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Geography 191  
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#### Final

Selecting and Classifying Land Uses: Create a map that shows the 6 different major categories of land uses (agricultural, mineral, commercial, residential, exempt). These land use codes are in the Parcels data (the class column). Select one of the categories, and create a second map showing all the sub-classifications in that category. Refer to the *Delaware County Land Use Codes* (below) for category and subcategory information. Symbolize each category with an appropriate color. Add appropriate additional data (such as road centerlines) for reference and make your map look decent. (approx. 1 page description + 2 maps)

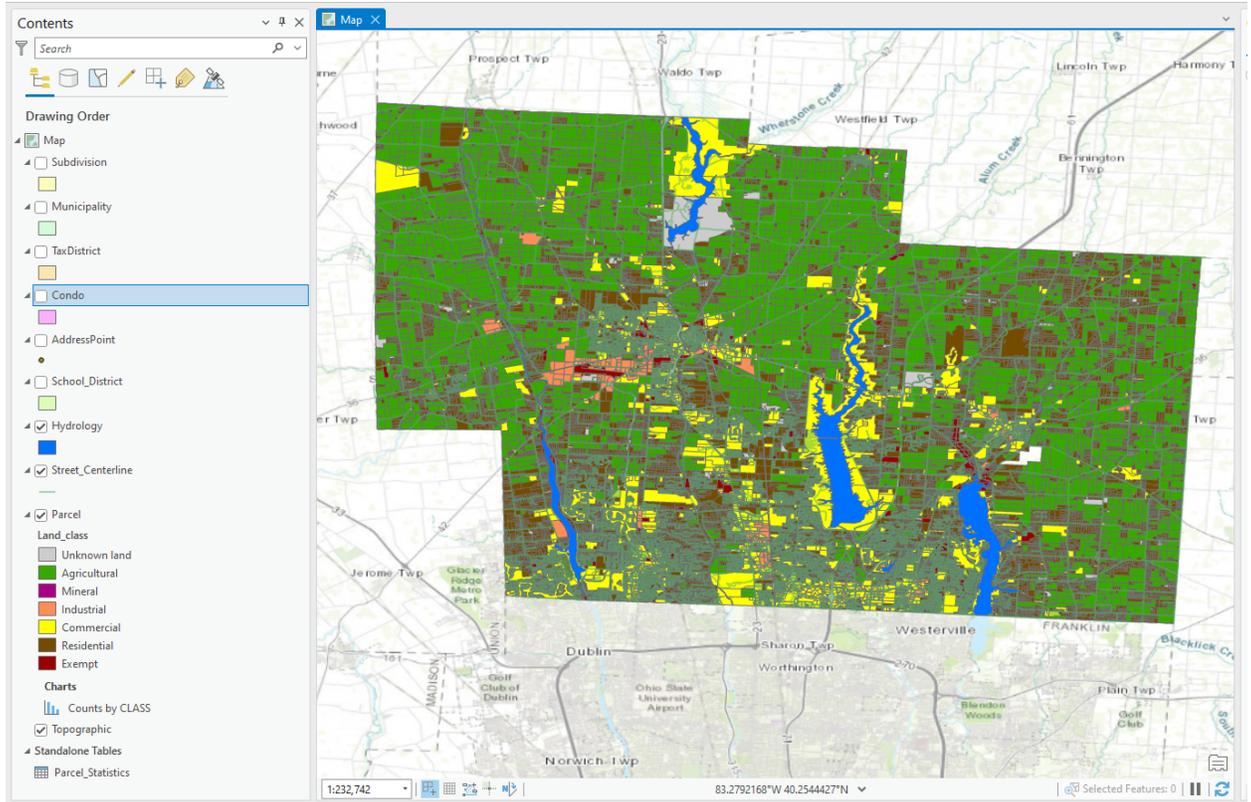
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The concept of selecting and classifying land uses seems very straightforward but there is actually a lot of detail that goes unseen into creating a map of this variety. This map was rather difficult to make at first because of the values associated with the CLASS field were not appropriately put into the dataset and this was rather telling from the fact the field was described as a text field rather than a numeric field. This exercise caused me a bit of trouble at first because of the 0-99 unknown land use class according to the Delaware County Land Use Codes. This was tough to visualize because selecting the 0-99 class in the map showed the borders of roads and other land uses in the county of Delaware. My first step was to create a new field called Land\_class that contained the data of the CLASS field but was shown as a numeric rather than a text field to show the different Land Uses in Delaware. The Land\_class field was created by calculating the CLASS field into the field and included all of the areas labeled S or left blank. The purpose in this was to show the unknown land in the county of Delaware.

