Mapping Census Data Extracted from Social Explorer

The University Library maintains a subscription to Social Explorer, an online research tool that facilitates access, interaction, and mapping of contemporary and historical census and demographic data.

These instructions explain how to join census data from Social Explorer to a shapefile or feature dataset in ArcMap.

1. Download tabular data from Social Explorer from the **Tables** link at the top of the page.

2. Choose the Decennial Census or American Community Survey you are interested in from the links in the middle of the page. For an example, we'll extract population density by county for all counties in North Carolina from the 2010 Census.

    - Select Decennial Census, then Census 2010 Begin report.
    - Select *County* as the **geographic type** (note: The most commonly used geographic options are at the top of the list. Some names may be duplicated further down, so be sure to choose the option from the top of the list).
    - Select *North Carolina* as the **state**.
    - Select *All Counties in North Carolina* as the **geographic area**.
    - Click *Add*, and then click *Proceed to Tables*.

Note: There are a couple of dataset options to choose from in the Select a dataset: drop-down menu. One of the options is Social Explorer Tables; these tables include frequently requested data from the Census that have been aggregated or otherwise manipulated by Social Explorer for improved usability. The other datasets are straight from the Census. Choose a dataset that best suits your needs. For this exercise we will use Social Explorer Tables.

3. The 3 tabs along the top of this page are **List Tables**, **Search by Keyword**, and **Premade Reports**. Depending on your needs, you might choose to select a premade report or search for a table by keyword. For this example stay on the **List Tables** tab and select the ***Population Density (per sq. mile)*** table. Click ***Add*** and then ***Show results***.

4. Click the **Data Download** tab. Select the data download option with the following specifications:
    - **Output Options:** ***Output DBF friendly column names***

5. Under **Download data by geography type**, click the *County data (CSV)* download link.
    - In Firefox or Internet Explorer, make sure you "save" rather than "open" the file once it has downloaded.
    - In Chrome, when you download the file and it appears at the bottom of your browser, click the arrow to see the download options and choose *Show in folder*. This will open your downloads folder, where you can copy the file and paste it to your workspace.

6. You will now need to make sure the FIPS code field is properly formatted in order to import it into ArcMap. Import the CSV file into Microsoft Excel as text using the **Get External Data** tool under the **Data** tab. Select the **Delimited** file type with a **Comma** as the delimiter and set the "**GEO_FIPS**" column as **Text**. Click "**Finish**", and put the data into the existing worksheet, then save it as an Excel file.

7. Next, download the data dictionary for the data file. Under **Download programs to import and label data:** click the *Data dictionary (text file)* link at the very bottom of the page. Save the file to your workspace. A data dictionary defines the fields included in the CSV.

8. Add the Excel worksheet into ArcMap using the "*Add Data*" button. Join it to a shapefile or feature class depicting county boundaries using the "FIPS" field. You can do this by right-clicking on the county spatial data in the table of contents and selecting **Joins and Relates** > **Joins…** > **Join attributes from a table.**

    1. *Choose the field in this layer that the join will be based on*: Select the field that contains the FIPS for each county.
    2. *Choose the table to join to this layer, or load the table from disk*: Select the csv downloaded from Social Explorer or the Excel worksheet that you created.
    3. *Choose the field in the table to base the join on*: Select the field from the CSV or worksheet that contains the FIPS for each county.

    Click OK.

9. Once the tables are joined, the data downloaded from Social Explorer will be appended to the right side of the county attribute table.

10. To make the joined attributes permanent, you can export the county shapefile to a new shapefile or feature class. To do this, right-click on the county shapefile in the Table of Contents, select **Data** > **Export Data…** Specify an output location and name for the new shapefile. Click OK. ArcMap asks, "*Do you want to add the exported data to the map as a layer?*" Click **Yes**.

11. Remember when symbolizing your data that the attributes from Social Explorer that you joined will be to the far right of the attribute table or the very bottom of the Fields list under the Symbology tab. You will need to consult the data dictionary to interpret the field names.