

# Getting Census Data into ArcMap or ArcView

## Obtaining Shapefiles from ESRI and Data from the Census Bureau

1) **Download the boundary shapefile from the ESRI website:**

[http://arcdata.esri.com/data/tiger2000/tiger\\_download.cfm](http://arcdata.esri.com/data/tiger2000/tiger_download.cfm) . Select the area that is of interest by clicking on the state in the map or by selecting the state from the drop down menu. To obtain a shapfile of data within a county, use the “select by county” dropdown menu.

**ESRI** GIS and Mapping Software

**ArcData**

**Download Census 2000 TIGER/Line® Shapefiles**

You have selected the state of **Washington**. If you would like to download one or more data layers for a single county in Washington, then select a county from the list below. If you would like to download a single data layer for one or more counties in Washington, then select a layer below.

**Select by County** OR **Select by Layer**

Select a County  Select a Layer

**Technical documentation for PL 94-171 and SF1 data:**

- [U.S. Census PL 94-171\(PDF\)](#)
- [U.S. Census Summary File 1 \(SF1\)\(PDF\)](#)
- [ESRI Abbreviated PL 94-171\(PDF\)](#)
- [PL 94-171 Quick Reference Guide](#)
- [SF1 Quick Reference Guide](#)

## Getting Census Data into ArcMap or ArcView

If you are interested in obtaining a shapefile for a larger area (i.e. census tracts or county lines for the entire state), use the “select by layer” dropdown menu and choose which layer you want.

**ArcData**

### Download Census 2000 TIGER/Line® Shapefiles

You have selected the state of **Washington**. If you would like to download one or more data layers for a single county in Washington, then select a county from the list below. If you would like to download a single data layer for one or more counties in Washington, then select a layer below.

**Select by County**    OR    **Select by Layer**

Select a County ▼      Select a Layer ▼

Submit Selection      Submit Selection

**Technical documentation for PL 94-171 and SF1 data:**

- [U.S. Census PL 94-171\(PDF\)](#)
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- [PL 94-171 Quick Reference Guide](#)
- [SF1 Quick Reference Guide](#)

Next, check which particular layer you want, download it, and finally use Winzip to unzip the layer. Now the layer is ready to be shown in ArcMap. Just remember, you are not allowed to download more than 20.0 MB of data in a single download. You must download numerous times to retrieve a large amount of data that exceeds 20.0 MB.

### 2) Download data through the American FactFinder service:

[http://factfinder.census.gov/home/saff/main.html?\\_lang=en](http://factfinder.census.gov/home/saff/main.html?_lang=en). Click “Download Center” in the left frame of the page. You will be routed to a page full of links to the various summary files created by the census.

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- 3) Select Summary File 3 and on the next page click on the National Level, State Level, or County Level that you desire. If you choose a level in a State Level you will need to specify which state and for the County Level you will need to specify the state as well as county in that particular state. The next step is to hit the SELECTED TABLES tab right in front.

Summary File 3 (SF 3) - Sample Data

at a Geographic  
ary Level and a  
wnload Method

=== National Level ===  
United States (010)  
All States (040)  
All Counties (050)  
All Places (160)  
All American Indian Areas/Alaska Native Areas/Hawaiian Home Lands (250)  
All Metropolitan Statistical Areas/Consolidated Metropolitan Statistical Areas (380)  
All Urban Areas (400)  
All 5-Digit ZIP Code Tabulation Areas (860)  
=== State Level ===  
All Places in a State (160)  
All County Subdivisions in a State (060)  
=== County Level ===  
**All Census Tracts in a County (140)**  
All Block Groups in a County (150)

