

How to Use the NHGIS Data Finder

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Overview

The <u>NHGIS Data Finder</u> lets you explore what's available in NHGIS, select any data tables or GIS files you'd like to get, and then customize, request, and download a data extract. There are *three main steps*:



On the first page of the Data Finder, browse available tables and GIS files, applying different data filters to narrow your search.

When you find tables or GIS files you would like to download, add them to the Data Cart.



Next, on the second page, you can select **geographic levels**, **years**, **breakdowns**, and **geographic extents** for any tables in your cart. The options will vary for different sources and types of data. You may also choose to remove tables or GIS files from the Data Cart.

Review & Submit Data Request

On the third page, choose the output file structure for any data tables you have selected. You may also enter a description for this request. Then submit it to the NHGIS extract system to begin processing.

Finally, you'll proceed to your Extracts History page, which lists all the data requests you've ever made. When NHGIS has finished processing your new data extract, a link will appear here to download it. You can also use this page to resubmit or revise any of your past extracts.



Apply Filters & Select Data

Explore what's available & look for data of interest, narrowing the scope by selecting any number of filters...

There are four filter types, which you can use in any combination. Click on a green filter button to open a window where you can select filters of interest, such as those listed in this image:

AP	APPLY FILTERS ? How TO USE THE DATA FINDER 1										
	GEOGRAPHIC LEVELS - County, Census Tract, Block, Congressional District,										
	YEARS										
	TOPICS - Total Population, Race, Educational Attainment, Housing Tenure,										
	DATASETS 🛛 🗲 1870 Agriculture Data, 2010 Summary File 1, 2023 ACS 1-Year Data,										
SE 51:	SELECT DATA ? 51509 SOURCE TABLES 389 TIME SERIES TABLES 2032 GIS FILES										
	v ≪ PAGE 1 OF 2,576 → ► 20 ✓ VIEW 1 - 20 OF 51,509										
	POPULARITY TABLE NAME			UNIVERSE	CLASSIFICATIONS	YEAR - DATASET 🖨	BREAKDOWNS				
•		NT1. Total Population			Persons		<u>1790_cPop</u>				
•		NT2. Urban Population (Incorporated Places 2,500 and Over)			Urban Persons (Incorporated Places 2,500 and Over)		<u>1790_cPop</u>				

Use multiple filters to hone in on specific data of interest. For example, if you select only the Geographic Levels filter of *Census Tract*, you will see there are thousands of tables and dozens of GIS files that are available at the tract level. If you also select the *1970* Years filter, it greatly reduces the number of available tables and files...





Use the controls in the "Select Data" grid to learn more about available data. Add any data of interest to the Data Cart to start creating a request.

The **Select Data grid** lists the NHGIS data tables and GIS files that are available to download, limited by any data filters you've applied.

S	SELECT DATA 😨										
9	949 SOURCE TABLES 58 TIME SERIES TABLES 2 GIS FILES										
	view 1 - 20 OF 58										
	POPULARITY	SEQUENCE 🗢	TABLE NAME	GEOGRAPHIC INTEGRATION	YEARS	GEOGRAPHIC LEVELS					
¢		100.02	AVO. Total Population	Nominal	1970, 1980, 1990, 2000, 2010, 2020, <i>ACS 5-year periods</i> 2006-2023	<u>STATE, COUNTY, TRACT,</u> <u>CTY_SUB</u> , <u>PLACE</u>					
C		102.02	AV1. Persons by Sex [2]	Nominal	1970, 1980, 1990, 2000, 2010, <i>ACS 5-year periods</i> 2006-2023	<u>STATE, COUNTY, TRACT,</u> <u>CTY_SUB, PLACE</u>					

Click on the tabs at the top of the grid to see different data types:

- SOURCE TABLES supply summary statistics from a single source census or program. NHGIS organizes source tables into datasets. For more information, see the <u>Overview of NHGIS Datasets</u>.
- **TIME SERIES TABLES** are designed by NHGIS to link together statistics from multiple years. For more information, see the <u>Time Series Tables documentation</u>.
- **GIS FILES** give the geographic locations of census reporting areas for mapping and spatial analysis. For more information, see the <u>GIS Files documentation</u>.

