The question:

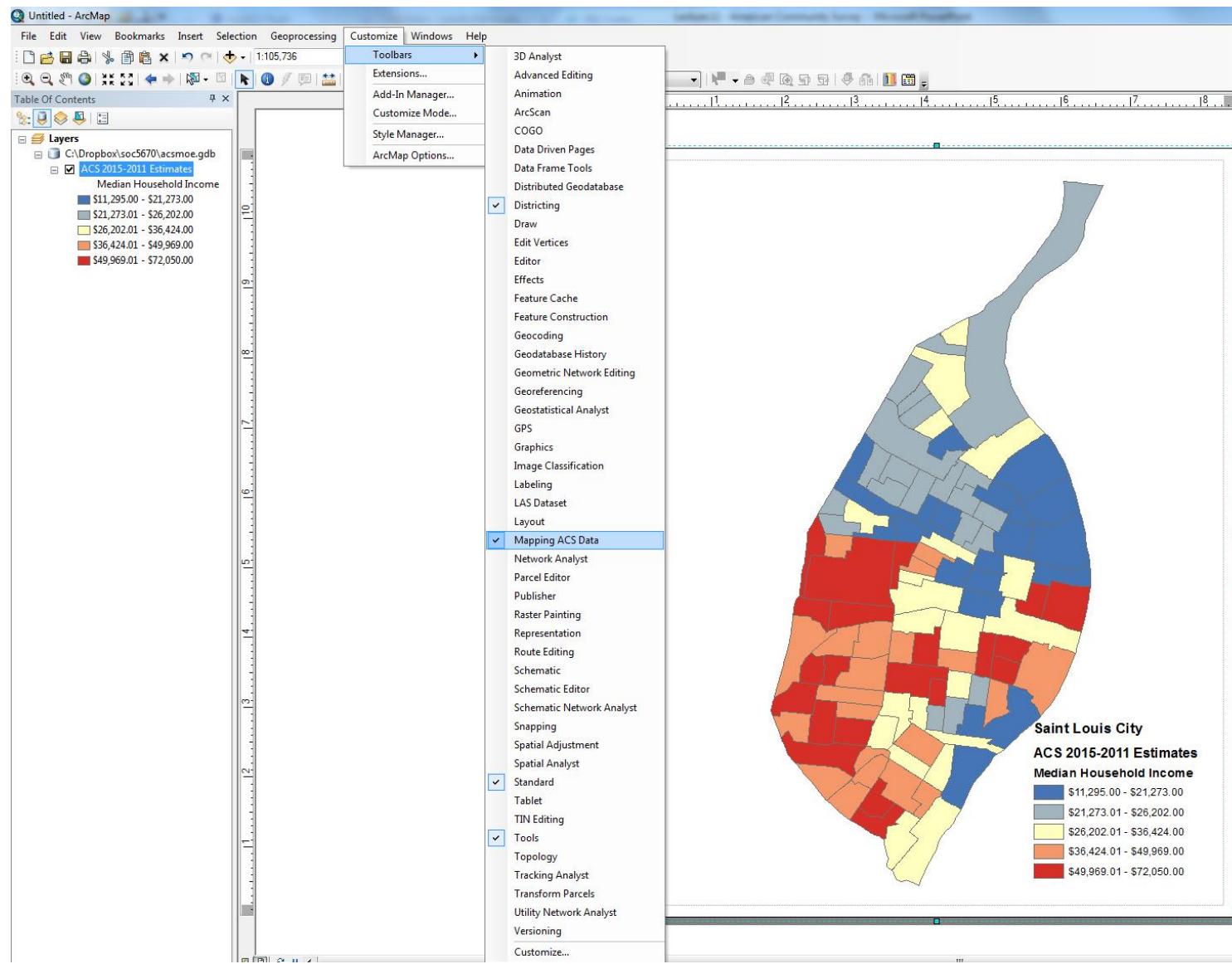
Are the spatial differences real?

Or

Are the spatial differences an illusion?



