

# Performing Table Joins

## QGIS Tutorials and Tips



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Translations by

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- QGIS□□ □□□ □□□□ □□□ □□□□ □□ CSV□□□□ □□□□□.

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`Americal FactFinder` <<http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>>`\_□ □□□ □□ □□□ □□□□ □□□□□□. `Advanced Search`□ □□□ □ □□ □□□□ □□□□ □□ □□ `Topic - Total Population`□ `Geographies - All Census Tracts in California`□ □□□ □ □□□□. □ □□□□□ `Total Population 2010 Census Summary File 1`□ □□□□□.

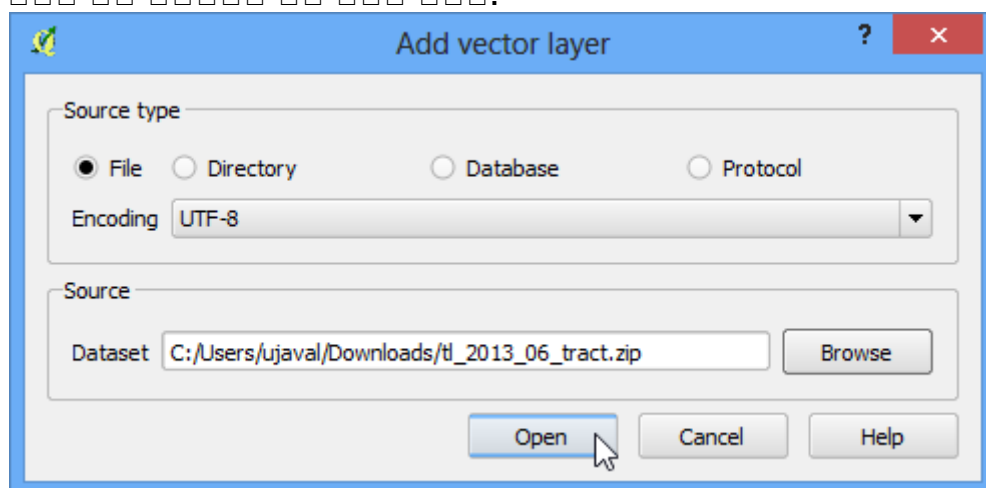
□□□ □□ [TIGER] [USCENSUS]

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1. □□□□ □□□ □□ shapefile□ □□□□□. □□ □□□ --> □□ □□□ □□ :menuselection: `Layer --> Add Vector Layer`□ □□□.



2. `tl_2013_06_tract.zip` को जोड़ें। QGIS में जोड़ें।  
 जोड़ें। `tl_2013_06_tract.zip` को जोड़ें।



3. `tl_2013_06_tract.shp` को जोड़ें :guilabel: 'OK' को जोड़ें।





6. □□ shapefile□ □□□ □□□□□□. □ shapefile□ □□□□ □□□□ □□□□ □ □□□ □□□□ □□□□ □□□□□□. □ □□□□ **\*\*\*GEOID\*\*\*** □□□□ □ □□□□ □□□□ □□□□ □□ ID□ □□□□ □□ □□ □□□□ □ shapefile□ '□□' □ □ □□□□.

Attribute table - tl\_2013\_06\_tract :: Features total: 8057, filtered: 8057, selected: 0

