

## Mapping 2001 Census Data Using ArcView 3.3

These procedures outline:

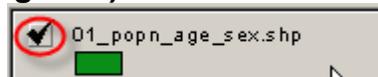
1. Mapping a theme (making a map)
2. Preparing the layout for printing and exporting the map into various file formats.

In order to use these instructions, you must have an ArcInfo shape file with appropriate census variables and data in the attribute table. In this example, we are going to use a shape file depicting the Toronto CMA along with corresponding 2001 census population data (in the attribute table).

### A. Mapping the Data From the Newly Created File

This example outlines the steps to make a map showing population density.

1. *Double-Click* on the **ArcView GIS 3.3** icon or *select* **Start > Programs > ESRI > ArcView GIS 3.3 > ArcView GIS 3.3**.
2. In the **Welcome to ArcView GIS window** *select* **with a new View**, then *select* **OK**.
3. In the **Add data window**, it asks you **Would you like to add data to the View now**, *select* **Yes**.
4. In the **Add Theme window**, browse to the shapefile (In this example we will create a thematic map using population data from the 2001 census, thus we will chose the **01\_popn\_age\_sex.shp**). Highlight the file and *select* **OK**.
5. Now *maximize* the window titled **View1**, then *maximize* the window titled **ArcView GIS 3.3**.
6. *Click* the little grey box (a check mark will appear) to the left of the word **01\_popn\_age\_sex.shp** (**Figure 1**).



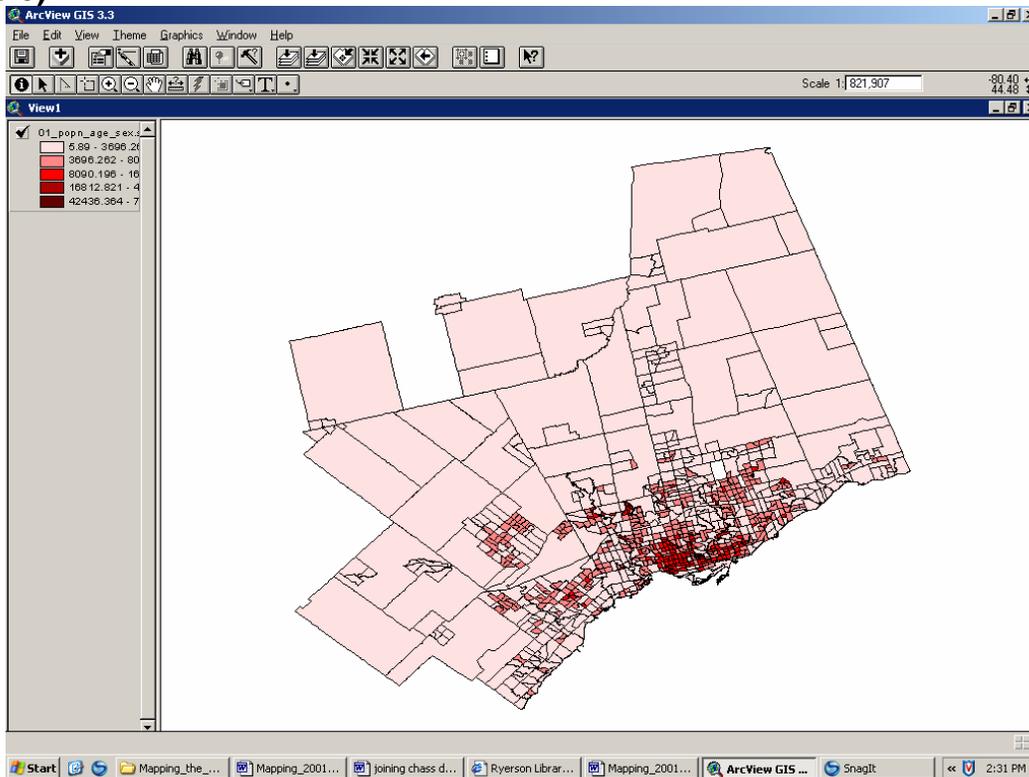
7. *Double-click* anywhere on **01\_popn\_age\_sex.shp** theme in the view menu, and a **Legend Editor** window will appear (**Figure 2**).



