

Accessing data using the American Fact Finder

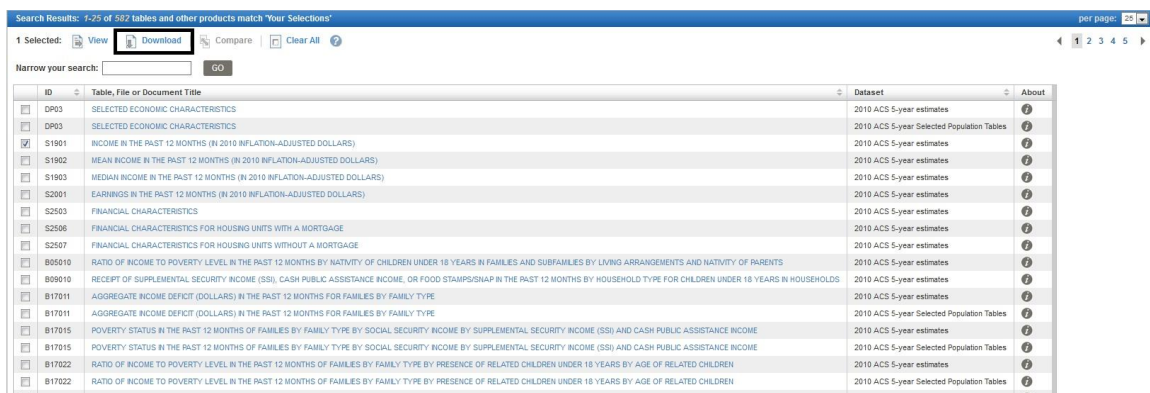
Part I – Finding Census & American Community Survey Tabular Data

To access any data collected by the Census or American Community Survey, you will need to use the American Fact Finder tool.

- Go to:
<http://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>
- To search through the data, we have to set up our parameters for the search – this includes our geographic area of interest and topics.
- We will start with our Geographic area of interest. Click on Geographies in the left side menu bar and a new window will appear.
 - Under 'Select Geography Type' click on Block Group.
 - Under 'Select by State' click on Oregon
 - Under 'Select a county' click on Multnomah
 - Highlight 'All Block Groups within Multnomah County, Oregon'
 - Click on 'Add to your selections'

- Close the window.

- Once you narrow down the Geography, the list that becomes available in the main window includes all the 'topics' available. You can browse that section to see all your options.
- Alternatively, to narrow down the selection, click on the Topics menu on the left. Peruse through the various categories of information that are available. When you find one that interests you, click on it. That will send the topic to 'your selections'. You can select as many topics as you wish. When you are finished, close the window.
- To download a table, check the box in the main window and click on 'Download' located above the main list. (see screenshot below).



- You will be prompted to download a zipped file. Click OK.
- Click Download and save the unzipped file to your flashdrive.
- The file that ends with '_with_ann' is the folder that contains all your data. Open that file and find the block group where you collected data (under Geo.id2, you are looking for: 410510051002. You can find the ID for other block groups by looking in the attribute table of the Census data from RLIS).
- The file that ends with '_metadata' provides a description of each column in the '_with_ann' table. It is the metadata, which helps you to understand what all those numbers represent and how to read the data.

Part II – Mapping data from the American Fact Finder

If you are interested in bringing this data into ArcMap to explore spatially, you will need to prep the '_with_ann' file first using excel.

When downloading this data, you often get numerous columns of irrelevant information. It is helpful to decide early on what you would ultimately like to display on your map. It is also helpful to derive new data from the given census data.

Delete unnecessary columns & rows

- Open up the '_with_ann' file using Microsoft Excel. Before making any changes, do a 'Save As' and save it to your flashdrive as an xls (excel 97-2003 Workbook).
- There are a number of different columns in the file. The first three columns should be left alone. Those provide the information we need to identify the counties by name, and the ID number to join to the shapefile (blockgrp2010) in ArcMap.
- After the first three columns, delete any column that has information that you are not interested in mapping. There is a limit to how many columns an attribute table may have in ArcMap (no more than 255), so make sure it does not exceed that number.
- To delete all the unnecessary columns in your excel file, right-click on a column name you want to delete, and click on delete.
- To delete multiple columns at once, left-click on a column and drag the mouse over all the columns you want to delete. When they are all selected, right-click and click on delete. You may have to do this a few times to select and delete all the unnecessary columns.

