C: Introduction to GIS and QGIS

Topics covered in demonstration:

Where to obtain GIS files from the Census
- TIGER/Line (tl) files
- Cartographic boundary (cb) files

Key contents of a zipped Esri shapefile:

Extension	Contents
.SHP	**Geometry**: points, lines, polygons
.DBF	**Attributes**: fields with names, areas, etc.

⚠ All component files are required parts of the "shapefile" ⚠

Adding a vector layer

Viewing the attribute table:
    NAME
    FIPS codes for state, county
    GEOID
    ALAND, AWATER

Filtering on attributes

Centering via the three-arrow tool

Exporting layers to geopackage files

Removing a layer

Using the information tool

Layer styling
    Fill color, lines, transparency
    Labels from attributes
    8 point text, using a buffer, showing all labels via "allow overlaps"

Saving a project

Adding a CSV layer
    Record and Fields Options: Detect field types
    Geometry Definition: No geometry
    Overriding specific field types

Joining CSV data onto the vector layer
    Join key
    Variable name prefix

Checking the updated attribute table

Heatmapping
    Choosing numeric variable to map
    Setting the color ramp and classification options