ArcGIS Online Part 1 Workshop
Spring 2015 – Spatial Analysis Lab

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5. Place Location Map Note
6. Use Find Nearest Tool
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1. Accessing ArcGIS.com
Start by accessing ArcGIS Online:

1. In a web browser (preferably Google Chrome) go to www.arcgis.com

2. Click **Sign In**

   👤 Sign In

3. Use the following to sign-in:

   ** Please contact at SAL@Smith.edu for username and password

4. In the ribbon at the top of the page click **Map** to open a new blank map

   FEATURES   PLANS   GALLERY   **MAP**   SCENE   GROUPS   MY CONTENT

5. Once the map is open zoom to Massachusetts using the scroll bar and pan by clicking and dragging the map – much like in Google Maps

   a. Locate Springfield MA on the map

2. Save Web Map

Go ahead and save your web map, since the account is being shared please make sure to include your name when saving your map:

1. Click **Save**
2. Select **Save As**
3. Add a name as well as a tag of your choosing (yes, this is required)
4. Click **Save Map**

**Saving periodically is a good idea. If your browser is accidentally closed or refreshed the work will not be automatically saved.

3. Add Layers

Add a feature service that we've put together and shared for online access:

1. Click the **Add** dropdown

    a. Select **Search for Layers**

    b. The window that appears to the left will give you access to search Esri's online GIS database

    c. To access only the layers created for this workshop search "SFFA"

    d. If you are not receiving results, make sure to **deselect** the "Within Map Area" check-box

    e. Locate the "SFFA" and click **Add**

    f. Click **Done Adding Layers**
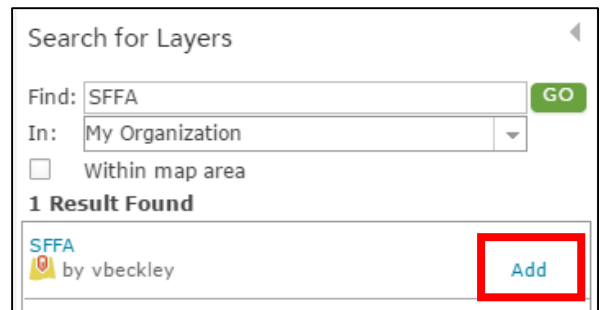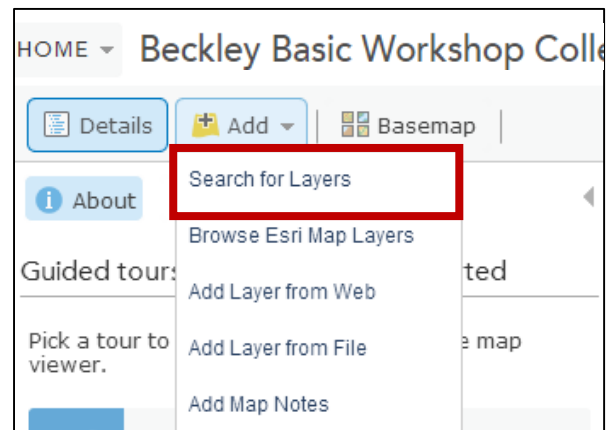
3.1 Explore the Layer's Content

There are now a variety of new layers added to the Table of Contents ("Content") of your web map. The next steps will lead you through exploring the data underlying these layers in order to better make sense of what is available and begin to transform it:

1. Take a moment to look over the layers listed in the Content of the web map

2. Locate the **Grocery stores** layer

3. To the right of the layer name there is a small **drop-down arrow**, which will from here out be referred to as the **Layer Options Dropdown --** this is where all of your layer options are located

4. Click the drop-down arrow and take a look at all of the functionality options listed

> ☑ SFFA - Grocery stores ▾
>
> "Layer Options Dropdown"

5. Select **Show Table** to view the layer's attribute table

6. Scroll down to view all of the fields (columns) of data as well as all of the features (rows)

7. You can expand the field name cell to view the entire text if some of the field names have been abbreviated due to character limit

8. To locate a grocery store on the map, click the feature in the table and a highlighted box will appear around the point on the map

9. Additionally, if you click the individual grocery store point on the map a pop-up will display the attributes of that store

10. Look at the pattern of store locations in Springfield, try to identify areas with low access to stores and areas with high access based on the overall distribution

| CONAME	SALES_VOL	NUMBER_EMP	SQFT	LOCNUM
BIG Y FOODS	988.00	0.00	A	889862611
STOP & SHOP SUPERMARKET	24,700.00	0.00	D	356880385
SUPER STOP & SHOP	61,750.00	250.00	D	315151167
SUPER STOP & SHOP	1,235.00	0.00	A	668936859
SAVE-A-LOT	5,187.00	21.00	B	962149795