|    | STATEFP | COUNTYFP | TRACTCE | GEOID       | NAME    | NAMESAD            | MTFCC |
|----|---------|----------|---------|-------------|---------|--------------------|-------|
| 0  | 06      | 001      | 442700  | 06001442700 | 4427    | Census Tract 44... | G5020 |
| 1  | 06      | 001      | 442800  | 06001442800 | 4428    | Census Tract 44... | G5020 |
| 2  | 06      | 037      | 204920  | 06037204920 | 2049.20 | Census Tract 20... | G5020 |
| 3  | 06      | 037      | 205110  | 06037205110 | 2051.10 | Census Tract 20... | G5020 |
| 4  | 06      | 037      | 205120  | 06037205120 | 2051.20 | Census Tract 20... | G5020 |
| 5  | 06      | 037      | 206010  | 06037206010 | 2060.10 | Census Tract 20... | G5020 |
| 6  | 06      | 037      | 206020  | 06037206020 | 2060.20 | Census Tract 20... | G5020 |
| 7  | 06      | 037      | 206050  | 06037206050 | 2060.50 | Census Tract 20... | G5020 |
| 8  | 06      | 037      | 207400  | 06037207400 | 2074    | Census Tract 20... | G5020 |
| 9  | 06      | 001      | 442900  | 06001442900 | 4429    | Census Tract 44... | G5020 |
| 10 | 06      | 037      | 192410  | 06037192410 | 1924.10 | Census Tract 19... | G5020 |
| 11 | 06      | 037      | 192510  | 06037192510 | 1925.10 | Census Tract 19... | G5020 |
| 12 | 06      | 037      | 192520  | 06037192520 | 1925.20 | Census Tract 19... | G5020 |
| 13 | 06      | 037      | 192610  | 06037192610 | 1926.10 | Census Tract 19... | G5020 |
| 14 | 06      | 037      | 192700  | 06037192700 | 1927    | Census Tract 19... | G5020 |
| 15 | 06      | 037      | 194500  | 06037194500 | 1945    | Census Tract 19... | G5020 |
| 16 | 06      | 037      | 195100  | 06037195100 | 1951    | Census Tract 19... | G5020 |
| 17 | 06      | 037      | 195300  | 06037195300 | 1953    | Census Tract 19... | G5020 |
| 18 | 06      | 001      | 443001  | 06001443001 | 4430.01 | Census Tract 44... | G5020 |
| 19 | 06      | 001      | 443002  | 06001443002 | 4430.02 | Census Tract 44... | G5020 |
| 20 | 06      | 001      | 443102  | 06001443102 | 4431.02 | Census Tract 44... | G5020 |
| 21 | 06      | 001      | 443301  | 06001443301 | 4433.01 | Census Tract 44... | G5020 |

Show All Features

7. `ca_tracts_pop.csv` CSV file. It contains population data for each census tract in California. The file is organized by state (CA) and county (e.g., 001 for Alameda County). The GEOID column is the unique identifier for each tract, formatted as STATEFP + COUNTYFP + TRACTCE (e.g., 06001443301). The population data is in the `POPULATION` column.

```
ca_tracts_pop.csv - Notepad
File Edit Format View Help
POPGROUP.id,POPGROUP.display-label,GEO.id,GEO.id2,GEO.display-label,D001
001,Total population,1400000US06001400100,06001400100,"Census Tract 4001, Alameda County, California",2937
001,Total population,1400000US06001400200,06001400200,"Census Tract 4002, Alameda County, California",1974
001,Total population,1400000US06001400300,06001400300,"Census Tract 4003, Alameda County, California",4865
001,Total population,1400000US06001400400,06001400400,"Census Tract 4004, Alameda County, California",3703
001,Total population,1400000US06001400500,06001400500,"Census Tract 4005, Alameda County, California",3517
001,Total population,1400000US06001400600,06001400600,"Census Tract 4006, Alameda County, California",1571
001,Total population,1400000US06001400700,06001400700,"Census Tract 4007, Alameda County, California",4206
001,Total population,1400000US06001400800,06001400800,"Census Tract 4008, Alameda County, California",3594
001,Total population,1400000US06001400900,06001400900,"Census Tract 4009, Alameda County, California",2302
001,Total population,1400000US06001401000,06001401000,"Census Tract 4010, Alameda County, California",5678
001,Total population,1400000US06001401100,06001401100,"Census Tract 4011, Alameda County, California",4156
001,Total population,1400000US06001401200,06001401200,"Census Tract 4012, Alameda County, California",2416
001,Total population,1400000US06001401300,06001401300,"Census Tract 4013, Alameda County, California",3528
001,Total population,1400000US06001401400,06001401400,"Census Tract 4014, Alameda County, California",4314
001,Total population,1400000US06001401500,06001401500,"Census Tract 4015, Alameda County, California",2630
001,Total population,1400000US06001401600,06001401600,"Census Tract 4016, Alameda County, California",2163
001,Total population,1400000US06001401700,06001401700,"Census Tract 4017, Alameda County, California",2667
001,Total population,1400000US06001401800,06001401800,"Census Tract 4018, Alameda County, California",1703
001,Total population,1400000US06001402200,06001402200,"Census Tract 4022, Alameda County, California",2385
001,Total population,1400000US06001402400,06001402400,"Census Tract 4024, Alameda County, California",2351
001,Total population,1400000US06001402500,06001402500,"Census Tract 4025, Alameda County, California",1784
001,Total population,1400000US06001402600,06001402600,"Census Tract 4026, Alameda County, California",1151
001,Total population,1400000US06001402700,06001402700,"Census Tract 4027, Alameda County, California",1569
001,Total population,1400000US06001402800,06001402800,"Census Tract 4028, Alameda County, California",3345
001,Total population,1400000US06001402900,06001402900,"Census Tract 4029, Alameda County, California",1434
001,Total population,1400000US06001403000,06001403000,"Census Tract 4030, Alameda County, California",2788
001,Total population,1400000US06001403100,06001403100,"Census Tract 4031, Alameda County, California",2238
```

