Delaware Data Inventory:

Zip Code- The data set zip code contains all of the zip codes in the county of Delaware. This data set was cleaned up in 2003 based on cross referencing between the Census Bureau's zip code file from the 2000 census, the United States Postal Service website, and tax mailing addresses from the treasurer's office.

Recorded document- Dataset consist of points that represent and show recorded documents in the Delaware county recorder's Plat Books, Cabinet/Slides and Instruments Records which are not represented by subdivision plats that are active. Dataset was created to help along the process of locating miscellaneous documents within Delaware county Ohio.

School district- Dataset consists of all school districts within Delaware county, Ohio. Was originally created via the Delaware county auditor's parcel records of the districts.

Map sheet- Dataset consists of all map sheets within Delaware county Ohio. Dataset has an attribute table that lists the map sheet number for each polygon area.

Farm Lot- Dataset consists of all the farmlots in both the US military and the Virginia Military survey districts of delaware county. Dataset was created with the purpose of identifying all the farmlots and their boundaries.

Township- Dataset consists of the 19 different townships that make up delaware county ohio. This map and dataset are updated on an as needed basis and is posted every month as well.

Street centerline- The state of ohio location based response system street_centerlines depicts center of pavement of public and private roads within delaware county ohio. Data collected by field observation of existing address locations and adding addresses using building permit information is what makes up Address Range data that is used in the dataset.

Annexation- dataset consists of Delaware county's annexations and conforming boundaries from 1853 to the present. If an annexation is recorded with the delaware county's recorders office then the map and dataset will be updated to include this.

Condo- dataset consists of all the condominium polygons within delaware county ohio. This includes all that have been recorded with the recorders office in delaware county ohio.

Subdivision- dataset consists of all subdivisions and condos (like the last dataset) recorded in the delaware count's recorders office. It is updated on a daily basis and consists of polygons on the map that make up this dataset.

Survey- This is a shapefile of a point coverage that represents surveys of land within delaware county ohio. Surveys were scanned and saved as pdf files by both the Map Department and the Delaware County Auditor's GIS Office.

Dedicated ROW- dataset consists of all lines that are designated right-of-way within delaware county ohio. Line data that is created through the daily update to the delaware county's parcel data.

Tax district- This data set consists of all tax districts within Delaware County, Ohio. The data is defined by the Delaware County Auditor's Real Estate Office. Represented as polygons on the map that show each district and an attribute table to number the districts as well.

GPS- This dataset identifes all GPS monuments that were established in 1991 and 1997.

Original township- dataset consists of the original boundaries of the townships in Delaware County, Ohio before tax district changes affected their shapes. Created using a feature layer of polygons that show this original township.

Imagery 2019- dataset consists of aerial imagery of the county of delaware ohio in 2019. This dataset can be used and referenced often by different groups and individuals.

Hydrology- dataset consists of all major waterways within delaware county ohio. Dataset was enhanced using LIDAR based data in 2018 and is therefore more accurate than the previous dataset. Dataset is updated monthly based on LIDAR data.

Precinct- dataset consists of voting precincts within delaware county ohio. The dataset is maintained by the GIS auditors office and is influenced by the delaware county board of elections. The precincts are represented as polygons that determine each voting precinct boundary in the Delaware county.

Parcel- dataset consists of polygons that represent all cadastral parcel lines within Delaware County, Ohio. The cadastral geometries are maintained by the Delaware County Auditor's GIS Office.

PLSS- Dataset consists of all the Public Land Survey System (PLSS) polygons in both the US Military and the Virginia Military Survey Districts of Delaware County. Created for the process of identifying all the plss in delaware county and their boundary.

MSAG- dataset is known as the master street address guide and is a polygon featureset of the 28 different political jurisdictions such as cities, townships, and villages that make up delaware county.

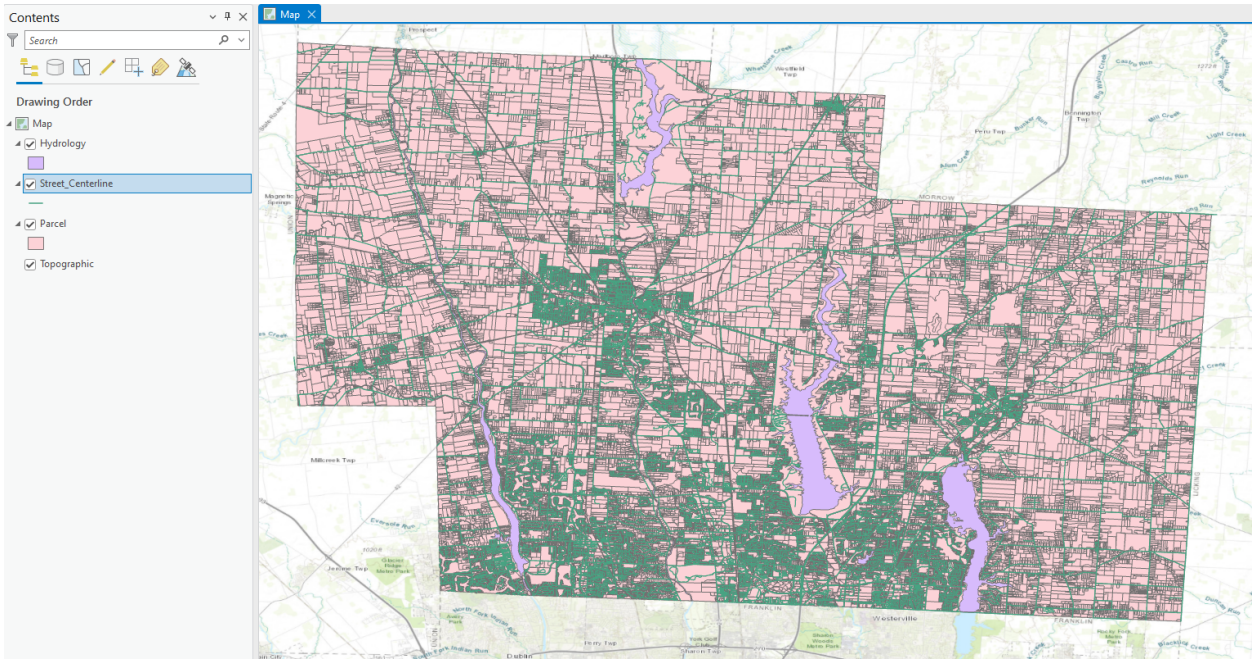
Municipality- data set consists of all municipalities within Delaware County, Ohio. shown as a polygon featureset.

Address point- The State of Ohio Location Based Response System (LBRS) Address_Points data set is a spatially accurate representation of all certified addresses within Delaware County

Ohio. The points themselves on the map are representative of the building centroid for the addresses.

Building outline- dataset consists of building outlines for all structures in Delaware County, Ohio. The layer was originally created from 2008 orthophotos.

