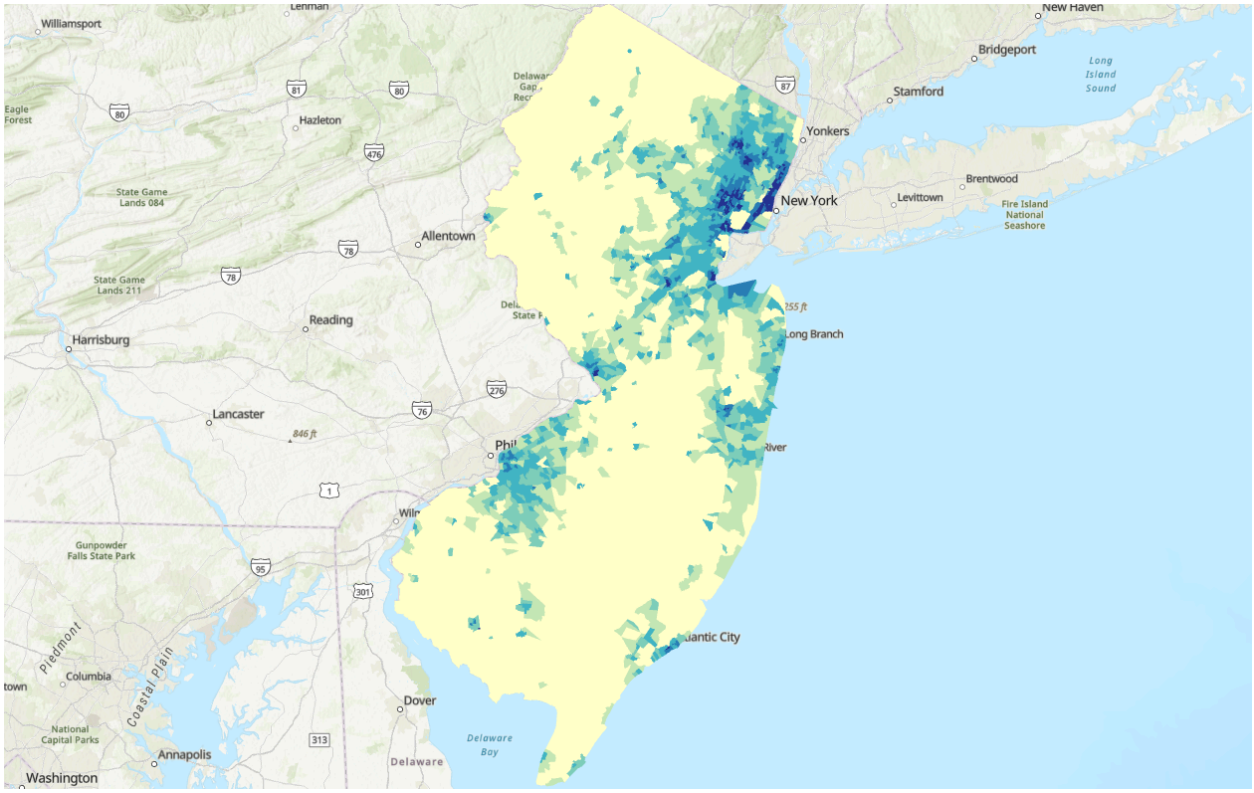
Problem Set 3

Exercise 1

Assignment 1.1

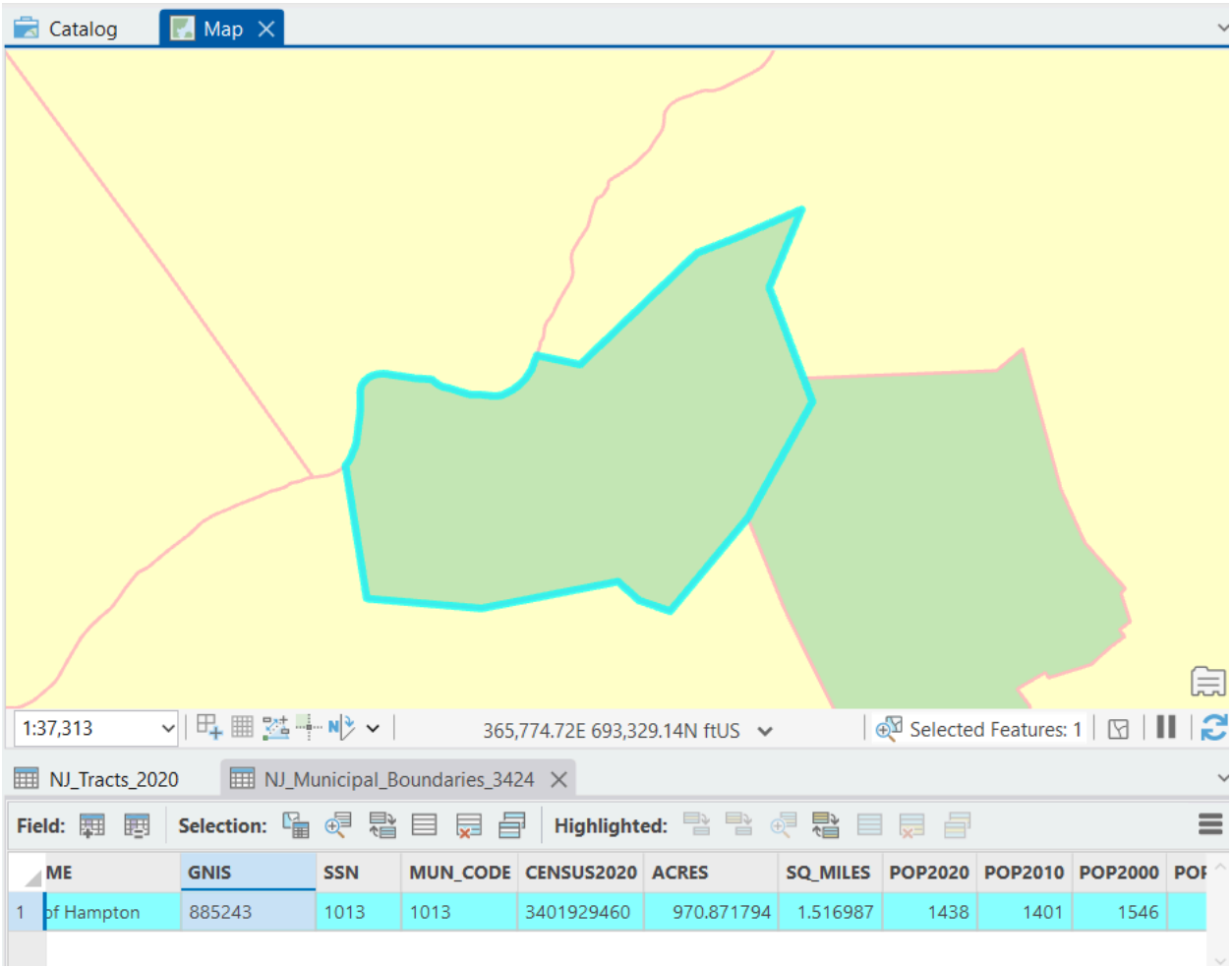
Assignment 1.2

- I chose quantile classification as it made the most sense for this dataset considering the wide range of population densities we have across the counties in NJ.
- 