8. `00 0000 0000 csv000 00000 00 000000 0000. 000 0 00 00 0000 String`  
 (text)`000 000. 0000 000 00 D001`0000 0000 00000. 0000 00000 000``  
`0 000 000 0000 000 0000 0000. QGIS00 000 000 0000000 `csvt`00`  
`0000 00 `00`000 0000 000. 0 000 0 0000 0000 0000 0000 000 0 00`  
`0000. 0000 `csv 0000 00 00 00000 `ca_tracts_pop.csvt`0 000000. 00`  
`:download: `download the csvt file from here.`  
`<../static/performing_table_joins/data/ca_tracts_pop.csvt> `00 0000 0 0 0000.`



9. In QGIS, open the CSV file in the previous step. In the main menu, go to Layer --> Add Delimited Text Layer. In the dialog box, click on the "Add" button.





10. CSV 格式 的 数据 文件 如何 导入。 请 在 :guilabel: `File format` 中选择 :guilabel: `CSV (comma separated values)` 格式 的 数据 文件。 请 在 :guilabel: `No geometry (attribute only table)` 选项 卡 中 选择。 :guilabel: `OK` 按钮。

**Create a Layer from a Delimited Text File**

File Name:

Layer name:  Encoding:

File format: ☒ CSV (comma separated values) ☐ Custom delimiters ☐ Regular expression delimiter

Record options: Number of header lines to discard:  ☒ First record has field names

Field options: ☐ Trim fields ☐ Discard empty fields ☐ Decimal separator is comma

Geometry definition: ☐ Point coordinates ☐ Well known text (WKT) ☒ No geometry (attribute only table)

Layer settings: ☐ Use spatial index ☐ Use subset index ☐ Watch file

|   | POPGROUP.id | POPGROUP.display-label | GEO.id               | GEO.id2     | GEO.display-label                 |
|---|-------------|------------------------|----------------------|-------------|-----------------------------------|
| 1 | 001         | Total population       | 1400000US06001400100 | 06001400100 | Census Tract 4001, Alameda County |
| 2 | 001         | Total population       | 1400000US06001400200 | 06001400200 | Census Tract 4002, Alameda County |
| 3 | 001         | Total population       | 1400000US06001400300 | 06001400300 | Census Tract 4003, Alameda County |
| 4 | 001         | Total population       | 1400000US06001400400 | 06001400400 | Census Tract 4004, Alameda County |
| 5 | 001         | Total population       | 1400000US06001400500 | 06001400500 | Census Tract 4005, Alameda County |

