CENSUS PRO
Making sense of the Census

Census Pro Documentation

Introduction:

Census Pro is our name for *both* our Census Demographics data, and our Data Extractor, which allows our clients to select just the data they need, in the format they need it. For instance, the Census provides 23 different age breakdowns (0-4, 5-9, etc.). We allow our clients to select *and aggregate* the ages they want (Children from 0-14, for instance).

Subscribers can also download all of our data from our web site, in one file. The .zip file is called, '**tu-census.zip**.' It contains both a CSV file and an Excel spreadsheet, optimized for easy viewing.

Excel File:

We include this spreadsheet, which has tooltips for each column and is color-coded for each section of data, which is logically arranged:

	ZCTA	Primary_City	State	Primary_County	ZIP_Type	Latitude	Longitude	Land_Area	Water_Area	Pop_2010	Pop_2000
2	010		MA	Hampden		42.069809	-72.619921	11	1.3	16,769	16,576
3	010		MA	Hampshire		42.376584	-72.500397	55	1.7	29,049	36,794
4	010		MA	Hampshire		42.389941	-72.524108	1	0	10,372	0
5	010		MA	Worcester		42.410455	-72.107496	44	0.5	5,079	5,077
6	010		MA	Hampshire		42.277181	-72.409675	53	2.3	14,649	13,017
7	01008	Blandford	MA	Hampden		42.17586	-72.945938	54	1.8	1,263	1,235

Tooltip: Census approximation of a 5-digit ZIP Code. [Click on Column Headers for detailed field info.]

5-Digit ZIP Code vs. ZCTA:

The Census Bureau created what's called ZCTAs. These are *close approximations* of ZIP Codes and are a combination of Census Blocks (the smallest Census areas, averaging 28 people per Block) which would be found in a ZIP Code. Because of overlaps and other factors, they won't cover exactly the same area as a ZIP Code, but are the closest approximation of a ZIP Code which exists.

Our Census Pro product contains only ZCTAs, but we often will refer to them as ZIP Codes for simplicity and because we will combine Census data with our ZIP Code information. Note: if a ZIP Code was not in existence at the time of the last Census, then we won't have information on that area.

Also note: There are about 33,000 ZCTAs and over 41,000 ZIP Codes. The 'extra' ZIP Codes are mainly PO Boxes and business ZIP Codes where there are no residences. This product only contains ZCTAs. We have a **Parent ZIP Codes** product that will map PO Boxes and other ZIPs which don't have a ZCTA (they are called 'Point ZIPs') to the 'parent' ZIP Code (the ZIP that the PO Box is located within).

Q. Can I Get This Data from the Census Bureau?:

A. The Census data that is available at the Census Bureau's site consists of tens of thousands of fields of information and often requires downloading multiple files and 'pasting them together.' We have spent many hours downloading what we believe are the most important Census and related data elements from various locations and combined them with our existing ZIP Code data. We maintain the data throughout the year, so you don't have to.

Data Extraction Tool:

We have created a simple, yet very powerful Data Extractor tool that allows you to pick and choose just the fields that you want and export them into the format that is best for you. Following are some instructions for using our Census Data Extraction tool:

- Here's a link to access our Census data extraction tool with sample data: https://greatdata.com/proddata/censustool

- If you've purchased this data, make sure that you are logged in to the site, so that you have unlimited extracts.

- If you're just demoing the product, you are limited in how much data that you can extract.

Tool Overview:

On a desktop or tablet, the page will initially open up to show you three side-by-side sections:

- The Available Data Fields, grouped by Categories on the left.
- The Drag To box in the middle.
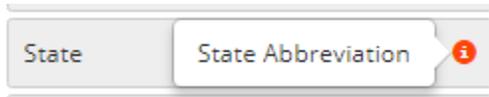- The Export options on the right.