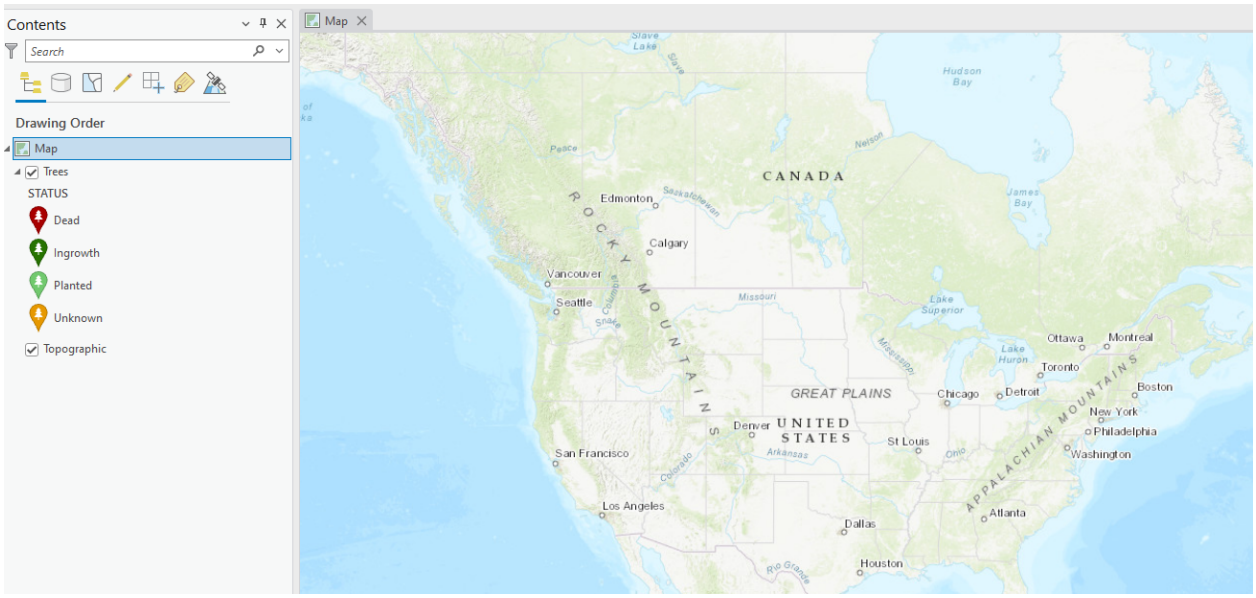
Delaware county contours- dataset is the two-foot contours for the county of delaware ohio in 2018 and is stored here in file geodatabase format.



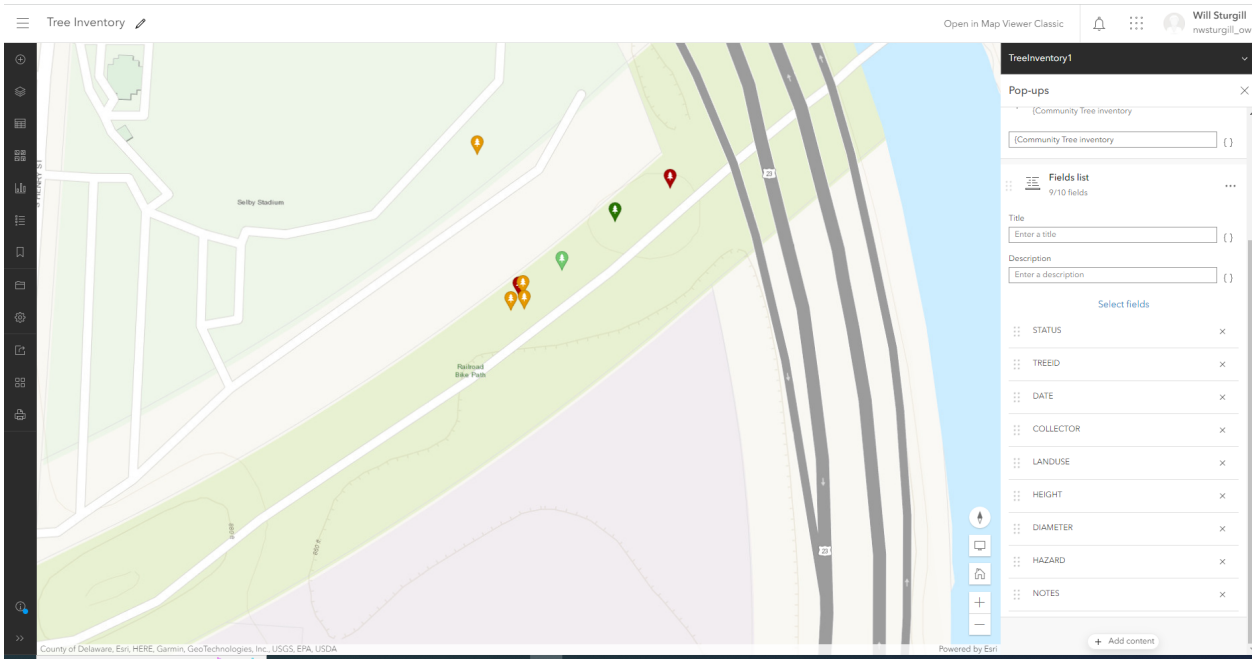
- This figure represents all of the Delaware Data retrieved from the Delaware County Ohio GIS Hub. This map shows the Parcel, Street Centerline, and Hydrology data for the county of Delaware.

Chapter 6:

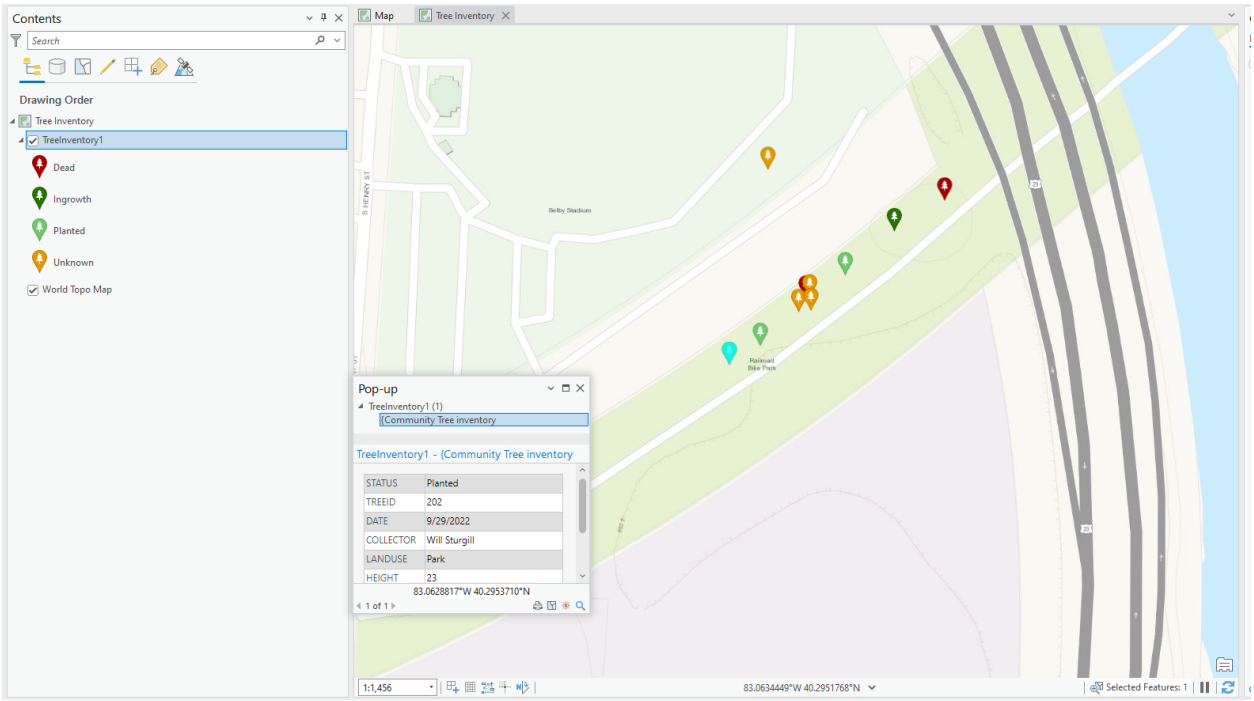
Questions+



- This figure represents the final map product of the first exercise in chapter 6. In this exercise we prepared a database for data collection. The database we prepared was about tree inventory and the tree inventory database will be used to store information collected using the Collector mobile app (theoretically of course). Publish this feature service will allow the organization with your account to access the data base.



