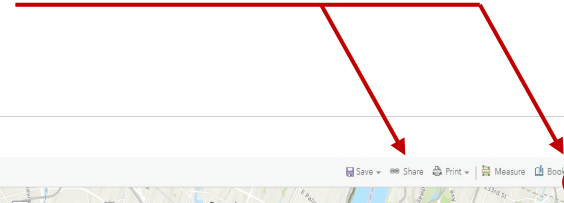
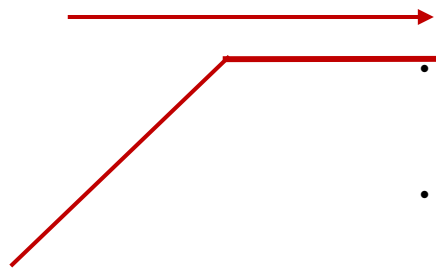
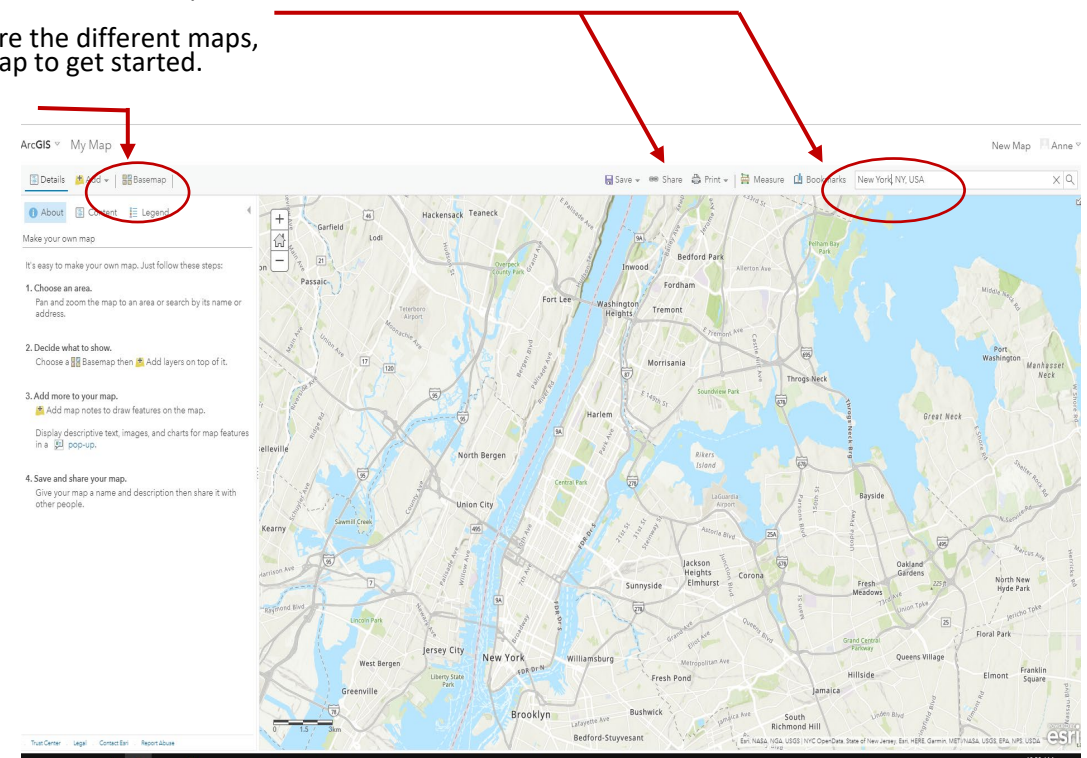
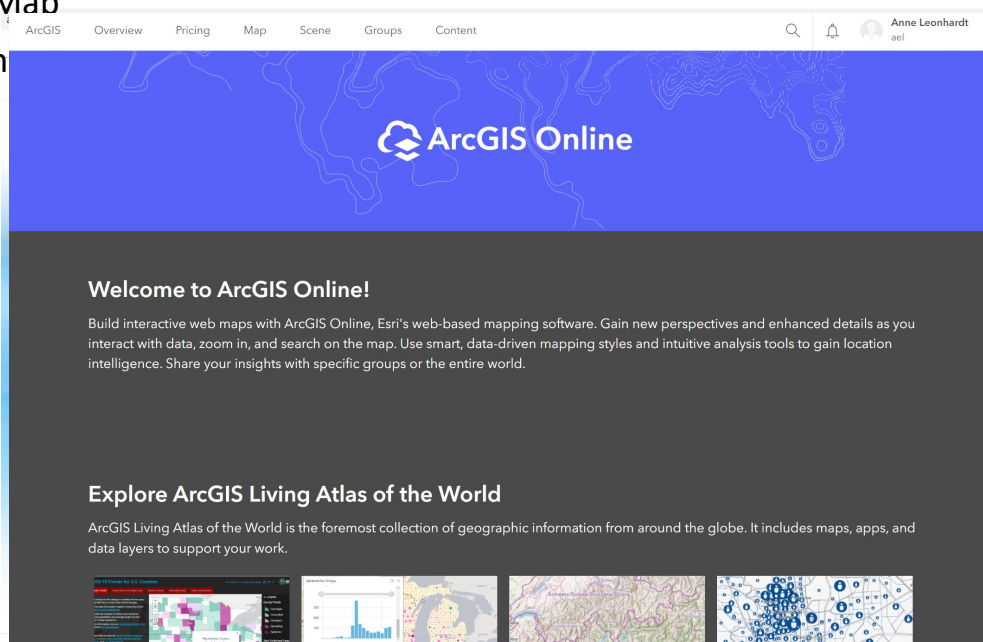