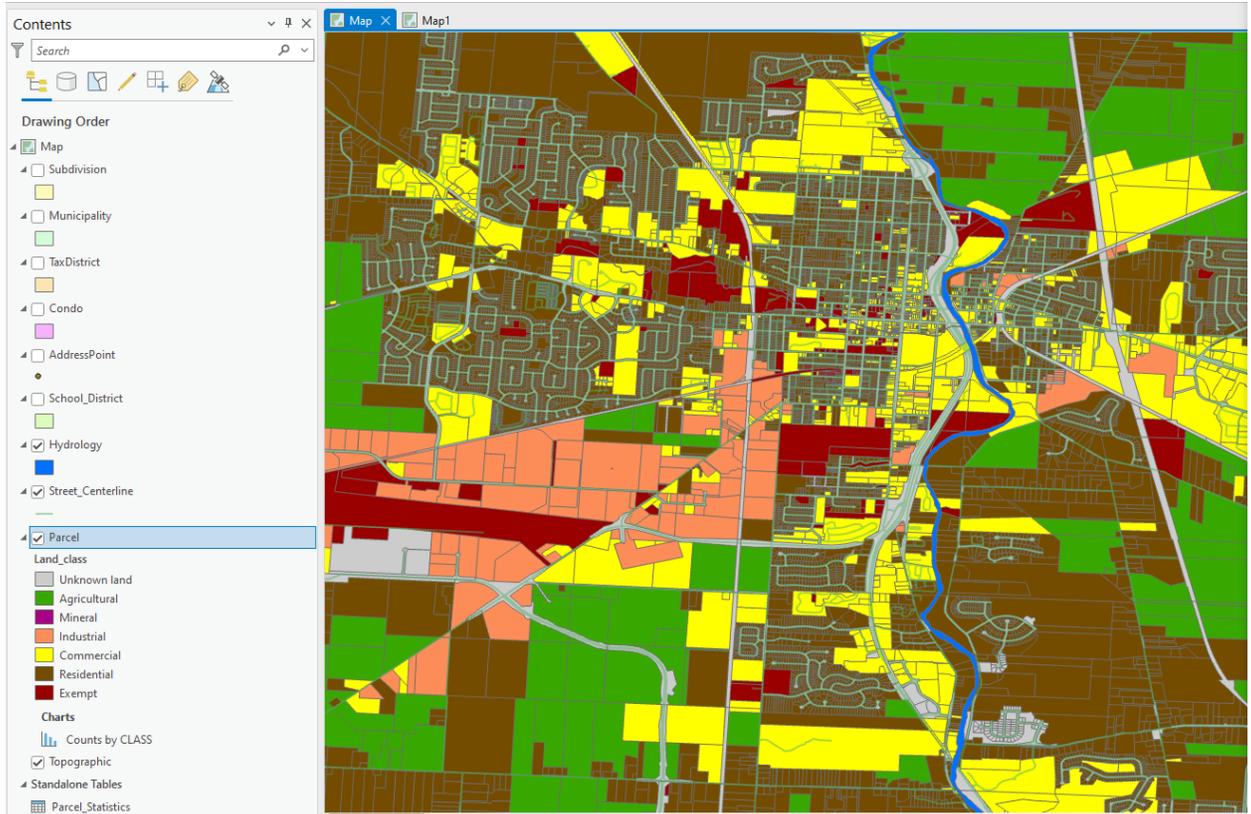
The first image you see below shows the entirety of Delaware County and its land uses classified. This was done using a symbology of graduated colors that were broken down into natural breaks to manipulate and create a different color for each class depending on the land use codes and the Land\_class field populating them. The second figure you see below is the sub-classification of the Industrial areas of the county of Delaware. This was done by creating a new field and then populating it with the CLASS field again. Then I created a definition query that only pulled out the values of the CLASS field that were equal to 300 and less than or equal to 399. These industrial land codes referred to different types of industrial land uses. From here I used the graduated color scheme again the symbology tab to create the different classes based on the land use codes and each class represents its land use code according to the Delaware County Land Use Codes. After all this was done I added road centerlines for each to make the map look decent, although I will say I will add another image to get a closer look at the classification used for the different types of land areas in the county of Delaware.