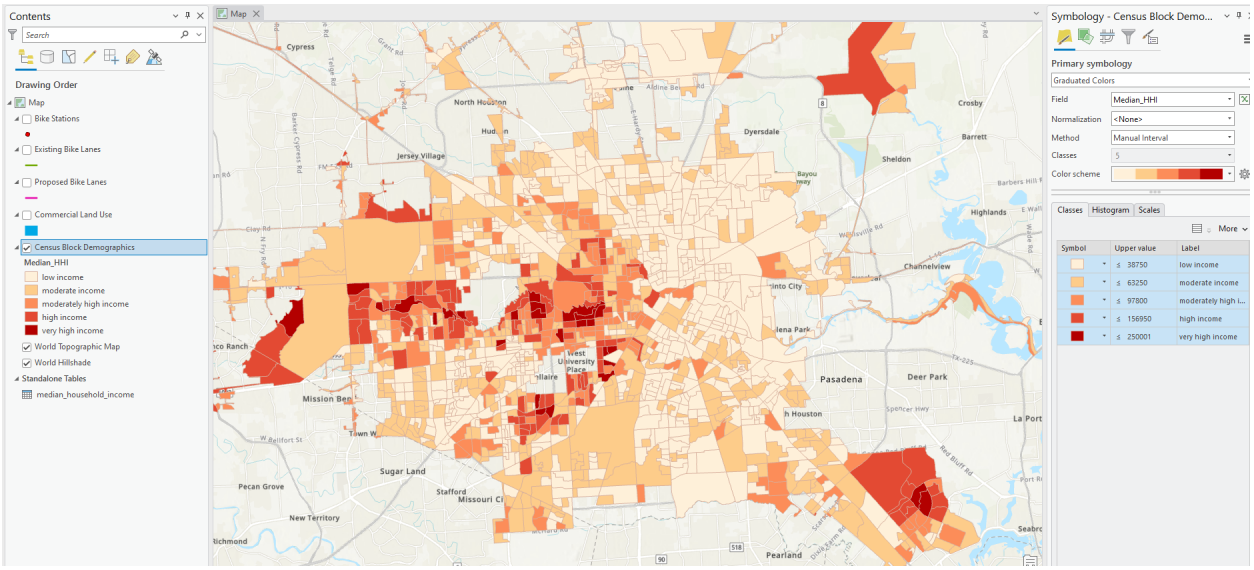
- This figure represents the arc online final map product of exercise 2 in chapter 6. This exercise was all about creating a map in our arcgis online account that will be used as the basis of collecting tree data in the field.

- 

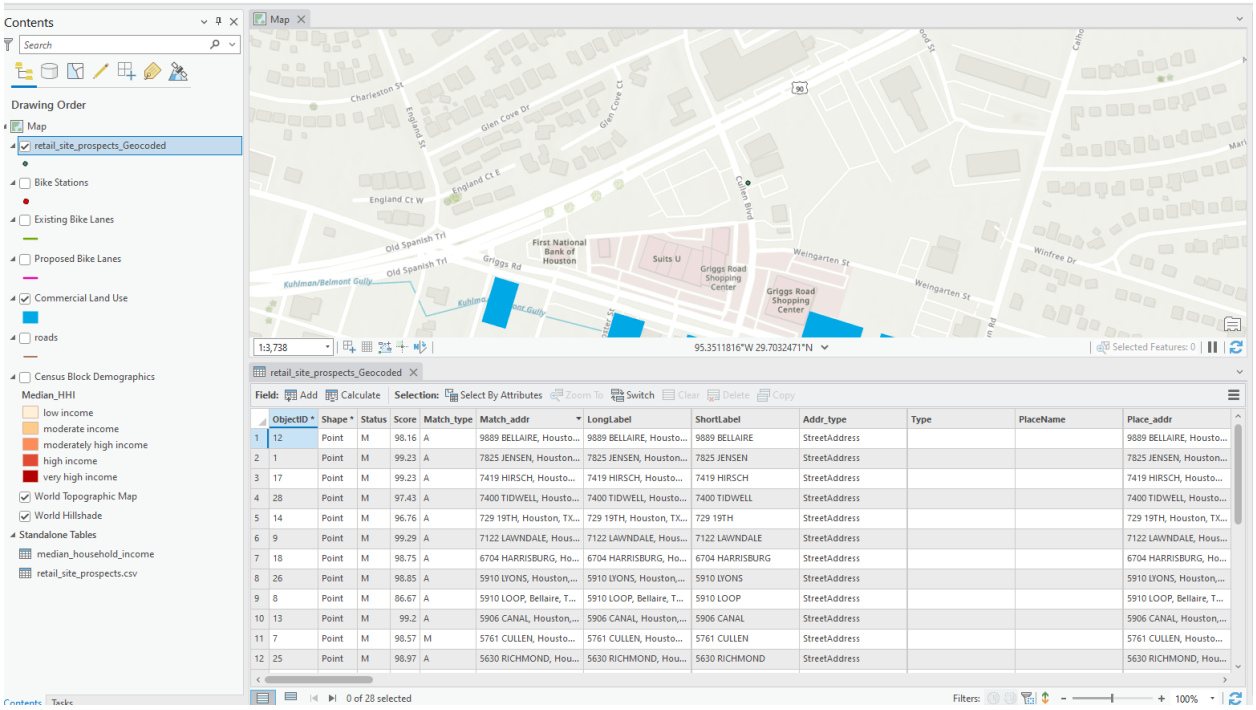
- This figure represents the final map product of exercise 3 in chapter 6 and the end of chapter 6. This exercise was all about using the ArcGIS Collector app on our phones. In the app we collected tree locations and entered new tree inventory data. The app is useful for this situation because it allows us to collect tree data in the field and add it to our maps with no data being lost and will update on the arc online and arcpro map automatically.

Chapter 7:

Questions+

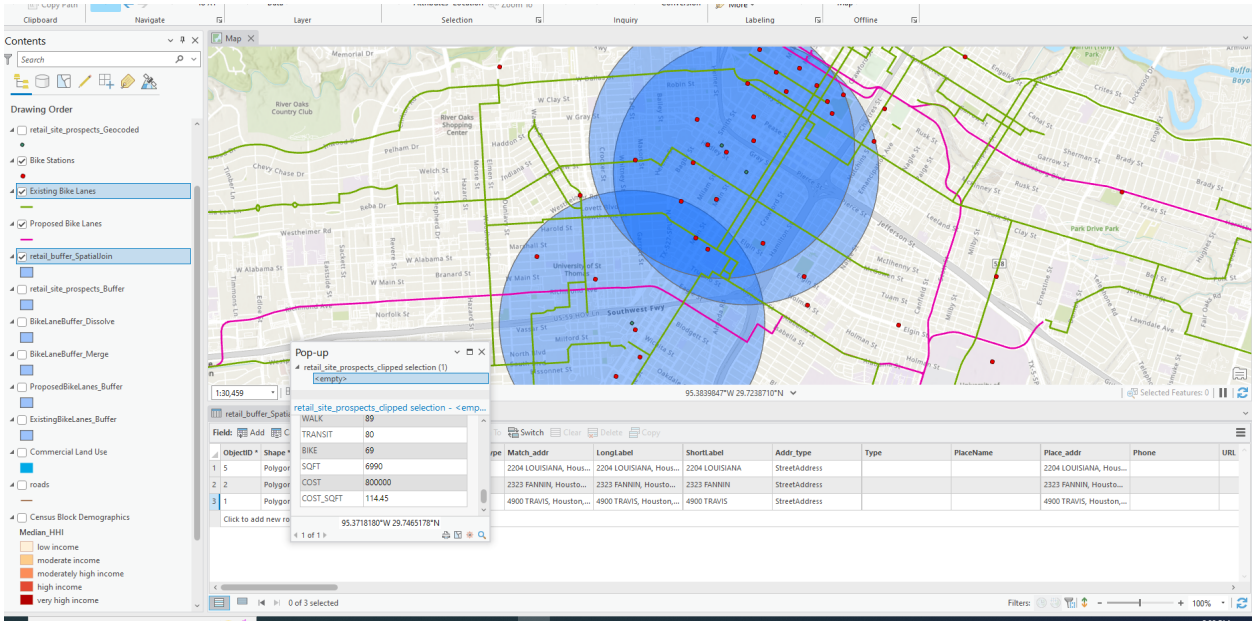


- This figure represents the final map product of exercise 1 in chapter 7. This exercise was all about preparing the census data for further analysis. This was a simple exercise that just consisted of manipulating the census data and symbolizing the different values of income data.