1. Download the ACS data and Merge with the shapefile
2. Load the Mapping ACA data Extension

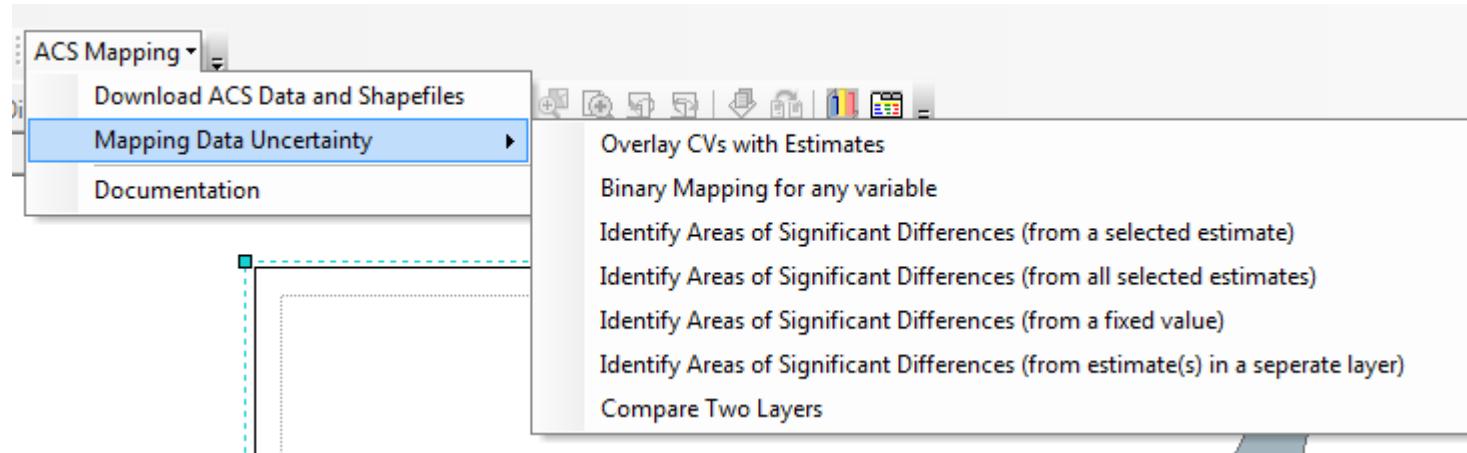


3. Review the attribute table to make sure your data is in the shapefile

Table ACS 2015-2011 Estimates

	p01	nh15	mh15	index01	index02	cc	x_coord	y_coord	Geo_FIPS	totpop	Shape_Leng	pct_blk	Shape_le_1	area	OBJECTID_4	GEOD1_1	Cnt_GEOID	Sum_count	homI_rate	Shape_le_2	GEOD10_12	HD01_VD01	HD02_VD01	Shape_Length	Shape_Area
>	0.124398	0.117283	51952	0.609551	0.645595	1	736555.653319	4280379.23071	29510112100	4432	11897.099074	0.291516	11897.099074	6.940674	42	29510112100	2	2	0.451264	11897.099074	29510112100	51952	9558	11897.09074	6940673.666932
	0.25854	0.212453	36301	0.501258	0.497012	1	740588.422418	4276141.0089	29510116500	4481	3776.493599	0.360857	3776.493599	0.90459	60	29510116500	6	6	1.338987	3776.493599	29510116500	36301	4627	3776.493599	904589.994923
	0.260671	0.227642	22131	0.417718	0.387952	1	740797.308362	4283242.20512	29510110300	1968	4272.979053	0.973879	4272.979053	0.938879	34	29510110300	16	16	8.130081	4272.979053	29510110300	22131	3539	4272.979053	938878.652221
	0.119674	0.097683	51563	0.574074	0.577313	1	736706.84845	4278844.24735	29510104500	1597	6818.338203	0.092048	6818.338203	1.940835	9	29510104500	2	2	1.252348	6818.338203	29510104500	51563	10947	6818.338203	1940385.273939
	0.411253	0.242459	17131	0.254585	0.222496	1	736540.857197	4283598.39476	29510106100	1724	4238.495866	0.973898	4238.495866	0.962875	15	29510106100	18	18	10.440835	4238.495866	29510106100	17131	2023	4238.495866	962875.280367
	0.316001	0.243568	31088	0.355762	0.355171	1	736935.419952	4282569.43403	29510105500	2993	5518.274458	0.395516	5518.274458	1.19625	14	29510105500	9	3	3.070116	5518.274458	29510105500	31088	4687	5518.274458	1196250.253651
	0.123822	0.082634	48669	0.575767	0.596619	1	735936.289762	4281467.41588	29510105200	2977	3903.051687	0.482701	3903.051687	0.831745	11	29510105200	1	1	0.335909	3903.051687	29510105200	48669	5658	3903.051687	831745.088149
	0.267716	0.145306	22361	0.366593	0.354344	1	735957.73928	4282629.5414	29510105300	2450	4580.225109	0.957959	4580.225109	0.956765	12	29510105300	7	7	2.857143	4580.225109	29510105300	22361	5578	4580.225109	958765.30391
	0.34465	0.175763	21675	0.323803	0.285972	1	735826.196339	4283094.64101	29510105400	2337	3553.365282	0.821994	3553.365282	0.721943	13	29510105400	10	10	4.27899	3553.365282	29510105400	21875	8250	3553.365282	721943.04939
	0.180939	0.091768	36979	0.46414	0.457985	1	736002.989176	4277449.69862	29510103600	1448	5475.281664	0.031768	5475.281664	1.373212	8	29510103600	1	1	0.690608	5475.281664	29510103600	36979	17545	5475.281664	1373211.988338
	0.239412	0.064887	54497	0.653912	0.72076	1	734987.60471	4281346.15815	29510105190	3483	7464.306314	0.130347	7464.306314	1.177177	10	29510105190	1	1	0.287109	7464.306314	29510105190	54497	14847	7464.306314	1177176.722178
	0.26175	0.254414	25068	0.334675	0.300334	1	737898.713145	4283586.02737	29510106500	2852	4563.609207	0.93989	4563.609207	1.064775	19	29510106500	18	18	6.311136	4563.609207	29510106500	25068	7921	4563.609207	1064774.867913
	0.524179	0.318505	18568	0.307205	0.249842	1	737842.425271	4282894.50222	29510106600	1709	4781.430102	0.984786	4781.430102	0.855355	20	29510106600	22	22	12.873025	4781.430102	29510106600	18566	6126	4781.430102	855355.425396
	0.296907	0.17732	23636	0.388056	0.363881	1	737354.928361	4284560.35786	29510106300	1455	4821.051578	0.966323	4821.051578	1.017727	17	29510106300	30	30	20.618557	4821.051578	29510106300	23636	6402	4821.051578	1017727.051496
	0.393270	0.238516	22230	0.347681	0.295235	1	738847.39102	4287135.618	29510107200	1158	3958.594579	0.975779	3958.594579	0.655793	22	29510107200	11	11	9.155171	3958.594579	29510107200	22330	5347	3958.594579	655792.675797
	0.434694	0.295608	23019	0.270571	0.287334	1	739017.05888	4283530.58284	29510106700	2960	4851.979135	0.984459	4851.979135	1.239242	21	29510106700	22	22	7.432432	4851.979135	29510106700	23019	8524	4851.979135	123942.348682
	0.481469	0.20192	24189	0.393523	0.317357	1	739116.655681	4286617.27357	29510107400	2968	4398.755327	0.898555	4398.755327	0.85756	22	29510107400	22	22	7.412399	4398.755327	29510107400	24189	4385	4398.755327	108576.17763
	0.245455	0.226033	28888	0.375239	0.314726	1	739665.445434	4286129.69007	29510107500	2420	4113.874771	0.969421	4113.874771	0.912325	25	29510107500	22	22	8.08909	4113.874771	29510107500	28988	6938	4113.874771	91235.08807
	0.345924	0.202549	19219	0.296221	0.265117	1	740158.963366	4285432.57028	29510107600	2197	5261.553685	0.978607	5261.553685	1.146634	26	29510107600	13	13	5.917116	5261.553685	29510107600	19219	5906	5261.553685	1146634.31257
	0.533136	0.226636	27216	0.336321	0.307741	1	740210.49473	428135.25443	29510111100	1814	5629.846651	0.96086	5629.846651	0.915145	37	29510111100	6	6	3.307607	5629.846651	29510111100	27216	11465	5629.846651	109154.072945
	0.533123	0.278159	21273	0.381634	0.323195	1	739521.014453	4282514.5598	29510111200	1021	6325.024967	0.908913	6325.024967	0.948105	38	29510111200	9	9	8.814887	6325.024967	29510111200	21273	3197	6325.024967	1048105.98764
	0.318862	0.21535	20150	0.362345	0.302834	1	740121.475673	4282574.14292	29510111300	1348	3965.751304	0.997033	3965.751304	0.951712	39	29510111300	12	12	8.902077	3965.751304	29510111300	20150	4121	3965.751304	951171.623234
	0.39468	0.173257	24688	0.381561	0.339094	1	740894.309699	4282099.0047	29510111400	1398	4259.822418	0.972063	4259.822418	0.912084	40	29510111400	15	15	10.744986	4259.822418	29510111400	24688	9614	4259.822418	912084.451971
	0.565428	0.25	21500	0.412205	0.383388	1	741477.944002	4281637.83073	29510111500	620	4330.598028	0.962903	4330.598028	0.788845	41	29510111500	8	8	12.930226	4330.598028	29510111500	21500	11584	4330.598028	788845.412399
	0.384664	0.086154	19703	0.260463	0.256687	1	737653.630648	4282032.46151	29510112200	1645	5116.965502	0.988785	5116.965502	0.695641	43	29510112200	7	7	4.255319	5116.965502	29510112200	19703	3913	5116.965502	695640.887019
	0.278807	0.270016	34309	0.471654	0.415903	1	738654.714347	4273175.21584	29510115400	3185	5460.495348	0.253061	5460.495348	0.979422	52	29510115400	3	3	9.041915	4640.509348	29510115400	34309	8139	4640.509348	979421.661899
	0.363237	0.298203	28323	0.386307	0.340969	1	739195.739267	4272914.18019	29510115500	7069	4827.392982	0.501202	4827.392982	1.216213	53	29510115500	5	5	7.07314	4827.392982	29510115500	28323	8255	4827.392982	1216212.665606
	0.319147	0.244966	17837	0.273216	0.247646	1	740844.533339	4272744.18392	29510115600	4815	7357.621727	0.480788	7357.621727	2.647478	54	29510115600	9	9	1.869159	7357.621727	29510115600	17837	5040	7357.621727	2647478.170864
	0.179844	0.244966	17837	0.473259	0.49317	1	740844.519952	428314.23617	29510110100	2079	5106.540151	0.994607	5106.540151	0.944607	67	29510110100	2	2	1.145475	4361.248629	29510110100	45000	15754	4361.248629	73403.265314
	0.411	0.248592	21693	0.265238	0.223227	1	741134.912865	4280446.81183	2951011200	2309	4272.680996	0.987374	4272.680996	0.772646	33	2951011200	23	23	9.961022	4272.680996	2951011200	21693	5786	4272.680996	77245.612886
	0.454123	0.225881	19294	0.335050	0.31271	1	738682.616437	4282051.51772	2951012200	2038	3723.870088	0.974975	3723.870088	0.852422	44	2951012200	23	23	11.285574	3723.870088	2951012200	19294	3903	3723.870088	85241.931124
	0.240229	0.226555	36019	0.502097	0.489501	1	739067.956351	4275008.464644	29510116100	3231	4019.217576	0.258434	4019.217576	0.765638	56	295									

4. Overlay CV's with Estimates → Select Layer with (Estimate and MOE=Margin of Error)
→ Select number of classifications and methods of breaks

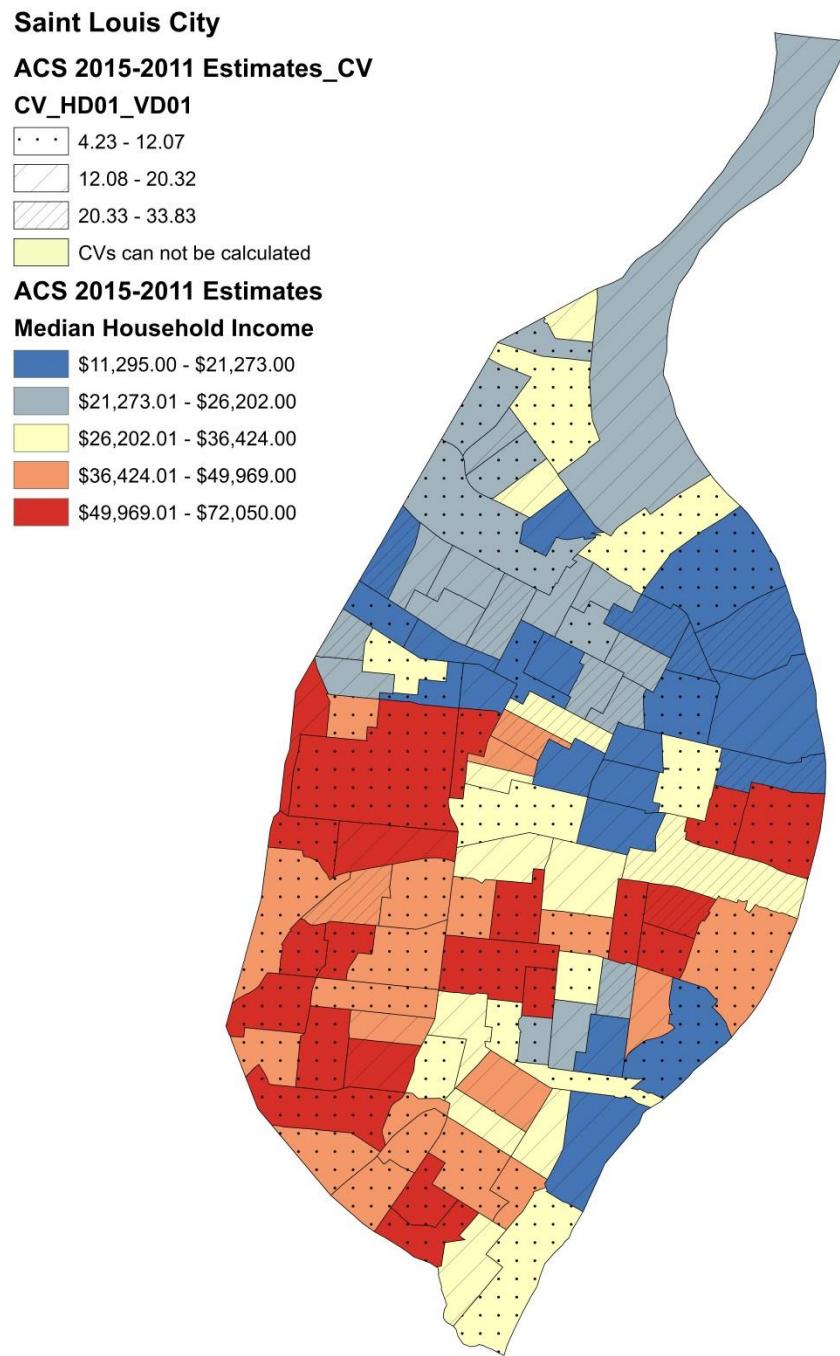


The image displays two overlapping dialog boxes. The bottom dialog is titled 'Select Target Layer, Estimate and MOE Fields'. It contains fields for 'Select the target layer' (set to 'ACS 2015-2011 Estimates'), 'Select the estimate' (set to 'HD01_VD01'), 'Select the MOE' (set to 'HD02_VD01'), and two radio button options: 'Create a choropleth map' (selected) and 'Create a binary map'. At the bottom are 'Select' and 'Cancel' buttons. The top dialog is titled 'Mapping CVs'. It includes settings for 'Fields': 'Value' set to 'CV_HD01_VD01', 'Normalization' set to 'none', 'Classification' set to 'Natural Breaks (Jenks)', and 'Classes' set to '3'. A 'Color Ramp' slider is shown with three distinct colors. A table below lists three class ranges with corresponding symbols: '4.23 - 12.07' (white square), '12.08 - 20.32' (diagonal lines), and '20.33 - 33.83' (cross-hatch). At the bottom of the dialog are 'OK', 'Cancel', and 'Apply' buttons, along with a checkbox for 'Show class ranges using feature values' and an 'Advanced' button.

