

## Census blocks and block codes

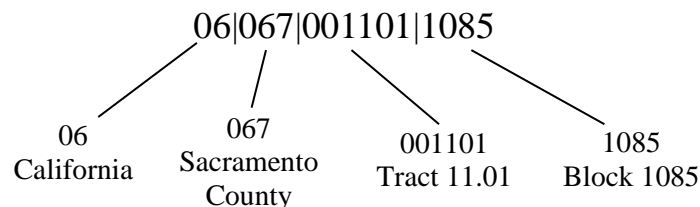
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Census blocks are “statistical areas bounded by visible features, such as streets, roads, streams, and railroad tracks, and by nonvisible boundaries, such as selected property lines and city, township, school district, and county limits and short line-of-sight extensions of streets and roads.”<sup>1</sup> Census blocks are the smallest unit of geography defined by the Census Bureau – there were a total of 11,166,336 defined for the 2010 census, covering the U.S. and its territories – but are diverse in size. While the largest block is over 8,500 square miles (it’s in Alaska), half the blocks are smaller than a tenth of a square mile (6.4 acres).

The codes used to identify blocks reflect the basic census geographical hierarchy: the country is made up of states, states are made up of counties (and county equivalents like parishes and independent cities), counties are made up of census tracts, and census tracts are made up of census blocks. Even though a block code only occurs once in each tract, it may be used again in another tract. Same goes for tracts in counties. Therefore, a particular census block within the nation must be identified by: its state code, its county code, tract code and its block code.

- States and the territories are identified by a 2-digit code.
- Counties within states are identified by a 3-digit code.
- Tracts within counties are identified 6-digit code.
- Blocks within tracts are identified by a 4-digit code.

If you paste these codes together, identifying each block requires the full 15 digits. For example, the census block containing the Office of the California Secretary of State, located at 1500 11<sup>th</sup> St, Sacramento, CA 95814, is fully identified by the code 060670011011085.



- 06 – identifies California,
- 067 – identifies Sacramento County within California,
- 001101 – identifies Census Tract 11.01 within Sacramento County and
- 1085 – identifies Census Block 1085 within tract 11.01.

### Is the tract code 11.01 or 001101?

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Both. Census tracts within a county are identified by a 4-digit basic code between 0001 and 9999, and may have a 2-digit suffix ranging from .01 to .98; for example, 6059.02. The decimal point separating the 4-digit basic tract code from the 2-digit suffix is shown in U.S. Census Bureau printed reports and maps. However, in computer-readable files prepared by the Census Bureau and for files uploaded for FCC Form 477, the decimal point is implied and does not appear.

<sup>1</sup> See *2010 Census Summary File 1 Urban/Rural Update Technical Documentation* prepared by the U.S. Census Bureau, 2012 at A-10, <http://www.census.gov/prod/cen2010/doc/sf1.pdf>.

## Which blocks will the Form 477 filing interface accept as valid?

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For the filing of **Fixed Broadband Deployment** data, the Form 477 electronic filing system will only accept valid **2010** census blocks. A list of valid 2010 census blocks by state is online at <https://www.fcc.gov/general/census-blocks-state>.

## Which addresses are in which blocks?

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There are a variety of public resources and commercial products for matching a street address with the census block in which it's located.

- The **Census Bureau** has a free address-matching (geocoding) tool that can provide the coordinates as well as the census geographies (state, county, tract and block) associated with addresses. The tool can be used for a single address or up to 1,000 addresses in batch mode. See <http://geocoding.geo.census.gov/geocoder/>. For a step-by-step guide to associating census tract and / or census block codes with addresses using this tool see [More About Census Geocoder](#).
- **Texas A&M Geoservices** has a number of free tools available including batch geocoding of addresses and batch lookup of census geographies (“Census Intersection”). Users need to register (free) and the first 2,500 lookups are included. See <http://geoservices.tamu.edu/Services/Geocode/>. This site also maintains a list of other geocoders at <http://geoservices.tamu.edu/Services/Geocode/OtherGeocoders/>.
- Additional information about 2010 geographic terms and concepts is available at [https://www2.census.gov/geo/pdfs/reference/GTC\\_10.pdf](https://www2.census.gov/geo/pdfs/reference/GTC_10.pdf).
- Census block reference maps in pdf format can be found at <https://www.census.gov/geographies/reference-maps/2010/geo/2010-census-block-maps.html>. Alternatively, an interactive map that will show census block boundaries is available at <http://tigerweb.geo.census.gov/tigerweb/> (to see the 2010 boundaries relevant for Form 477, select “Census 2010” under the “Select Vintage:” drop down menu).
- The geographic coordinates (latitude and longitude) of the end-user premises can be matched to census block by the tool at <https://geo.fcc.gov/api/census/>.