Renaming Columns

- To make the data easier to read while you are in ArcGIS, we can change the names of the columns.
- In order for the table to work properly in ArcGIS we have to follow these rules when renaming our columns:
 - No longer than 13 characters
 - Only letters, numbers and underscores can be used
 - No spaces
- Change the names of the columns in the 2nd row (we are going to delete the 1st row when we have the table we want).
- After you deleted unnecessary columns and changed the name of the remaining columns the 2nd row – delete the entire 1st row. To do this, right-click on the row # and go to 'delete'.

- Save the file.
- Now – change the name of the worksheet. On the bottom of the screen, right-click on ACS_10_5YR_S1901_with_ann.csv and click on Rename. Type in a short name without any spaces.

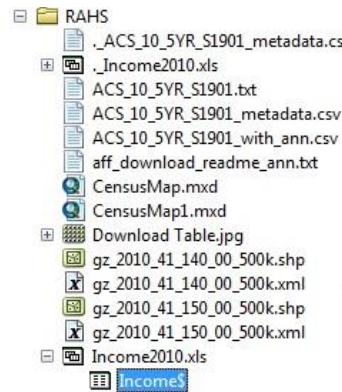
GeoID	GeoID2	Name	Households	LowIncome	HighIncome	Median	Mean
1400000US41001950100	41001950100	Census Tract 9501, Baker County, Oregon	87	7.7	4.1	55481	70616
1400000US41001950200	41001950200	Census Tract 9502, Baker County, Oregon	136	10	0	42193	49131
1400000US41001950300	41001950300	Census Tract 9503, Baker County, Oregon	115	8.7	0	31859	41594
1400000US41001950400	41001950400	Census Tract 9504, Baker County, Oregon	111	12.2	0.5	35000	42663
1400000US41001950500	41001950500	Census Tract 9505, Baker County, Oregon	98	11.5	2.1	43384	51181
1400000US41001950600	41001950600	Census Tract 9506, Baker County, Oregon	98	16.9	3.2	30851	45057
1400000US41003000100	41003000100	Census Tract 1, Benton County, Oregon	147	11.2	1.2	41559	50123
1400000US41003000200	41003000200	Census Tract 2, Benton County, Oregon	145	7.5	7.3	51470	78889
1400000US41003000400	41003000400	Census Tract 4, Benton County, Oregon	160	8.6	5.9	75503	84156
1400000US41003000500	41003000500	Census Tract 5, Benton County, Oregon	96	7.8	10.8	78661	102137
1400000US41003000600	41003000600	Census Tract 6, Benton County, Oregon	128	6.6	0.4	33885	46047
1400000US41003000900	41003000900	Census Tract 9, Benton County, Oregon	108	6.2	5	55875	74871
1400000US41003001001	41003001001	Census Tract 10.01, Benton County, Oregon	119	18.8	2.2	25788	44750
1400000US41003001002	41003001002	Census Tract 10.02, Benton County, Oregon	97	15	1.6	39053	53102
1400000US41003001101	41003001101	Census Tract 11.01, Benton County, Oregon	110	42.2	0	13411	21960
1400000US41003001102	41003001102	Census Tract 11.02, Benton County, Oregon	174	30.1	0	21595	34873
1400000US41003001010	41003001010	Census Tract 101, Benton County, Oregon	154	2.5	5.1	75556	92048
1400000US41003001020	41003001020	Census Tract 102, Benton County, Oregon	110	3	2.6	74024	84472
1400000US41003001030	41003001030	Census Tract 103, Benton County, Oregon	96	3.2	2.4	59519	70741
1400000US41003001040	41003001040	Census Tract 104, Benton County, Oregon	89	6.6	2.8	52804	63839
1400000US41003001060	41003001060	Census Tract 106, Benton County, Oregon	209	37.3	2.4	16152	29210
1400000US41003001070	41003001070	Census Tract 107, Benton County, Oregon	113	20.4	1.1	29306	41334
1400000US41003001080	41003001080	Census Tract 108, Benton County, Oregon	146	7	2.6	52000	61573
1400000US41003001090	41003001090	Census Tract 109, Benton County, Oregon	102	2.8	5.8	74792	90279
1400000US41005020100	41005020100	Census Tract 201, Clackamas County, Oregon	87	1.9	27.1	107313	162157
1400000US41005020200	41005020200	Census Tract 202, Clackamas County, Oregon	141	3.5	16.5	72119	113509
1400000US41005020300	41005020300	Census Tract 203.02, Clackamas County, Oregon	115	4.1	6.2	64130	84747
1400000US41005020301	41005020301	Census Tract 203.03, Clackamas County, Oregon	196	7	11	66223	87739
1400000US41005020304	41005020304	Census Tract 203.04, Clackamas County, Oregon	122	4.7	12.4	84668	112985
1400000US41005020401	41005020401	Census Tract 204.01, Clackamas County, Oregon	104	7.4	9.1	67589	90632
1400000US41005020403	41005020403	Census Tract 204.03, Clackamas County, Oregon	102	1.3	23.5	130222	158494
1400000US41005020404	41005020404	Census Tract 204.04, Clackamas County, Oregon	109	1	15.6	90375	131715
1400000US41005020501	41005020501	Census Tract 205.01, Clackamas County, Oregon	165	2.8	15.7	92344	121858
1400000US41005020503	41005020503	Census Tract 205.03, Clackamas County, Oregon	76	0	20.3	102614	157852
1400000US41005020504	41005020504	Census Tract 205.04, Clackamas County, Oregon	136	0.6	11.5	87426	124998
1400000US41005020505	41005020505	Census Tract 205.05, Clackamas County, Oregon	77	10.1	7.9	47364	77574
1400000US41005020600	41005020600	Census Tract 206, Clackamas County, Oregon	132	3.1	8.7	83426	107411
1400000US41005020700	41005020700	Census Tract 207, Clackamas County, Oregon	124	4	5.8	87379	101271
1400000US41005020800	41005020800	Census Tract 208, Clackamas County, Oregon	143	8	1	44511	55882