Exercise 2

Assignment 2.1

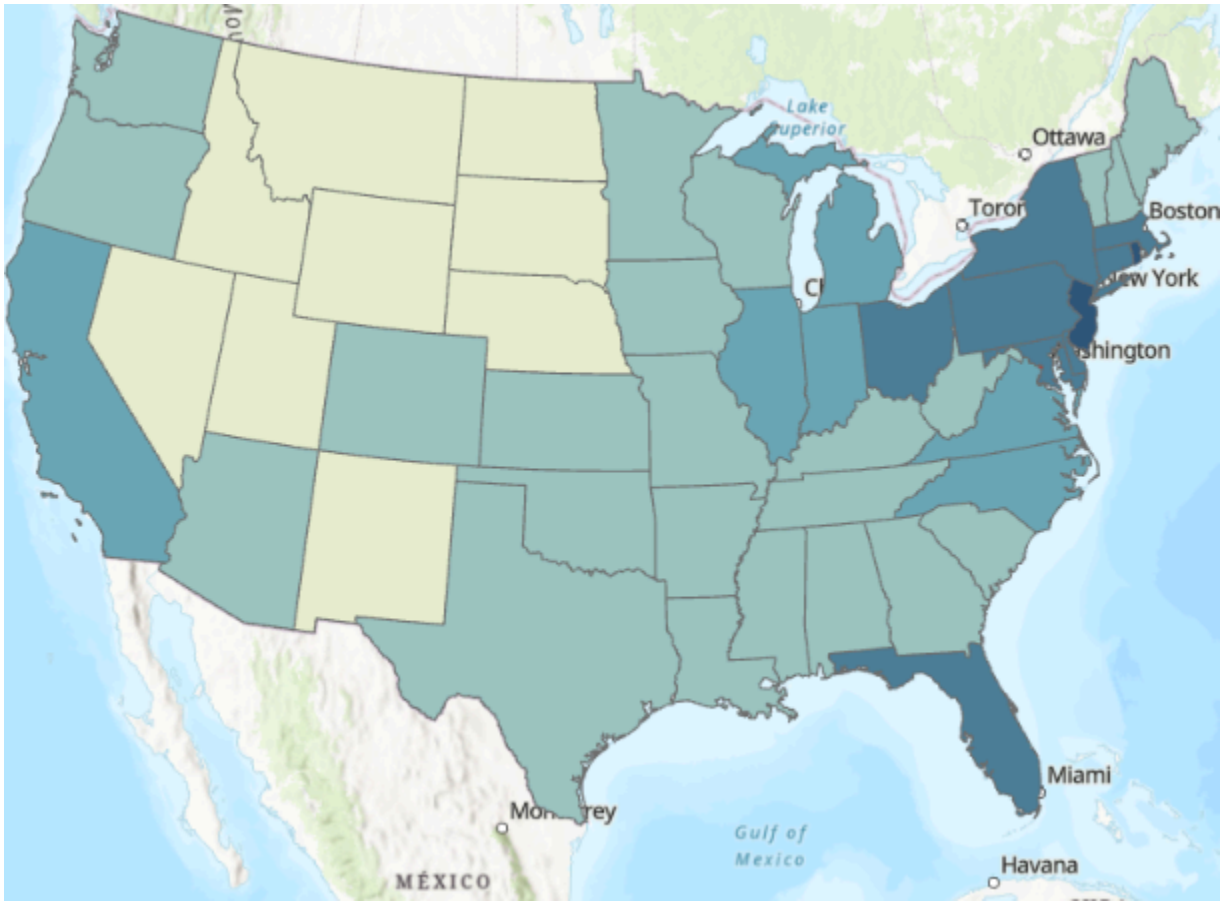
- 1.516987 sq. mi.
- GNIS code 885243


Catalog
Map
1:37,313
365,774.72E 693,329.14N ftUS
Selected Features: 1
NJ_Tracts_2020
NJ_Municipal_Boundaries_3424
Field:
Selection:
Highlighted:
ME
GNIS
SSN
MUN_CODE
CENSUS2020
ACRES
SQ_MILES
POP2020
POP2010
POP2000
POI
1
of Hampton
885243
1013
1013
3401929460
970.871794
1.516987
1438
1401
1546