8. In **Legend Type** change it from **Single Symbol** to **Graduated Colour**, by using the **dropdown** menu.
9. In the **Classification Field** change it from **None** to **Popn\_2001** (total population). In the **Normalize by window** change it from **None** to **Land\_area** (total land km2). By

default ArcView has broken down the data into 5 ranges. Now *click Apply*. Then *close* the **Legend Editor** window.

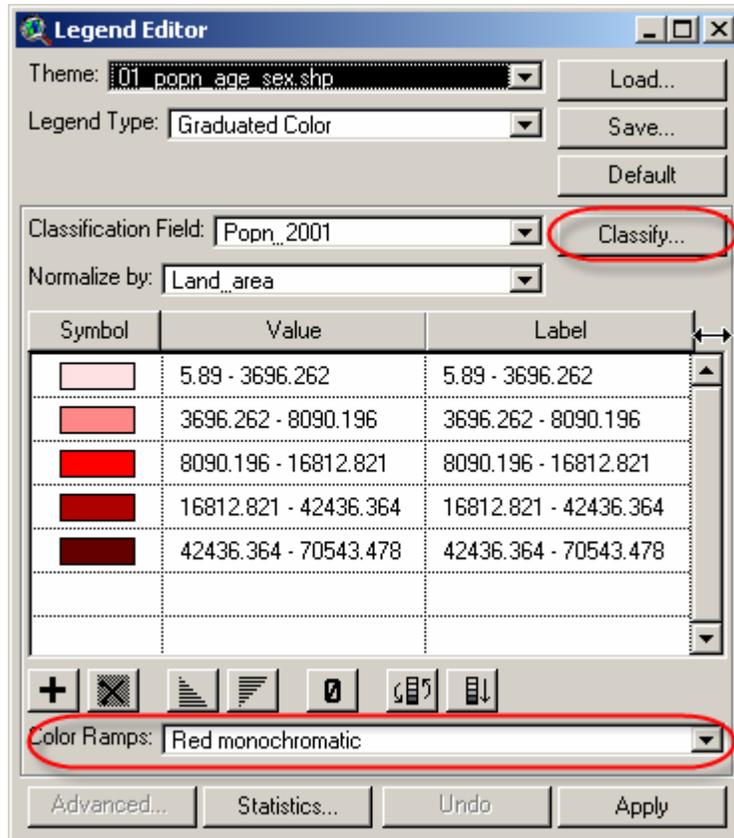
Now you have a theme displaying the **Total Population Density By Census Tract** (Figure 3).



(Figure 3)

10 (a). If you are not satisfied with the colour schemes or the ranges, *double-click* anywhere on **Torct.shp** theme, and the **Legend Editor** window will appear.

10 (b). To change the colour schemes, *click* in the **Color Ramp** window and select an appropriate colour scheme. *Click Apply* (Figure 4).



(Figure 4)

10 (c). The **Legend Editor** window also allows you to change the number of classes, *select* **Classify > Number of classes** change it from **5** to which ever value you want, *by scrolling down*, then *select* **OK** (Figure 4).

## **B. Preparing the Layout for Printing or Exporting to JPEG and other Formats**

1. Prepare the legend: From the **Main Menu Bar** *select* **Theme > Properties**. The **Theme Properties** window should *open*. Change the **Theme Name** from **Torct.shp** to **Population Density (persons / KM square)**, then *select* **OK**. This doesn't change the name of the file on disk; it only changes the name for the purpose of this View.

2. Again from the **Main Menu Bar** *select* **View > Layout > Landscape > OK**.

In the window titled **Layout 1** there are 5 objects: Title, Legend, North Arrow, Scale Bar and the Theme.