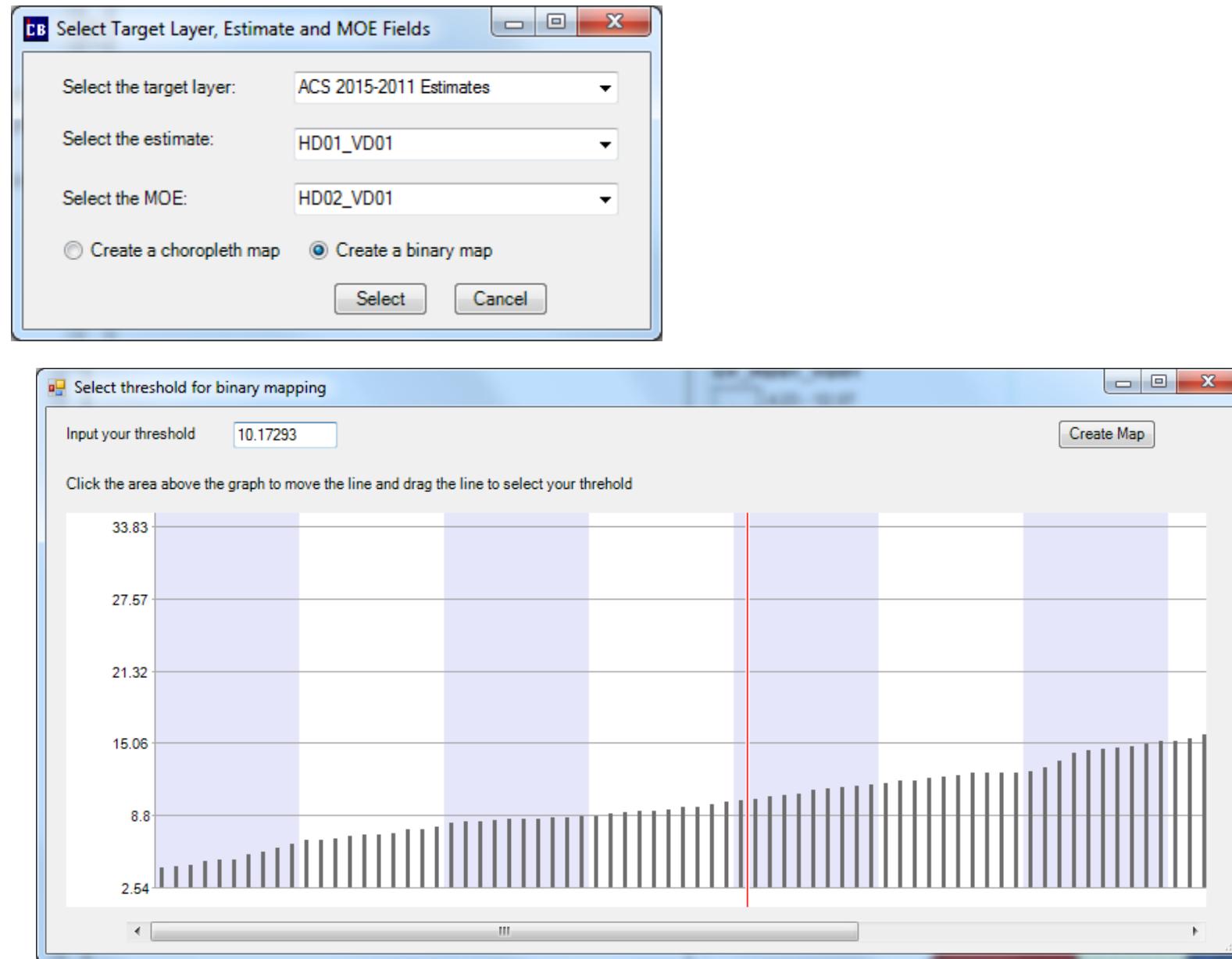
5. Review our new map

6. Look at the variation of CVs

Remember Higher CVs indicate that estimates have a high degree of uncertainty,



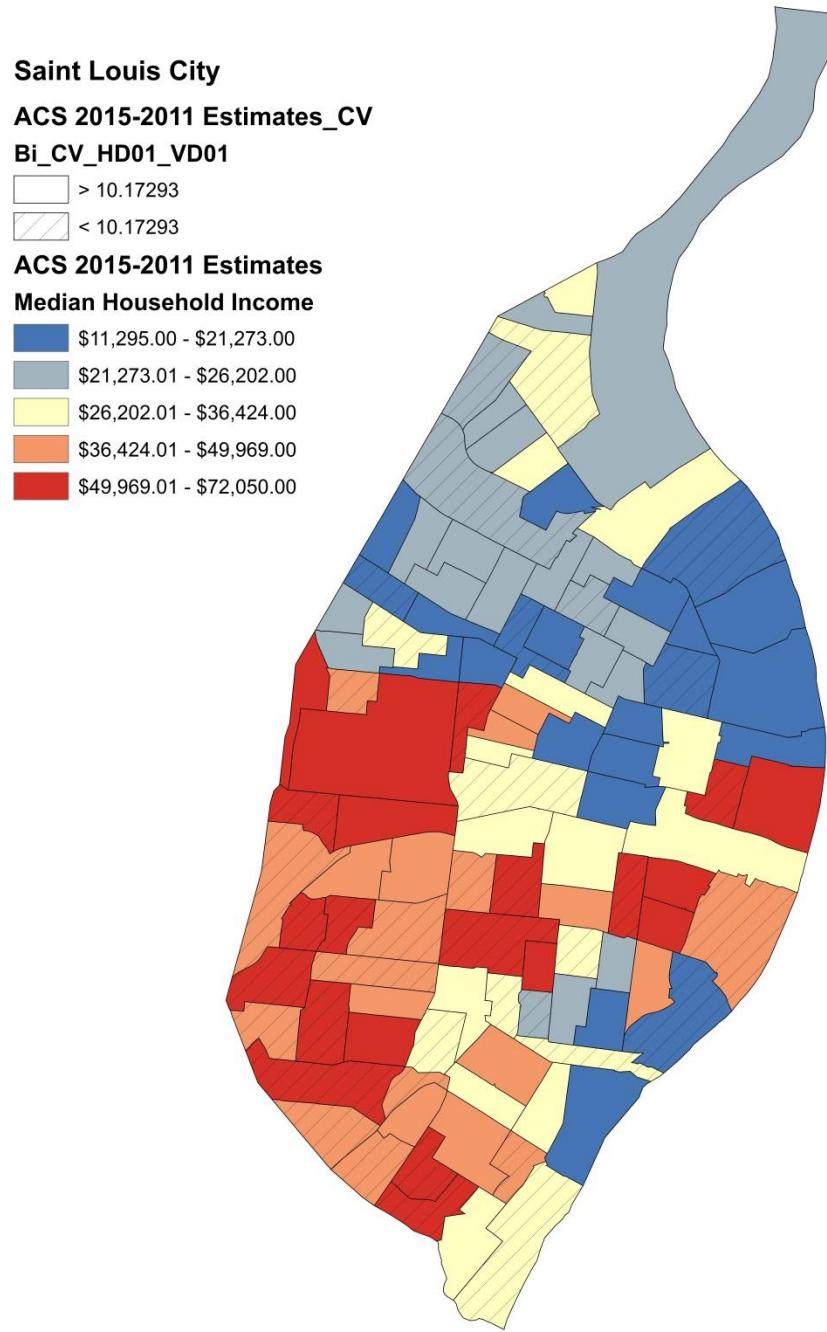
7. Let's create a binary map → You must click on the box and select a “threshold”



