

qgis1

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first thing: find data

- reliable?: always think how reliable is the source
- trust the govt, “major companies”, universities, etc
- say US states; where do i get it?
- google “US states shapefile”
- or go to census: useful, all adm boundaries!
- https:
`//www.census.gov/cgi-bin/geo/shapefiles/index.php`
- eg 2016-States (and equivalent)-Submit
- and save somewhere on hard drive

saving and unzipping

- go to where you downloaded it in file explorer and unzip
- eg right click and “Extract Here”
- you’ll see a bunch of files—the key one is .shp
- keep them **all with same name in same location**—otherwise it won’t work!

adding data

- click first icon on second toolbar “3 squares with +”
 - to open Data Source Manager
 - and click first icon on the left toolbar “line with nodes” for vector data
 - (“checkboard” is for raster/pictures (later))
 - and we got the map in the middle
 - it also appears in Layers panel on the left
- NOTE: can also specify zipped folder
 - OR even grab it from file explorer and drop into map window of qgis
 - but sometimes have to unzip/extract first!
 - and it shows you what's inside

zooming, identifying

- grab it and move around with “hand” pointer
- can zoom in and out
- either click the map with appropriate tool
- better yet, draw a rectangle to achieve appropriate zoom
- once zoomed in, let's identify features
- select tool “arrow with 'i'” - 'i' for info/identify
- click on some polygon, say TX, and it'll pop up info
- useful thing to right click on layer and “zoom to layer”

underlying data

- there is always a table (database) underlying a map
- right-click on the layer in left panel ,or from top menu:
Layer:
 - “Open Attribute Table”
- let's make a selection: highlight some rows in the table
 - or do it in the map: “arrow with rectangle”: Select Features by Area
 - either click or draw a rectangle
 - to deselect use “rectangle with 'no' sign”

loading more data

- download <https://docs.google.com/uc?id=1xJDhcRCkgv7k4tNCa720og5bohV6dTB2&export=download>
- (also at https://www.nj.gov/dep/gis/digidownload/metadata/html/Govt_admin_municipal_bnd.html)
- and drag over the zipped file into qgis map window
- (or load as we did before but without unzipping)
- make sure select all layers to add
- 3 shapefiles inside and so now have 3 additional layers

play around

- move layers up and down
- turn on the layers and off (check tick)
- right click and see the data (table)
- there are always data under the map!

your first thematic map

- thematic maps are the key thing in this class
(thematic.pdf)
- nj counties-Properties-Symbology and from drop-down:
“Graduated”
- Column: “POP2010”
- Color ramp: can just leave Reds
- and hit “Classify” button
- many ways to do the classification: more soon
 - if you’re curious—just poke around with classifications
 - easy to experiment and figure things out there
- and hit “OK” to see the map—viola!

export

- make sure map is centered:
 - nj counties-Zoom to Layer
- Project-Import/Export-Export Map to PDF
 - (useful for presentation/high quality mapping)
- Project-Import/Export-Export Map to Image
 - (useful for ps to insert into word)
 - have nice resolution, but not too big, say <1mb, 300dpi
 - or end up with unwieldy files that take forever to open

VisionZ; very useful; do watch them! (qgis2 not 3)

- the whole thing <https://www.youtube.com/watch?v=KjvFil3o4y8&list=PLNCPalajQvg7wQvzf3fM8f0Z5lMKl86Q4>
- 01 - open and view data
<https://www.youtube.com/watch?v=KjvFil3o4y8&list=PLNCPalajQvg7wQvzf3fM8f0Z5lMKl86Q4&index=1>
- 04 - Working with attributes
<https://www.youtube.com/watch?v=G6UeiGg2Cp8&list=PLNCPalajQvg7wQvzf3fM8f0Z5lMKl86Q4&index=4>
- 07 - Basic vector styling
<https://www.youtube.com/watch?v=b-0MQ7dnVJk&index=7&list=PLNCPalajQvg7wQvzf3fM8f0Z5lMKl86Q4>
- 03 - print composer
<https://www.youtube.com/watch?v=YnqbC1hkfnk&list=PLNCPalajQvg7wQvzf3fM8f0Z5lMKl86Q4&index=3>

other references

- http://www.youtube.com/results?search_query=qgis
not sure, any of these useful in particular? email listserv
- pretty good and comprehensive; in-depth but easy to navigate reference <http://www.qgistutorials.com/en/>
- QGIS FAQ
http://hub.qgis.org/projects/quantum-gis/wiki/How_do_I_do_that_in_QGIS
- if you find something really good and email listserv, extra credit