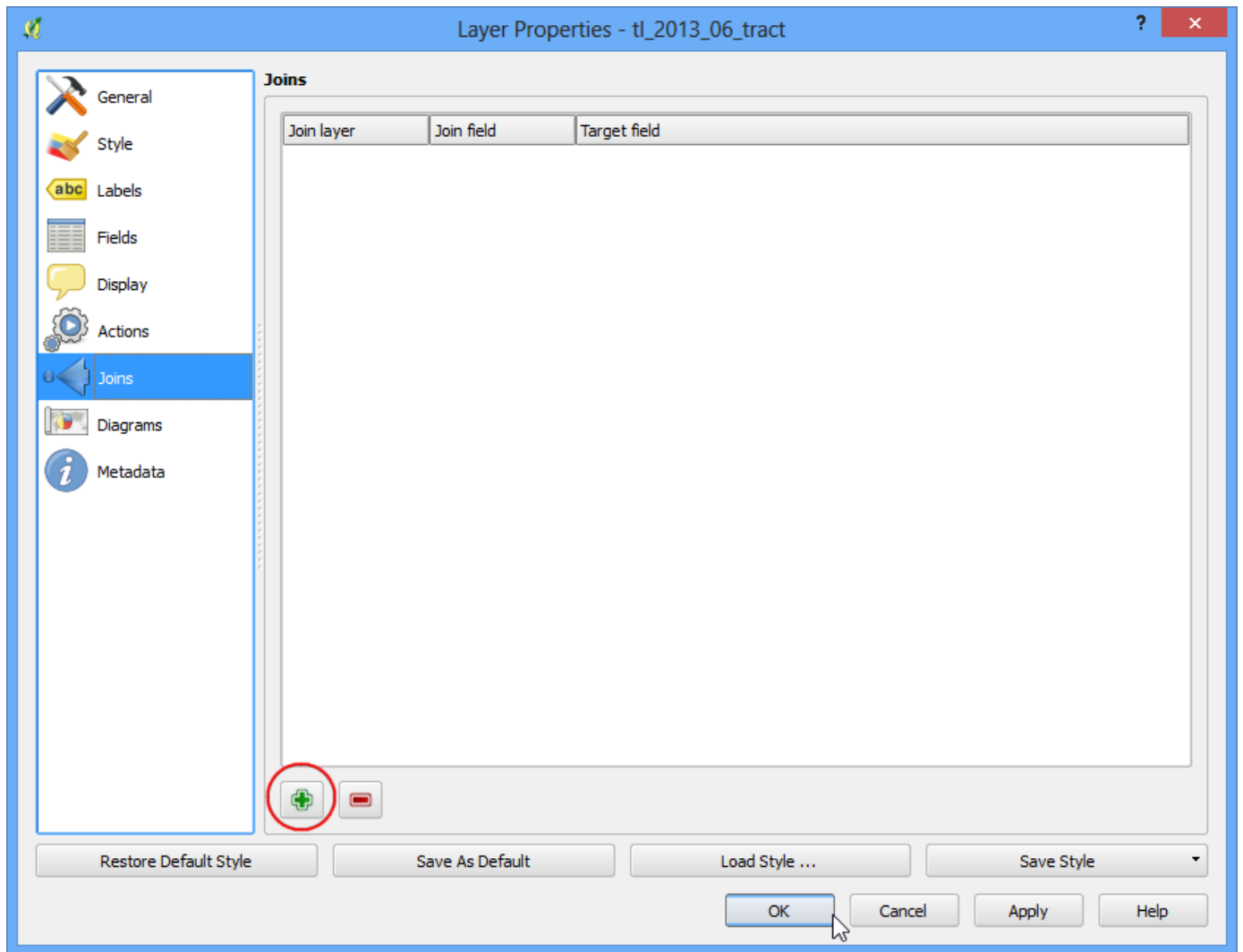
11. CSV ☐ ☐ QGIS ☐ ☐ ☐ ☐ ☐ ☐.



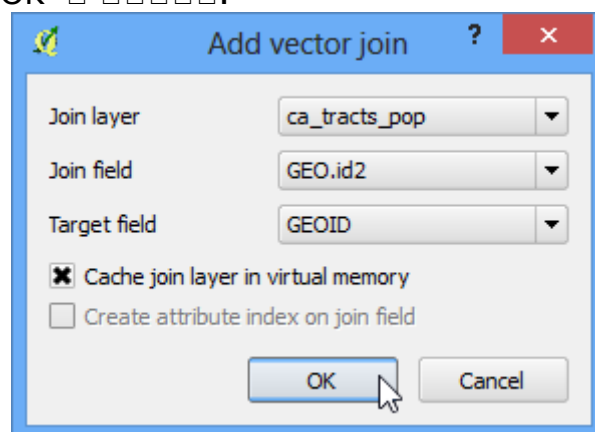
12. Select the ***tl\_2013\_06\_tract*** layer. Right-click on it and select Properties.