When you tap on, or put your mouse over the red information icon, you will receive additional info on each data item:


Each Category button can be opened or closed by touching or clicking on the name:
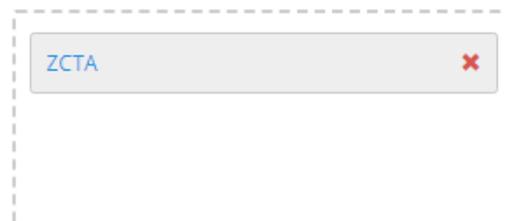

You choose the data fields that you want by dragging them from the Available Data Fields list to the Drag-To box. If you change your mind, just click on the red '**X**' in the Drag-To box.

Note: when you drag the field to the box, the field name will turn blue in the Available Data Fields list, in order for you to know that the field has already been selected:
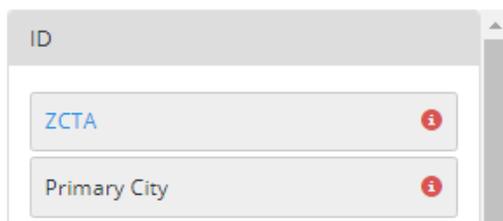
Also, if you have multiple items in the Drag-To box, you can **drag the items within the box** to re-arrange them.

Basic ID Info:

From the ID category, at a minimum, you will need to choose the ZCTA field, but normally you may also want the corresponding State and Primary City, at a minimum:

You can also drag an item in-between other items.

Aggregating Data:

One of the big limits with downloading the data from the Census web site is that much of the demographics are too detailed for most users. For instance, they group most ages in 5-year sections (0-4, 5-9, 10-14, etc.) They further break that down between males and females.

In the Age Category, we have some pre-defined groups such as Under 18, Over 18, Over 21, Over 65, etc.

What if you want one total of all boys and girls, up to 14 years old? With the Census data, you would have to be very good with Excel, or be a programmer to combine them, but not with our Extractor! Here's how:

- In the **Optional Features** section, click on the 'Add Custom Summary Fields' link:

-
  Optional Features
  ⊕ Add Custom Summary Field

- The list of Categories with fields that can be aggregated will show up (note: not all fields are suitable to be aggregated):
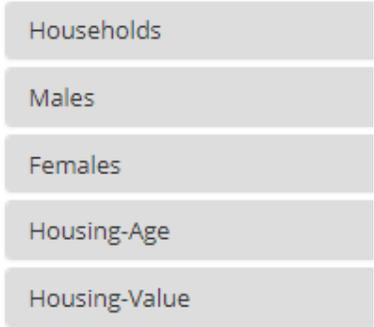
-
  | Households |
  | Males |
  | Females |
  | Housing-Age |
  | Housing-Value |

- Under the Males Category, just select the fields that you want to aggregate:
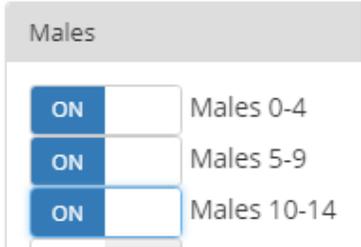
-
  Males
ON	Males 0-4
ON	Males 5-9
ON	Males 10-14

- You can click on the 'Males' Category name to collapse that list and then click on the 'Females' name and select the girls:

Females	
ON	Females 0-4
ON	Females 5-9
ON	Females 10-14

-
- Collapse that list and enter in the custom field name and click on Accept:

Custom Field Name	Children	Accept	Cancel

-
- The custom field now shows up in the list:

ZCTA	✖
State	✖
Primary County	✖
Primary City	✖
Σ (Children)	✖

-

Another example would be if you wanted to include **Millennials**. You would do something similar, except would want different ages. The exact age of Millennials is a bit subjective, but as of 2018, these would be the closest selections:

ON	Males 20-24
ON	Males 25-29
ON	Males 30-34

Exporting the Data:

- To export the data, just choose the State/ZIP Code options that you want, and the touch or click on the '**Export To Excel**' button and save it wherever you like.