THE 2280 GIS Project

Outline

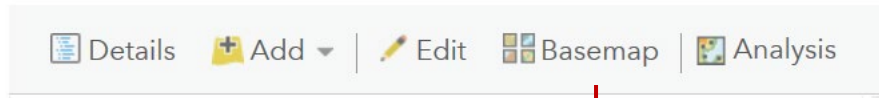
1. Opening ArcGIS Online,
2. Add theater location
3. Add Data for Land Use: MapPluto
4. Navigating Menus & Styling Map
5. Exporting

- Open ArcGIS.com and sign in with your new account.
- Click on Map at the top menu; confirm that you see "Open in Map Viewer" on the top right, if not click once on the text "Open in Map Viewer Classic".
- Type in your theater name, New York (or other Borough) NY at the top right, and zoom out so you can see the neighborhood around your theater. Select save to map notes and **Save** the map.
- Select Basemap and explore the different maps, then add the Light Gray map to get started.



Outline -- General Navigation

1. Opening ArcGIS Online
2. Add Data for Land Use: MapPluto
3. Navigating Menus & Styling Map
4. Exporting Map



Top left Menu:

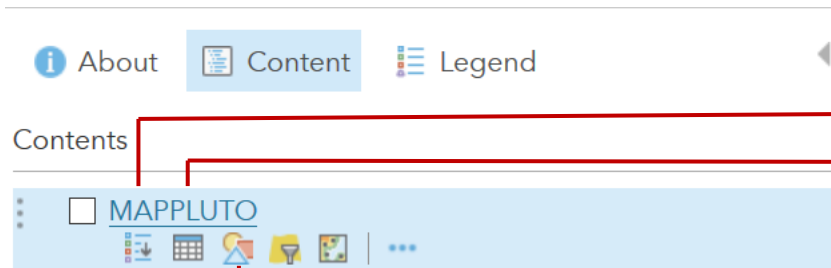
-Details: Gives basic details about the map ownership, who can view, etc

-**Add**: To insert operational layers to the map from the Web, from a File, from Living Atlas (a rich, curated collection of data sources)

-Edit: For insertion of Features, like Points, etc.

-**Basemap**: To insert base maps to build up from with operational layers of data

-Analysis:



Layer Menu (appears when the cursor hovers over layer in the Content Menu):

-Show Legend

-Show Table (containing the data for the map layer)

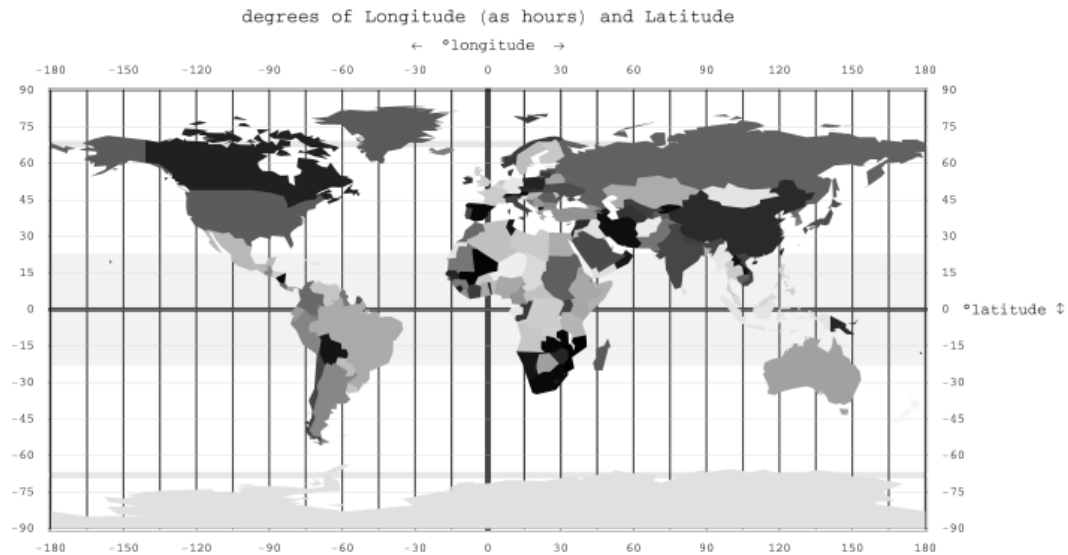
-Change Style (allows changes in color, size, transparency, symbol types, etc.)