3.2 Add Labels to Neighborhoods Layer

Adding labels to your features allows for additional data to be displayed on the map. We'll add the neighborhood names to the map:

1. Locate the Neighborhood layer and click the **Layer Options Dropdown**, select **Create Labels**

   a. Note "Name" in the Text field means the program will use the Name field to display neighborhood labels
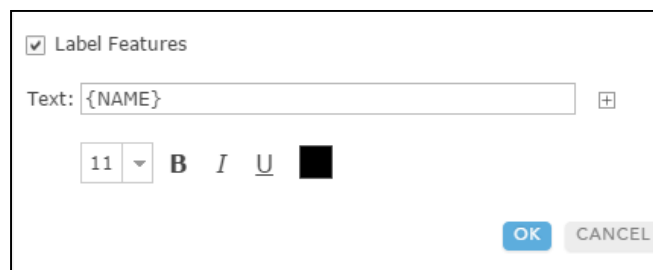
2. Feel free to make changes to the font settings, and click **OK** when done

3. Now on the map the name of each neighborhood is visible. There are four neighborhoods in the center of Springfield that we will focus on: Old Hill, Upper Hill, Bay, and McKnight – these are the Mason Square neighborhoods which are home to a number of organizations focused on addressing food access needs by developing an urban agriculture network that includes local gardening, harvesting, and delievering, as well as a local farmers market. A course in the Study of Women and Gender at Smith has worked closely with some of these community organizations in Mason Square to support efforts to expand food equity in Springfield by locating a new grocery store within these four neighborhoods. This is the same objective for this workshop – site a grocery store in the Mason Square neighborhoods.

4. Investigate Low Access and Low Vehicle Access Layers

The map contains layers from the USDA exploring food access, vehicle access, and income. These layers are in the Content window and can be made visible by checking the box next to the layer name:

1. Turn on the **One Mile from Supermarket** layer, this layer shows Low Access areas of Springfield – note the distance from the points in our grocery store layer – what might account for areas marked as over one mile from a supermarket that have one just outside the area border? How might this data have been created to cause this effect?

2. Turn on the **Low Income** and **Low Vehicle Access** layers one at a time, or together to look at the overlap of these different factors of access

3. Once you've looked at each layer you may want to turn them off to reduce clutter on screen or leave one or two on to provide context

4. Placing Location Map Note

Place a point, or "map note", in the Mason Square neighborhoods to represent a sample household to relate to these layers of access:

1. Click **Add**, and select **Add Map Notes.**

2. Title your map note layer "sample household", click **Create**

3. Note that creating this layer automatically takes you to the **Edit Mode** as indicated by the highlighted Edit button in the top banner – this is what you'll click to make future edits to this layer
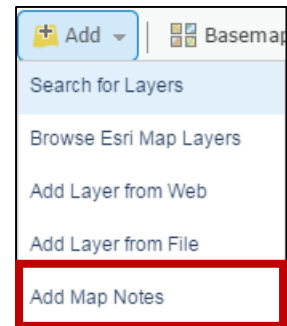
4. In the banked window on the left of the screen are features that can be added to the map

    a. To add a feature, select one of the point options from the panel – stickpin, pushpin, or cross

5. Zoom and pan to the place on the map you want to add the point, click the symbol from the options and then click again to place on the map

    a. The properties window will automatically appear, here you can add text to the point and change the symbol

6. When finished adding map note features, deselect the **Edit** button to exit the **Edit Mode**
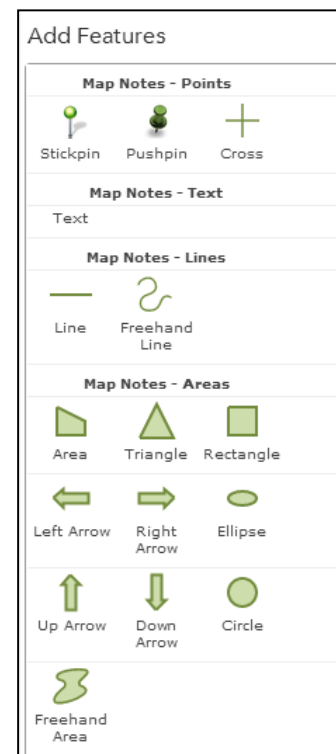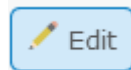
5. Finding Nearest Tool

Use the Find Nearest proximity tool to identify the nearest grocery store from your "sample household" map note point