13. □□□ □□ Layer Properties □□□□□□ □□ Joins □□ □□□□□. □□□ □□ □□□□□ □□□  
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14. Click the '+' icon to add a new join. In the 'Join layer' dropdown, select 'ca\_tracts\_pop'. In the 'Join field' dropdown, select 'GEO.id2'. In the 'Target field' dropdown, select 'GEOID'. Click the 'OK' button.



15. Click the 'Open Attribute Table' button in the Layer Properties dialog box for the 'tl\_2013\_06\_tract' layer.



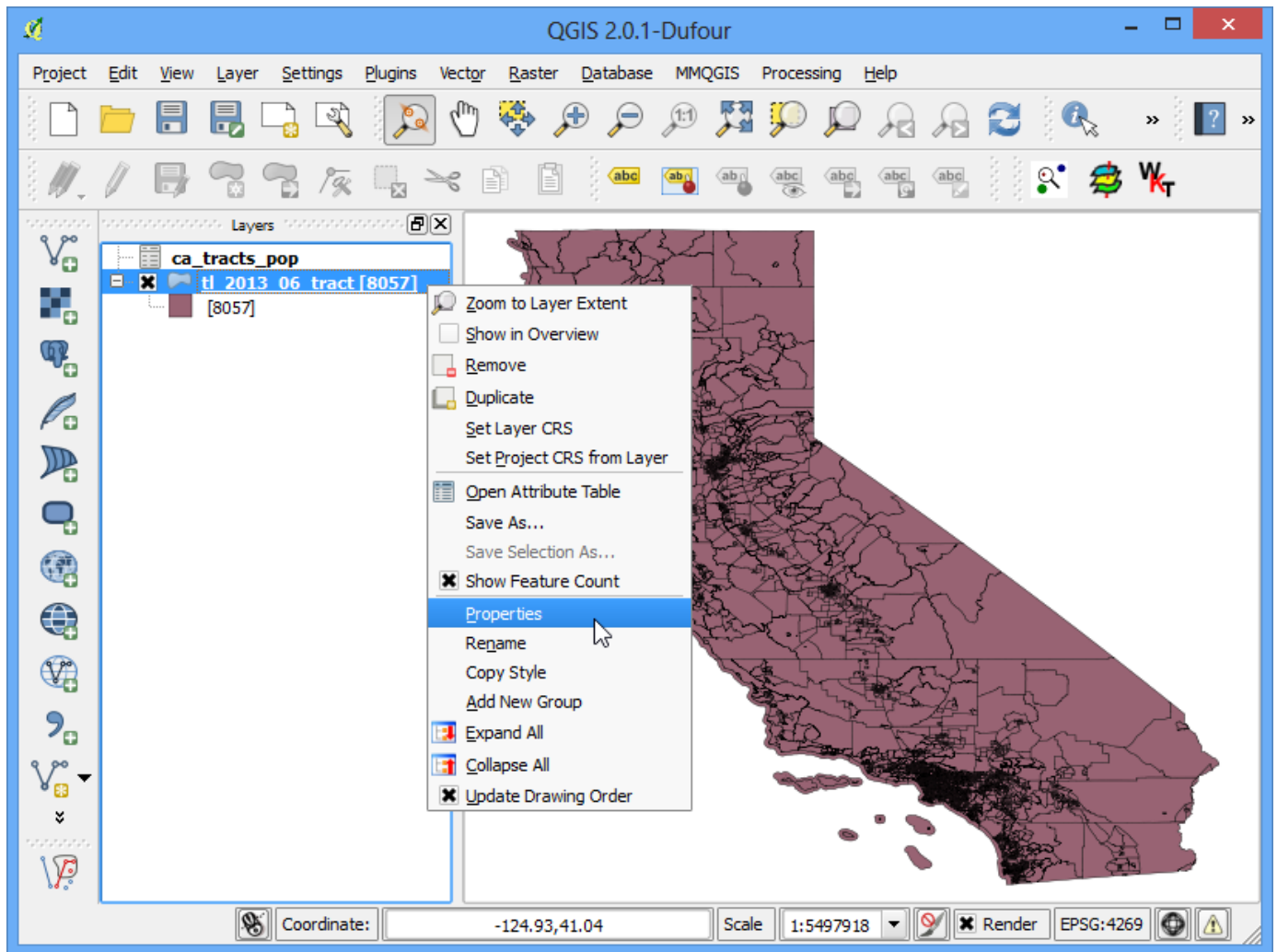
16. □□ ca\_tracts\_pop\_D001 □□□ □ □□□ □□□ □□□ □ □ □□□□. □□ CSV□□□□□ □ □□□ □□□□ □□□□□. □□ □□□□ □□ QGIS□ □□□□□.

