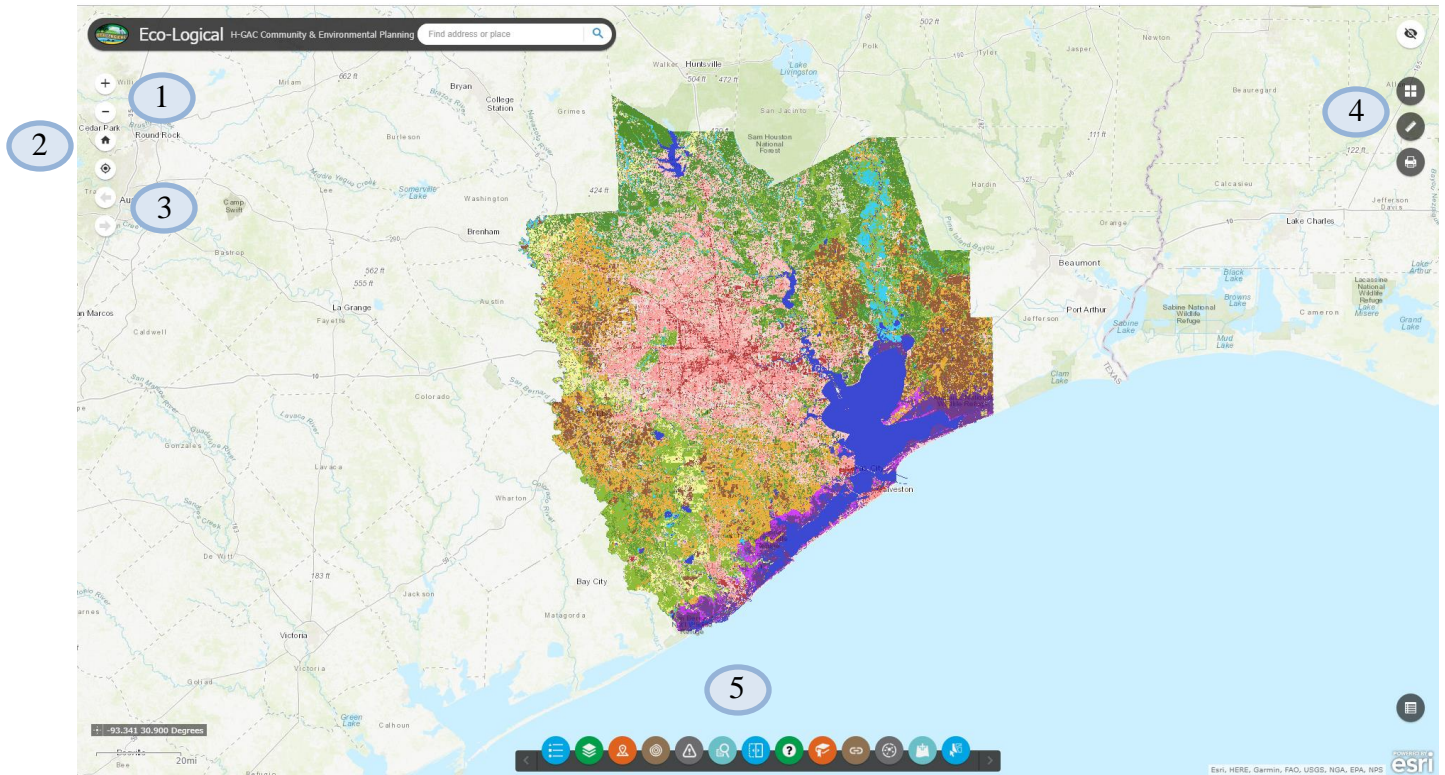# Eco-Logical User Guide

1. Application Platform

1. **Zoom in and Zoom out**

2. **Home** and **My Location** – **Home** zooms the map out to the initial extent while **My Location** centers the map on the user's current device location. **My Location** requires additional permission by the user.

3. **Previous and Next Extent** – Both buttons provide a quick way to get the map to previous extent.