- This figure represents the final map product of exercise 2 in chapter 7. This exercise was all about geocoding location data. This was done by geocoding the table of retail locations, using reference data to create an address locator to create point features (little green dots) that represent the locations of the addresses. This is known as a locator style and ours in the exercise was called houston_locator. This sounds like a simple

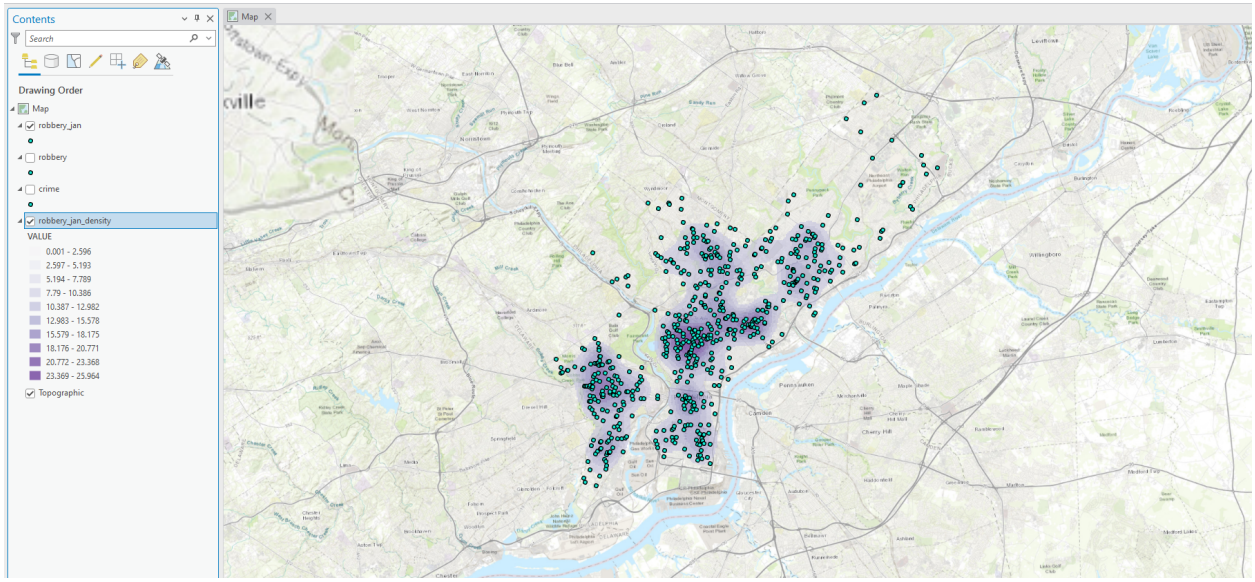
process but it was a rather lengthy process with many moving parts involved to get an accurate and compared address locator.

- 

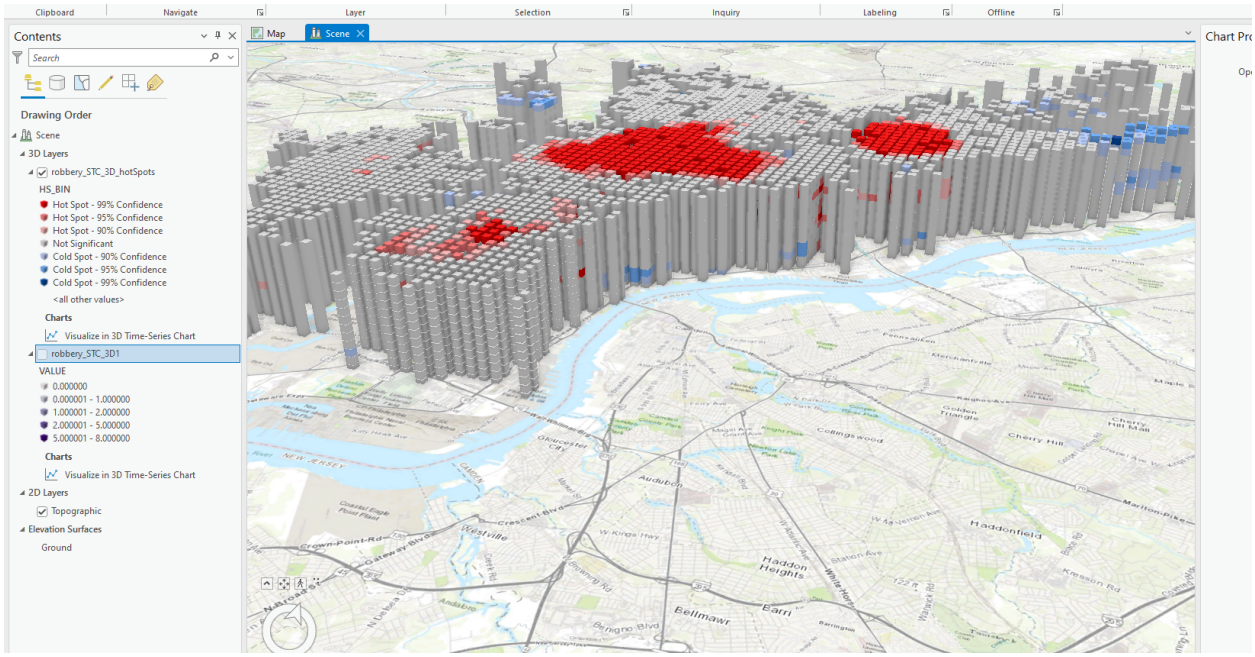
- This figure represents the final map product of exercise 3 in chapter 7 and is the end of chapter 7. This exercise consisted of continuing using analysis to identify retail sites that may be suitable based on certain criteria. This meant finding retail site prospects that were within a certain range to bike lanes and select sites that are in a certain range of median household income. There were many facets of this chapter that highlighted the ability of GIS to help communities and come up with solutions related to certain questions such as where to put a business and the amount of data used to create such a decision.

Chapter 8:

Questions?