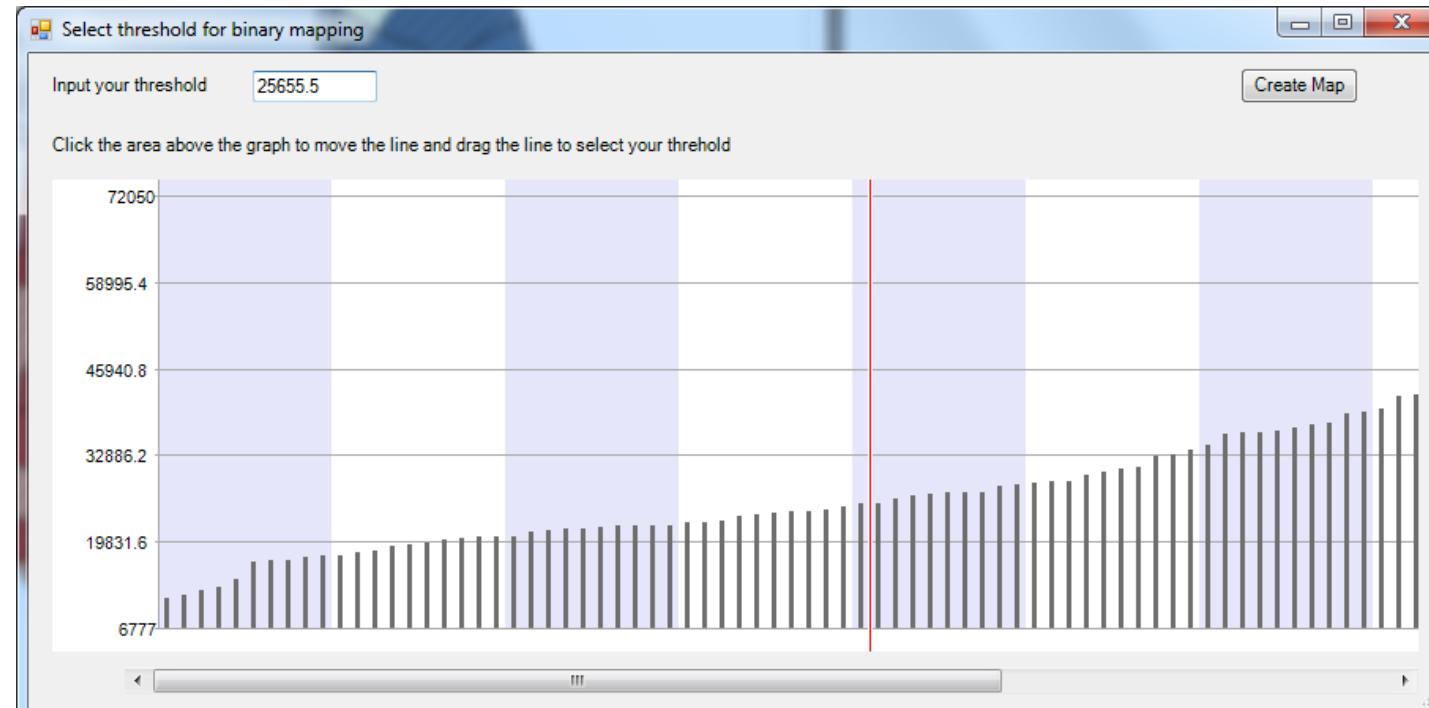
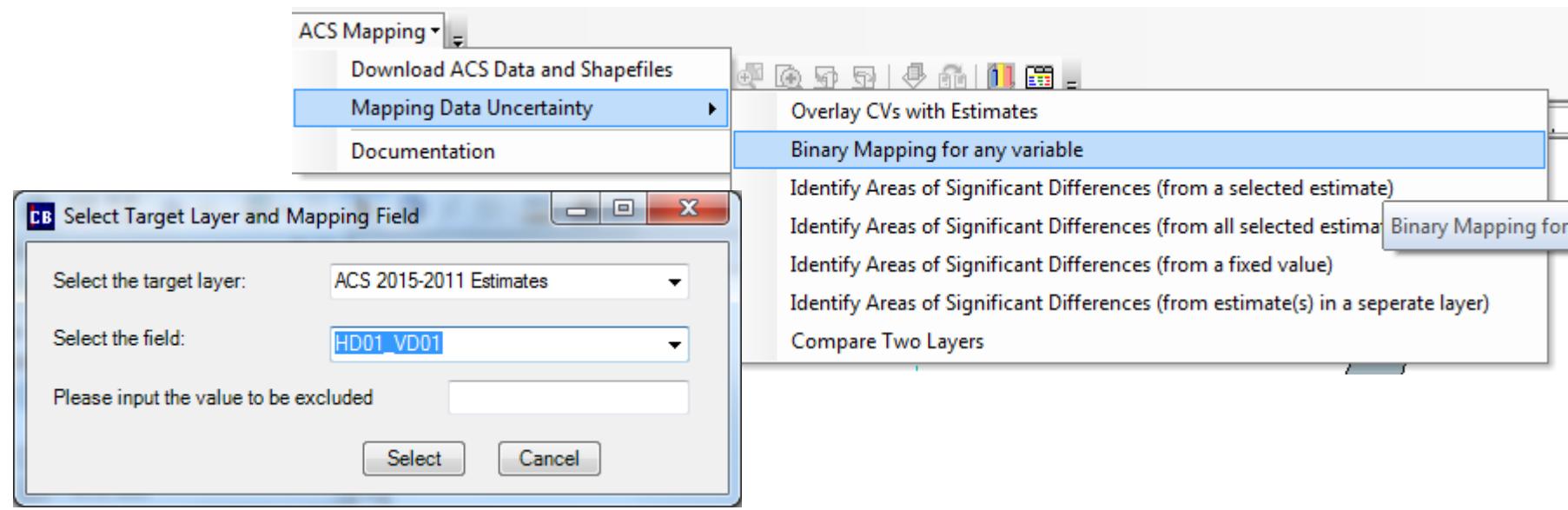
8. Review our new map. It only has two categories

9. Look at the variation of CVs

Remember Higher CVs indicate that the estimates have a high degree of uncertainty,

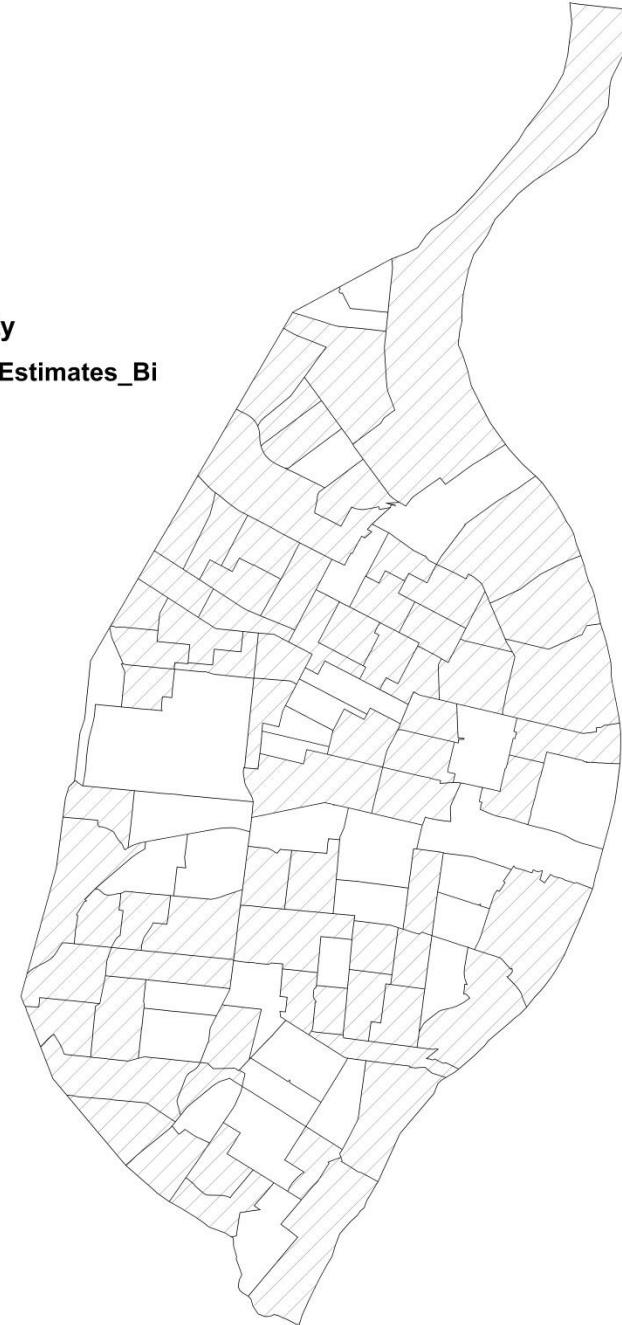
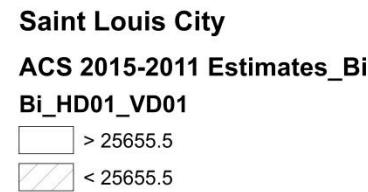


10. Let's create a binary map of Median Household Income



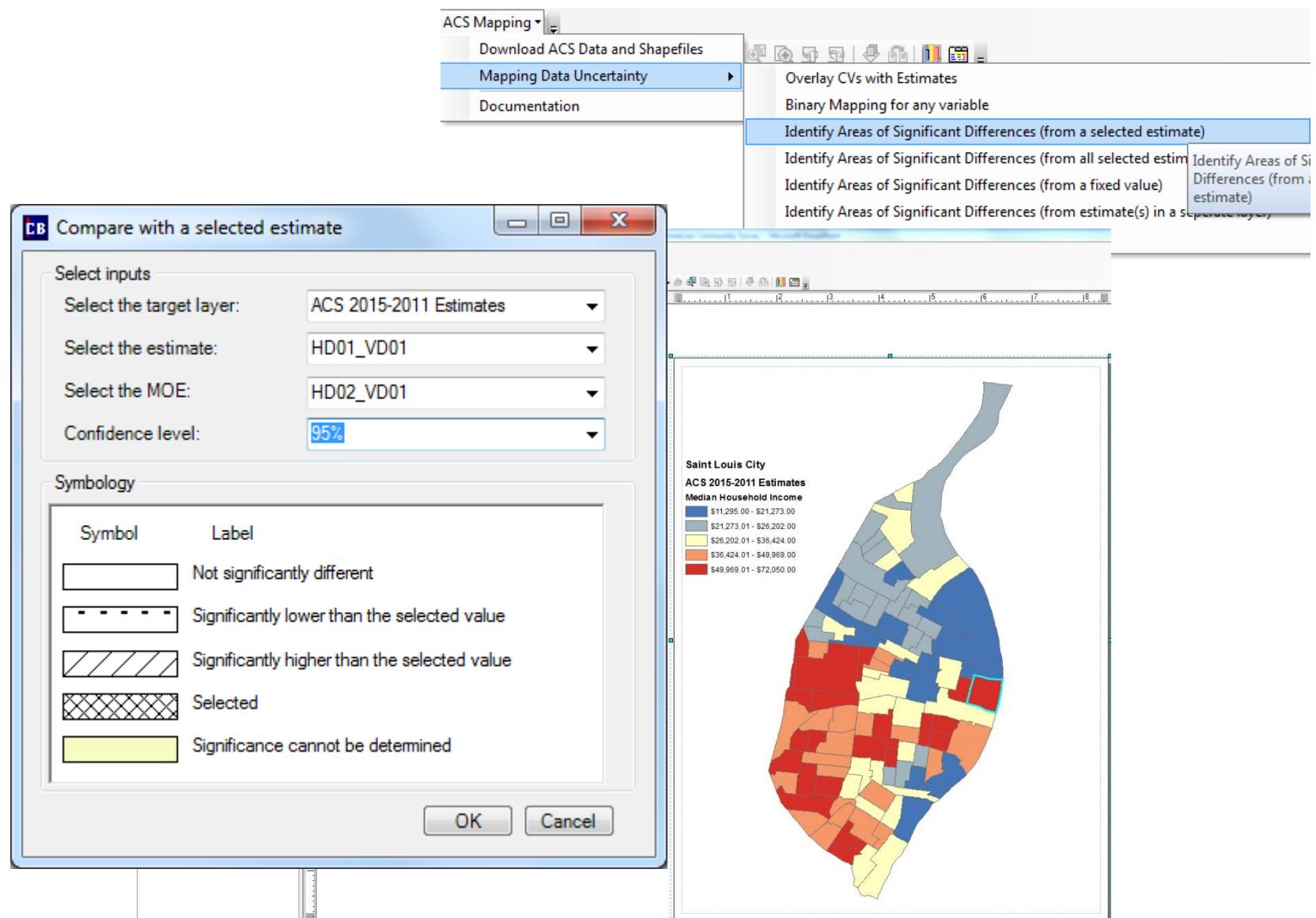
11. Review your new map. It only has two categories

This is helpful if you trying to dichotomous variables or operationalize theoretical variable like “High Poverty Neighborhoods”



12. Identify areas of Significant Differences from one estimate → enter your data → I prefer to start with 95% Confidence.