--select a state--

**SELECTED TABLES** - Up to 50 tables in comma-delimited format.

**ALL TABLES** - All tables in summary file format.

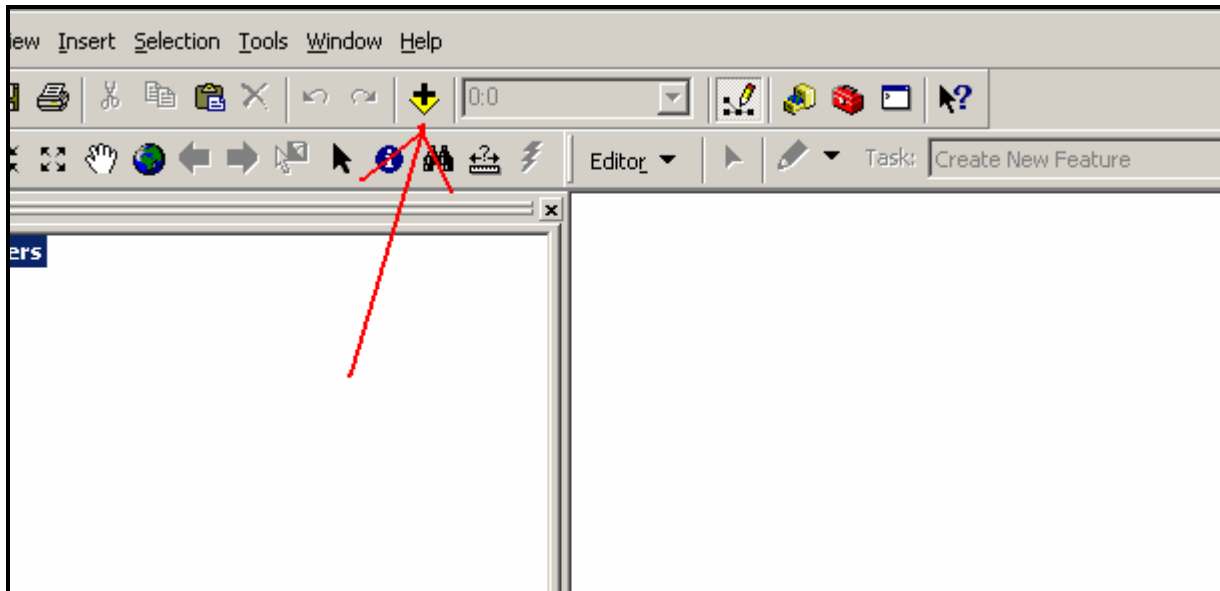
[Information about summary file downloads](#)

- 4) Select the data you would like to include in your table. You may select as many items as you want to add, but if you do add more than one item, you will have to hold the “CTRL” key while choosing or click “Add” after each selection. Once, finished adding tables hit the “Next” button, and on the next page proceed to download your data to a secure location.