-

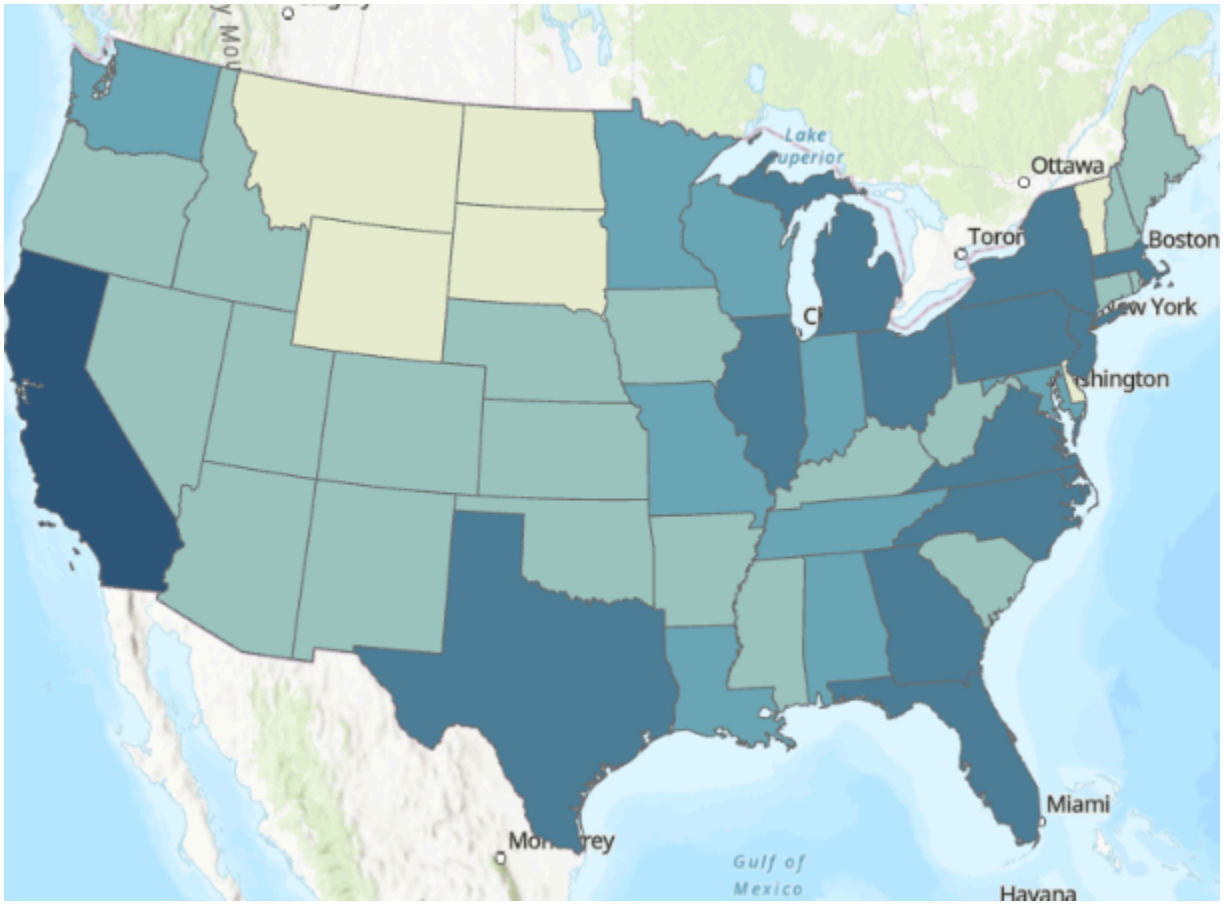
Exercise 3

Assignment 3.1

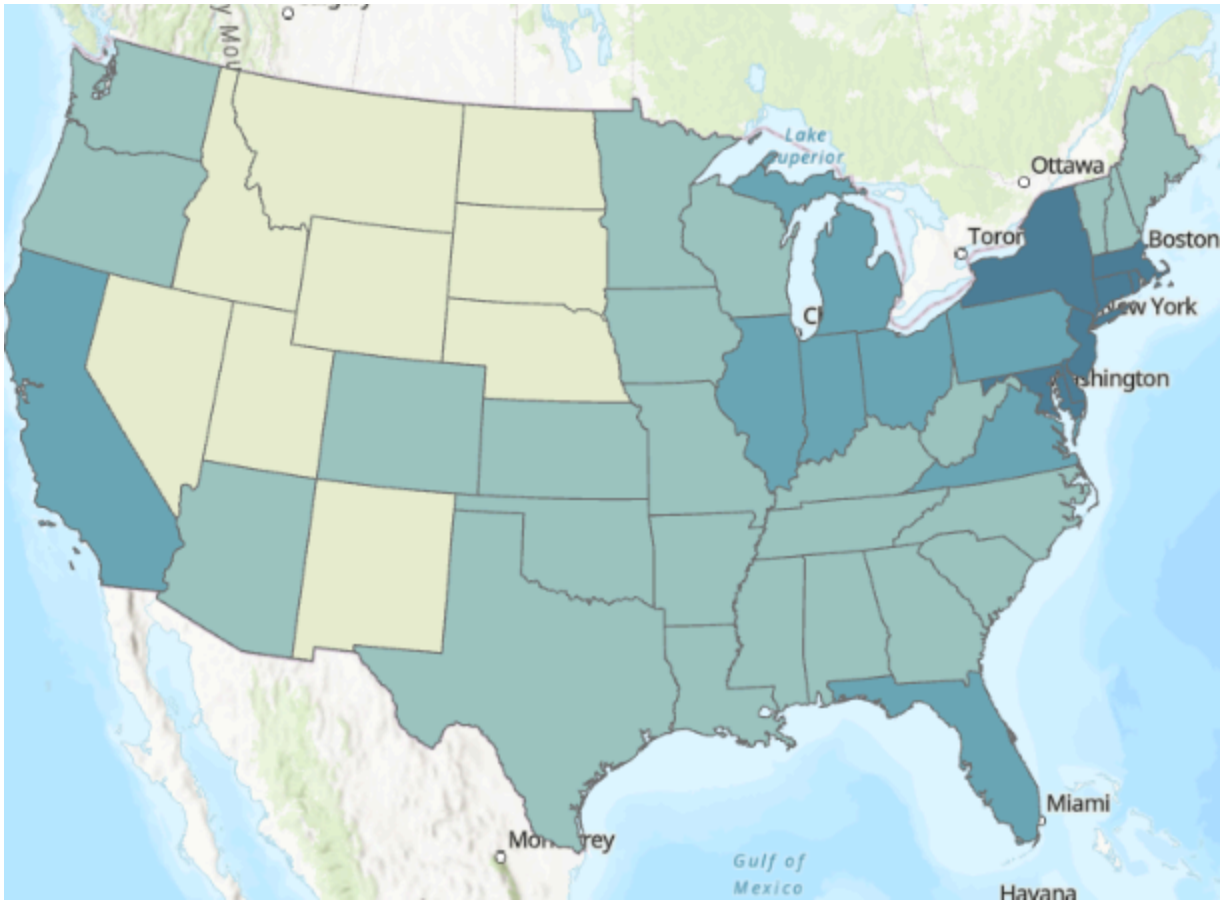


- This is a map of the population count in 1990 normalized by the square miles of each state. The data is already normalized, so I did not further apply normalization on it.
- I chose graduated colors and the natural breaks classification method as it made most sense for the population density map. The range of values is vast (even with the exclusion of the outlier), which was best represented on the map by the use of the jenks algorithm with 7 classes. The highest density states are in dark blue, which appear mostly in the northeast.