Note: You must select a feature in the shapefile before you execute this command.



13. Review our new map.

Note our comparison is the double hatched polygon (Selected). We selected this feature before we executed our command.

The polygons that are empty are not statistically different compared to our selected polygon.

We can say that the polygons with the dots have a significantly lower median household income compared to our selected area of study.

We can say that the polygons with the hatches have a significantly higher median household income compared to our selected area of study. Based on my selected there were none.

Saint Louis - 2015-2011 ACS

moe_SigDiff

Dif_HD01_VD01jnl5rz

Not significantly different

Significantly lower than the selected value

Selected

moe

HD01_VD01

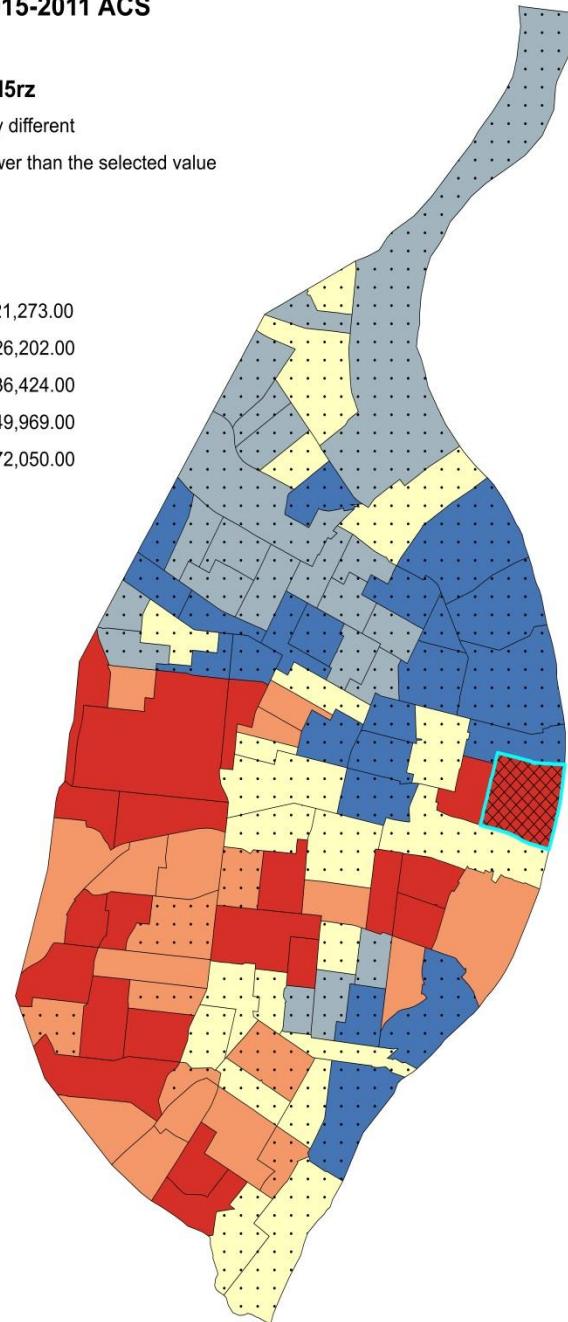
\$11,295.00 - \$21,273.00

\$21,273.01 - \$26,202.00

\$26,202.01 - \$36,424.00

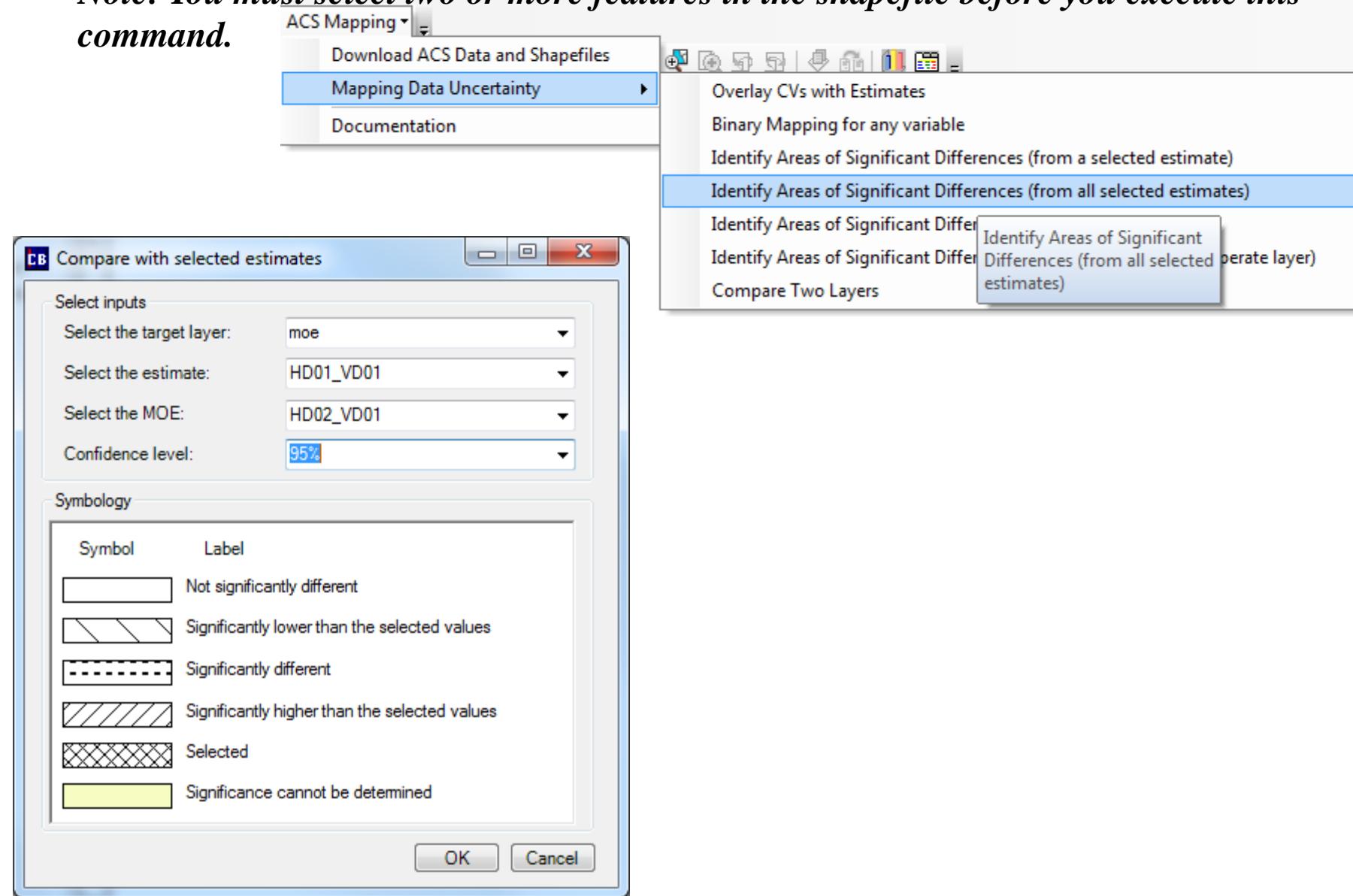
\$36,424.01 - \$49,969.00

\$49,969.01 - \$72,050.00



14. Identify areas of Significant Differences from all selected estimates → enter your data
→ I prefer to start with 95% Confidence.

Note: You must select two or more features in the shapefile before you execute this command.