## Getting Census Data into ArcMap or ArcView

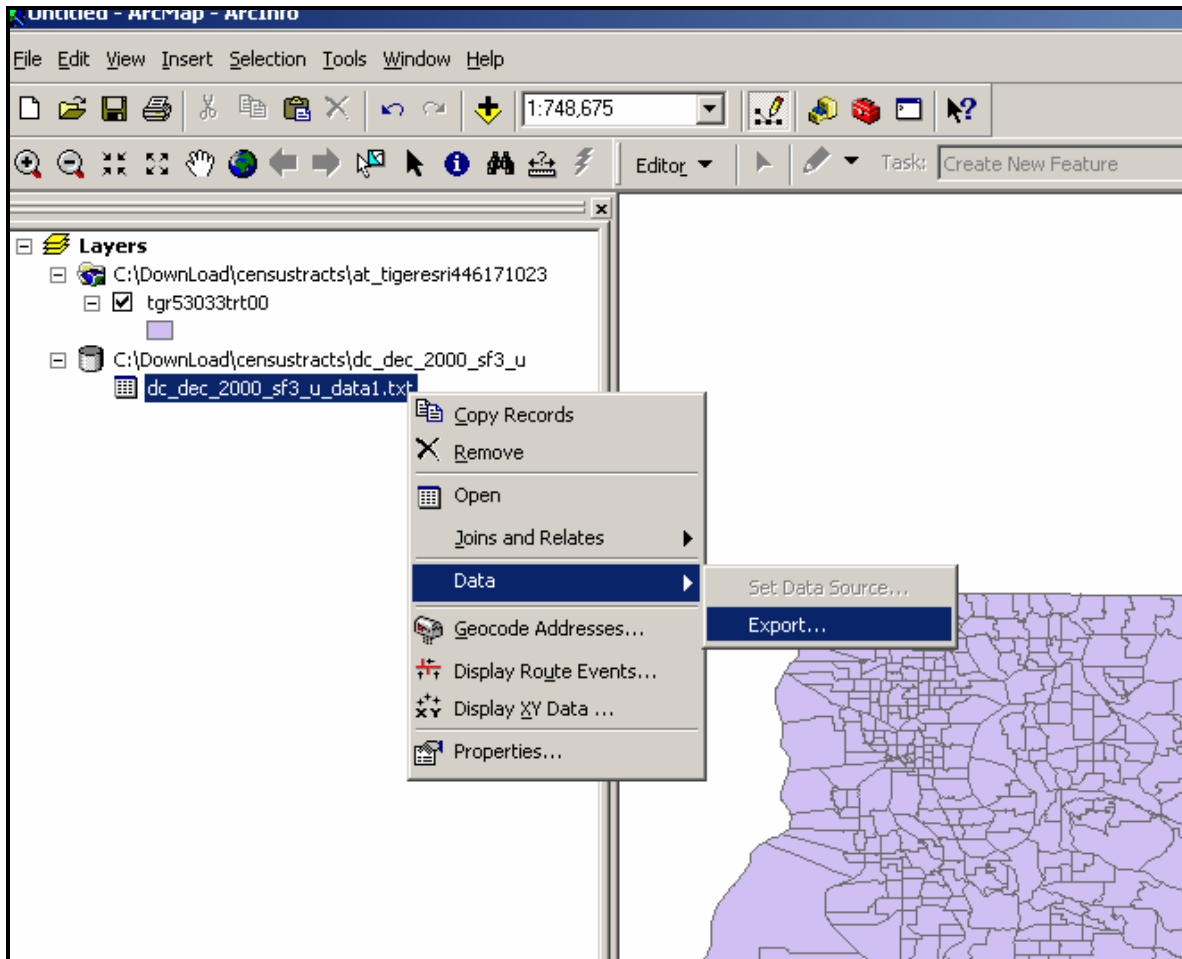
### 5) Getting the data into ArcMap:

The file downloaded will include the data (example: dt\_dec\_2000\_sf3\_u\_data.xls) and the geographic link file (example: dt\_dec\_2000\_sf3\_u\_geo.xls). The data portion is the one that is important so we will import this file into ArcMap. Next, unzip the shapefile you downloaded from ESRI Tigerline. Also, remember sometimes when unzipping data, you may have to do it more than once to complete the extraction. Import this shapefile into ArcMap using the Add Data icon and you will have everything you need.