Assignment 3.2

- 

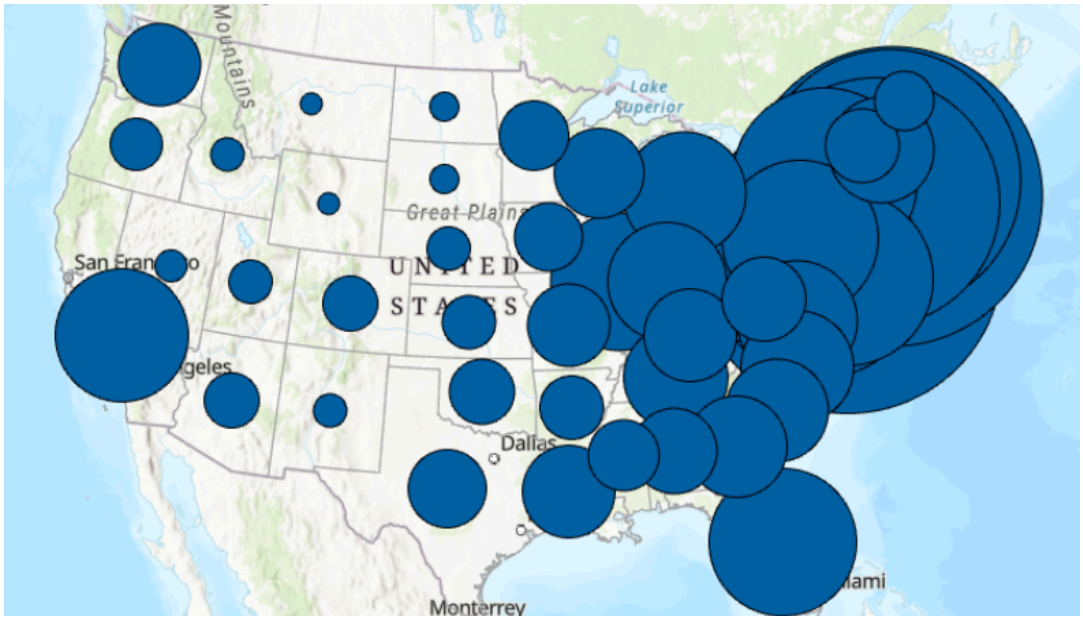
- POP1990

- 

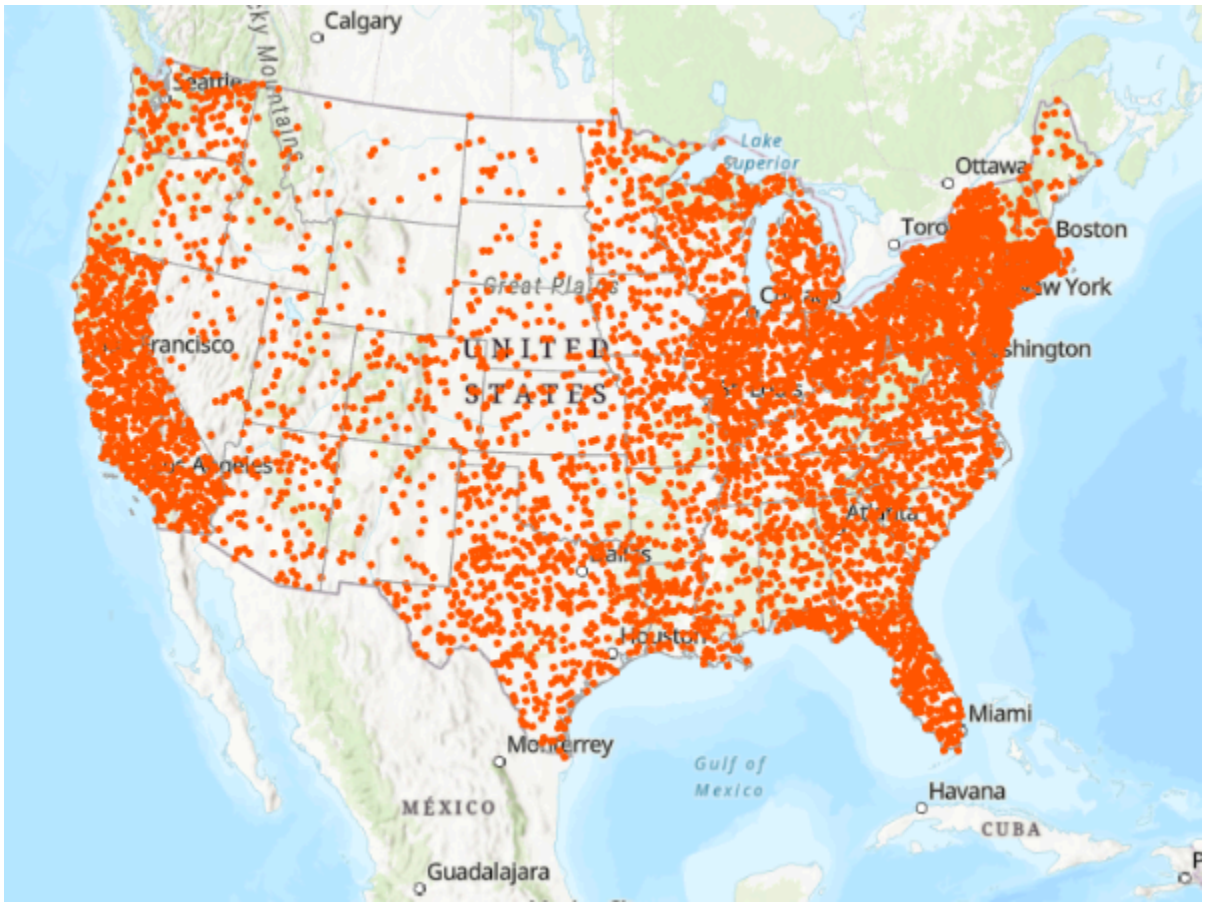
- POP90_SQMI
- The population density is better captured by the normalized dataset. There isn't enough information in the raw population dataset.