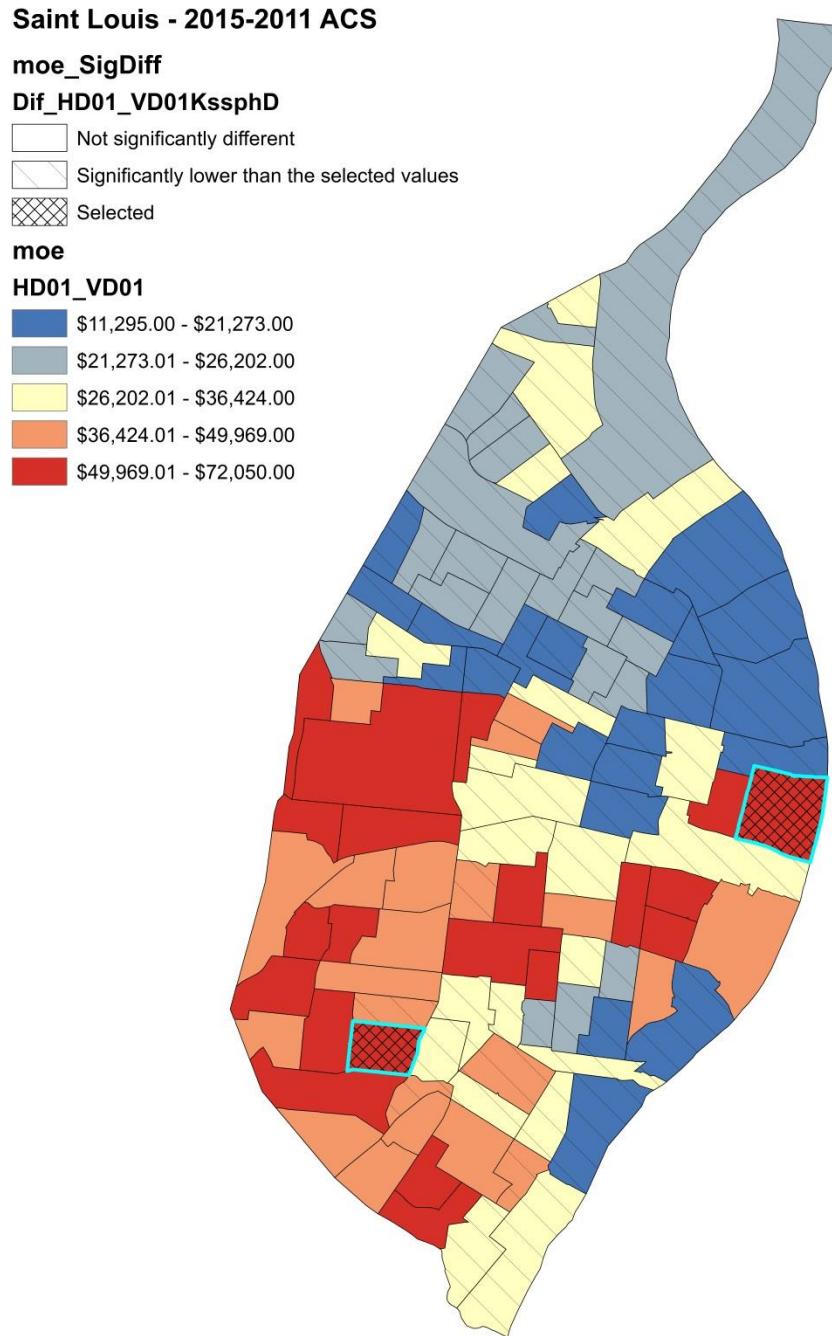


15. Review our new map.

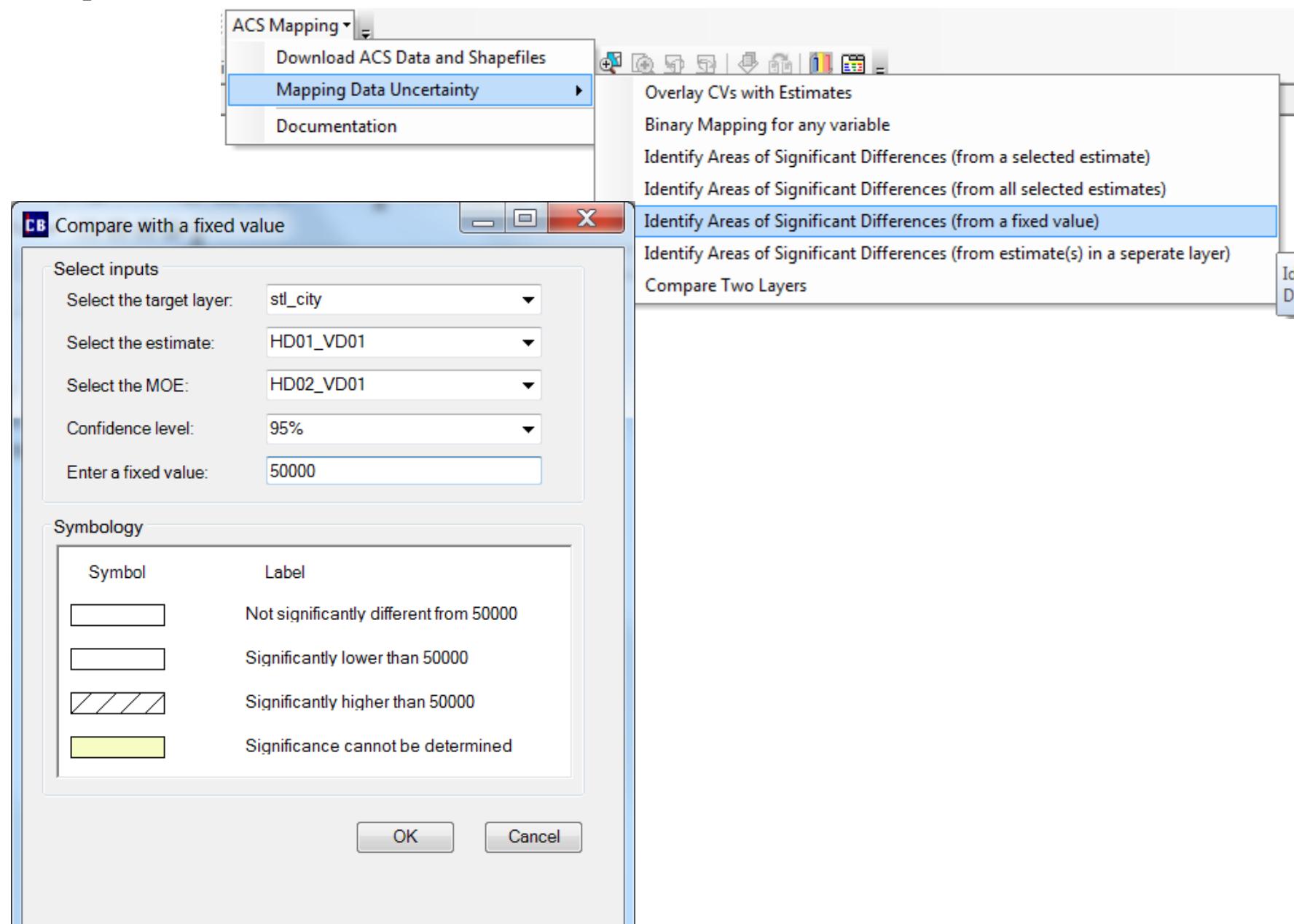
Note our comparison is the double hatched polygons (Selected). We selected these features before we executed our command.

The polygons that are empty are not statistically different compared to our selected polygon.

We can say that the polygons with the hatches have a significantly lower median household income compared to our selected areas of study.



16. Identify areas of Significant Differences from a fixed value → enter your data → I prefer to start with 95% Confidence → Enter a Fixed Value.



17. Review our new map.

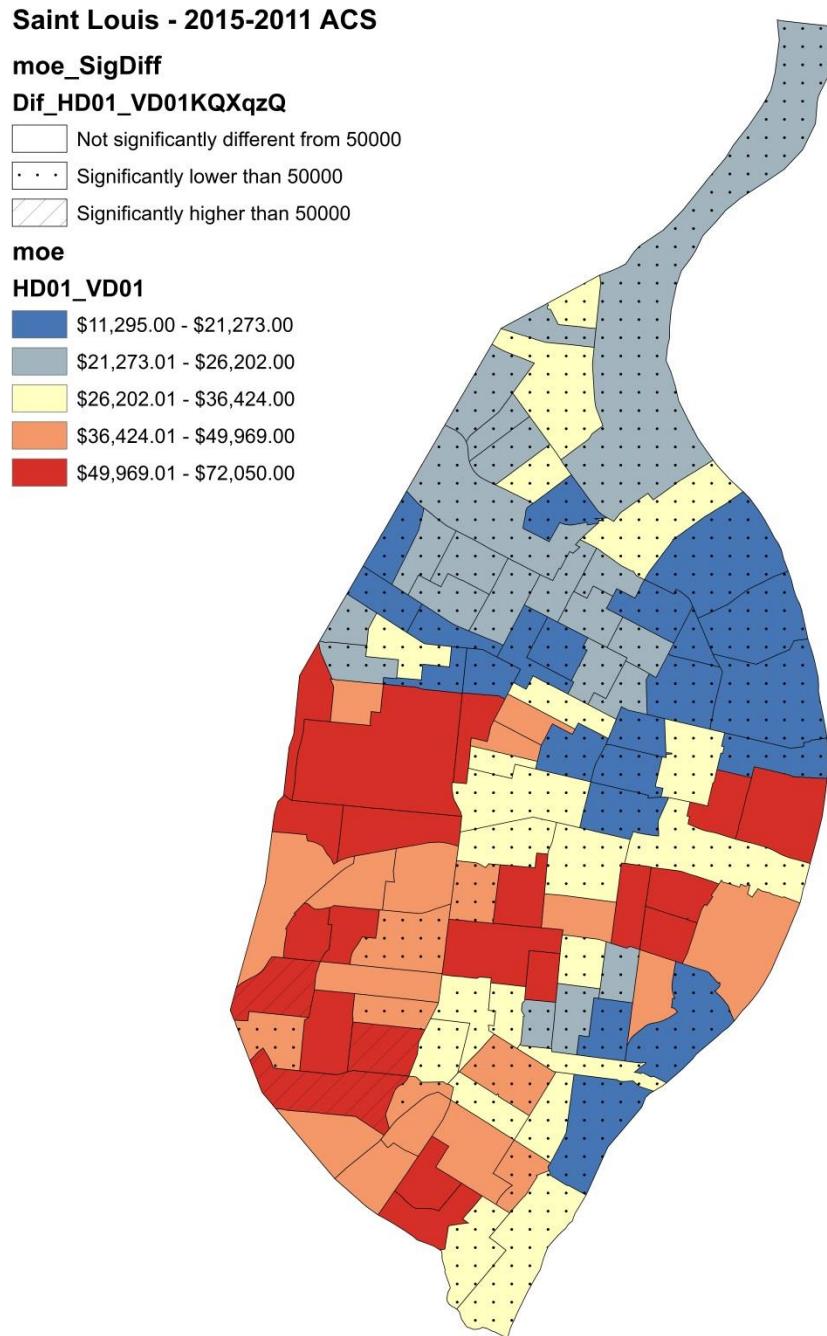
Note our comparison is to the fixed value of \$50,000.

