Accessing & Using Census Data

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Did you know? Most Federal statistical agencies do not have policies or standards relating to how their data users can access public data resources developed by these agencies. There are no overarching Federal statistical policies or standards relating to public use Federal statistical data. Agencies are free to set their own procedures for public use data access. Some agencies release important datasets only in CSV format while others are supported with dashboards and interactive mapping. Some statistical programs within agencies support data access by Application Programming Interface (API). Others do not. API operations and use vary widely between statistical agencies, some not supporting data access by API at all.

Despite the absence of overarching Federal statistical data access policies and standards, most agencies have very good data access programs. However, the mixture of situations results in challenges for most data users.

Most Federal statistical agencies have no budgetary line item for data access and user support. Agencies may be reluctant to include data access and support as budgetary line items. It is one expense that can be immediately cut.

This document is focused on the general topic of "Accessing and Using Census Data". The broader set of Federal statistical agencies will be addressed in other documents. While the Census Bureau has their own methods of addressing this topic, easy access to and use of Census Bureau data remains elusive.   Issues addressed here include: how can I use "Census" data? Is Census data publicly accessible? What Census data are private, confidential? How can I access Census data? A version of this document was first used in the December 9, 2024 ProximityOne Weekly Update.

What is Census data and why would I want to use it?

The term "Census" sometimes refers to data from the decennial census of population and housing. The term Census might also refer to other statistical programs. The 2020 decennial census of population and housing is one decennial census statistical program. The term Census can also refer to the Census Bureau, the largest of 13 principal Federal statistical agencies. The Census Bureau operates many geostatistical programs. These are important unique geographic, demographic, economic data programs that can inform stakeholders about trends and the current/recent situation.

These data:
- help stakeholders better understand the demographic-economic characteristics of an area of interest.
- enable stakeholders to compare one area (maybe your town) to another area (maybe your county).
- provide the foundation for planning and evaluation.
- provide a basis for setting reasonable goals/objectives for growth opportunities
  .. such as area employment or income.
- help stakeholders geographically focus on challenge or problem areas.
  .. such as affordable housing in a set of census tracts in a city or county.

Consider determining employment status by neighborhood .. there is no alternative data source.

Are Census data publicly accessible? .. a focus on the decennial census.

Decennial census respondent data, collected by the Census Bureau, are confidential and not publicly accessible.

Under certain guidelines,
- tabulations of census data (summary statistics) are available for public use.
- public use microdata samples (PUMS), samples draw from the decennial census basic record file,
    are available for public use -- no personal identifiers are included.
respondent data older than 70 years are available for public use.

What Census data are private?

All respondent data except respondent data older than 70 years are confidential, private.

How can I access Census data?

Before you can access Census data, you need to locate the data that meets your needs. Terminology plays an important role in locating, accessing and using the data. Such as summary level. Key parameters in accessing data include subject matter, time attributes, geographic attributes

Finding the subject matter can be the first challenge.

if census or survey based, review the questionnaire.
need to differentiate the Census as a statistical program versus Census Bureau.

The Census Bureau operates many statistical and geographic programs; selected programs are listed below .. and a few key things to know; helping to narrow the search in finding and accessing data.

Below are a few selected Census Bureau major programs; there are many others
Decennial census, once every 10 years -- a census'
- the smallest tabulation area is the census block
- no richer demographics (like income, education, etc.)
- there is no estimable error of the data; there are other errors

American Community Survey, annual -- a statistical survey
- the smallest estimation area is the block group
- extensive richer demographics
- there is an estimable error of estimate; there are other errors

Population and population components of change -- annual -- model-based estimates-
- the smallest estimation area is county; place and MCD total population are also included
- there is no estimable error of estimate

County Business Patterns, annual -- tabulation of administrative records

- the smallest tabulation areas are county, Congressional District, ZIP Code
- there is no estimable error

Economic Census -- every 5 years -- a census
- the smallest tabulation area is city/county though not national coverage
- there is not an estimable error of the data; there are other errors
- time lag might be an issue; 2022 data mainly released in 2025

Building permits by place and county -- monthly -- administrative records data
- the smallest tabulation area is permit-issuing place
- these are administratively reported data; there are potential tabulation & reporting errors

TIGER - Topological Integrated Geographic Encoding & Referencing Digital Map Database -- annual updates
- mainly geographic data in the form of shapefiles for use in GIS applications
- not a primary source of statistical data
- widely used for non-Census Bureau applications

.. consider not asking "How can I access Census data?" but rather how can I find/access [certain data]?
.. for example, employment status by block group.

This section is extended in the next weekly update.