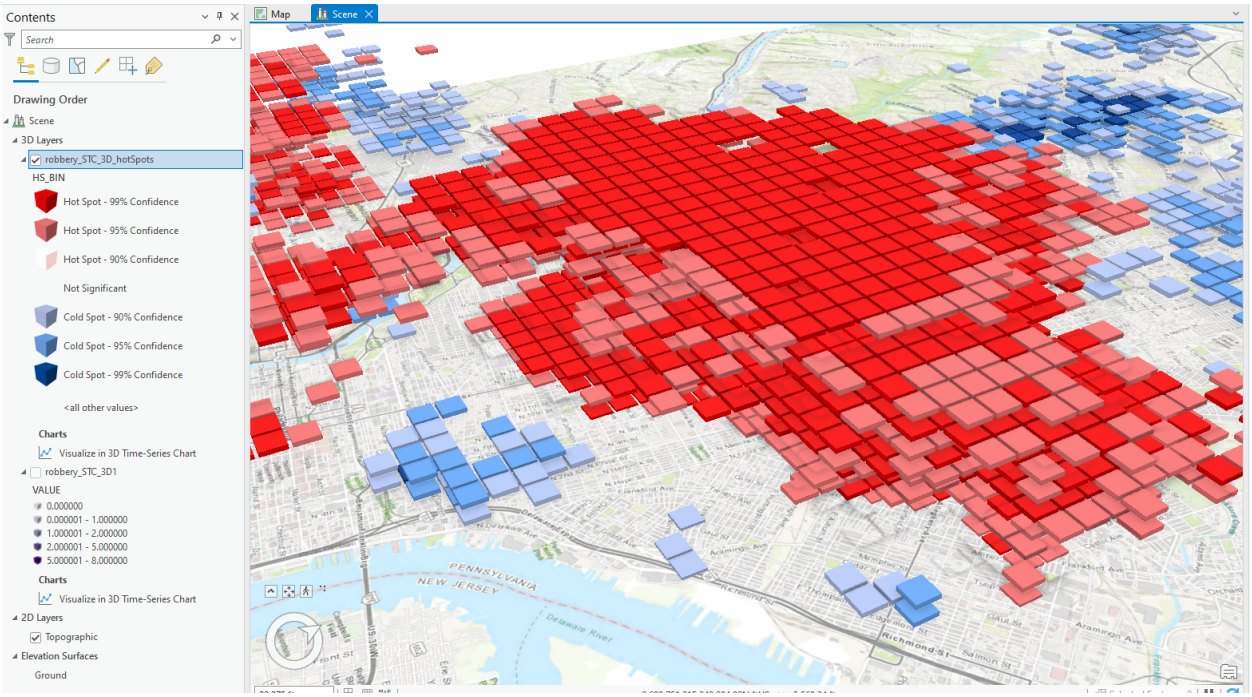
- 

- This figure represents the final map product of exercise 1 in chapter 8. This exercise was brief and was all about creating a kernel density map to see where certain crime hotspots are in the city. This type of map is used to approximate where these robberies are happening within the city and where they occur the most in a city like Philly.

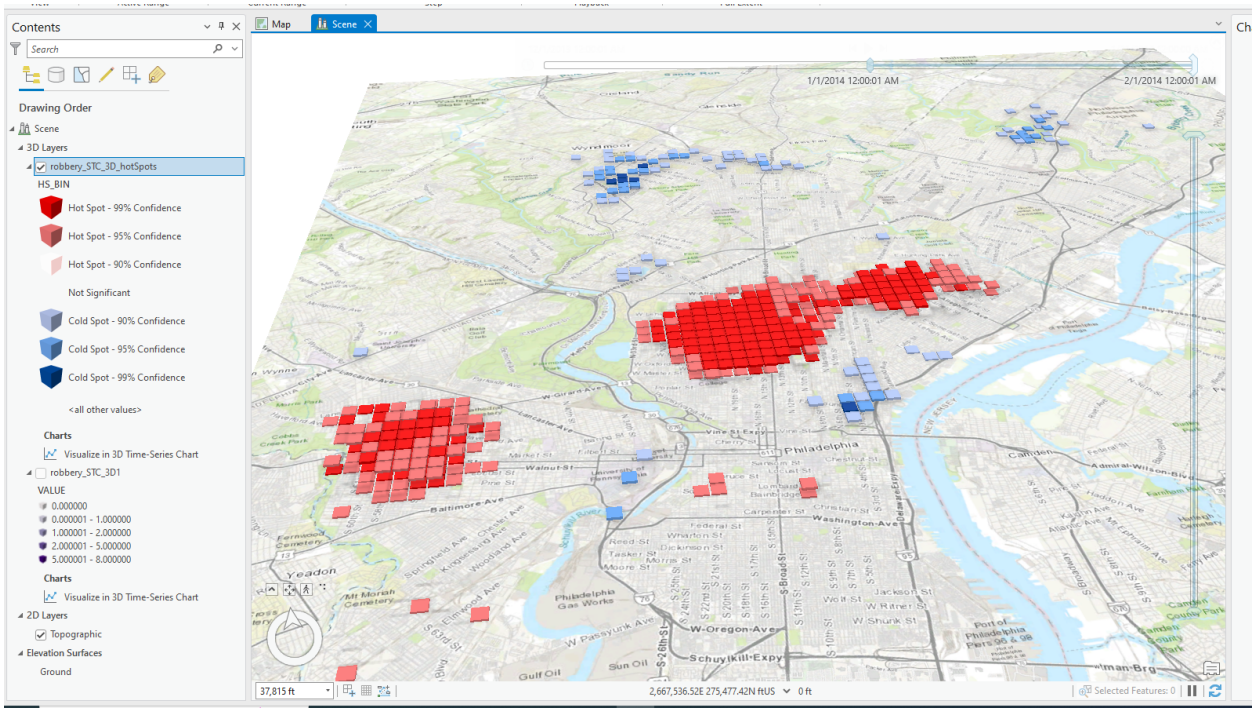
- 

- This figure represents the final map product of exercise 2 in chapter 8. This exercise was a bit more complex than the others due to tools I have never seen before in ArcMap such as visualizing the space time cube in 3D. In this exercise we used the Optimized Hot Spot Analysis tool to find statistically significant hot spots and cold spots of robbery. We then expanded this analysis further by using the data mining pattern tool which is a space-time cube to look for trends over time and to determine the type of hotspot and cold spot that was in a certain area for robberies.

-



- This figure represents the final map product of exercise 3 in chapter 8. This exercise was all about exploring the analytical results from the first two exercises in three dimensions to observe patterns and trends in the data. The first two exercises were all about creating crime hot spots for the city of Philadelphia and in this exercise we were able to analyze the results in a three dimensional perspective. This exercise was great to show us just how much we could do with the three-dimensional aspect of arcpro. This is something that really separates arcpro from arcmap.

- 

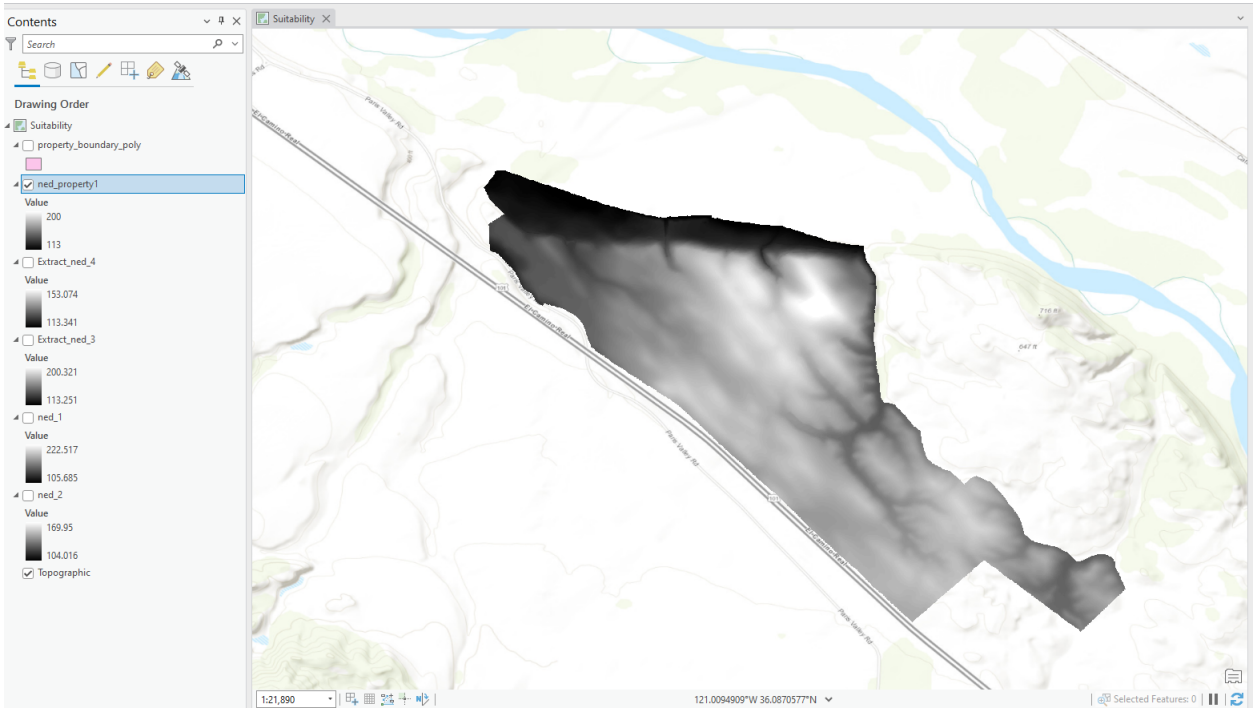
- This figure represents the final map product of exercise 4 in chapter 8 and the end of chapter 8. This exercise was all about animating the data. This was done by using the time slider to animate the robbery incidents that occured during the 2014 year in Philadelphia. The data was also animated using the range slider which shows the numerical values of robberies with high or low confidence with a normal range being from -3 (cold spot 99% confidence) to 3 (hot spot 99% confidence). The end result of this chapter shows hot spots that are filtered by both time and range. This helps to provide information and a narrative regarding when and where crimes happened (robberies).