- Save and close file.

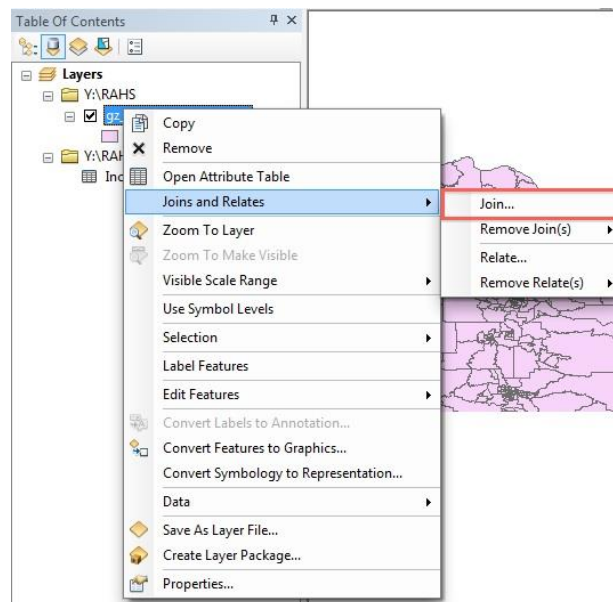
Part III – Joining the Table to your Boundary File

A table join appends the attribute fields of a non-spatial table to a (spatial) layer attribute table, creating one large table. Joins are used when there is a one-to-one table relationship – i.e. for each geographic feature in the layer there is one match in the non-spatial table. Joins are also used for many-to-one table relationships.