Other grid controls:

- To sort results, click on a field name at the top of any column
 - *Tip:* To see which tables and files are requested most often, click on POPULARITY
- To get more information about the available data, click on any underlined text
- To see more results, use the page controls at the top or bottom of the grid

Selecting data to download:

- To add a table or file to your Data Cart, click the plus symbol 🕀 next to that item
- To remove a table or file, click on the green check mark for that item in the Select Data grid, or click on SHOW SELECTIONS in the Data Cart (at the top of the page) and deselect the item in the listing there
- To remove all selected data, click on **CLEAR** in the Data Cart

DATA CART CLEAR X 4 SOURCE TABLES 2 TIME SERIES TABLES 2 GIS FILES SHOW SELECTIONS CONTINUE

When you're satisfied with your selections, click on **CONTINUE** in the Data Cart to proceed to the Data Options.





Review and adjust options for any tables in your Data Cart. Remove any data no longer wanted.

The Data Options page provides a summary of the data that you've added to your Data Cart. If you have any tables in your cart (**Source Tables**, **Time Series Tables**, or both), you can use the controls here to select the *geographic levels*, *years*, *breakdowns*, and *geographic extents* for your table data. You may also deselect tables to remove them from the Data Cart.

For GIS Files, you may review the files in your cart and deselect any you would like to remove.

DATA OPTIONS 2								
SOUR	CE TABLES			SELECT GEOGRAPHIC EXTENTS				
	DATASET	TABLES	GEOGRAPHI	C LEVELS	BREAKDOV	VNS YEARS	GEOGRAPHIC EXTENTS	
	<u> 1970 Census: Count 2 - 100% Data [Tracts, Urban Areas, Metro Areas, etc.]</u>	<u>1 table</u>	<u>1 of 11</u>		Spatial: 1 of 15	1 of 1	<u>1 extent:</u>	
	2020 Census: DHC - P & H Tables (Blocks & Larger Areas)	<u>3 tables</u>	<u>1 of 164</u>		Spatial: 1 of 37	1 of 1	<u>Minnesota</u>	
	TABLE	GEOGRAP	HIC INTEGRATION	SELEC YEARS YEARS	GEO	SELECT GEOGRAPHIC LEVELS		
	AV0. <u>Total Population</u>	<u>Nominal</u>		<u>2 of 20</u> 1970,	2020 <u>1 of 5</u>	Census Tract		
	D08. Persons by Age [2]: Children and Adults	<u>Nominal</u>		<u>2 of 20</u> 1970,	2020 <u>1 of 5</u>	Census Tract		
GIS FILES								
	1970 Census Tract	United S	itates		2008 TIGE	R/Line +		
	2020 Census Tract	United S	itates		2020 TIGE	R/Line +		

Options for Table Data

- *Geographic Levels*: Most tables are available for multiple levels—states, counties, census tracts, *etc*. To specify the levels for which you'd like to get data, click on the green SELECT GEOGRAPHIC LEVELS button(s) or click on the underlined text in the GEOGRAPHIC LEVELS column(s). You can choose to get the same levels for all tables or select different levels for different datasets and time series tables. If you had any Geographic Level filters selected when you added the tables to your Cart, those levels will be preselected here.
- *Years*: Year selection is available for all Time Series Tables, but for Source Tables, it is only available for datasets that provide separate data for multiple years (*e.g.*, County Business Patterns). For Time Series Tables, if you had any Year filters selected when you added the tables to your Cart, those years will be preselected here.

More options on next page...