The polygons that are empty are not statistically different compared to our selected polygon.

We can say that the polygons with the dots have a significantly lower median household income compared to \$50000

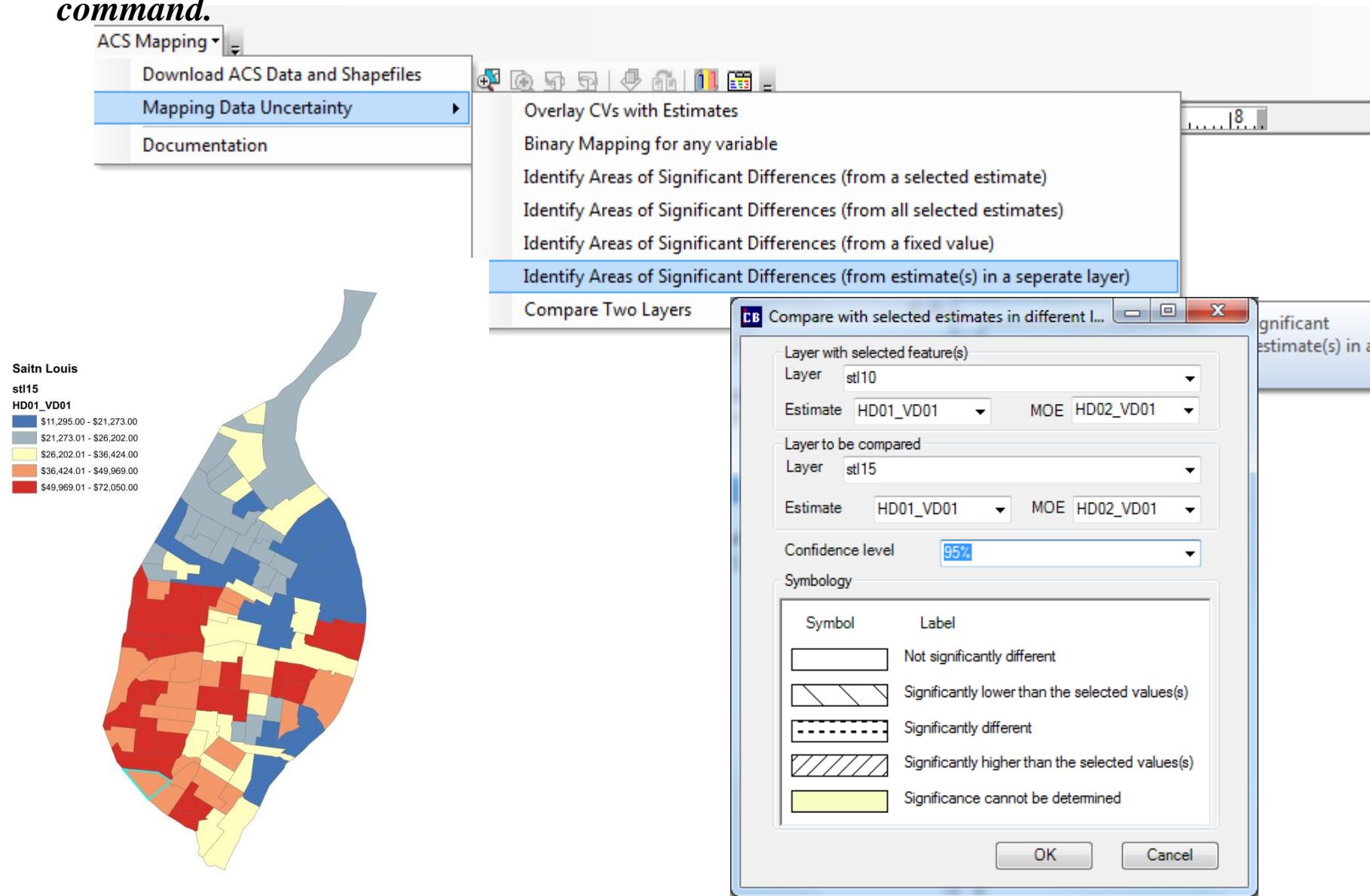
We can say that the polygons with the hatches have a significantly higher median household income compared to \$50000

Note: We have some orange areas that are not significantly different



18. Identify areas of Significant Differences from estimates in a separate layer (i.e., time periods) → enter your data

Note: You must select at least one feature in a different shapefile before you execute this command.

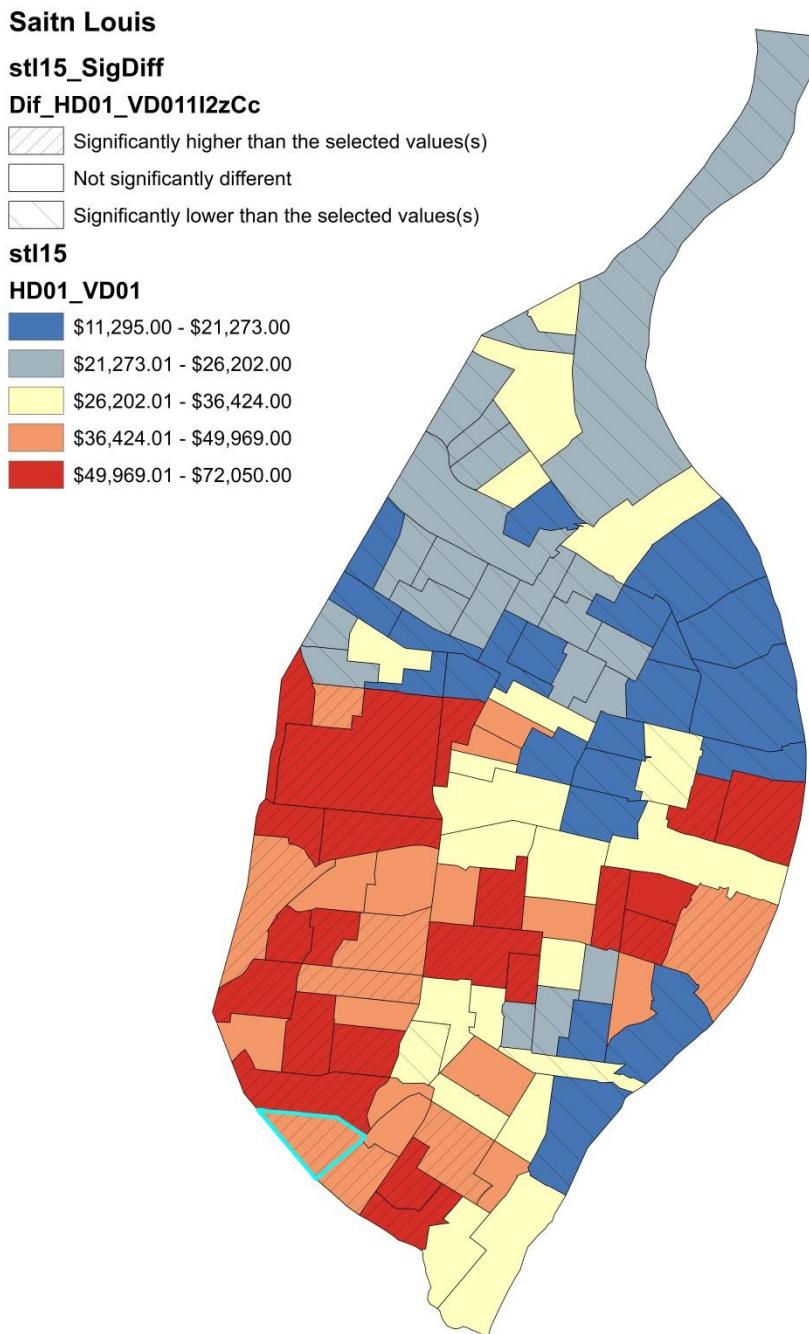


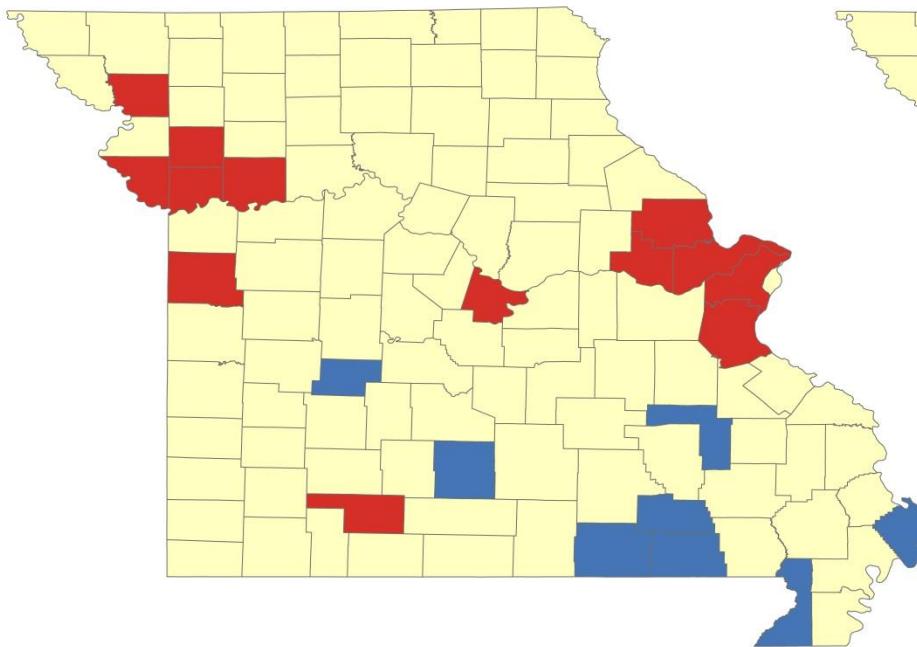
19. Review our new map.

The polygons that are empty are not statistically different compared to our selected polygon.