4. **Basic Widgets** – Basemap Gallery, Measurement, and Print widgets.

5. **Advance Widgets** – There are 13 advance widgets including Legend, Layer List, Project Location, Eco-Type Density Contour Query, Red Flag Report, Eco-Type Acre Query, Eco-Type Comparison, Application Help, Bookmark, Links, Location Analysis, Add Data, and Select.

2. Basic Widgets

1. Basemap Gallery

Click **Basemap Gallery**   to select a different background map. There currently are 12 different background maps to choose from.
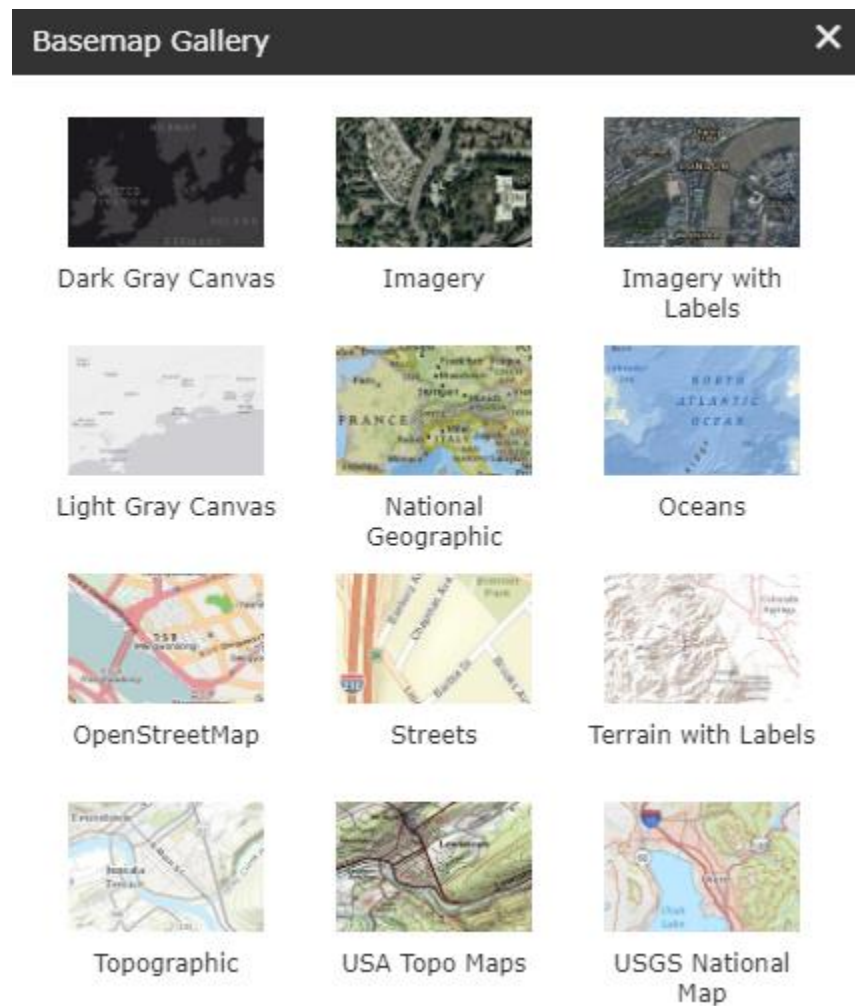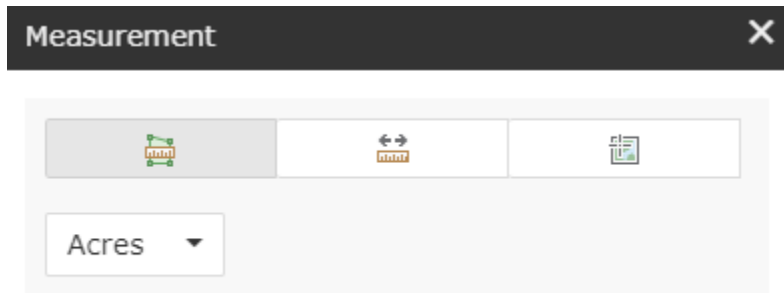
2. **Measurement**

Click **Measurement** to measure area, distance, and location.