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2) Run report for any ZIP Code or State

ZIP Code: [ ]

State: [Alabama ▼]

[Export To Excel]

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Census Data Elements Available:

Our data contains information from the last Census taken (every 10 years) and from annual surveys that the Census Bureau conducts. Prior to 2010, the Census Bureau would send a 'Short Form' to most people and a 'Long Form' to a certain percentage of the population. The Long Form would have much more detailed info than the Short Form, and since it was done at the time of the Census, there would be a high percentage of people that filled it out and it was statistically accurate.

Starting in 2010, the Census Bureau just sends the Short Form to people every 10 years and now conducts annual surveys of detailed info, similar to the Long Form, to a select sample of the total population. This is called the American Community Survey. They then release a 1-year survey and a 5-year combined survey. Their sample rate is small, so we've found that the 5-year info seems to be more precise than the 1-year.

Note: Besides individuals, the Census Bureau defines housing units, households (all people in the housing unit) and families (related people in the housing unit).

Important Note: The demographics which are updated annually are listed below in **bold**. Also, in **Excel**, to distinguish between the 2010 counts and the latest estimates, you should see '2010' or 'Estimate' / 'Estimated' in the tooltips that show up in the first column in the Spreadsheets.

The following data elements are available per ZIP Code:
- Basic Information:
  - ZCTA, along with its primary City, State and County (note: a ZIP Code can cross multiple cities, states and counties, so we just include the primary).
  - ZIP Code Type (blank-General Delivery, e-Exclusively used for PO Boxes, b-Business / Government private use, m-Military use)
  - Latitude / Longitude, Land Area, Water Area
- Population Information:
  - 2010 Population

- o 2000 Population
- o Population Density (persons per square mile of land)
- o **Population Estimate** ACS & MOE (Margin of Error) – this is the American Community Survey estimate at the ZCTA level. Note: we recommend that you *don't* rely on this too heavily. Over time, the ACS data should become more accurate, but we recommend using our Population Estimate Factor which has proven to be more reliable overall.
- o **Population Estimate Factor** (since the last Census). *This is something that we create on our own (it's not available from the Census or competitors)*. This is our estimate of how the population has changed since the last decennial census. Currently, that's the 2010 Census. To get a current estimate, multiply that figure (2010 Population) by the Population Estimate Factor to get the latest estimate. For instance, if the factor is 1.1 and the population was 1,000, it's now estimated to be 1,100. We plan on updating this estimate annually with our October release.
- o **Population Estimate Level**. This is the Level of detail that we were able to achieve in determining our Population Estimate Factor. It will be either 'City' or 'County.' The Census releases some accurate city estimates for larger cities, so we use that when available, but for smaller towns, we use the county estimates.
- o **Projections**: these are unique to GreatData and are figures that we derived estimating what the population will be in 5 and 10 years from the date the latest version of our file. We also give you a factor that you can use in adjusting our population figures in order to get an estimate of what that figure will be in 5 or 10 years. Note: the projection factors are based on the changes in population since the 2010 Census Counts.
- o Total Males
- o Total Females
- Group Quarters:
  - o These are people living in institutional group quarters (correctional institutes and nursing homes), plus non-institutional group quarters (College dorms, Military barracks, other).
- **Military Status Estimates**:
  - o Active Military: currently in the military, reserves or National Guard.
  - o Veterans: no longer in the military and not in the reserves.
  - o Civilians 18 and Over.
- **In School Estimates**:
  - o Estimates of those currently in preschool, kindergarten, elementary school (up to 8th grade), high school or college / graduate school.

