

RPC Methodology in the Origin and Formatting of Census 2016 TIGER Block Geographies Joined with LUCA 2017 Counts

State of Louisiana Tiger Census Block data downloaded via ftp- <https://www.census.gov/geo/maps-data/data/tiger-line.html>

State of Louisiana 2020 Census Local Update of Census Addresses Operation (LUCA) download text file-
<https://www.census.gov/geo/partnerships/luca.html>

Additional support: https://www2.census.gov/geo/pdfs/education/tiger/JoiningTIGERshp_with_AFFdata.pdf

I. Downloading Original Census Data

a. Geography <https://www.census.gov/geo/maps-data/data/tiger-line.html>

Via web interface or ftp.

- i. SHAPE (geographic area) boundary files have been downloaded for Louisiana Census Blocks for the state of Louisiana. One can also download by county of select from the state data by county FIPS code.
- ii. These files contain a descriptive name, land and water area measures (in square meters), and the geographic coordinates of the centroid of the boundary (2016 Census Block). This unique identifier is referred to as “Geoid.”
- iii. The Census provides SHAPE files for the updated 2016 Census geography with the following naming convention for Census Blocks:

“**tl_2016_22_tabblock10.zip**”.

*[Tiger Line]_[Year of Geographic Update]_[FIPS State Code (22)]
_[Geographic Level][Year of Original Geography]*

Thus this file is made up of the Census Block boundaries for in the state of Louisiana (22) for the 2016 updated geography originating from Census 2010.

b. The Census 2020 LUCA

- i. Original data can be downloaded from:
<https://www.census.gov/geo/partnerships/luca.html>
- ii. One can repeat the process with the following online assistance following Census instructions below:
 - i. Background Information:
“The 2020 Census LUCA Address Block Count files are available for download from our FTP site. Please select American Indian Areas, a state, the District of Columbia or Puerto Rico from the menu below. For the states, DC and PR, after you select your state, click on the folder of your entity type (county, place, or mcd for Minor Civil Divisions) or use the Address Block Count List Locator file to determine which folder your entity's Address Block Count file is stored in. More information about [opening and saving as a Microsoft Excel file. \[PDF\]](#)”
 - ii. “To view your Address Block Counts on a map, download the **BLOCK** layer [2016 TIGER/Line shapefiles](#) for your state and follow the

instructions for [Joining Census Data to TIGER/Line Shapefiles](#) [PDF]. We also have [detailed instructions](#) on downloading and working with TIGER/Line Shapefiles.”

- c. Attributes
 - i. Total_Residential Population summed to Census Block
 - ii. Total_Group_Quarters Population summed to Census Block
- d. Data Anomalies
 - i. LUCA data in its original text format includes 2 records used for state summation that were eliminate for the join to Census Block. The LUCA text also includes two records from Hancock County, MS with zero population for both attributes that slightly overlap into Louisiana and did not join to a Louisiana Geoid. Therefore, the original LUCA text file formatted has 204,451 records, with 204,447 records joining by Geoid to Louisiana Census Blocks.

II. Joining the Formatted LUCA Count Data with Geography

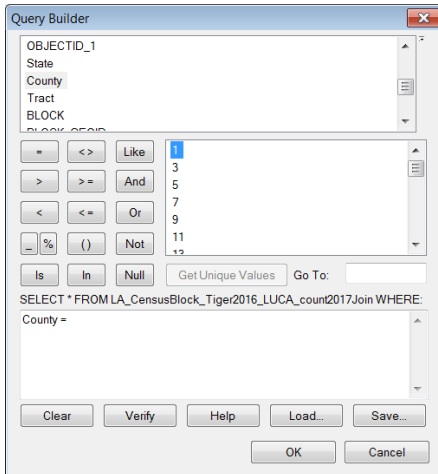
- a. The “Geoid” (referred to in section 1.a.ii) is a concentrated string of numbers (stored as text) that links the formatted Count data table to the appropriate geography.
 - i. See Table 1 below for an example of a Geoid with a Block number and one with a Block Group number. Note, the Geoid cannot refer to both a Block and a Block Group.