3 (a). *Double-click* the words **View1**, then *type* **2001 Population Density of the Toronto CMA By Census Tract**.

3 (b). To *change* the size of the font, *press* **Ctrl** and **P** at the same time. *Change* the **Size** to **28**. Quit the **Font Palette**. *Centre* the title between the blue border.

3 (c). *Select* the **theme (map)**. To *enlarge* the **theme** *grab* any one of the **four black square dots**, and then *drag* them.

3 (d). Once you have made the **theme** larger, then you must *centre* it on the **layout**.

3 (e). Once the **theme** is *centred*, *right click* anywhere outside the borders of the **layout**, and *select* **Refresh View Frames**.

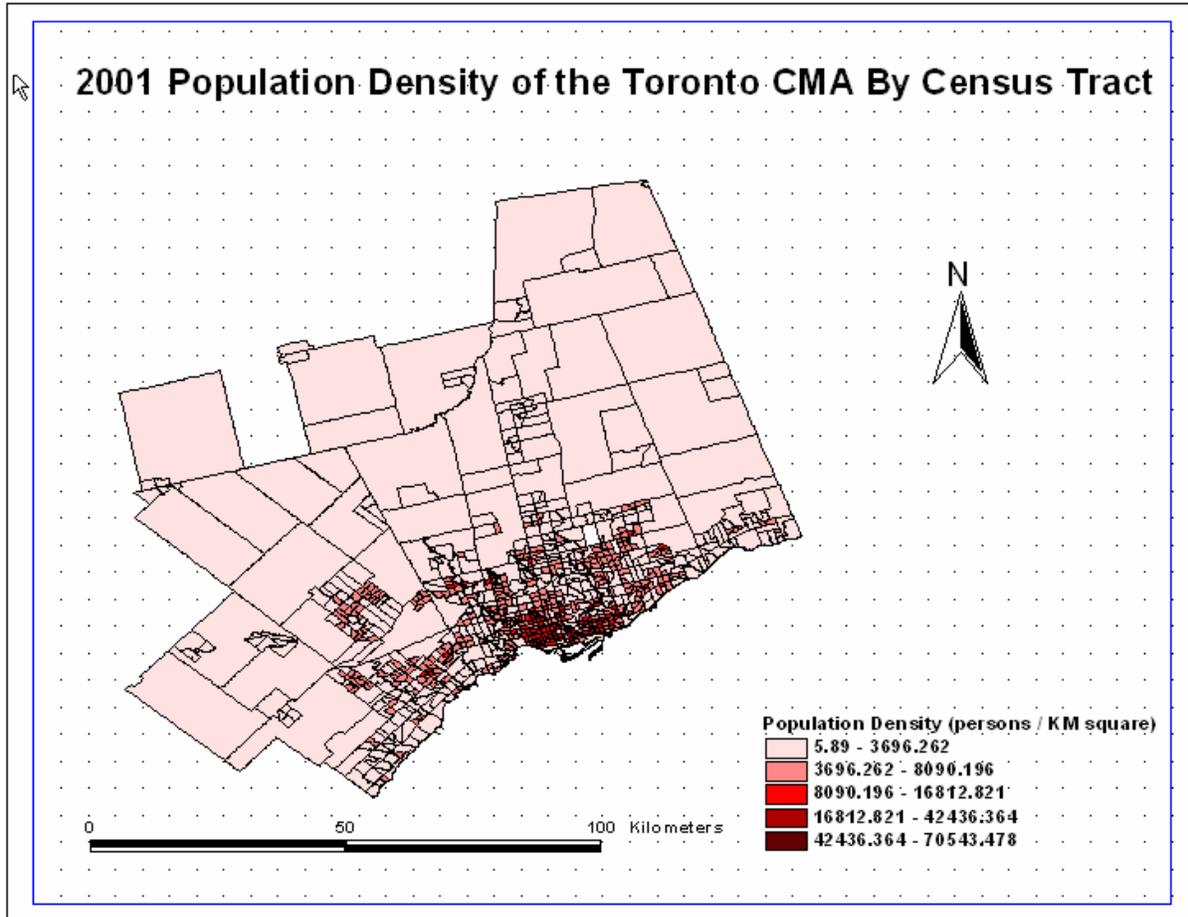
4. *Double-click* on the **scale bar**. The **Scale Bar Properties** windows will *open up*. *Change* the **Units** to **Kilometers**, by *scrolling down*. *Change* the **Interval** to **50**. Finally, *change* the **Left Divisions** to **0**. Now *select* **OK**. *Centre* the **scale bar** below the theme (map).

