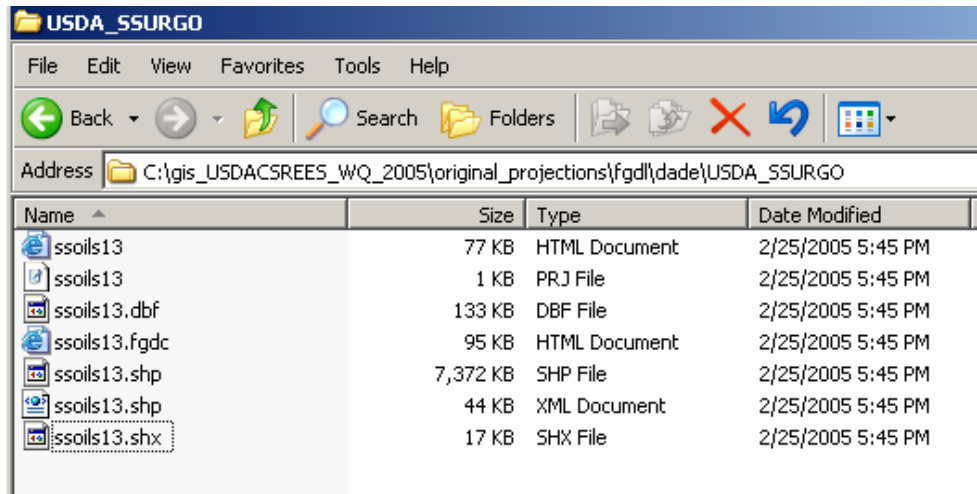


4 GIS data file system

GIS information is unique, and because of this quality it is composed of multiple files.

For this course, I will refer to a group of files that represent a single set of data as a layer.

Complete GIS layers include the following files:



Together, these files provide all the data needed to display and edit a GIS layer.

- HTML document: contains information about the data included in the layer
- PRJ file: information about the projection and datum
- DBF file: the database file, includes data in a tabular format
- SHP file: contains the visual data that is linked to the dbf file
- XML document: meta data file
- SHX file: index information for shapes

All files must be in the same folder and must have the same name before the extension

(see above). In order to view a shape file, you must have a *.shp, *.dbf, and *.shx.

However, it is to your advantage to also always have a *.prj. If a *.prj file is not provided with the data, you can create this in ArcTool. We will discuss ArcTool later.

DBFs and attribute information

DBFs are the database file that provides information linkage to spatial references. For example, suppose you had the coordinates of 15 different points for which you sampled air quality. For each of these points, information could be entered into the dbf table that describes the points. In ArcGIS, the information stored in the dbf is presented in the Attribute Table.

DBFs can be added to ArcGIS and from them, created into a layer if appropriate data is provided. This is the most common method general GIS users complete for creating new layers.

Data sources

There are many good data sources for GIS layers. Some examples follow:

- The South Florida Water Management District <http://www.sfwmd.gov/site/index.php?id=40>
- GeoPlan UF <http://www.fgdl.org/>
- US Geological Survey <http://seamless.usgs.gov/>
- USDA NRCS <http://www.ncgc.nrcs.usda.gov/products/datasets/ssurgo/>

When using GIS layers from other sources, be sure to identify the source and obtain the meta data associated with that layer.

GIS layers are also available through many warehouse for \$\$.

I keep a GIS page on my website that contains links.

Acquiring data and storing on your computer

Data is generally downloaded from a website in a zipped file. Once you download the zipped file, you can extract the files into a folder on your computer.

One of the unique qualities of ESRI software is that it doesn't like spaces in file or folder names. When you save a layer to your computer, MAKE SURE THAT IT IS NOT IN A FOLDER THAT HAS A SPACE IN IT'S NAME. This means that in can not go into the 'My Documents' folder.

The set of files (*.shp, *.dbf, *.shx, etc) should all be in the same folder.

Please note that raster files are different than shape layers. The raster filing system will not be covered in this tutorial. If you have questions regarding rasters, please see Kati outside of this class.