1. Click the Layer Drop-down for the Sample Household layer, choose **Perform Analysis**

2. Expand the **Use Proximity** options and select **Find Nearest**

3. For **Find the nearest locations in**: Choose the Grocery store layer

4. Change **Measure** to Walking Distance

5. **Limit the number of nearest locations to:** 1

6. The Search Range is fine at 100 miles

7. Change the result name to be "Nearest grocery last name"

8. Save in the default location

9. Unclick **Use current map extent**

10. Run Analysis

11. It will take a minute or so, once the new layer is added to the map take a look at its different components, click on the resulting lines and points on the map for more information
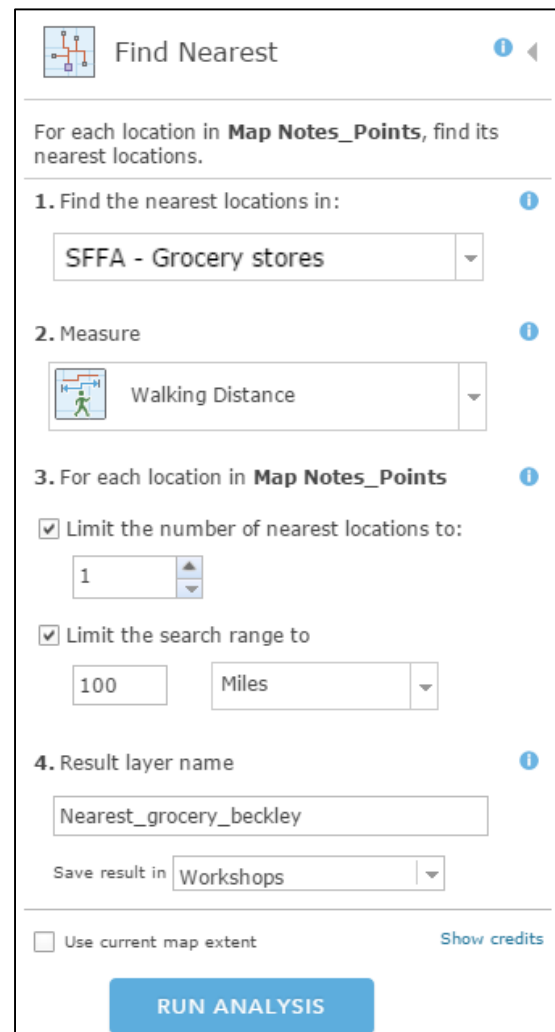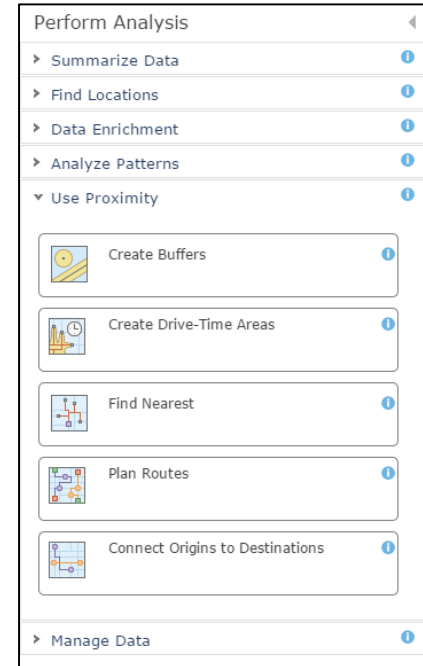
6. Siting a New Grocery Store Location

Take what you've explored so far to identify a vacant lot that could be used to build a new grocery store in the Mason Square area that would improve access to homes like your sample household:

1. Turn on the **Medium Vacant Lots** layer and the **Large Vacant Lots** layer
2. A "Medium lot" is defined here as 25,000sqft – 50,000sqft and a "Large lot" is defined as "50,000sqft +"

3. Look at the vacant lots in relation to the four mason square neighborhoods, the grocery access layer, the vehicle access layer, and the other grocery stores – identify a few vacant lots that might work well for siting a new store

4. Turn on the **Bus Lines** and **Bus Stops** layers
5. Use these to narrow the vacant lot selection to ones in close proximity to bus stops

6. Decide on one vacant lot to designate as the ideal lot to build on
7. Add a new map notes layer:
   a. Go to **Add**, select **Add Map Notes**
   b. Name this New Store Location
   c. Once in the editor mode use either a point tool or a polygon tool to identify the chosen vacant lot
   d. Click the **Edit** button to end the editing session when done marking the store location

8. Once this is complete make sure to save your map, we'll pick up from here in the next workshop