-Filter – allows filtering of material shown in the map. Can be added to and edited.

-Analysis – allows operations on the data shown, including buffering, overlaying, analyzing patterns

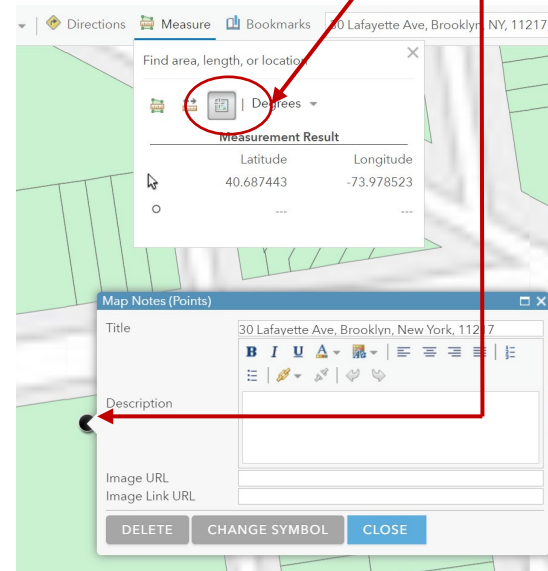
Outline

1. Opening ArcGIS Online
2. Add Data for Land Use: MapPluto
3. Navigating Menus & Styling Map
4. Exporting Map



† meridians are lines of equal longitude
 and run N-S paralleling time zones
 ⇄ circles of latitude run E-W paralleling climate
 · longitude changes along a circle of latitude
 · latitude changes along a meridian
 · this equirectangular projection does not preserve
 area, nor angle between locations

- Create a simple spreadsheet in Excel/Google Sheets that will give the location for the theater
- Select the location /symbols of the theater on your map
- Go to the Measure Menu tab, and click on the Location Option. Note down the Latitude and Longitude numbers to add to your spreadsheet.



Theater Name	Latitude	Longitude
Brooklyn Academy of Music	40.68711	-73.97707


Note: The longitude for NY is negative since we are in the Western Hemisphere, and the longitude will always be around 40.