Choose one of the measurement types. After selecting the type of measurement, you can change the unit of measurement.


For **line measurements**, click on the map to start the measurement and double click to end the measurement. For **polygon measurements**, click on the map to start measuring and double click to end measuring. When using a polygon for the measurement, you must have at least 3 vertices to get a measure. For **location measurements**, just click the map to get the Latitude/Longitude of the click.
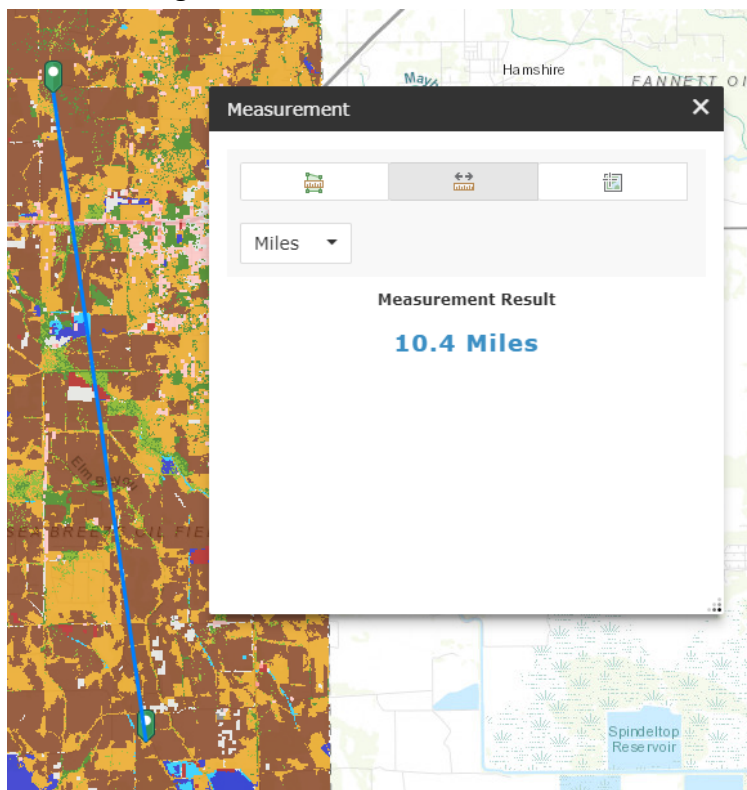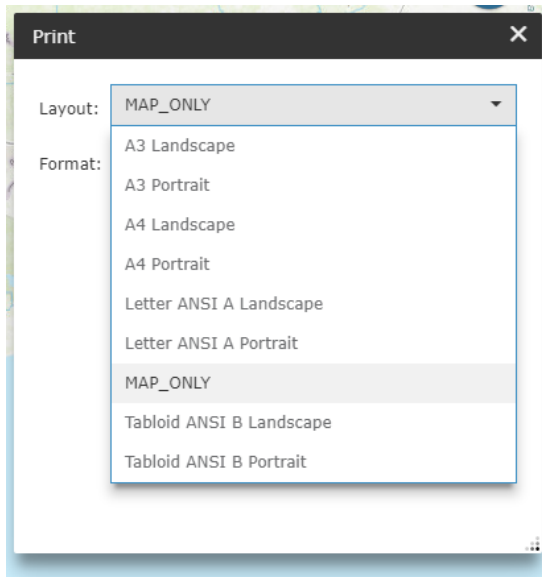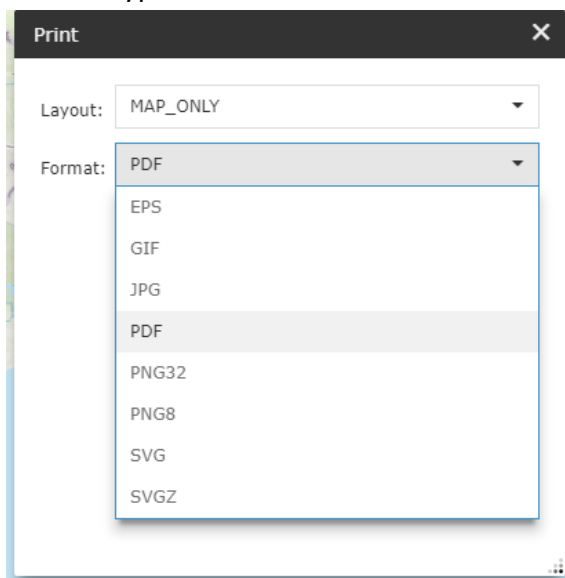
3. **Print**
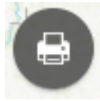
Click **Print** to open the printing options.