## Getting Census Data into ArcMap or ArcView

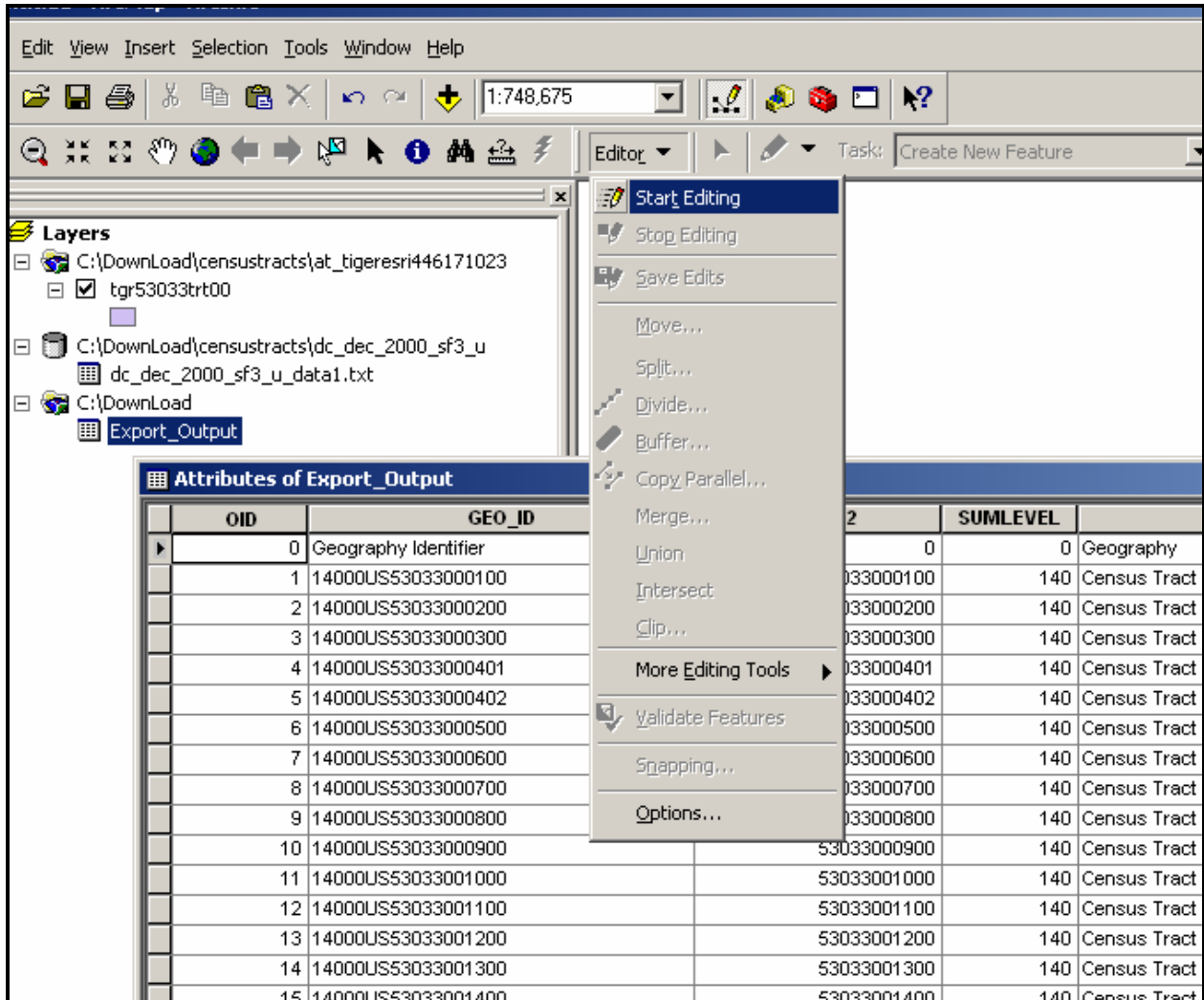
- 6) Once you have added your shapefile and data into ArcMap, it is now time to make a join so that your census data can be displayed in ArcMap. This first step in this process is to Export your census data. Right click on the census data in the layers area, hit data, then export.



Keep the default name to Export\_Output (or if you change the name, remember what you renamed it as). Click Yes on the next box and your data will be exported.