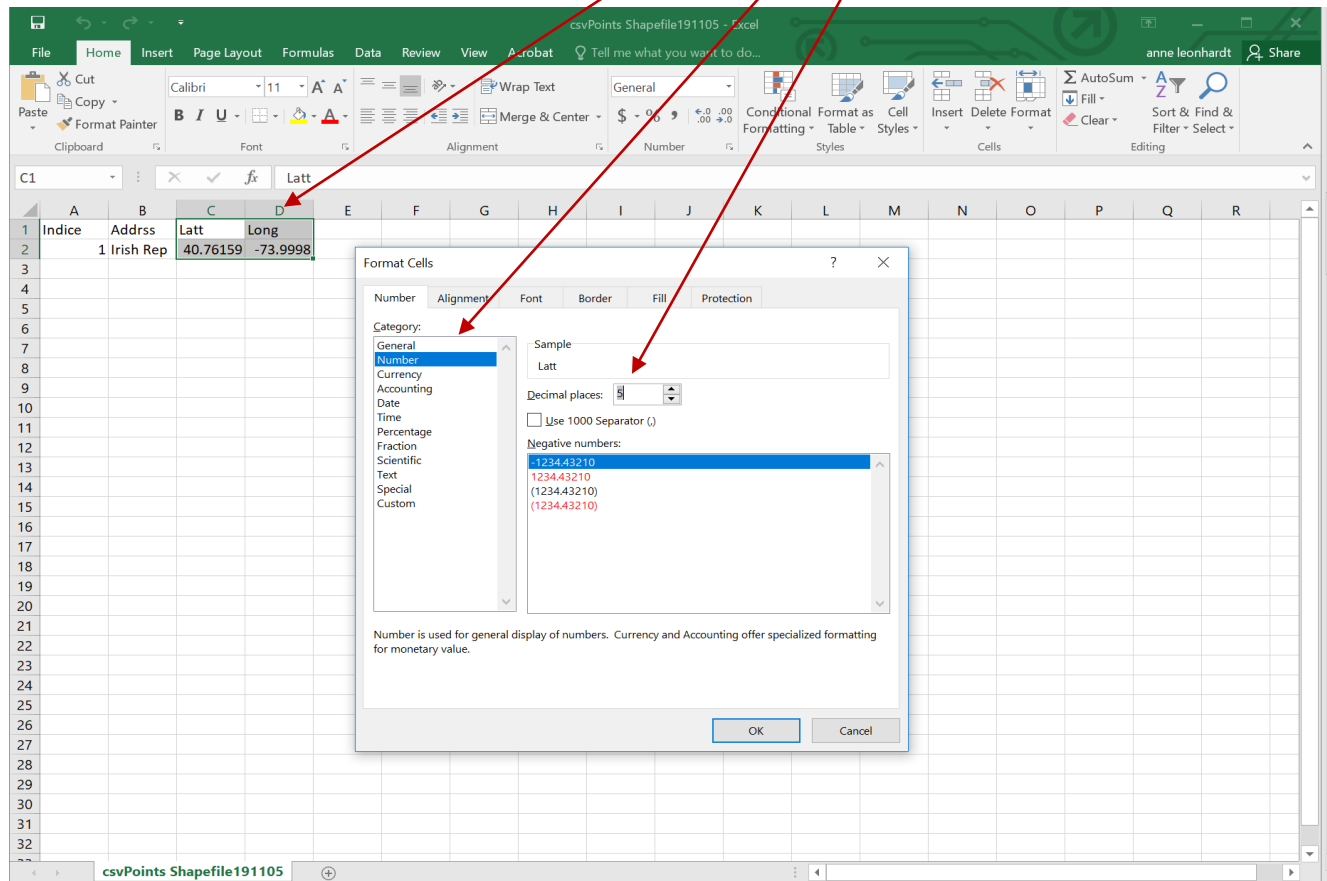
Outline

1. Opening ArcGIS Online
2. Add Data for Land Use: MapPluto
3. Navigating Menus & Styling Map
4. Exporting Map

-Format the purely numeric columns as “Number” format and make sure the Latitude and Longitude have five digits

-Save the file as a **.CSV file**

Add your file to the map.  Click on Change style to increase the size and choose the color you'd like.

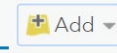


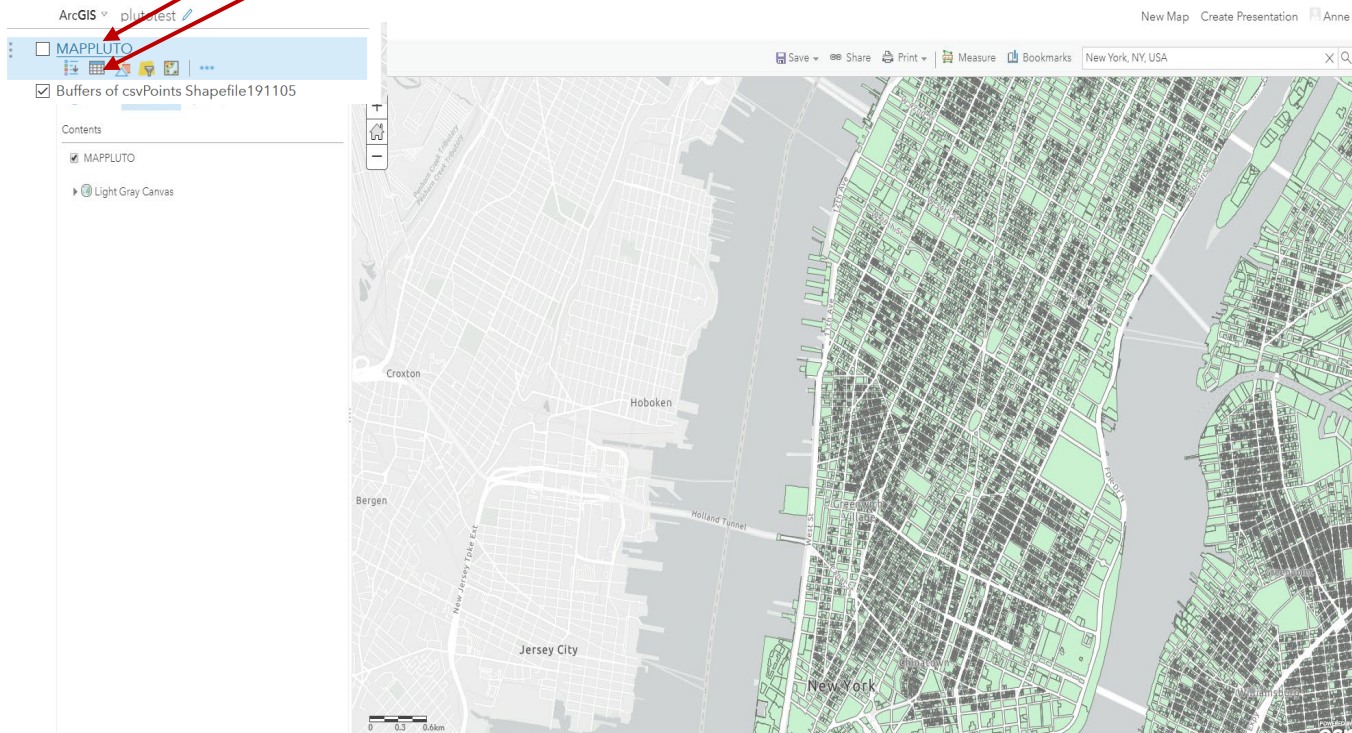
Rules of thumb for preparing data to enter into a GIS file-