Chapter 9:

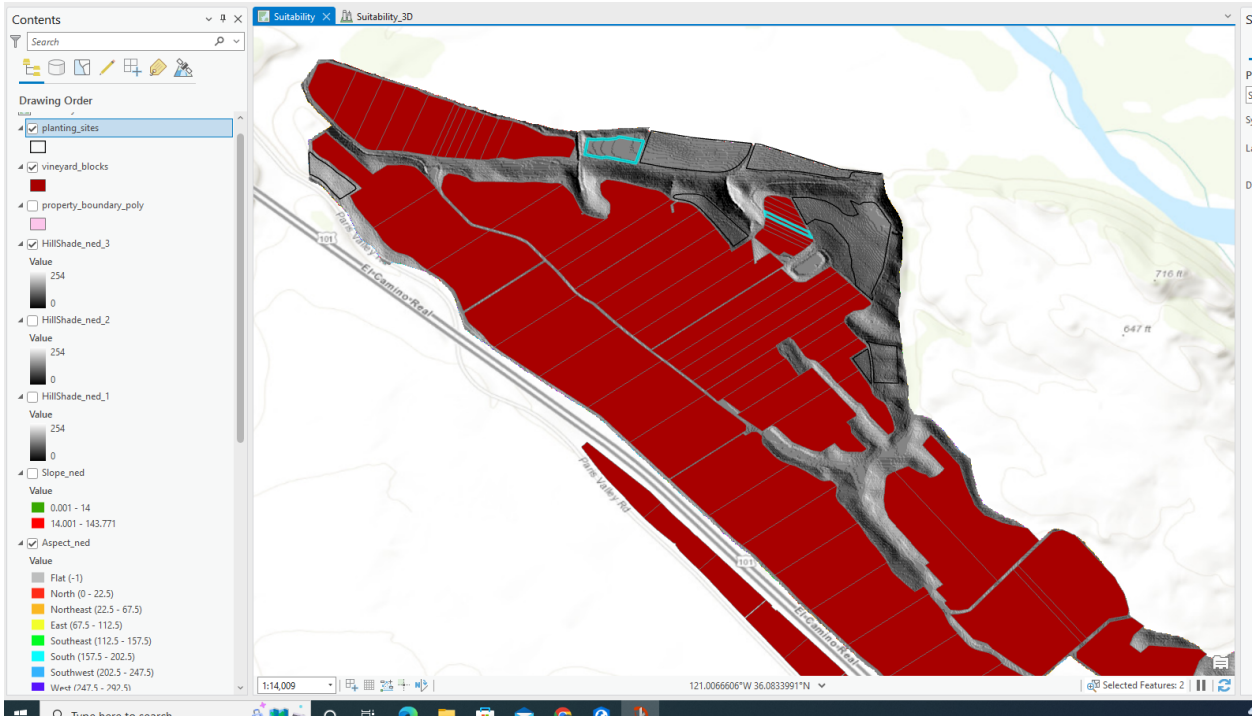
Questions+

- (derive new surfaces) No there is no part of the property in complete shadow at this time, the lowest cell value is 1
- (derive new surfaces) There are 4 planting site that contain mostly low-slope topology
- (derive new surfaces) There are 3 potential planting sites that include at least some land that faces south, southeast, or southwest
- (derive new surfaces) None of the potential planing sites are in shadow at 2:00pm in mid-September
- (derive new surfaces) Object 6 is the best planting site that meets the slope and aspect criteria somewhat and has decent sun exposure at 4:30pm, Object 1 is a close second option.
- (create a weight suitability model) Object 1 has a soil type of Rincon clay loam and object 6 has a soil type of Greenfield fine sandy loam

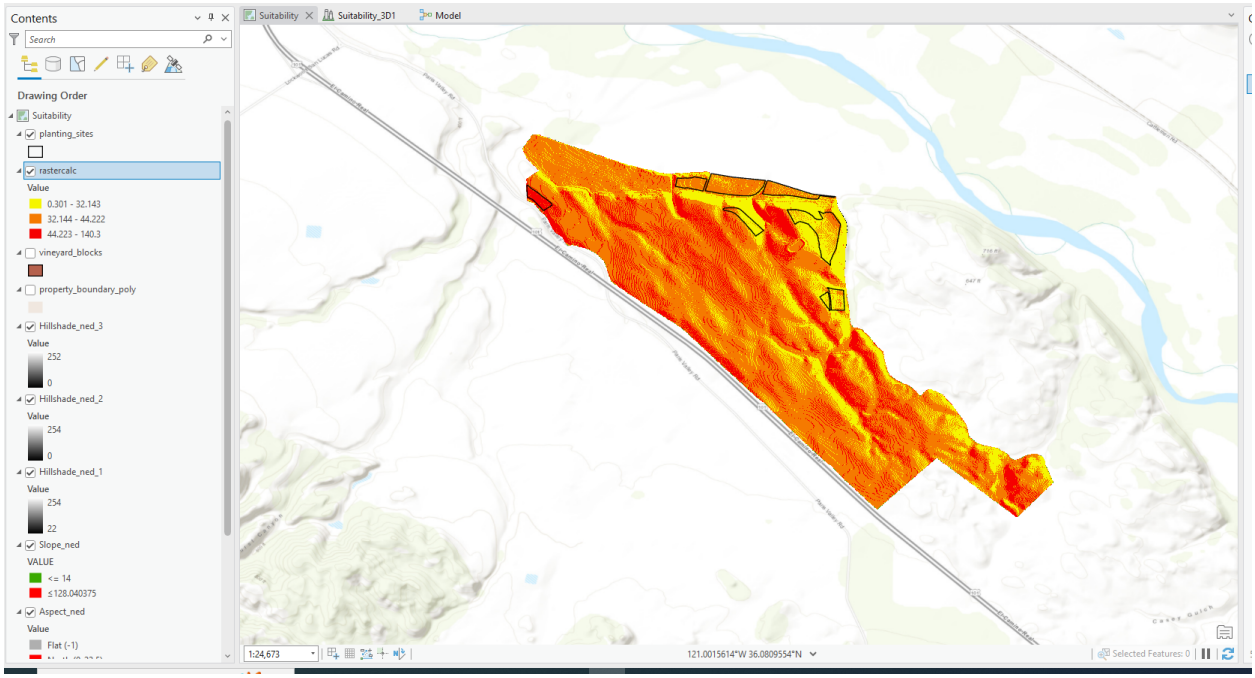
- (create a weighted suitability model) Object 8 in the potential sites has already been planted