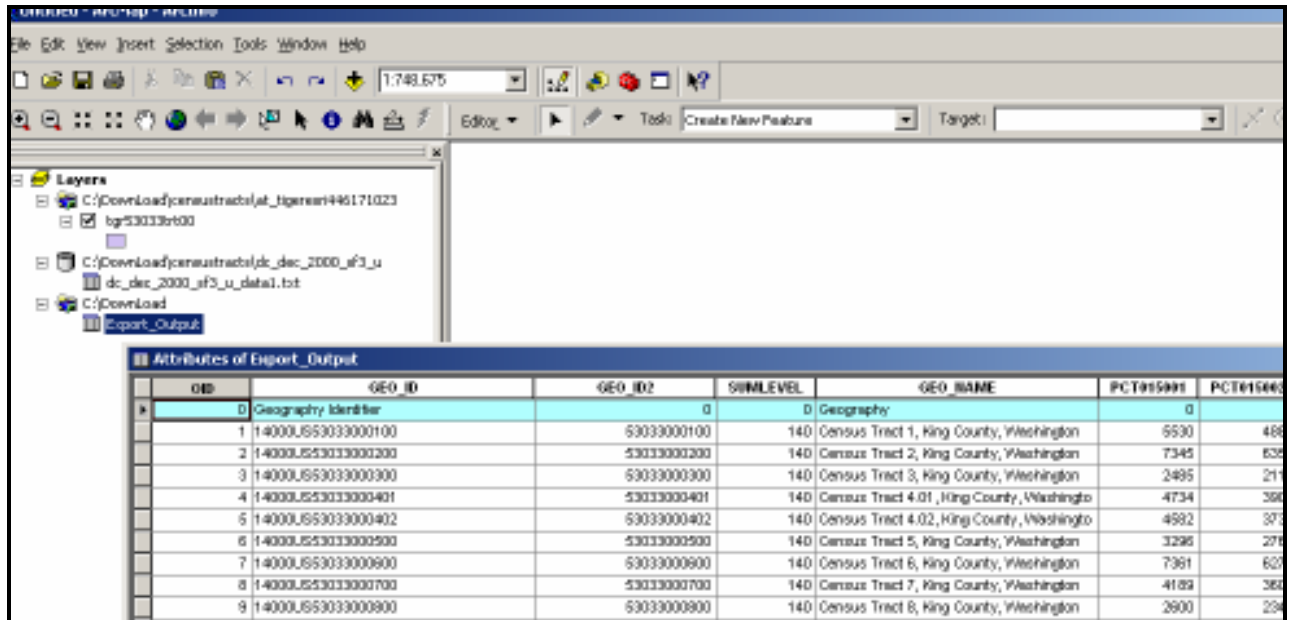
## Getting Census Data into ArcMap or ArcView

- 7) Next, delete the second row in your attribute table for your new Export\_Output layer. Open the attribute table by right clicking on it and hit the “open” option. Next, hit the Tools option, then select Editor Toolbox. The toolbox will appear just above the cartographic display. Click on editor, then start editing.



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Make sure the layer that you are editing is Export\_Output. Delete the second row, the one that isn't recognized in the attribute table.