-Column titles should always be one word, number columns should always be in a number format, and spreadsheets saved as a .csv files. Latitude and longitude should always be included.

Outline

1. Opening ArcGIS Online
2. Add Data for Land Use: MapPluto, etc.
3. Navigating Menus & Styling Map
4. Exporting Map

- Go to the Add Menu on the top left. 
- Click on Search for Layers from the pulldown and then click on "My Content" to change to ArcGIS Online.
- In the search bar, type in MAPPLUTO and select the first entry to add as a layer to your map
- Hover to the right of the layer and drag it below your Theater location layer if it isn't already.
- Hover over the MAPPLUTO Layer in the Contents pane at the left, and click on the Select Table icon that appears



Outline

- 1. Opening ArcGIS Online
- 2. Add Data for Land Use: MapPluto
- 3. Filtering and Styling Map
- 4. Exporting Map

- The data table appears at the bottom of the map, as seen below. Take a look at the table column headings and scroll down.
- Look at the Pluto Data dictionary to understand the https://www1.nyc.gov/assets/planning/download/pdf/data-maps/open-data/pluto_datadictionary.pdf?r=19v1
- Select the Filter icon and Choose "Borough" "=" "MN" (or the Borough your theater is in). To select MN, click on Unique Value. This will filter out information from other boroughs and make the file size more manageable.

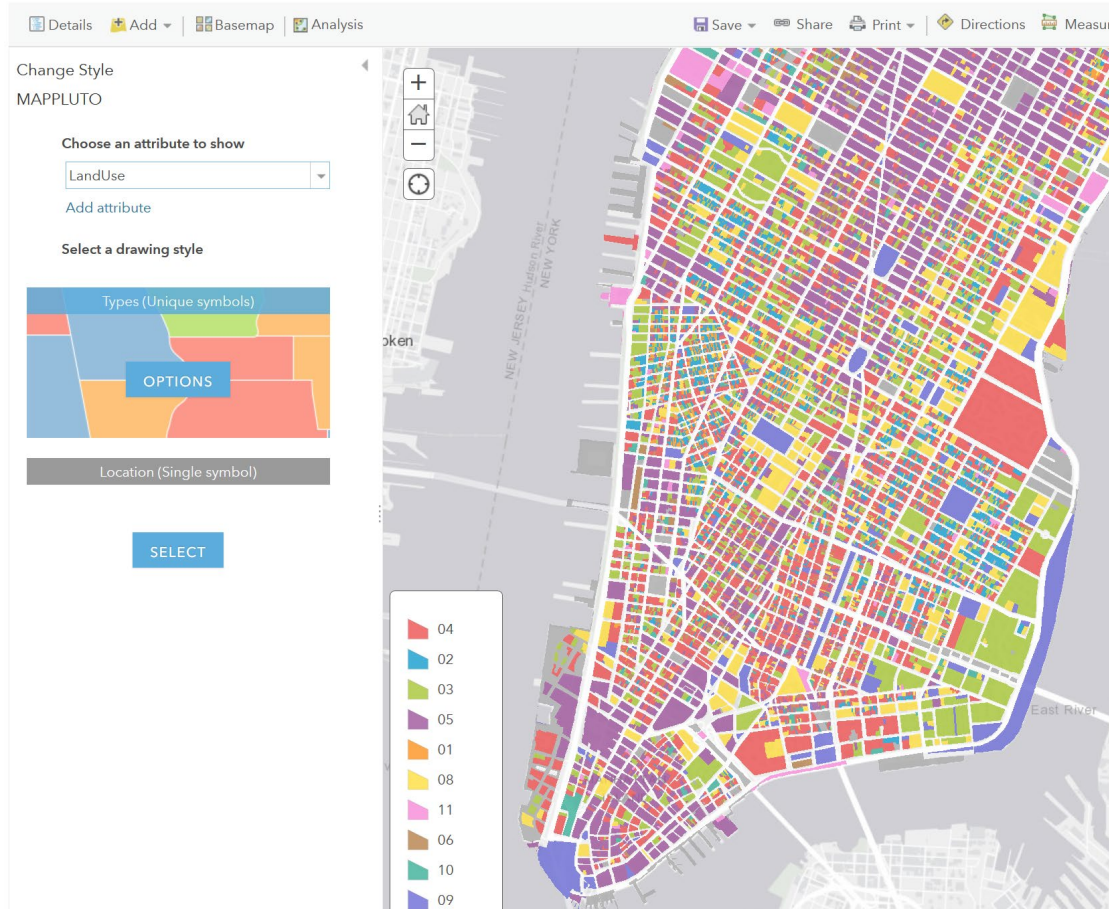
The screenshot shows the ArcGIS Online interface for a map titled 'New Map C' in the 'plutotest' workspace. The map displays a grid of land use data in green, overlaid on a light gray canvas. The interface includes a 'Contents' panel on the left with 'MAPPLUTO' and 'Light Gray Canvas' listed. A data table is visible at the bottom of the map, titled 'MAPPLUTO (Features: 857321, Selected: 0)'. The table has the following columns: Borough, Block, Lot, CD, CT2010, CB2010, SchoolDist, Council, and ZipCode. The map also shows labels for 'Croxton', 'Hoboken', 'Bergen', 'Holland Tunnel', and 'Greenwich Village'. A scale bar indicates 0, 0.3, and 0.6 km.