Click on the dropdown arrows to change the layout and format types. Once you've selected the layout and format you want, click "**Print**" to begin the download.

Layout Types:

Format Types:

3. Advanced Widgets

1. **Legend**

Click **Legend** to see the symbology of every layer that is currently displayed on the map.


Eco-Types

Eco Types (2018)

☐

🟩 Upland Forest

🟩 Bottomland Forest

🟧 Prairies

🟪 Tidal Prairies

🟨 Grasslands

🟦 Wetlands

🟪 Tidal Wetlands

⬜ Barren Lands

🟫 Row Crops

🟦 Open Water

🟥 Developed High Intensity

🟥 Developed Medium Intensity

⬜ Developed Low Intensity

⬜ Developed Open Spaces

2. **Layer List**

Click **Layer List** to turn map layers on or off.

Click the checkbox next to the layer's title to turn it on or off. If you click the arrow next to the checkbox, you can display the layer's symbology.
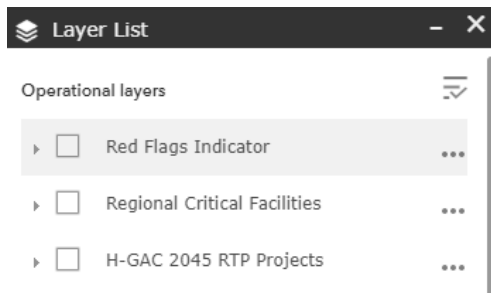
**Steps to Download Data using Layer List widget**

Frist, open **Layer List** then click on the dots icon for the layer you want to download. You must expand to the sublayer by clicking the arrow.

Second, click "**View in Attribute Table**" to open the Attribute Table.
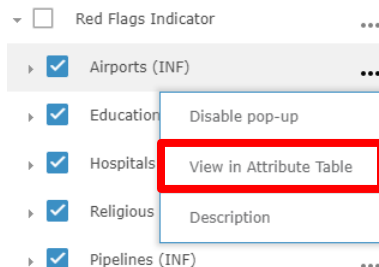
Third, click "**Options**" on the left-hand side of the attribute table.

Fourth, click "**Export all to CSV**" then "**OK**" to download the data.
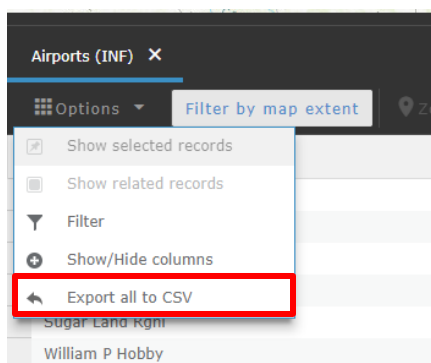
3. **Project Location**