Assignment 3.3

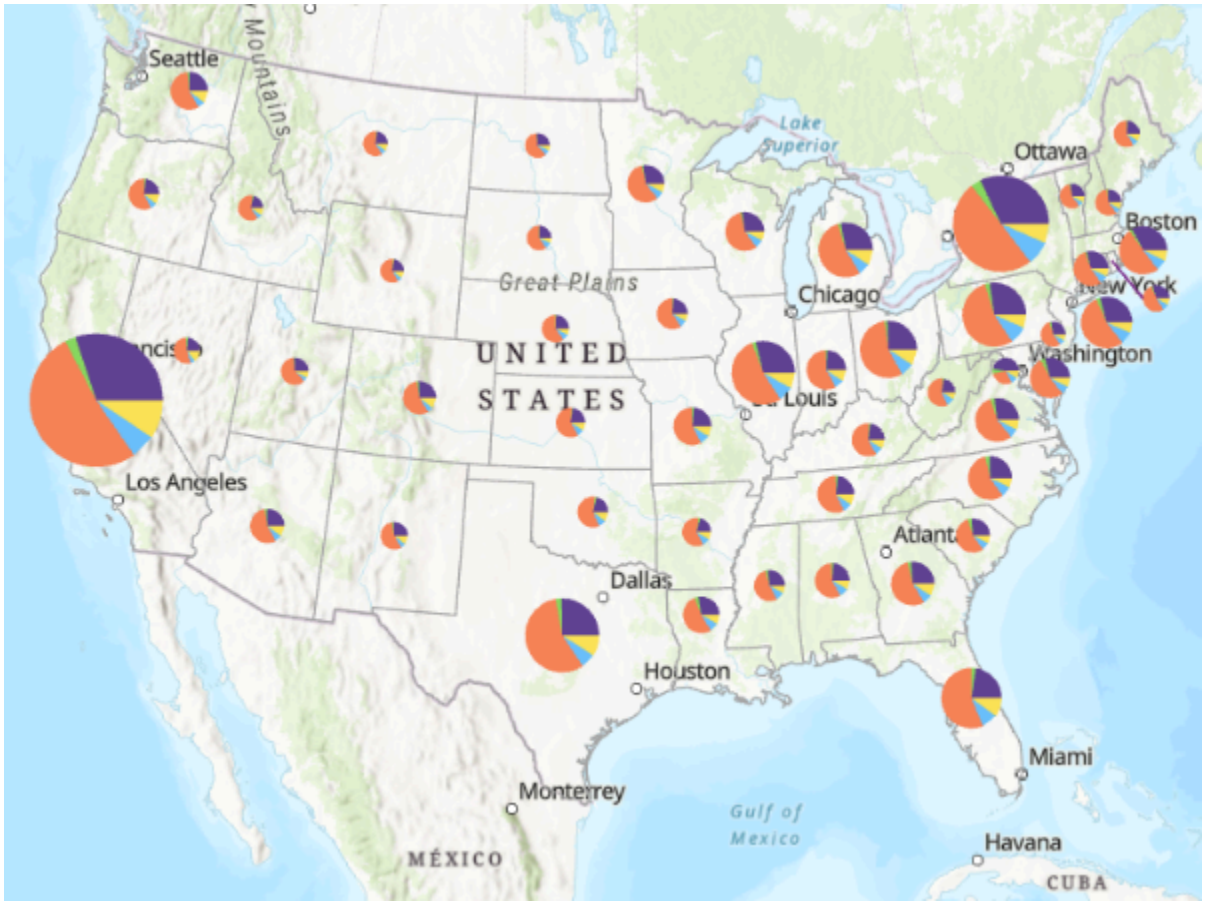
- The population density is highest for D.C, which is an outlier in the dataset. The size of the dot is massive as the 600,000 population of D.C is contained in a very small area. California is a big state with a big population, and so has a smaller population density, which is represented by the smaller dot.
- The choropleth map with graduated colors is more accurate and readable and comprehensible compared to this proportional symbols map.



