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Shapefiles

Shapefiles began as a proprietary file format from Esri, creator of the ArcGIS series of products, but has now become a standard GIS file format. There are, however, a couple of things that new shapefile users need to know.

1: Shapefiles contain many separate files when you look at them in Windows Explorer, but look like only one file when you view them in Esri products (e.g. ArcMap).

How a shapefile looks in Windows Explorer:

ONfsa.dbf
ONfsa.htm
ONfsa.prj
ONfsa.sbn
ONfsa.sbx
ONfsa.shp
ONfsa.shp.xml
ONfsa.shx
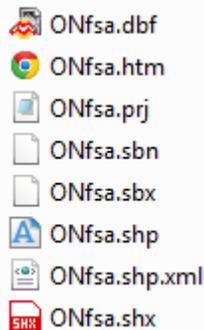
How a shapefile looks in ArcMap:

ONfsa.shp

2: When copying a shapefile in Windows Explorer, you need all of the files.

Rule of thumb: **if it has the same letters/numbers before the file extension (aka: before the dot), you need it**. In the example in #1, you'd need everything that starts with ONfsa. Take it all!

While not all shapefiles have 8 parts like the one in the example above, every shapefile will have at least 3.

YOU NEED
ALL THE PARTS
memegenerator.co

3: What are all the files in Windows Explorer, and why are they not always consistent?

Three shapefile components are absolutely necessary (.dbf, .shp, and .shx, highlighted below) while others are not. Remember: just **take every file that has the same filename before the extension**!

ONfsa.dbf → .dbf is the database, or where the data is stored that you see in the attribute table.

ONfsa.htm → .htm is metadata in HTML format.

ONfsa.prj → .prj contains the projection information which properly locates the shapefile on the Earth.

ONfsa.sbn → .sbn is a spatial index.

ONfsa.sbx → .sbx is also a spatial index.

ONfsa.shp → .shp contains the geometry, such as whether there are points, lines, or polygons.

ONfsa.shp.xml → .shp.xml is metadata in XML format.

ONfsa.shx → .shx is the shape positional index file.