Borough	Block	Lot	CD	CT2010	CB2010	SchoolDist	Council	ZipCode
QN	16,224	12	414	934.01	3002	27	32	11,694
SI	101	76	501	67	1007	31	49	10,301
SI	348	16	501	147	3010	31	50	10,314

Outline

1. Opening ArcGIS Online
2. Add Data for Land Use: MapPluto
3. Filtering and Styling Map
4. Exporting Map

- Select the Symbology icon when you hover over MAPPLUTO.
Change the attribute to show to "LandUse".
-Research what the numbers in the Legend mean
-Click on Options. and simplify so all residential zones are one color
(click on the color you want to change to get started).



PLUTO DATA DICTIONARY

Sej

VALUE	DESCRIPTION
01	One & Two Family Buildings
02	Multi-Family Walk-Up Buildings
03	Multi-Family Elevator Buildings
04	Mixed Residential & Commercial Buildings
05	Commercial & Office Buildings
06	Industrial & Manufacturing
07	Transportation & Utility
08	Public Facilities & Institutions
09	Open Space & Outdoor Recreation
10	Parking Facilities
11	Vacant Land

-Finally, in the Symbols area, rename the numbers to correspond to land use type given in the MapPLUTO dictionary (label all Residential Building types, Residential, etc.)
-Click OK and done

Change Style
MAPPLUTO

LandUse

Click to edit symbol or label.

LABEL	COUNT	Symbols
04	4318	
02	2991	
03	1663	
05	2711	
01	1613	
08	795	
11	264	
06	289	
10	165	
09	84	
<input checked="" type="checkbox"/> Other	209	Ungroup
07	167	
No value	42	

Counts based on sampling data.

Transparency

Overall

0% 50% 100%

Per feature

Set from Attribute Values

Visible Range

World Room

OK CANCEL

Change Style
MAPPLUTO

LandUse

Click to edit symbol or label.

LABEL	COUNT	Symbols
04	4318	
02	2991	
03	1663	
05	2711	
01	1613	
08	795	
11	264	
06	289	
10	165	
09	84	
<input checked="" type="checkbox"/> Other	209	Ungroup
07	167	
No value	42	