Table 1: Example boundary record for Block 2003, Census Tract 401.04, St. Tammany Parish, LA

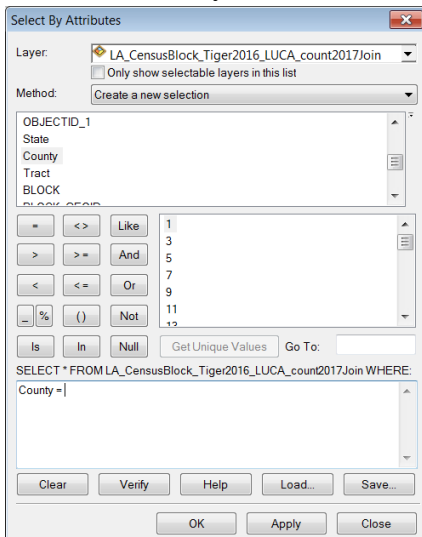
Code (# of characters)	221030401042003
FIPS* state code (2)	22
FIPS* county code (3)	103
Census Tract number (6)	040104
Block Group number (1)	2
Block number (4)	2003

- b. Joining by geographic boundary
 - i. Block level data joins to formatted LUCA count data are by the following convention:
*22(state)071(county)012101(tract)2009(Block-which is in Block Group 2)
 =220710121012009=Geoid for Block 2009 (within Block Group 2) Tract 121.01
 Orleans Parish, Louisiana*

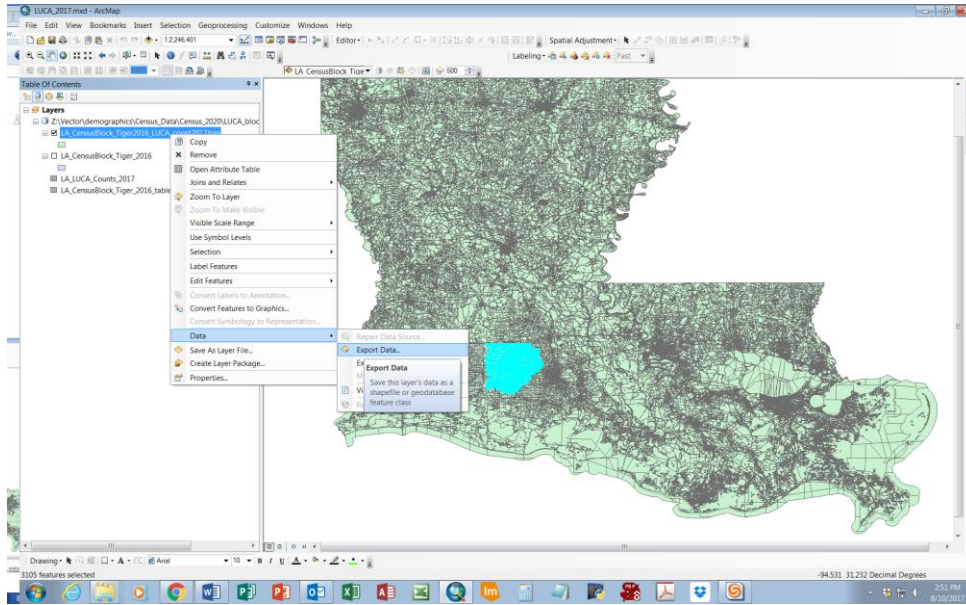
III. Sub-setting the State file for your region or parish can be achieved in several ways. A definition query can be used in GIS software with the following syntax (fill in FIPS code for chosen county (list of FIPS codes for LA on the next page):



Or subset the file by selecting the records for the chosen county and exporting to a new file.
Use the Select by Attributes window:



With selected records highlighted Export the data to a new file:



Should you need further clarification you may contact:

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