When applicable, select additional **breakdowns** or limit your tables to specific geographic extents

Options for Table Data (continued)

• *Breakdowns*: Breakdowns are additional categories of data that are available for all tables in a dataset. For example, for the 1980–2010 censuses, the SF2, STF2, SF4, and STF4 datasets each have two types of breakdowns: a Spatial breakdown and a Race/Ethnicity breakdown. When you request tables from these datasets, you can get each table's data not only for the total population (the default breakdown) but also for subgroups distinguished by geographic (e.g., urban or rural) and/or racial/ethnic (e.g., White or Hispanic) characteristics.

Typically, datasets provide breakdown data only for areas where a subgroup's population exceeds a minimum threshold. For example, in 2010 SF2, if the population of a subgroup is below 100 in an area, then there are no data records for that subgroup for that area.

DATASET

SOURCE TABLES



• Geographic Extents: You can select geographic extents only if you've selected a geographic level that nests within states (e.g., counties, census tracts). For levels that span across state boundaries (e.g., urban areas, ZIP Code Tabulation Areas), your requested table data will include all areas. Extent selections apply to all tables in your cart, including both Source Tables and Time Series Tables.

When you open the window to **SELECT GEOGRAPHIC EXTENTS**, colored circles indicate the availability of each extent given your current selections for Source Tables and Time Series Tables. A half circle indicates that an extent is available for some of your selections but not others.



When you're satisfied with your selections, click on **CONTINUE** in the Data Cart.



B Review & Submit Data Request

Specify the output structure & layout for table data files

On the Review & Submit page, if you have any tables in your Data Cart, you may choose the structure and layout of the output table data files here.

TABLE FILE STRUCTURE

You may download NHGIS tables in *comma-delimited* or *fixed-width* formats. If you plan to use the table in a spreadsheet or GIS application, the comma-delimited option is best. You may also choose to include an additional descriptive header row, which is helpful for interpreting data in a spreadsheet but is not supported in standard GIS software. The fixedwidth option includes command files for loading the data into SPSS, SAS and Stata.



BREAKDOWN/DATA TYPE LAYOUT

If you selected multiple breakdowns for any source tables in Step 2, or if your request includes any tables from the American Community Survey (ACS), you will be able to choose whether to combine all of the breakdowns (*e.g.*, urban and rural) and data types (the estimates and margins of error in ACS datasets) into a single data file or to separate them into distinct files. The default is to combine them all in one file.

More options on next page...



Finalize selections & submit the data request. Log in if you haven't yet.

TIME SERIES TABLE LAYOUT

Time series tables include data for multiple areas over multiple times. You may choose one of three options for how data for different times will be arranged in output files:

- 1. *Time varies by column* puts data for different times in separate columns within one file. The rows correspond to geographic units, and the columns correspond to particular times within a time series. For example, data for Chicago is in one row with 2010 and 2020 Total Population counts in separate columns.
- 2. *Time varies by row* puts data for different times in separate rows within one file. Each row represents a single geographic unit at a single time (*e.g.*, Chicago in 2010 or Chicago in 2020), and each column corresponds to a single time series (*e.g.*, Total Population).
- 3. *Time varies by file* puts data for different times in separate files. Within each file, the rows correspond to geographic units, and each column corresponds to a single time series.

DESCRIPTION

You may optionally enter a description for this data extract. The description will appear on your personal Extracts History page along with descriptions for any other extracts you've made. If you briefly note the data types, geographic levels, years, extents, and/or subject matter included in each extract, this information could help you later to find a past extract to revise or resubmit.

Submission & Authentication

Finally, when you are satisfied with your choices, click on **CONTINUE** to submit your request.

If you aren't logged in, you'll be prompted to do so now. If you don't yet have an IPUMS account, you can create one through the link at the bottom right of the login page. Registration is completely free of charge, as are all IPUMS datasets.