We can say that the polygons with the hatches have a significantly lower median household income compared to the selected feature from 2006-2010

Note: We have some orange areas that are not significantly different





Missouri

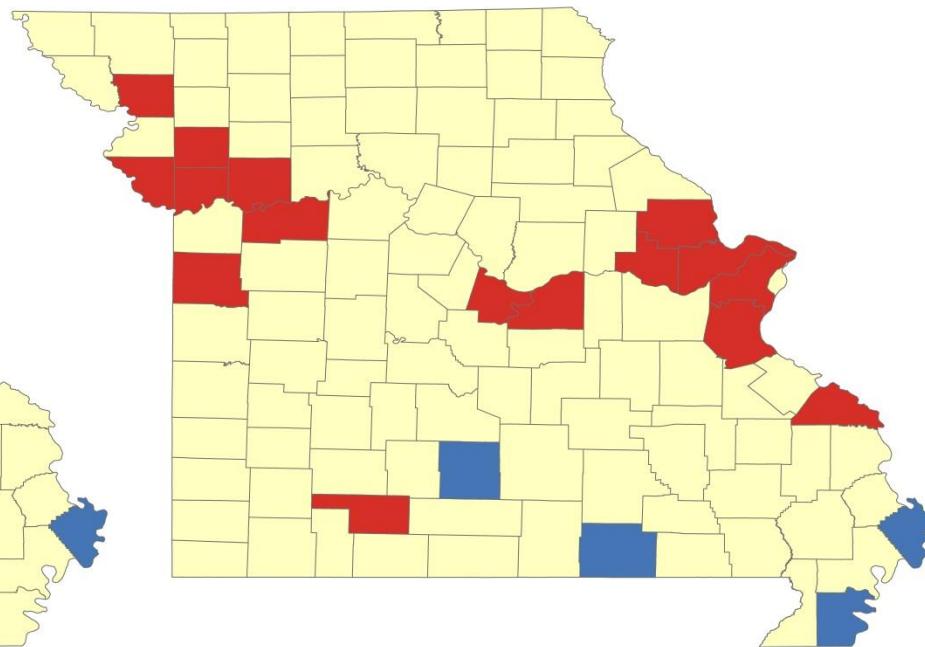
2010

Median Household Income

\$26,144.00 - \$30,000.00

\$30,000.01 - \$50,000.00

\$50,000.01 - \$70,331.00



Missouri

2015

Median Household Income

\$28,347.00 - \$30,000.00

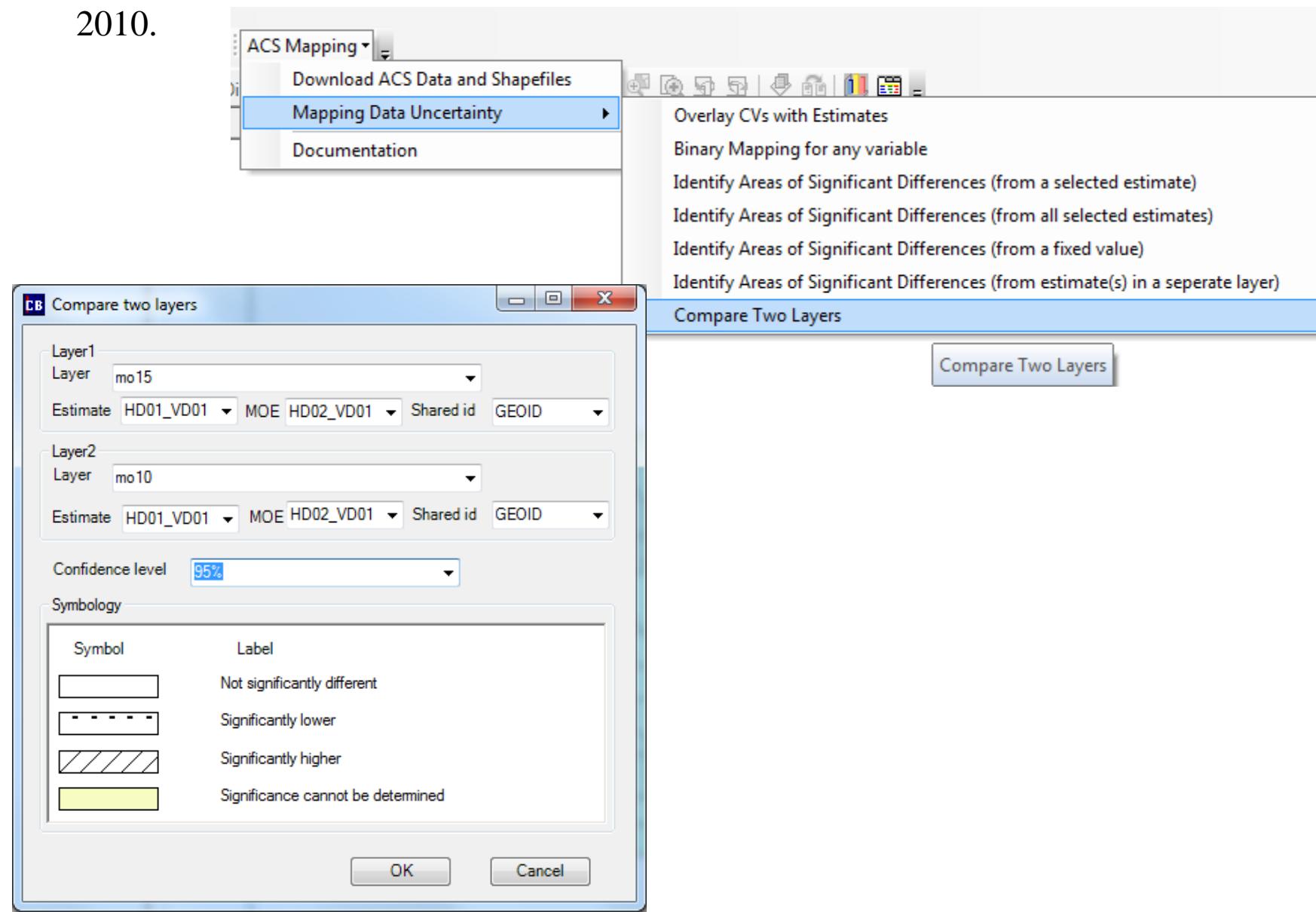
\$30,000.01 - \$50,000.00

\$50,000.01 - \$72,415.00

20. Compare Two Layers (i.e., two time periods) → enter your data

Note: You need to enter: Estimate, MOE, and unique ID that is common in both shapefiles

Note: Very difficult to do if you have your census tract boundaries changed from 2000 to 2010.



19. Review our new map.

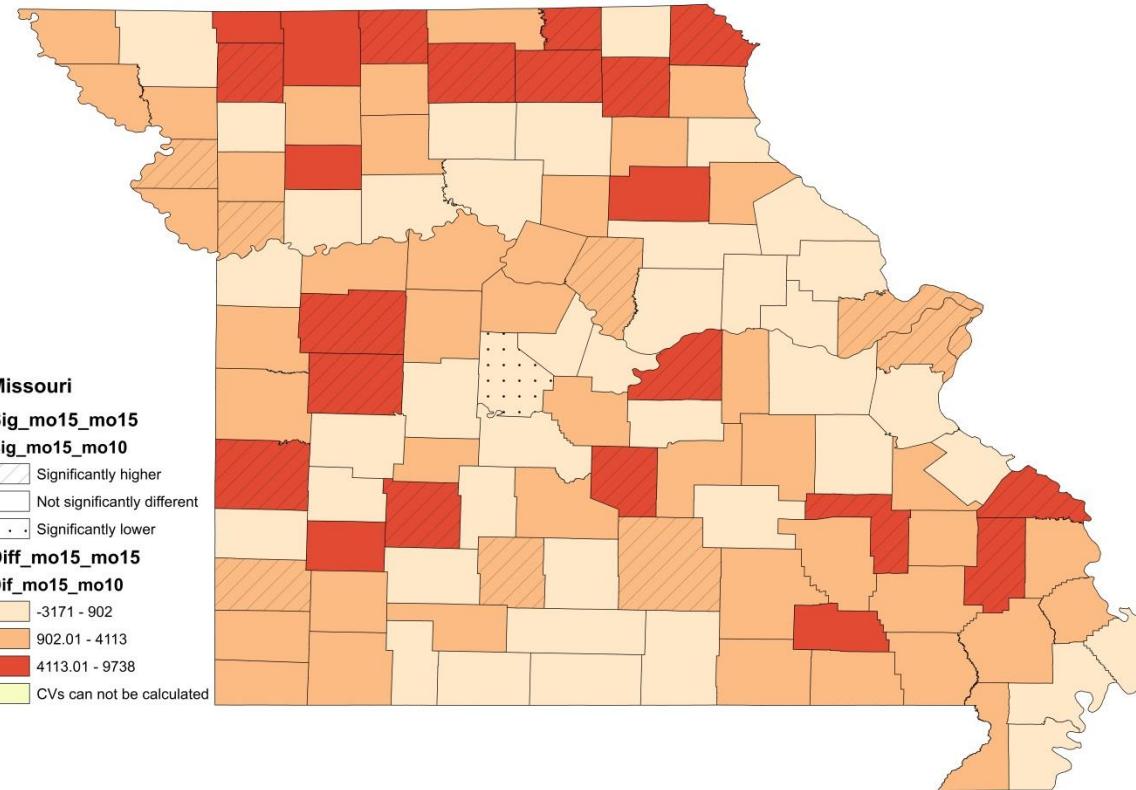
We can examine the difference for the two time periods.

Polygons with dots are significantly lower. Polygons with hatches are significantly higher. There are many polygons where the difference is not significant.

The second layers shows the difference

Or

We can convert our census tract data to grids and proceed with analysis



Saint Louis County

- Time Period 1 - \$57,561, moe=\$701
- Time Period 2 - \$59,755, moe=\$723
- Difference - \$2194
- Category = Significant-Higher @ 95%