- 

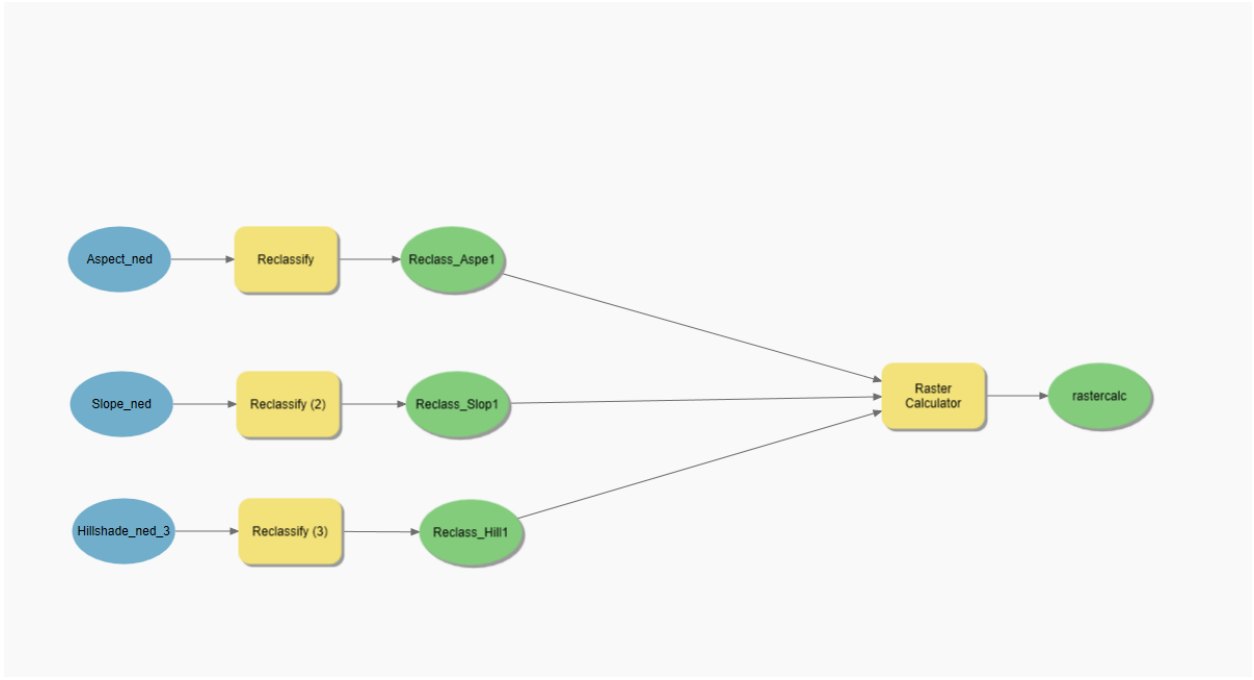
- This figure represents the final map product of exercise 1 in chapter 9. This exercise was all about preparing data for a vineyard sustainability analysis. This was done by using tools in the geoprocessing pane such as feature to polygon tool, extract by mask tool, and mosaic to new raster tool. All of these tools were used to produce the map in this figure.



- These two figures represent the mapping processing that took place in exercise 2 of chapter 9. This exercise was all about deriving new surfaces using precision agriculture techniques. This included hillshade, aspect, and ratio. The top figure represents the hillshade of the area of interest with vineyard blocks and potential new planting sites. The bottom figure represents the same but with slope (red and green values) instead of hillshade. Slope, hillshade, and aspect were all used in this exercise to determine what could be the best option for a new potential planting site.

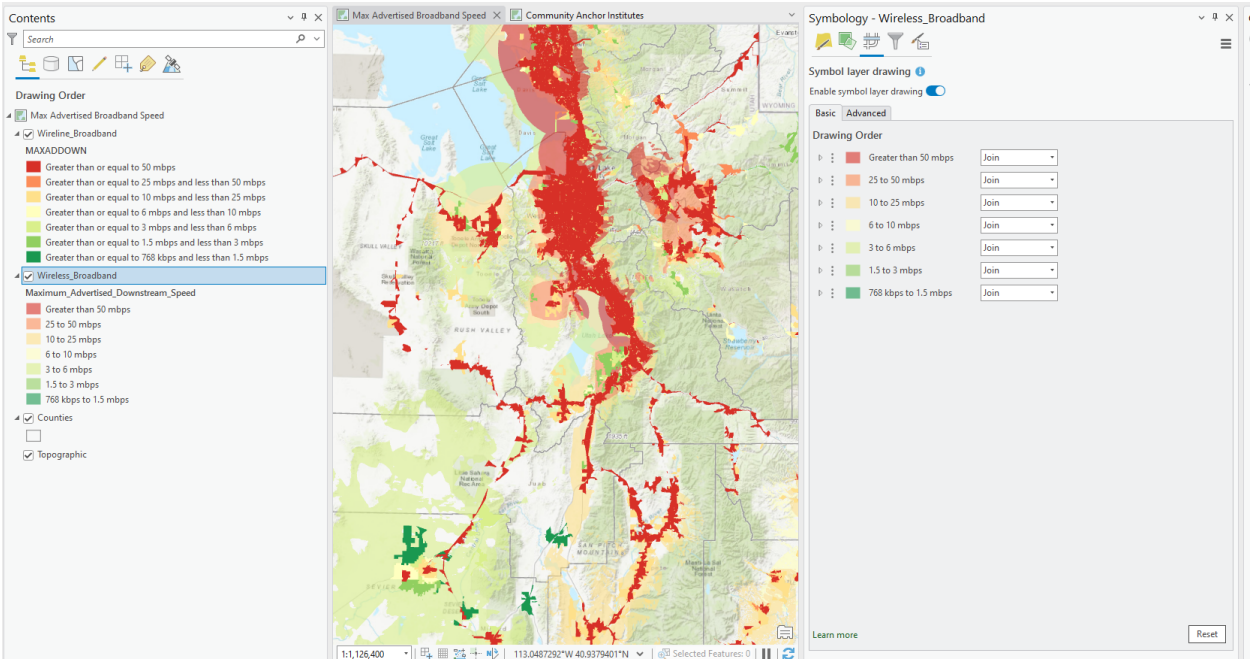


- This figure represents the final map product of exercise 3 in chapter 9 and the end of chapter 9. This exercise was all about creating a weighted suitability model. This was done by reclassifying the values of slope, aspect, and hillshade so that way they can be added together. Each layer was weighted so that way we could prioritize the criteria. After this was done the values of the three layers were combined in a model builder so that way the most suitable planting site could be found. The top three planting sites were all at the top-right of the area of interest/planting site.

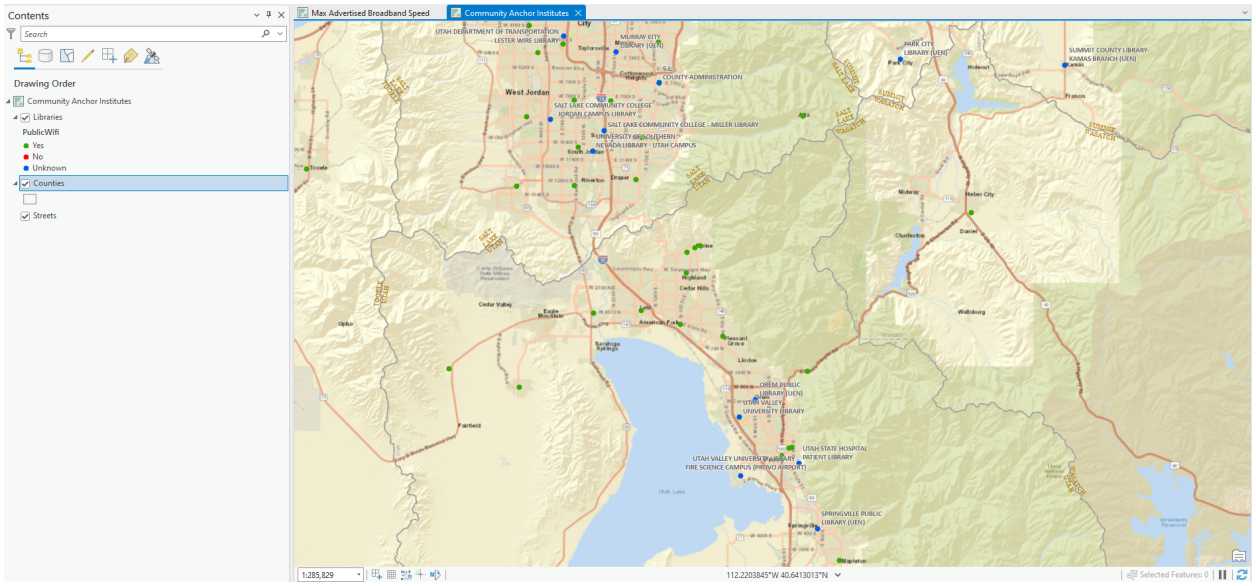


Chapter 10:

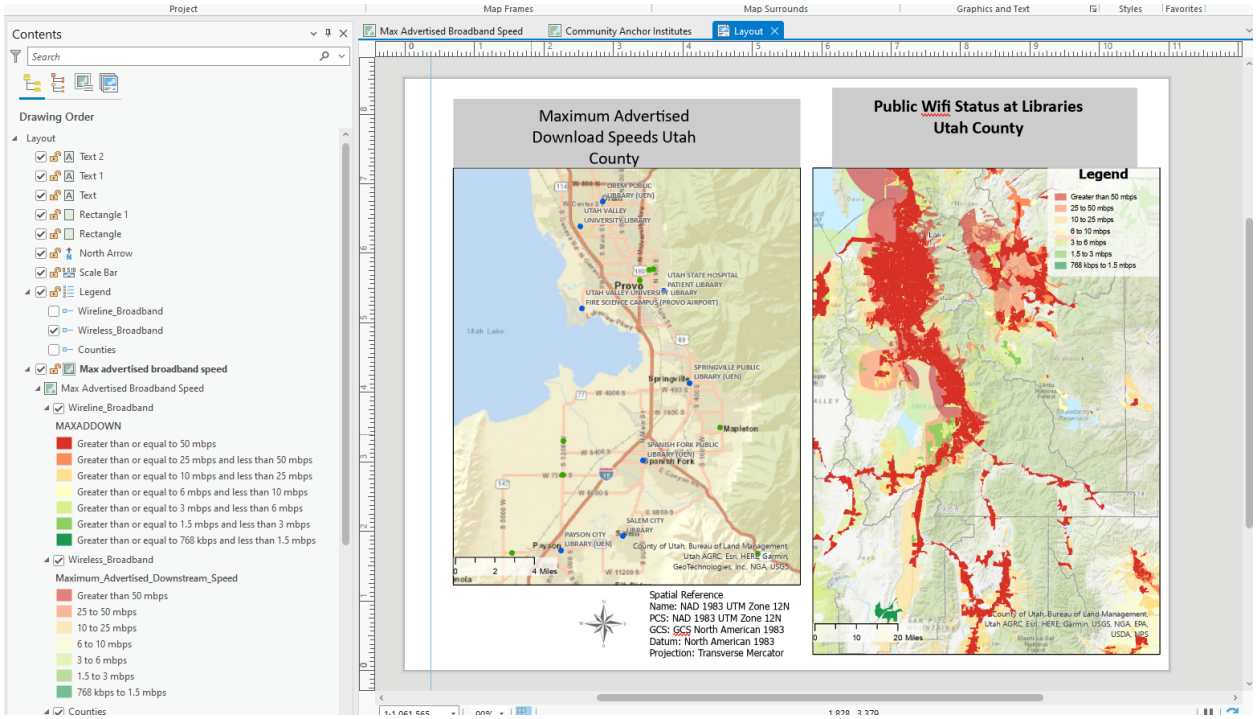
Questions+

- (apply detailed symbology) There are 43 areas that have fixed wireless technology
-
- 

- This figure represents the final map product of exercise 1 in chapter 10. This exercise was all about applying detailed symbology to visualize broadband speeds (wired and wireless).

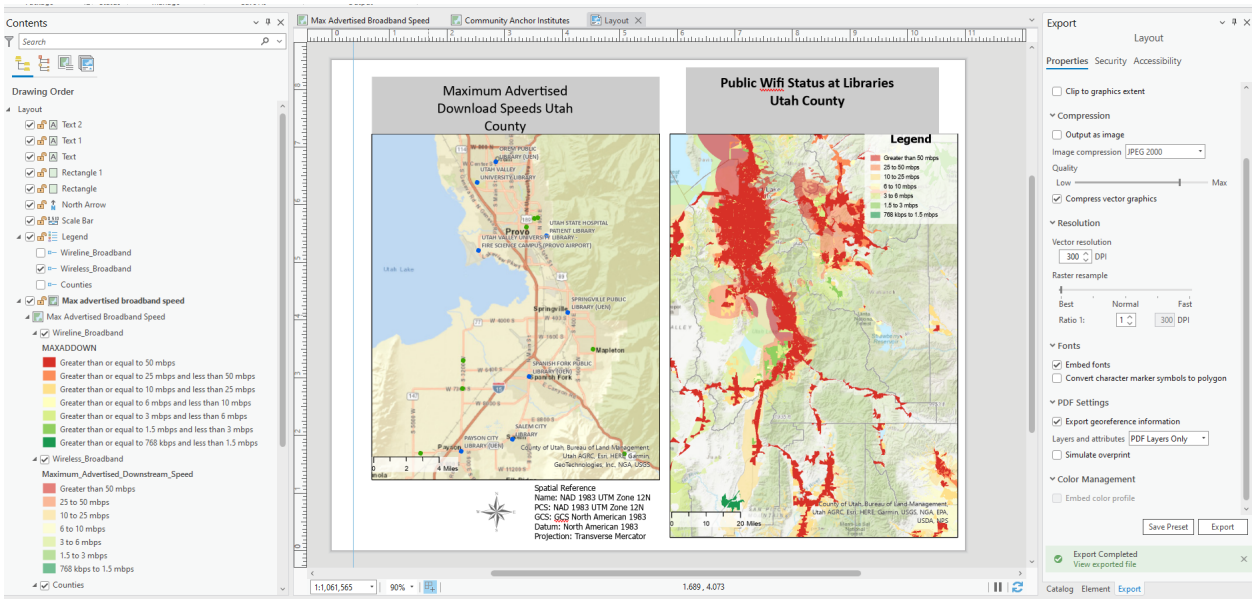


- This figure represents the final map product of exercise 2 in chapter 10. This exercise was all about labeling features. We created labels so that we can get a visual perspective of which libraries still require information to be collected so that the database can be updated accordingly. Dynamic labels were not used and the labeling process was changed in this exercise due to a variety of reasons including map scale and placement of labels.



- This figure represents the final map product of exercise 3 in chapter 10. This exercise was all about creating a page layout. This page layout was made to help readers identify

what is happening in the map with references to scale and direction, as well as source material. The decisions made creating this layout help facilitate the design process.



- This figure represents the final map product of exercise 4 in chapter 10 and the end of chapter 10. This exercise was simple and straightforward and was all about sharing the project in similar ways to previous chapters. We shared the project template to our accounts on ArcGIS Online. We also exported the project to a file and shared it this way. We also exported the project as a PDF file and this is one of the most popular industry-standard formats.

Notes: Although this was more complicated than the first 5 chapters, I found it to be easier. I think this is due to the fact that we have been gaining more experience working with ArcPRO and this kind of data. I will be interested to see how all of this will apply to the final exam/project for this half of the class.