Mapping Environmental Justice:
The Geography of Population and Pollution

Navigate to ArcGIS Explorer Online at: http://www.arcgis.com/explorer

- Click on the **New Map** button on the top left side of the page.
- Expand the **Layers** window by clicking on the arrow in the top left side of the page.

- Click on the **Add Content** button (it has a plus sign) at the bottom of the Layers window.
- In the *Search* window, type in the word **Population**. From the choices that appear, click to **Add** the *USA Diversity Index*.

Now, open a new tab in Internet Explorer and navigate to:

http://www.epa.gov/enviro/facts/qmr.html#waste_cerclis

- Scroll down slightly more than halfway, and under the heading *Toxics*, click on the **Go to Search** button next to **TRI Search**.
- Scroll down and in the **State** window under the *Geography Search* heading type in the abbreviation for New Hampshire.

- Scroll to the bottom of the page and click the **Search** button. Wait for a moment for the search to be completed. When the list of EPA-Regulated Facilities in TRI for the state of New Hampshire is generated, take a few moments to review the resulting table.
  - What can you infer about the facilities based on information in the Facility Name column?
  - Which counties seem to be listed most frequently? Based on your knowledge of New Hampshire, does this seem to make sense? Why/Why not?
  - What geographic identifier in the table allows for mapping?
  - How many total TRI facilities are listed for the state of New Hampshire?
- Once you have reviewed the table, navigate to the top of the page and click to download the table as a CSV file.

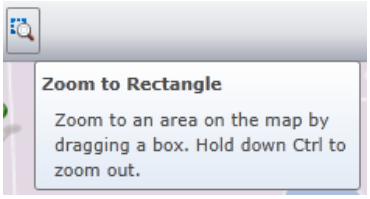
- When prompted, click to **Open** the file. The file will open in Excel. Click the arrow in the top left corner of your spreadsheet (located adjacent to the column A and row 1) in order to select your data. Once the data is selected, you may now return to ArcGIS Online Explorer.

- In the Layers window, again click on the **Add Content** button. In the Add Content window, click on the **Import** button. Click the **CSV** button, then click the **Paste from a table** button. Your downloaded TRI data should appear. When it does, click **Next**. The table should now appear orderly! At the top of the window, change the layer name from **New Layer** to **TRI Sites in NH**. Click the **Import** button. Congratulations, you've just created your map!

Now, examine your map for any correlation between the two layers. Then answer the following questions:

- How many counties are in New Hampshire?
- How many counties are in the lowest category of diversity?
- In general, where are most of the TRI facilities located?
- Does there seem to be any correlation between diversity of population and location of TRI facilities?

- Hillsborough County, in the southern central portion of the state, has the most diversity. Use the **Zoom to Rectangle** tool to zoom in to Hillsborough County.



- Next, use the scroller on the mouse to zoom in and out of Hillsborough County so that the map scale changes from county to census tract and back.

- What effect does changing the scale of your map have on your analysis?

- Repeat this analysis for several other counties. Are there similar effects?

- Aside from diversity of population, what other factors may influence the location of TRI facilities?

- Turn off your *USA Diversity Index* layer by unchecking its box in the **Layers** window and assess the location of TRI facilities in relation to the Topographic base map. Does this help to confirm or reject your thoughts of additional external factors?

Please be prepared to discuss the findings of your state...