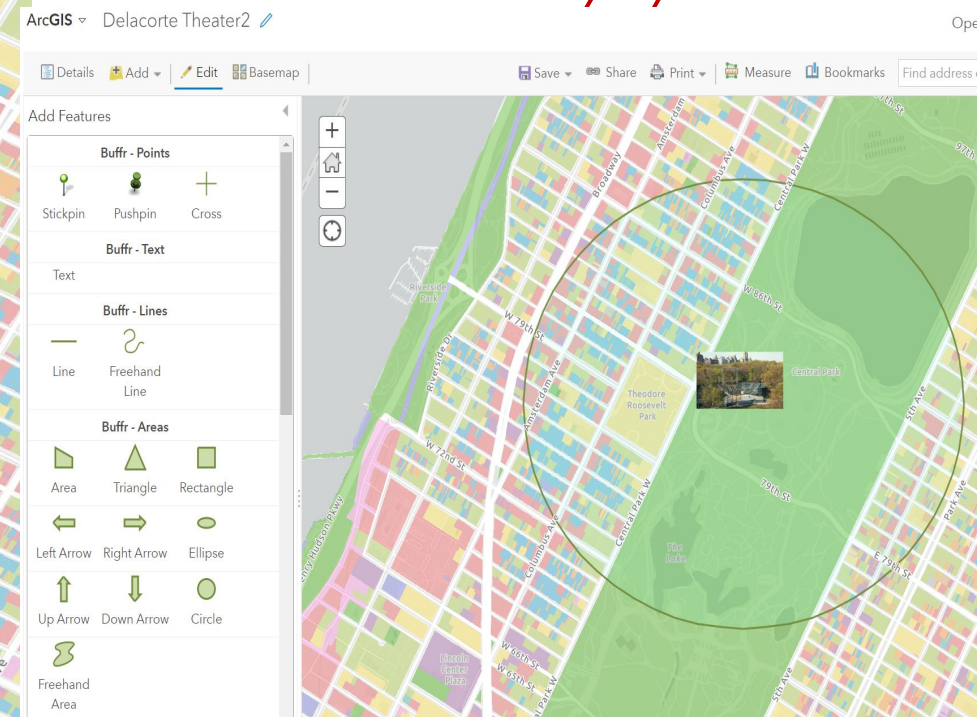
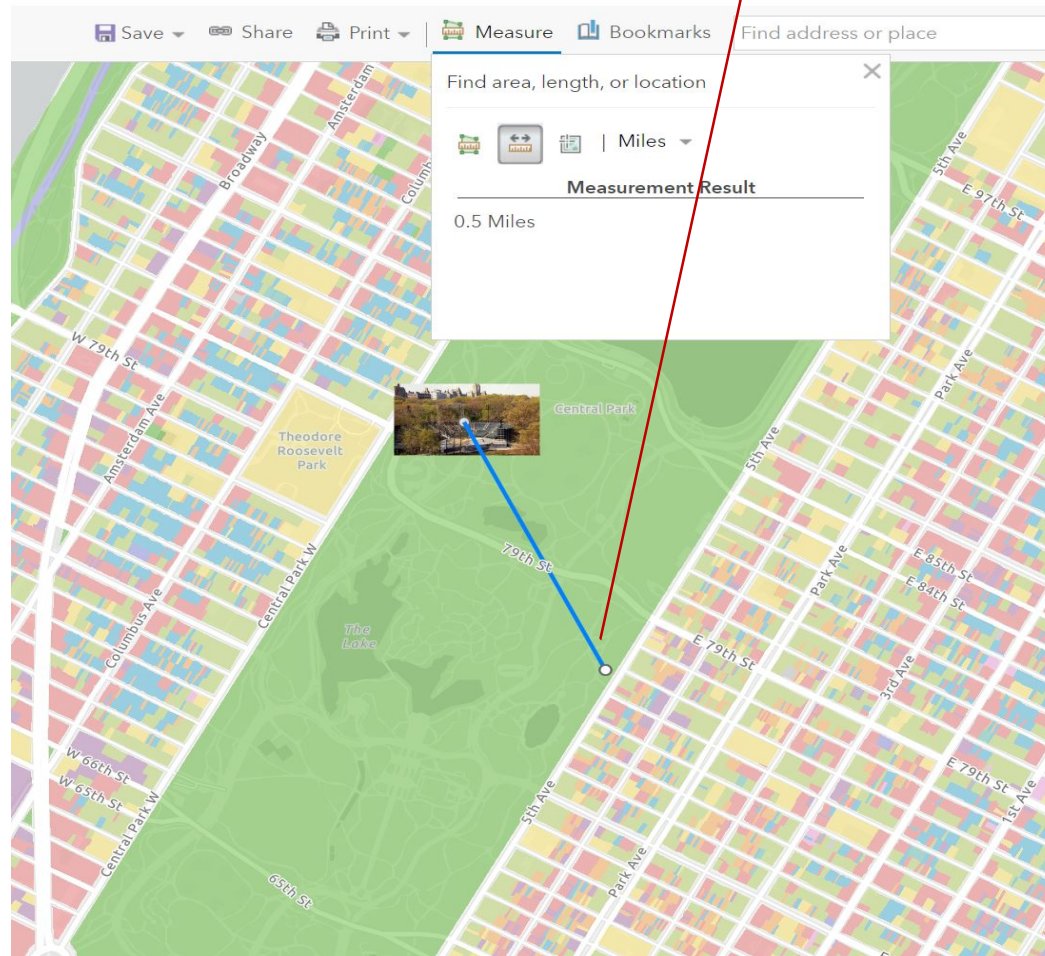
Outline

1. Opening ArcGIS Online
2. Add Data for Land Use: MapPluto
3. Filtering and Styling Map
4. Exporting Map

- Add other layers, like subway routes or restaurants you think are useful, with a search in the ArcGIS Online database. (for example, search, "Subway routes nyc")

- Use the Add > Map Note tools to add a buffer around the theater to help visualize the neighborhood. Begin with the Measure > Distance, and measure 0.5 miles out from the theatre. Note where this distance falls on the map
- -In the Map Notes, choose the Circle and draw it to extend 1/2 mile out from the theater. This will define the 1 mile buffer for the theater.
- Next edit the circle to have a line and fill color of your choice. Make the circle fill quite or completely transparent, and rename it as "Buffer".