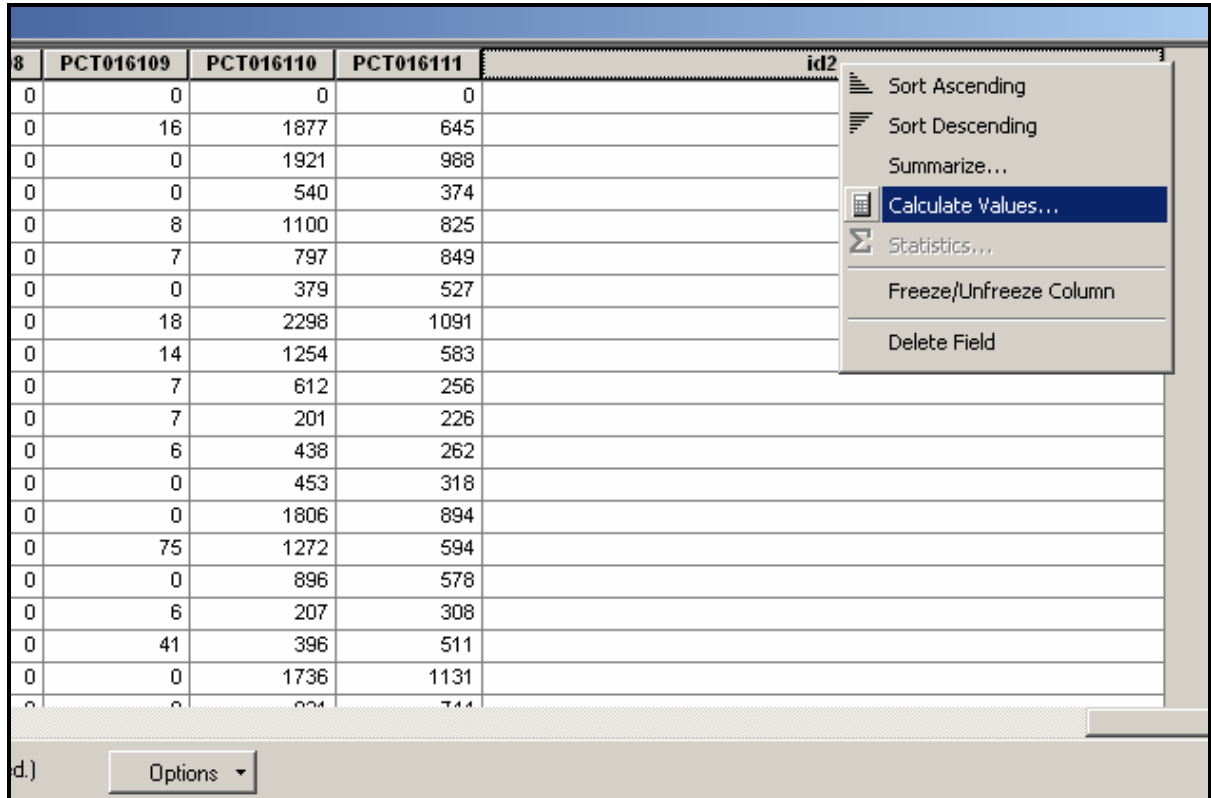


Go back to the editor Toolbox and stop editing, and save the editings.

- 8) Now you must add another field in the census data attribute table so that the join of the data and shapefile can be completed. Open the attribute table for the Export\_Output table and hit the options tab, then choose 'add field'. A box will appear and you must put in a new name and for the type choose 'text'.

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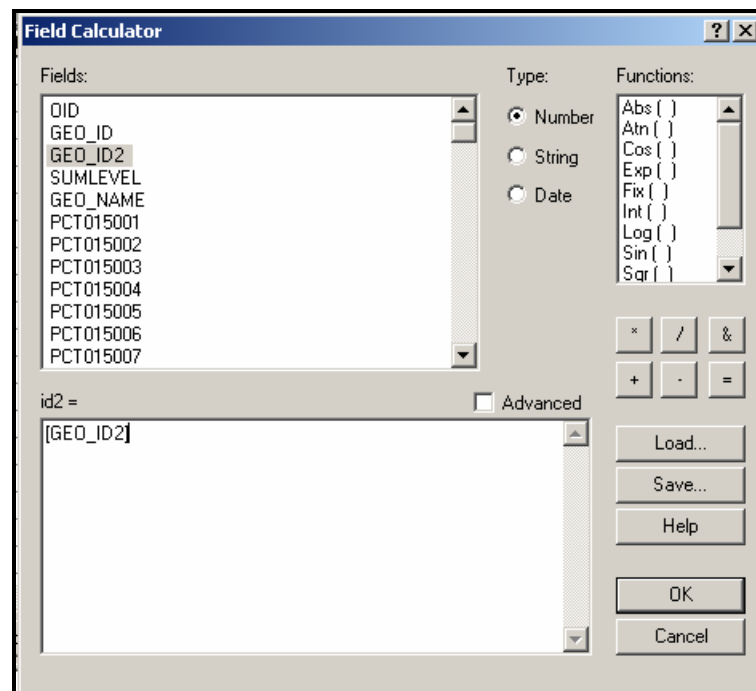
Find the new field and right click on the name of the field, and go to calculate value.



The screenshot shows a data table with the following columns: 8, PCT016109, PCT016110, PCT016111, and id2. The 'id2' column is currently empty. A context menu is open over the 'id2' column header, with the 'Calculate Values...' option selected. The menu also includes options for 'Sort Ascending', 'Sort Descending', 'Summarize...', 'Statistics...', 'Freeze/Unfreeze Column', and 'Delete Field'. The table contains 20 rows of data with numerical values in the first four columns.

8	PCT016109	PCT016110	PCT016111	id2
0	0	0	0	
0	16	1877	645	
0	0	1921	988	
0	0	540	374	
0	8	1100	825	
0	7	797	849	
0	0	379	527	
0	18	2298	1091	
0	14	1254	583	
0	7	612	256	
0	7	201	226	
0	6	438	262	
0	0	453	318	
0	0	1806	894	
0	75	1272	594	
0	0	896	578	
0	6	207	308	
0	41	396	511	
0	0	1736	1131	
0	0	0	0	

Click on GEO\_ID2 for the field and it will be duplicated in the below box. Hit OK and this will put in values that will be able to be matched to your shapefile.