Click **Project Location** to draw a project onto the map. You can add a point, line, polyline, freehand line, triangle, square, circle, ellipse, polygon, freehand polygon, or text.
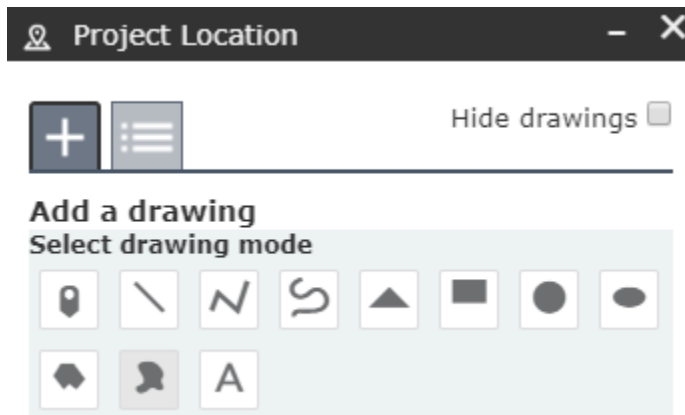
Click on the icon for the shape you want to draw. After clicking an icon, you can change the name and color of the drawing and add a description. If you scroll down, there are additional properties that can be edited. These properties include transparency, outline width, and whether to show measurements.
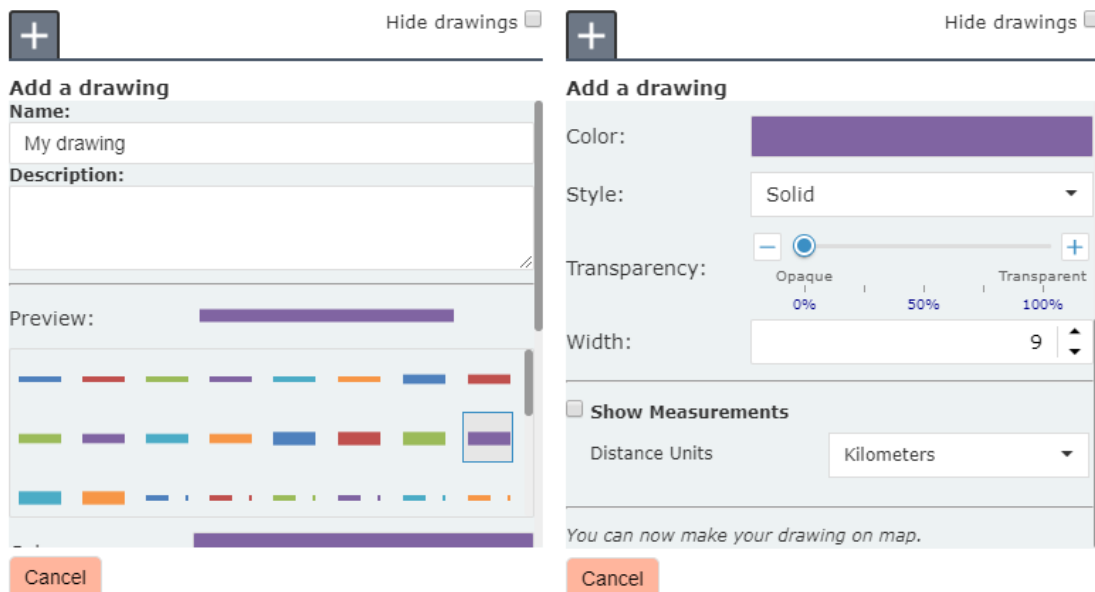
Draw your shape on the map and once you've finished drawing, the results will display on the screen.
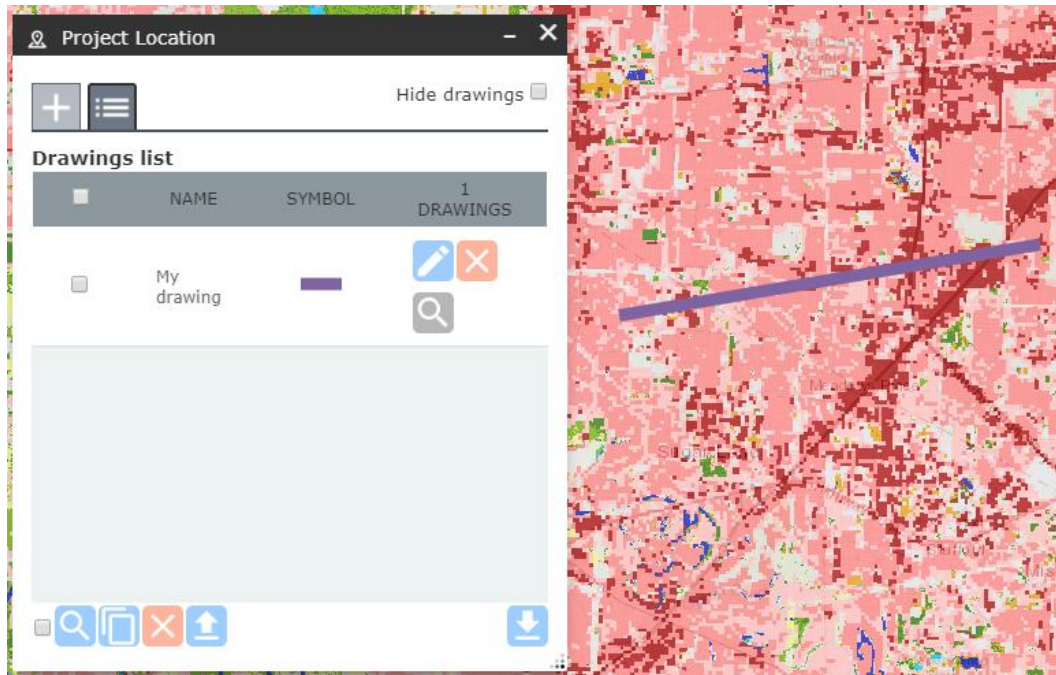
Click ![pencil icon] to edit the drawing result including title, description, shape color or size. Then click "**Save**" to save the changes.