Open in Map Viewer



Outline

1. Opening ArcGIS Online
2. Add Data for Land Use: MapPluto
3. Filtering, Analysing, and Styling Map
4. Exporting Map

Add other layers with information you've decided on from the Living Atlas and Open Data NYC. See suggestions below, and also browse the catalogue and info pages found at:

- <https://livingatlas.arcgis.com/en/>

- Considerations- Data Analysis and Visualization:

- Check the source of the data and see if you consider it trustworthy (the U.S. Census Bureau and ESRI are more reliable than a research institute that a Google search returns strange information for).
- Filter it as with MapPLUTO to the Borough level, and check what data is being displayed. Look at the column headings and see if there is some other information that would be useful to look at. Use the Change Style as with MapPLUTO to select the new type of information.
- Look at the information represented and check the units, and if it is raw data, percentages, etc. See if it would be suited to change.
- Repeat this process with other data layers. Once you're happy with each layer, see about turning on other layers as overlays – one layer could have the transparency increased so multiple parts of the information show at once. Experiment and decide if some layers could be shown together as overlays. The different data can help understand other types of data, for example, Land Use may assist in making sense of income or median age data.
- To close a data table attached to a map, click on the top right of the table.
-

Outline

1. Opening ArcGIS Online
 2. Add Data for Land Use: MapPluto
 3. Filtering, Analysing, and Styling Map
 4. Exporting Map
- Incorporating Historic Maps into ArcGIS:
 - Find an old or antique map you find interesting from the original time of your theater.
 - Open the web app: Georeferencer
 - Follow the simple instructions found in this video to create an overlay on the GIS map: <https://youtu.be/0OrSVn8k8Mc>
You will end up with the historic map overlaid on the GIS base map. Save this with the popup label on your map. You can turn off the MapPluto and other layers, keeping the popup label visible. Save your work.
 - Creating a map in the spirit of the period your theater was built
 - Create a map in the style of the graphics of the theater's original time. This map will show the theater in pop out image, as well as having image popouts of other key neighborhood landmarks you find interesting (3 or more). A Font(s) popular at the time should also be used, especially for titles and legends.
 - Links: (<https://www.1001fonts.com/1910s-fonts.html>)
 - Also, research posters of famous performances that took place at your theater during this time to increase your feel of the graphics for this period.
 - Research the graphic design and maps created from the period of time your theater was constructed. What colors and fonts are used? What is the main feel of the period? The colors can be inserted either through Basemaps, or through overlaid symbol polygons.
 - Use the colors to help create the spirit of the period.
 -

Living Atlas Layers for Demographic Analysis [11/30/20]

- **Median Household Income**
 - Meta-Data: <https://www.arcgis.com/home/item.html?id=45ede6d6ff7e4cbbbffa60d34227e462>
 - Map layer access: https://services.arcgis.com/P3ePLMYs2RVChkJx/arcgis/rest/services/ACS_Median_Income_by_Race_and_Age_Selp_Emp_Boundaries/FeatureServer
- **Median Age**
 - Meta-Data: <https://www.arcgis.com/home/item.html?id=d227d6a4ee3e4d2d87eb9843ee14dd87>
 - Map layer access: https://services.arcgis.com/P3ePLMYs2RVChkJx/arcgis/rest/services/ACS_Median_Age_Boundaries/FeatureServer
- **Language Spoken at Home**
 - Meta-Data: <https://www.arcgis.com/home/item.html?id=527ea2b5ba814c8ca1c34a2945e1b751>
 - Map layer access: https://services.arcgis.com/P3ePLMYs2RVChkJx/arcgis/rest/services/ACS_Language_by_Age_Boundaries/FeatureServer
- **Ethnicity**
 - Meta-Data: <https://www.arcgis.com/home/item.html?id=23ab8028f1784de4b0810104cd5d1c8f>
 - Map layer access: https://services.arcgis.com/P3ePLMYs2RVChkJx/arcgis/rest/services/ACS_Population_by_Race_and_Hispanic_Origin_Boundaries/FeatureServer
- **OpenStreetMap Amenities North America**
 - Meta-Data: <https://www.arcgis.com/home/item.html?id=bad87ec08d394721a032cd97a0f640a7>
 - Map layer access: https://services6.arcgis.com/Do88DoK2xjTUCXd1/arcgis/rest/services/OSM_Amenities_NA/FeatureServer
- **OpenStreetMap Landuse North America**
 - Meta-Data: <https://www.arcgis.com/home/item.html?id=282127096f344ed39a8d895d498d94c4>
 - Map Layer Access: https://services6.arcgis.com/Do88DoK2xjTUCXd1/arcgis/rest/services/OSM_Landuse_NA/FeatureServer