5 (a). *Double-click* on the **North Arrow**, the **North Arrow Manager** window will *appear*. You may want to *select* a simpler **north arrow**, like the first one on the second row. *Select* **OK**.

5 (b). *Move* the **north arrow** to the top right of the **layout**. The **north arrow** appears to be too large, so *reduce* it's size. *Select* the **north arrow**, *grab* one of the **four black square dots** and *reduce* the **arrow** by bringing the **dots** closer together.

6. *Select* the **legend**, and *move* it down to the bottom right corner of the **layout**.

You may want to *align* the **legend** and the **north arrow**. *Move* the north arrow above the legend. *Select* the **Legend**, *hold down* the **shift key** on the **keyboard**, and *select* the **north arrow**. *Press* **Ctrl** and **A** at the same time, and *select* **align centre (>|<)** at the top. The layout is complete and ready for printing:

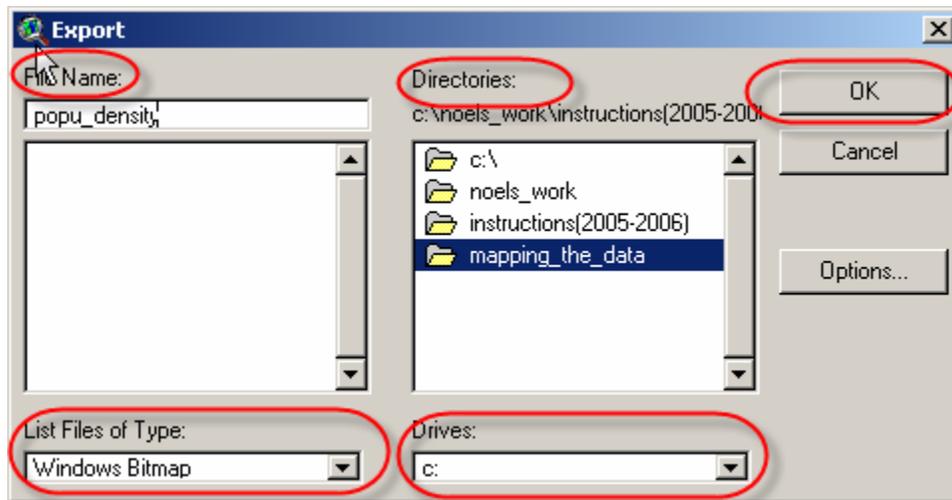


8. Now you are ready to print. **File > Print > OK.**

### Exporting to PDF or Other Formats

Alternatively, you may opt to export your map and save it for later use rather than printing your map. ArcView offers a variety of file types that you can save your map as. The following procedure will show you how to export your map, using one of the various file types.

1. Once you have completed *steps 1* through *7* in **Part B** above or you are satisfied with the way that your map looks, you may begin to export the map. *Click File* from the main menu and *Select Export*.
2. The **Export** window will open. In the **Drives** window, *browse* to the location that you wish to save your map. In the **Directories** window, *browse* to the folder that you wish to save your map. In the **File Name** text box, chose an appropriate name for your map. In the **List Files of Type** window *select* the format that you would like to save your map in (**Figure 6**).



(Figure 6)

3. Click **OK**.