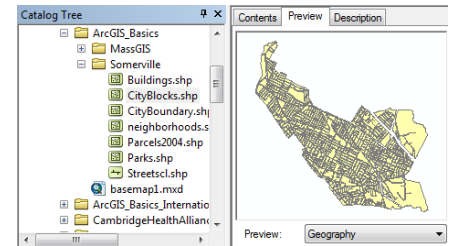


GIS Data Management & Organization Tips

Author: Abigail Vladeck, updated by Carolyn Talmadge on 1/14/2016



As you become a prolific map-maker, data management and organization will become an issue. You will be accessing data from many different places, and creating new files as you perform spatial analysis and make more sophisticated maps. Ultimately, you need to come up with a data management system that works for you so you can easily find files when you need them. These are a few tips on what's worked for students and other map-makers in the past.

- 1. If you are going to be working on a number of different kinds of projects, create a separate folder for each project.** You can then look at only the relevant data, and not have to wade through several projects' worth of data to find what you need. However, if you need to access the data later, you'll have to remember what project you used it for. Also, it can be helpful to create subfolders, indicating where you got your data from. For instance, if your data is from the US Census Bureau's Tiger site, it's helpful to have a separate subfolder titled "Tiger," containing the information from that site. (This can be particularly helpful with international data, since you often end up pulling spatial data from a dozen or so sources.)
- 2. Do not include spaces or special characters in file or folder names.** Raster analyses are very sensitive to how you name things. Not just how you name the layer, but how you name the folder the layer will live in. You will encounter many errors if your folders or your rasters have spaces in them. Additionally, the error message will not tell you this is the reason...you just have to know. So, good practice is to NEVER put spaces or weird characters in ANYTHING!
- 3. Within your project folder, you should have a folder for each kind of file.** These may include folders for pdfs of your finished maps, for the raw data, for clipped data (though if it's just a simple clip to focus your data on the area you're mapping, you may want to keep it with the raw data), for address locators and geocoded addresses, etc. Some of these folders may only have one or two files in them, but it will help you browse through your files in a logical way. You'll get a sense as you go as to what kind of data is used together and adjust your organizational structure accordingly.
- 4. Have a Temp or Scratch folder when doing spatial analysis.** Throughout your analysis, you're going to experiment with different settings – e.g. buffering $\frac{1}{4}$ mile around parks rather than $\frac{1}{2}$ mile, or changing the cell size of your density raster. Rather than saving all these versions in your permanent folder, and then wondering later on which one you ended up using, save them to your temp folder (in your project folder), and give each test sequential names – e.g. "housingdensity1," "housingdensity2," "housingdensity3," etc. Just be sure to move whichever version you wind up keeping back into your project folder when you're done with your session.
- 5. Give your files names that make sense.** This may sound self-evident, but will be **extremely** important later on when you have hundreds of files from several different projects, and no longer remember what city your "streets" layer file refers to. This is especially important when you begin to do spatial analysis, and ArcMap is generating lots of different files for you. Additionally, abbreviate the file names that you want to assign (e.g. instead of naming your file "housingdensitymassachusetts", name it "mass_housdens").
- 6. When moving around files, make sure to do so in ArcCatalog, and not in My Computer.** That way, you can be sure you're moving all the files you need.

- 7. Clean up your data when you are done with a project.** Space will ultimately be an issue. To make sure you have enough space, clean up your scratch data regularly and delete datasets you do not need. Also, delete old assignments that have a lot of data and take up a lot of space. If you are wondering how much space you have left, go to **Computer**. If the drive where you store your data is in “the red”, that means it is too full to perform analyses and tools will not run properly (or at all).