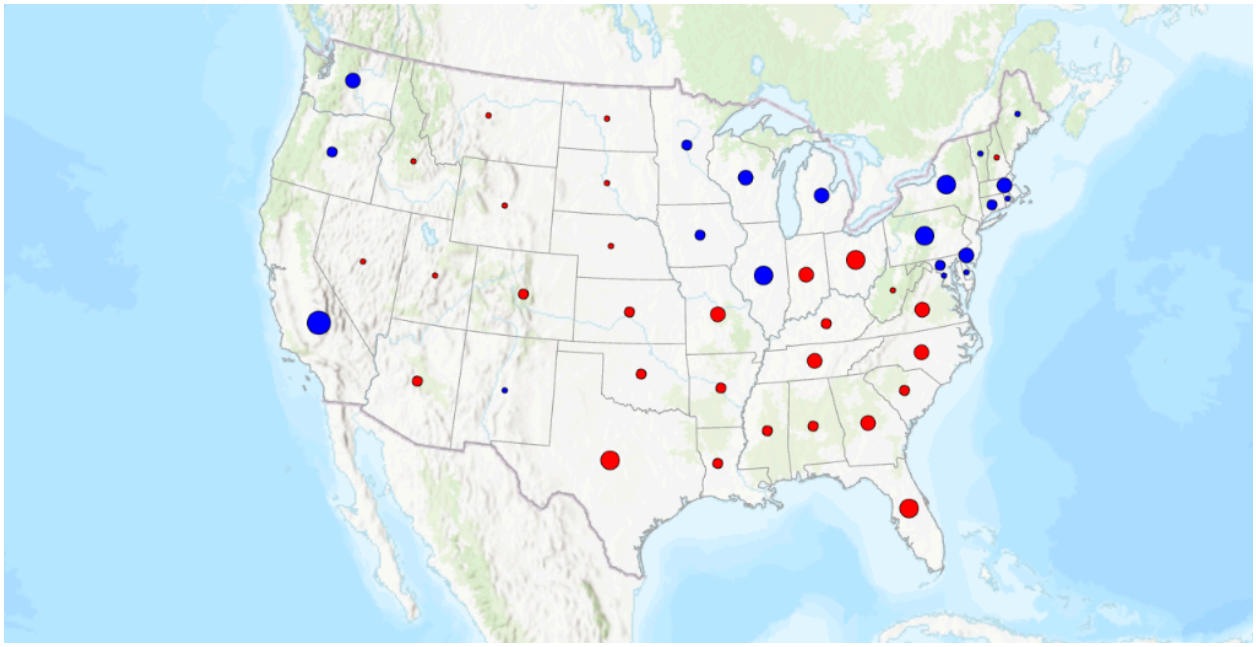
Assignment 3.4



Assignment 3.5

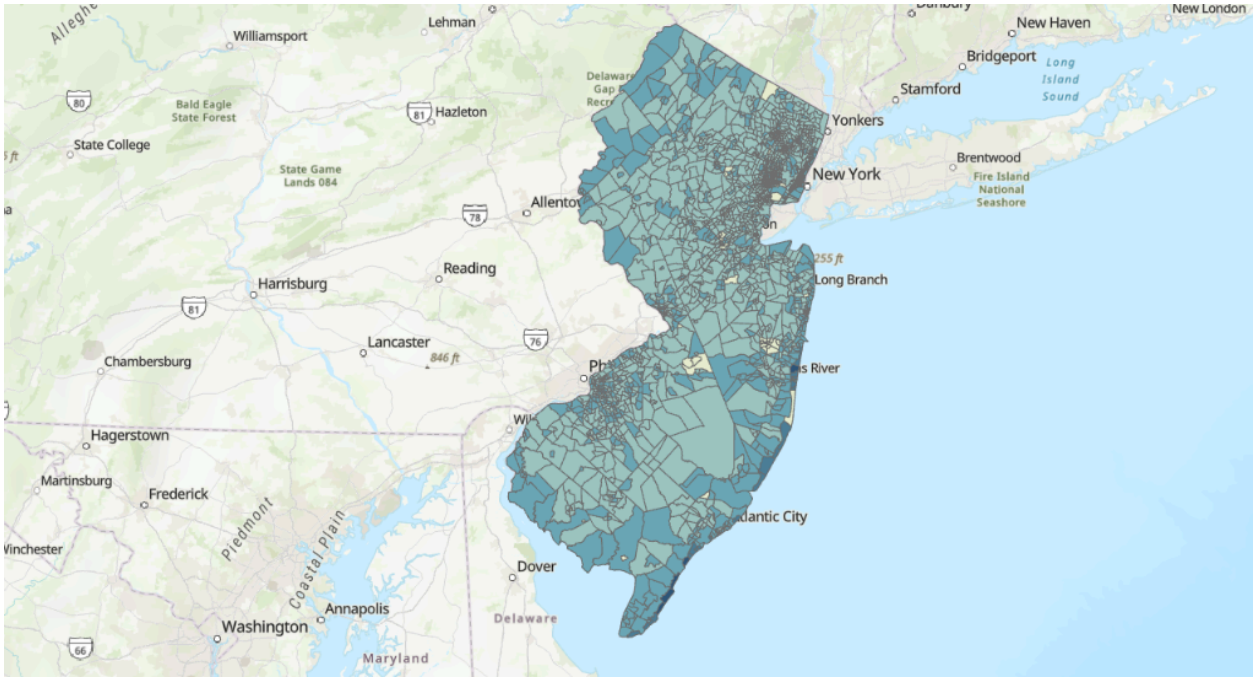


Assignment 3.6



Exercise 4

Assignment 4.1



- I chose graduated colors as the number of housing units distribution across NJ is fairly uniform when normalized with the population
- I normalized the housing units with population to present a more detailed understanding of the availability of housing to people across the state
- I classified the data using natural breaks. This was helpful to represent the spread of housing across counties