

Create a reference map that sets the stage for a decision-making context

The point of this exercise to demonstrate your understanding of the cartographic principles and techniques discussed in class and documented in these web pages [Nuts and Bolts of Mapping](#), and the selected sections of [Elements of Cartographic Style](#), as linked below. Your maps and caption should be oriented to a general audience with no prior knowledge of the assignment. Here is [An example map](#).

- _____ Use the all of the data layers that you downloaded from MassGIS to create map for your area of interest. **Resist the temptation to add other layers that are not called for [a local reference map](#)!!! You will get plenty of opportunity to include other thematic data when we practice making thematic maps in coming weeks! Do not use basemap layers from ArcGIS On-Line .**
- _____ **Junior GIS Wrangler track: Use the pre-made data collection provided in the tutorial.**
- _____ Your map portrays the relationship of your subject area with its greater context at a scale that is between 1:25,000 (urban area) to 1:50,000 (rural area) in a landscape-format, letter-sized layout that is big enough to include your caption.
- _____ **Choose an appropriate projection case.** Add a scale bar. Make sure that it spans a nice round number of Kilometers. Declare the projection case that you used underneath [your scalebar](#) and north-arrow. See [Fundamentals of Map Projections](#) for important advice on declaring your projection.
- _____ Simplify the MassGIS layer symbolization for your layers and adjust their drawing order to create a [three-layer graphical hierarchy](#), as described in Elements of Cartographic Style that includes a background of minor roads, major roads, railroads (if applicable), public open space, hydrography. In the reference layer: include the town boundaries. Be careful to maintain meaningful distinctions between different types of hydrographic and transportation features: Big vs. Small Roads; Wetlands vs. Ponds. **Show ALL roads.**
- _____ Include a short caption on the same page (in the map or in the margin.). [Describe a hypothetical decision-making situation with a spatial mechanism](#) that might be investigated by addition or removal of some entity.
- _____ Use the graphics tools on the Draw toolbar to place points, and lines and polygons to illustrate the specific things, conditions and spatial relationships that you propose to create, remove and alter. Include a polygon indicating the extent of the conceptual spatial mechanism associated with the hypothetical effect of the proposed change (area of increased accessibility, exposure, seal level rise habitat expansion.... **Keep graphical hierarchy and intuitively appealing symbols in mind when you choose your drawing symbols.**
- _____ Use Automatic Labels to label the towns. Use fonts and line styles to try to graphically associate the town names with the town labels, as described in [Nuts and Bolts of Mapping](#). [See example map](#)
- _____ Use the Draw toolbar to label a couple of major roads or other features (parks, rivers?) which would be useful in a conversation about the context of your area of interest. Use the appropriate label tool to align your road labels with the roads. **Do not include needless labels.** This may require turning off auto-labeling for most of your layers. Discuss places in your paragraph. Label these on the map – especially the changed thing or condition.
- _____ Put an evocative title on the page. Identify yourself as the cartographer and name the institutional context of this project: in this case, your school, the course, and the date.
- _____ Use short citations (as described on the [Understanding Data](#) page.) to identify the title, primary source, and collection dates for your Transportation, Hydrography, Open Space, and Towns data.
- _____ As always, this assignment should be submitted as a letter-sized, landscape format PDF document. Name your file **yourusername_Basemap.pdf** and upload it to this week's drop box.

It is not necessary to include a legend on this map. Just make sure that you label the graphical elements that you add to the map.