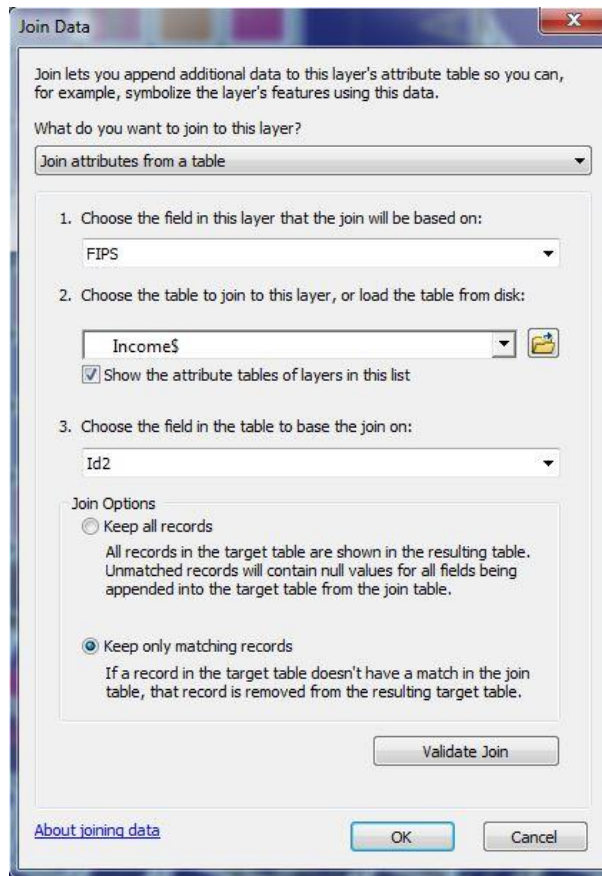
- In ArcMap, add the newly created table and make sure that you also have the blockgrp2010.shp on the map.
- To add the table, go to ArcCatalog and find the table. Expand the file and drag the **worksheet** onto your map.



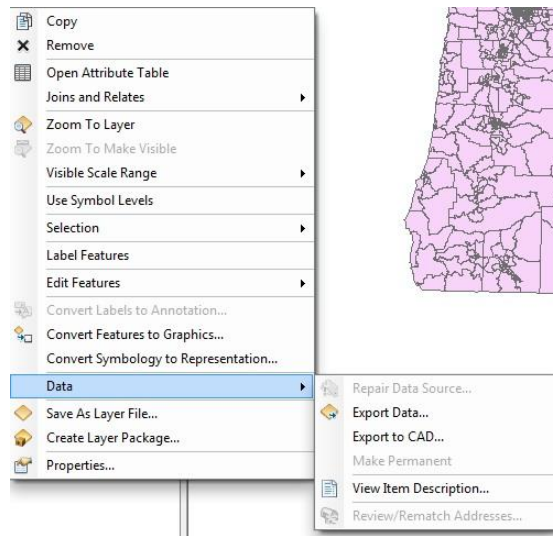
- Right-click on blockgrp2010.shp in your table of contents and scroll down to Joins & Relates, and click on Join.



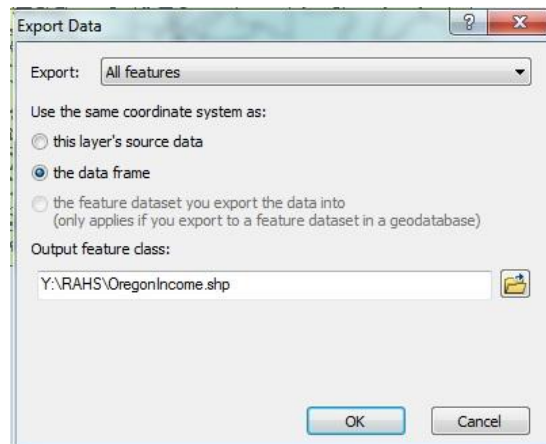
- Under #1, the field in the layer that the join will be based on is: FIPS (from the shapefile). Under #2, the table to join to the layer should come up automatically (if not use the browse button to navigate to your table). Under #3, the field to join it to in the table is id2. Keep only matching records.



- Click on Validate Join – this will tell you if there are any errors in your join. It should go through successfully. Click OK twice.
- Nothing will automatically look any different, but now if you open the Attribute table for your shapefile, you will see the columns from your excel file at the very end. **Joins are not permanent** – follow the next few steps to make it a permanent file.
- Right-click on the blockgrp2010.shp and scroll down to Data and click on Export Data.



- Use the same Coordinate System as: The Data Frame and name your output feature. Save the file to your flashdrive and be sure the Save As type is a shapefile.



- Now to map the data – Go to the Symbology tab and under quantities, use graduated colors to map out the topics in the newly created data set.