Codes in **class** column of **parcels** map. Ex) 108=nurseries Ex) 600=owned by USA

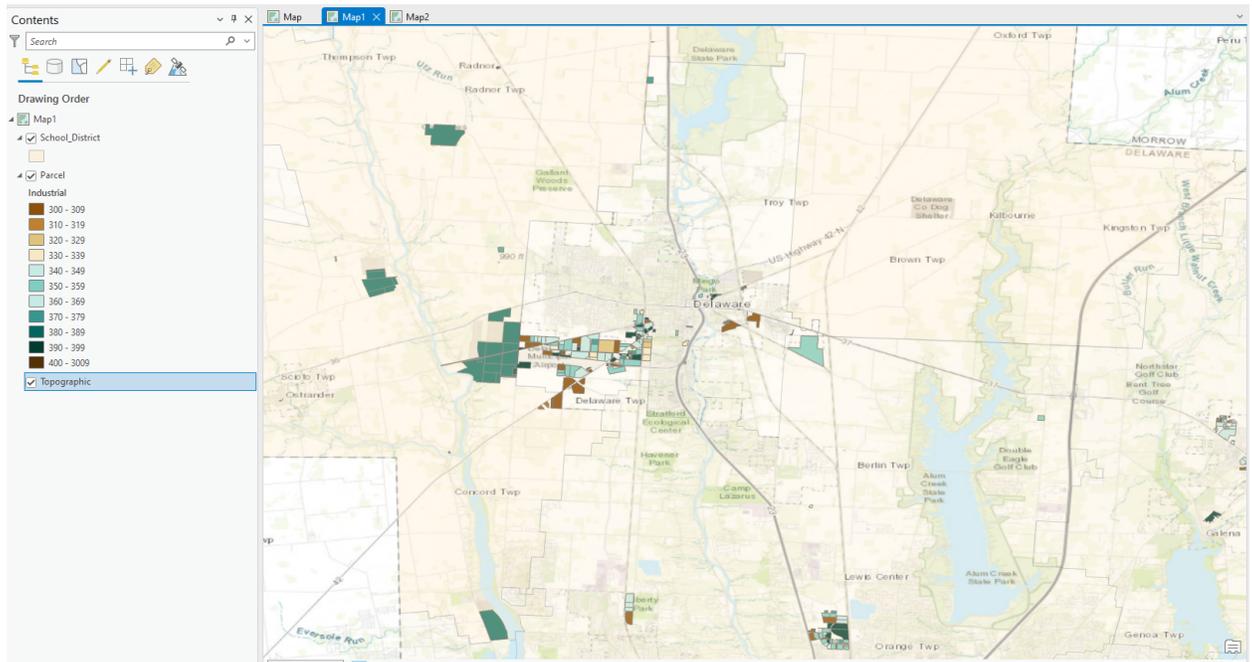
1 AGRICULTURAL	41 funeral homes
00 vacant land	42 med clinics & offices
01 cash grain/gen farm	44 full service banks
02 livestock o/t 03 & 04	45 savings and loans
03 dairy farms	47 office bldg - 1 & 2 story
04 poultry farms	48 office o/t 47- walk up
05 fruit & nut farms	49 office o/t 47 - elevator
06 vegetable farms	52 auto service station
07 tobacco farms	54 auto sales & service
08 nurseries	55 Comm garage
09 greenhouses	56 parking lot or struct
20 timber	60 theaters
99 other agricultural use	61 drive-in theaters
2 MINERAL (see detail)	62 gold range/ min course
3 INDUSTRIAL	63 golf courses
00 vacant land	64 bowling alleys
10 food & drink	65 lodge halls/ amuse pks
20 foundries & heavy mfg	80 Comm warehouses
30 medium mfg & assembly	82 Comm truck terminals
40 light mfg & assembly	90 marine svc facilities
50 Ind warehouses	96 marinas ( small boats)
60 Ind truck terminals	99 other Comm structures
70 small shops	5 RESIDENTIAL
80 mines & quarries	0 vacant land
90 grain elevator	1 one-family dwelling
99 otherInd structures	2 two-family dwelling
4 COMMERCIAL	3 three-family dwelling
00 vacant land	4 house trailer (real)
01 04-19 apt rental units	5 condominium unit
02 20-39 apt rental units	0 platted lot
03 40 or more families	1 unplatted0-09-99 acs
10 motels/tourist cabins	2 unplatted 10-19-99 acs
11 hotels	3 unplatted 20-29-99 acs
12 nursing hms/hospitals	4 unplatted 30-39-99 acs
15 mobile home parks	5 unplatted 40 +
16 Comm camp grounds	99 other res structures
19 otherComm housing	6 EXEMPT
20 small det retl (-10000)	00 owned by USA
21 supermarkets	10 owned by State of Ohio
22 discnt/jr dept stores	20 owned by Counties
24 full line dept stores	30 owned by Townships
25 neighborhd shop center	40 owned by Municipalities
26 community shop center	50 owned by Bd of Education
29 other retail struct	60 owned by Park District
30 rest, café and/or bar	70 owned by colleges, etc
35 drive-in restaurant	80 charitable exemptions
39 other food service struct	85 churches, public worship
40 dry clean plant/laundry	90 cemetery/monuments



- This image shows the different types of land classified based on the land use.