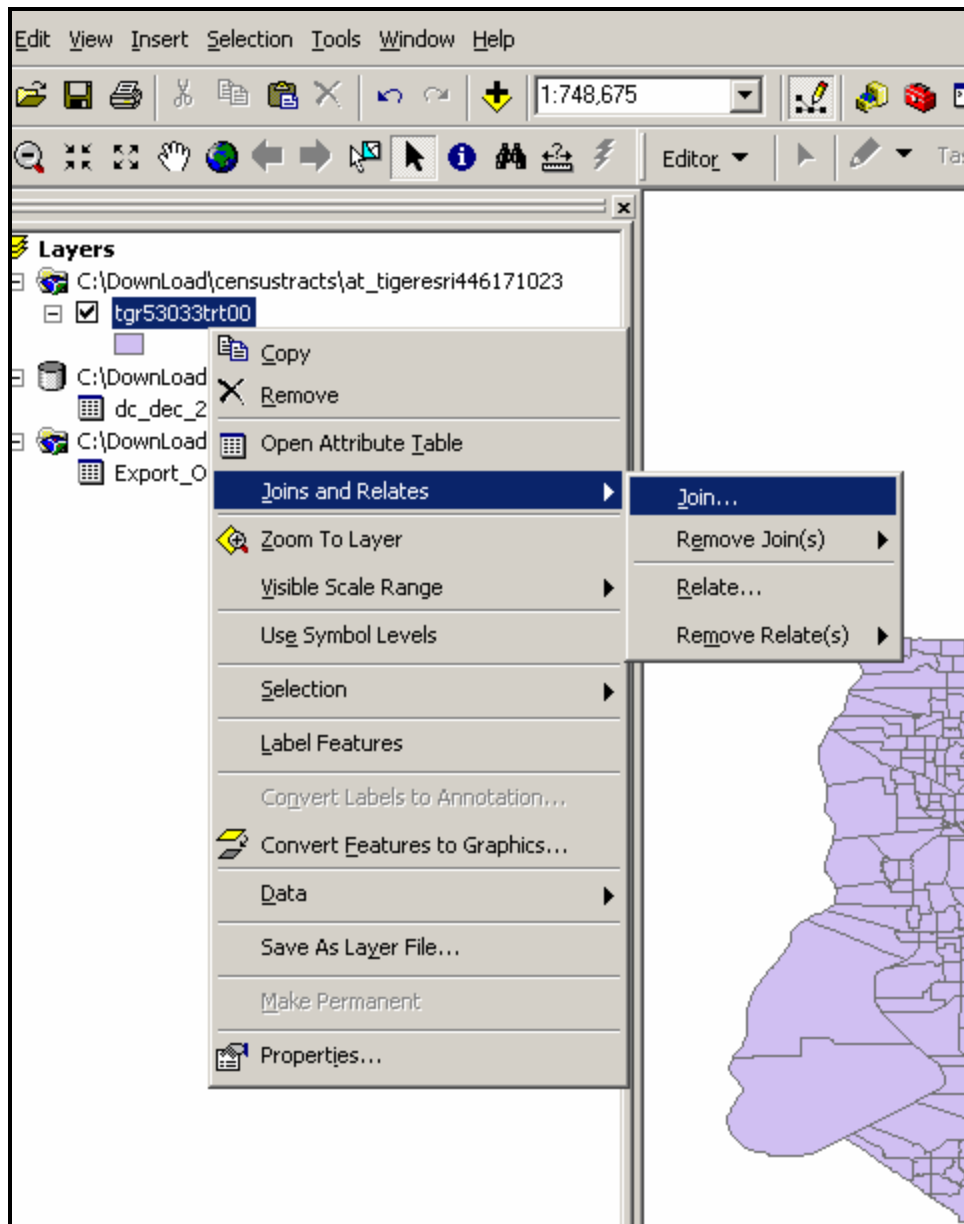


The screenshot shows the 'Field Calculator' dialog box. The 'Fields:' list on the left contains the following fields: OID, GEO\_ID, GEO\_ID2, SUMLEVEL, GEO\_NAME, PCT015001, PCT015002, PCT015003, PCT015004, PCT015005, PCT015006, and PCT015007. The 'Type:' section has 'Number' selected. The 'Functions:' list on the right contains: Abs ( ), Atn ( ), Cos ( ), Exp ( ), Fix ( ), Int ( ), Log ( ), Sin ( ), and Sqr ( ). The 'id2 =' field is currently empty. The 'Advanced' checkbox is unchecked. The 'OK' button is highlighted.