IPUMS	
LOG IN TO IPUMS NHGIS	
EMAIL ADDRESS Enter email PASSWORD Enter password SIGN IN	IPUMS uses a common user management system for most of its data collections: IPUMS International, IPUMS USA, IPUMS CPS, IPUMS HigherEd, NHGIS, IPUMS Health Surveys, IPUMS Time Use, IPUMS PMA, and IHGIS. If you already have an account for any of the above data collections, sign in on the left side of this page. If you do not have an account for any of the IPUMS data collections listed above, you may create one here. Note that IPUMS users who have only registered accounts with IPUMS DHS or IPUMS MICS will need to create a general IPUMS account to access the IPUMS user forum. HELP > Forgot your password? > Create an account – only for users who do not have an IPUMS account



Download

Use the Extracts History page to see the status of your extract requests, download data files, and revise or resubmit past requests

After you've submitted a data request—and you're logged in—NHGIS will begin processing your data extract, and your browser will open your Extracts History page.

IPUMS NHGIS			NHGIS G NATIONAL I HOME I SELI	NHGIS GEOMARKER NATIONAL HISTORICAL GIS HOME L SELECT DATA L MY DATA L SUPPORT								
textra	REATE ANOTHER EXTRACT											
N	EXTRACT # DATE CREATED STA		STATUS ?	TUS ? DOWNLOAD DATA		REVISE EXTRACT		ESCRIPTION (CLICK TO EDIT)				
	2	2025-Feb-27	PROCESSING	PROCESSING		REVISE		nty level, Labor Force data and GIS				
	EXTRACT #	DATE CREATED	STATUS ?	DOWNLOAD DATA		REVISE EXTRA	CT	DESCRIPTION (CLICK TO EDIT)				
	2	2025-Feb-27	COMPLETED	TABLES ↓ 4.97 MB GIS FILES ↓ 3 MB		<u>REVISE</u>		<u>REVISE</u> county level, Labor Force file		county level, Labor Force data and GIS file		

This page lists every NHGIS extract you've requested and indicates the current status of each. When you first arrive, your last extract's status is typically **PROCESSING** (meaning it's being constructed by the NHGIS extract system), or it may be **QUEUED** (waiting for NHGIS to complete other requests). A spinning circle indicates that NHGIS is working to complete the request.

When the processing is complete, the spinning circle will change to a checkmark in a green circle, and a green button will appear in the DOWNLOAD DATA column for each main data type in your extract: **TABLES** and **GIS FILES**. (If you requested only one of these types, there will be only one button.) To begin downloading your data, simply click the button(s).

NHGIS processes most extracts in under a minute each, but processing time varies with extract size, and large extracts can take several minutes or longer. NHGIS also sends you an email when your extract is ready, so if your extract is taking a long time, you needn't continue rechecking this page to see if it's done.

You can return to your Extracts History page anytime by clicking on the MY DATA link in the top menu of an NHGIS web page, or you can use the link in the email that notifies you that your extract is ready. An extract will be available for download for two weeks after you request it. For older extracts, this page provides a **RESUBMIT** option that you can use to regenerate the extract files. Every extract also has a **REVISE** option that sends you back into the Data Finder with all the selections that you'd originally made for the extract. You can then add to, remove, or adjust any of those selections before submitting a new request.



Unzip & Open

NHGIS data extracts consist of multiple files, including table data files, codebook files (which describe the contents of the table files), and shapefiles (which is the format NHGIS uses for its GIS files). NHGIS packages all of an extract's files in one or two ZIP files: one ZIP file containing any table data along with corresponding codebooks, and one ZIP file containing any GIS files.

Both Windows and Mac systems allow you to open a ZIP file and view its contents. To work directly with the files within a ZIP file, you may first need to "unzip" the ZIP file.

To do this in Windows, first find and open the ZIP file. (Your browser may open it automatically after it's downloaded. If not, you may be able to find it through your browser's "Downloads" or in your Windows "Downloads" folder.) Then click on "Extract all".



Because the GIS files are in a shapefile format, and each single "shapefile" is composed of multiple data files, the GIS files are double zipped, with each shapefile individually zipped within the main extract ZIP file. Make sure to unzip all files before using them in a GIS.

You can now open your data and begin your analysis!

If you ever have any questions, please visit the <u>Technical Support page</u> for contact options. IPUMS has a user support team that is happy to help.