- This figure shows a closer look at the classification used for the first part of the exercise (the city of Delaware focused in the middle).



- This figure shows the industrial land use in Delaware subclassification

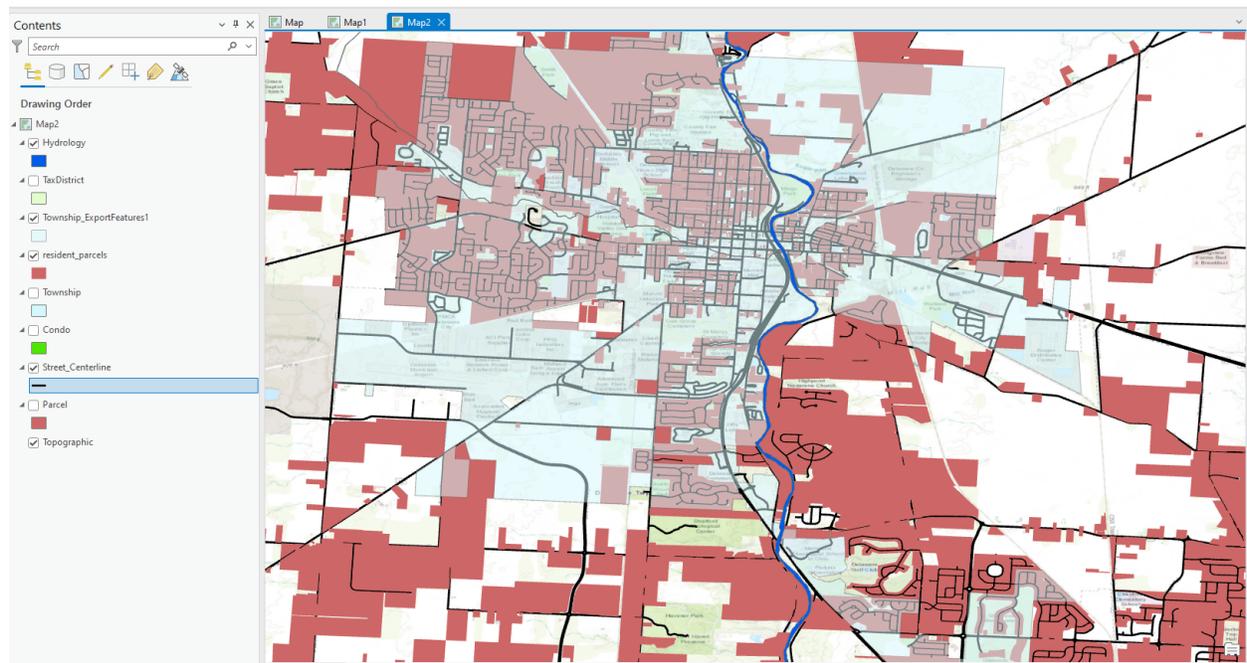
**2. Making New Shape Files from Existing Shape Files:** Choose two Delaware data shapefiles, select a relevant subset of the data on those shapefiles, and create new shapefiles of the subset of data.

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The two Delaware shapefiles I chose were the parcel shapefile and hydrology shapefile, and I also had to download the township shapefile for my analysis. My first step was to create a new shapefile that contained only the residential land from the existing parcel shapefile. This was done by creating a new field within the parcel shapefile titled resident and create a definition query that makes this field only include residential land parcels. Then use this new shapefile and create another field that contains the residential areas in the Delaware township. The real purpose in this

exercise is to see which residential areas in the Delaware township are threatened by future floods in their proximity to the water sources/locations notated in the hydrology layer. The next step to achieve this purpose of the exercise was to select only those water sources in the Delaware township from the hydrology shapefile and to make this a new shapefile.

This map can be very useful in determining future development for residential areas in the Delaware township. This map can also help local officials determine who is in the most danger if a flood were to occur in Delaware township. Since this map shows all the residential land use parcels in the Delaware area/township it can also be used to help developers plan where the next subdivisions may go or just any residential building in general.



- This figure shows the new shapefiles of the residential land use areas in the county of Delaware (in red) and the township of Delaware which is represented in a faint blue.

The reason for this is so you can see the residential areas inside of the Delaware township. Those areas in the township closest to the Olentangy River (royal blue color in Hydrology shapefile) are at the highest risk if a flood were to occur in the township of Delaware. Street centerlines were added to show where these residential areas are in terms of road proximity.