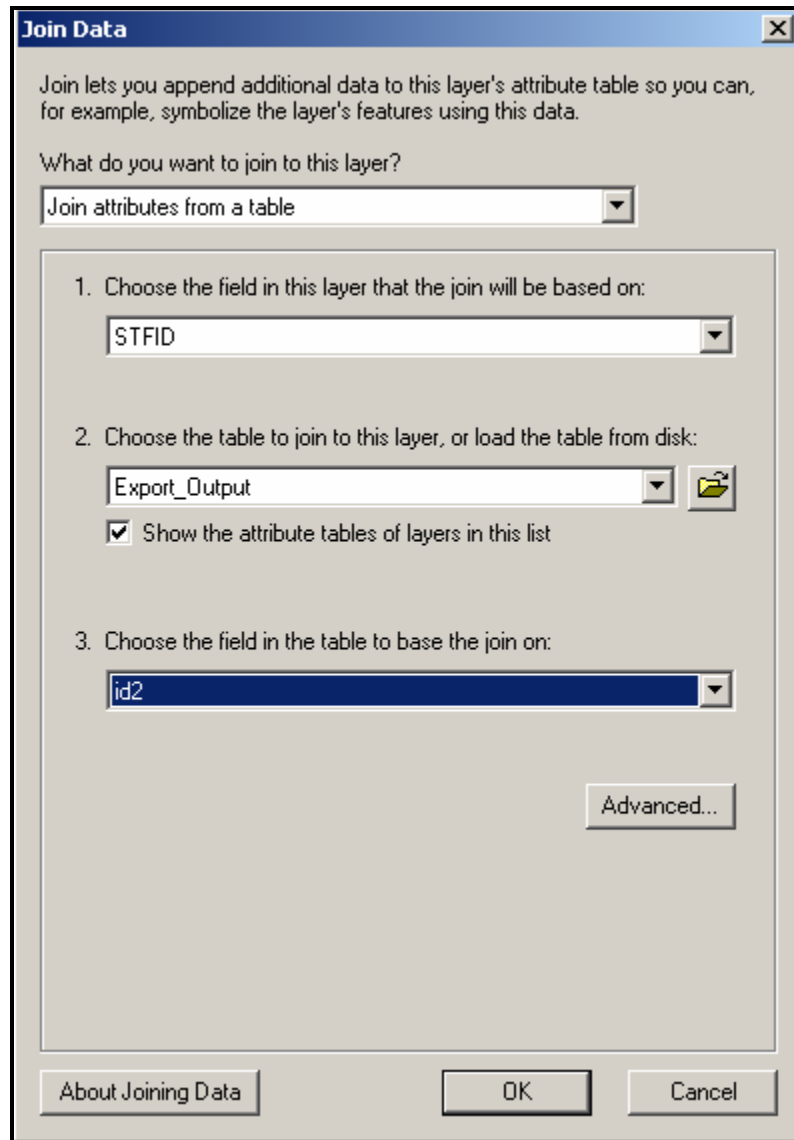
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- 9) The final process is to join the shapefile and census data (from Export\_Output). The first step is to right click on the shapefile in the layers column, then to Join and Relates, then to Join.



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For #1, put in the field that has “STFID”, for #2 put in Export\_Output (or the name you gave the exported data), and for #3 put in the field you added from the last step.



Hit Yes for the next box and the join will be completed.

- 10) Go to this website to view the PDF file that will be handy matching up the data from the attribute table with the real categories since only numbers are applied for the heading of each column. Website: <http://www.census.gov/prod/cen2000/doc/sf3.pdf> .