EnvSci 360 – Computer and Analytical Cartography
Spring 2017

- Lab 1 -

Map 1: Map for public and private high school graduate analysis in Middlesex County (15 POINTS)

Task: You are working for a regional planning authority that is conducting a study of high school graduates in Middlesex County, Massachusetts. As a first step, the planners need a map of all public and private schools from which students graduate with a high school diploma. The study does not include special education, charter or collaborative schools.

Download the data needed for this map:
Schools (SCHOOLS_PT) – http://www.mass.gov/massit/schools
Towns (TOWNSSURVEY_POLYM, TOWNSSURVEY_ARC) – http://www.mass.gov/massit/townsurvey
Counties (COUNTIESSURVEY_POLYM, COUNTIESSURVEY_ARC) – http://www.mass.gov/massit/counties

Your map layout should be 8.5 x 11 inches in size and include:

- Public and private schools symbolized differently to distinguish their type (show only these two types) in Middlesex County (don't show schools in other counties).
- Only schools from which students graduate with a high school diploma. (hint: use a definition query to display such public and private schools)
- The Middlesex County boundary (thick line symbol).
- The boundaries of cities and towns in Middlesex County (thin dash or dash-dot line symbol).
- The names (labels) of the cities and towns in Middlesex County.
- A small locator map showing where Middlesex County is within the state.
- All supporting elements (title, legend, date, your name, etc.).

What to turn in: Export the map to a PDF, named **Lab1_Map1_*yourname*.pdf** and email it to michael.trust@umb.edu.
(** NOTE: *yourname* should be your last name and first initial, e.g., *trustm*.)

Map 2: National Football League (NFL) teams in the southeastern part of the U.S. (15 POINTS)

Task: You work in the graphics department of a media company that covers sports teams in the southeast U.S. For the start of the NFL season, you have been assigned to create a map of the locations of all the teams in your region to be used in "NFL Preview" layouts in marketing materials.

The data and team logo images for this map are located at http://faculty.umb.edu/michael.trust/data360/lab1map2.zip.

Your map layout should be 17x11 inches (tabloid page size) and include:

- The nine (9) states in the region, labeled with their name. The nine states are Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee. Only show these states.
- The seven (7) cities with NFL teams in the region, labeled. If you are unsure of which cities to display, see http://en.wikipedia.org/wiki/Nfl#Clubs.

  To isolate these seven cities, add a field called NFL_TEAM (text string, length 1) to the Cities shapefile. Select the cities, calculate NFL_TEAM = 'Y'. Unselect all the cities. Use a definition query to show only those cities on the map.

- Logos for all the teams (place them near the cities on the map or off the map area, it's up to you – be creative).
- A small locator map showing where the nine-state region is within the Continental U.S.
- All supporting elements (title, legend, date, your name, etc.)

What to turn in: (1) Export the map as a PDF file named **Lab1_Map2_*yourname*.pdf**. *(2)* Export to an Excel file your cities attribute table, named **Lab1_Map2_*yourname*.xls**. Email both files to michael.trust@umb.edu.