Attribute table - tl\_2013\_06\_tract :: Features total: 8057, filtered: 8057, selected: 0

|    | INTPTLAT    | INTPTLON     | tracts_pop_POPGRC | op_POPGROURdi    | tracts_pop_GEC | pop_GEQdis    | ca_tracts_pop_D001 |
|----|-------------|--------------|-------------------|------------------|----------------|---------------|--------------------|
| 0  | +37.5371514 | -122.0081094 | 001               | Total population | 1400000US06... | Census Tra... | 2873               |
| 1  | +37.5293619 | -121.9931002 | 001               | Total population | 1400000US06... | Census Tra... | 2816               |
| 2  | +34.0175004 | -118.1974975 | 001               | Total population | 1400000US06... | Census Tra... | 2598               |
| 3  | +34.0245059 | -118.2142985 | 001               | Total population | 1400000US06... | Census Tra... | 3766               |
| 4  | +34.0187546 | -118.2117956 | 001               | Total population | 1400000US06... | Census Tra... | 3618               |
| 5  | +34.0682177 | -118.2320356 | 001               | Total population | 1400000US06... | Census Tra... | 3127               |
| 6  | +34.0571230 | -118.2311021 | 001               | Total population | 1400000US06... | Census Tra... | 7883               |
| 7  | +34.0299036 | -118.2244531 | 001               | Total population | 1400000US06... | Census Tra... | 2146               |
| 8  | +34.0561941 | -118.2466502 | 001               | Total population | 1400000US06... | Census Tra... | 1363               |
| 9  | +37.5184093 | -121.9748369 | 001               | Total population | 1400000US06... | Census Tra... | 7194               |
| 10 | +34.0798577 | -118.3181008 | 001               | Total population | 1400000US06... | Census Tra... | 3628               |
| 11 | +34.0798690 | -118.3068568 | 001               | Total population | 1400000US06... | Census Tra... | 3670               |
| 12 | +34.0799255 | -118.3024972 | 001               | Total population | 1400000US06... | Census Tra... | 5067               |
| 13 | +34.0813650 | -118.2961539 | 001               | Total population | 1400000US06... | Census Tra... | 4389               |
| 14 | +34.0800134 | -118.2881064 | 001               | Total population | 1400000US06... | Census Tra... | 3513               |
| 15 | +34.0781753 | -118.3695958 | 001               | Total population | 1400000US06... | Census Tra... | 2037               |
| 16 | +34.1022274 | -118.2669741 | 001               | Total population | 1400000US06... | Census Tra... | 4717               |
| 17 | +34.0992506 | -118.2836893 | 001               | Total population | 1400000US06... | Census Tra... | 3203               |
| 18 | +37.5184218 | -121.9515237 | 001               | Total population | 1400000US06... | Census Tra... | 2917               |
| 19 | +37.5168344 | -121.9605916 | 001               | Total population | 1400000US06... | Census Tra... | 5918               |
| 20 | +37.5071943 | -121.9271475 | 001               | Total population | 1400000US06... | Census Tra... | 4611               |
| 21 | +37.4707325 | -121.9129556 | 001               | Total population | 1400000US06... | Census Tra... | 4074               |

Show All Features

17. `tl_2013_06_tract` :guilabel: `Properties` .



18. `Style` `Graduated` `Column` `ca_tracts_pop_D001` `Color ramp` `Mode` `Quantile (Equal Count)` `Classify` `OK`





19. `guiLabel: 'Zoom in'` 增加放大按钮。



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