- **Educational Attainment Estimates**:
    - o We break down those who are over 18 and have attained No High School, Some High School, High School Graduate /GED, Some College, Associates Degree, Bachelor's Degree or Graduate / Professional Degree.
- Household Counts from the Last Census (families are included in these figures):
    - o Total Households and Average Household Size.
- **Household Estimates:**
    - o Latest Estimate and Margin of Error.
    - o Average and Median Household Income and Margins of Error
    - o Estimated Number and Amount of Households with Income from:
        - ▪ Earnings
        - ▪ Retirement
        - ▪ Social Security
        - ▪ Social Security Supplemental Income
        - ▪ Cash Assistance
    - o Estimated Number of Households receiving Food Stamps
    - o **Household Income**: these are breakdowns of households with income in various ranges from less than $10,000 to over $200,000.
- **Worker Earnings Estimates**:
    - o These breakdown wages from earnings (average worker, average male, average female).
- Family Counts
    - o Total Families and Average Family Size as of the last Census.
- **Family Estimates**:
    - o Latest Estimate of Total Families and the Margin of Error
    - o Average / Median Family Income and the Margins of Error
- **Individual Income Information Estimates**:
    - o Per Capita Income and the Margin of Error
- **Poverty Statistics Estimates**:
    - o This includes the poverty universe, which is slightly less than the total population (.65%). Not sure who is excluded from this number.
    - o Estimate of the number of people determined to be in poverty, plus the Margin of Error.
    - o Breakdowns by age groups of those in poverty (under 18, 18-64, 65 and up) and the Margin of Error.
- Age Counts from the last Census:

- o Median age – All
  - Median age – Males
  - Median age – Females
- o Age Breakdowns (available by Male & Female)
  - 0-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49,
  - 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85-89, 90+
- o Age Groupings: Up to 17, 18 & Over, 18 & Over Males/Females, 21 & Over, 65 & Over, 65 & Over Males/Females and 85 & Over.

- **Population and Age Estimates:**
  - o Total Population Estimate.
  - o Estimate of the number of Males and Females
  - o Estimated Median Age.

- Racial Information, broken down various ways:
  - o White
  - o **White, Non-Hispanic**
  - o Black
  - o American Indian or Alaskan Native
  - o Asian
  - o Hawaiian / Pacific Islander
  - o **Asian Indian**
  - o **Chinese**
  - o **Filipino**
  - o **Japanese**
  - o **Korean**
  - o **Vietnamese**
  - o **Other Asian**
  - o **Mexican**
  - o **Puerto Rican**
  - o **Cuban**
  - o **Other Hispanic**
  - o **Total Hispanic**
  - o **Non-Hispanic**
  - o Total other race than above
  - o Total with two or more races
- Racial Information concerning Hispanic or Latino:

- - Total Hispanic or Latino
  - Total non-Hispanic / Latino
- Racial Information – basic info:
  - Total White Alone
  - Total Black Alone
  - Total American Indian or Alaskan Native alone
  - Total Asian Alone
  - Total Hawaiian / Pacific Islander Alone
  - Total other than above
  - Total with two or more races
- Miscellaneous info:
  - Percentage of people foreign born.
  - Total Business establishments
- **Housing Units Estimates:**
  - Total Housing Units
  - Total Occupied Housing Units
  - Total Owner-Occupied Housing Units
  - Total Renter-Occupied Housing Units
  - Vacant (Total, For Sale, For Rent & Seasonal) Housing Units
  - Number of Mobile Homes
  - Number of Single-Family Units
  - Number of Duplexes
  - Number of multi-unit buildings, broken down by size (3-4, 5-9, 10-19, 20+)
  - Heating Fuel / Source (Utility Gas, LP or Bottled Gas, Electric, Oil, Coal, Wood, Solar, Other)
  - Housing Age: includes housing build since 2010, 2000-2009, each decade from 1940-1999, and housing built prior to 1940. We include Margin of errors for each of these breakdowns.
  - The Average and Median Gross Rents paid, along with the Margin of Error. This includes average utilities.
  - Average and Median Home Values based on the latest Census Bureau's American Community Survey, including the Margin of Error.
  - **Estimate of the number of Homes valued in various price ranges**.
  - **Mortgage information** (units with and without a mortgage, plus costs and if over 30% of Household Income).