After saving the changes, you can select several different operations from the widget window.

Click ![search icon] to zoom to the drawing.

Click ![delete icon] to delete a drawing.

Click ![copy icon] to copy a drawing to the widget pane.

Click ![export icon] to export a drawing.

Click ![import icon] to import a draw shape from a local drive.

Steps to use the drawn shape within the Red Flag Report or Location Analysis widgets

Click on the shape to open the popup window then click the dots icon ••• in the lower right-hand corner.
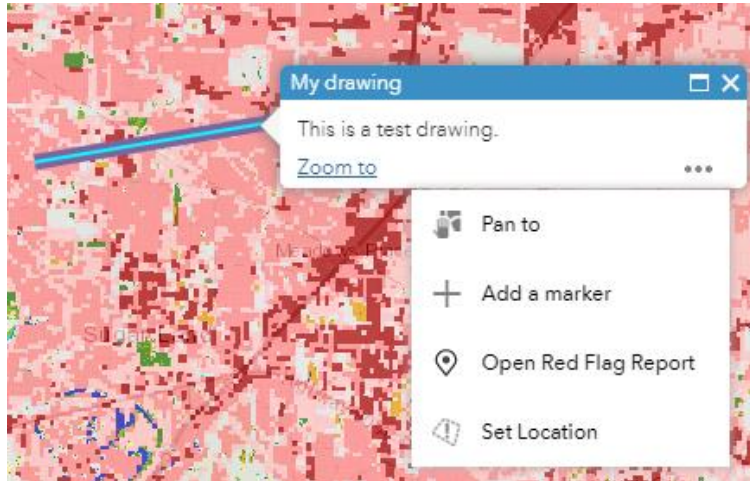
After clicking on the dots icon, you can either select "**Open Red Flag Report**" or "**Set Location**".

Selecting either option will open the widget then enter a buffer and you will successfully use your drawing shape in the widget.

4. **Eco-Type Density Contour Query**

Click **Eco-Type Density Contour Query** to display predefined percentiles of Upland Forest, Bottomland Forest, Prairies, Tidal Prairies, Grasslands, Wetlands, Tidal Wetlands, and All Eco-Types.

Select the Eco-Type you want to query.

Click the dropdown arrow to select the percentage of the Eco-Type you want.

Once you've selected a percentage, click "**Apply**"

After the query has finished, the results will display on the map and widget will display the results in a tabular fashion. The results are also included in the Layer List widget.
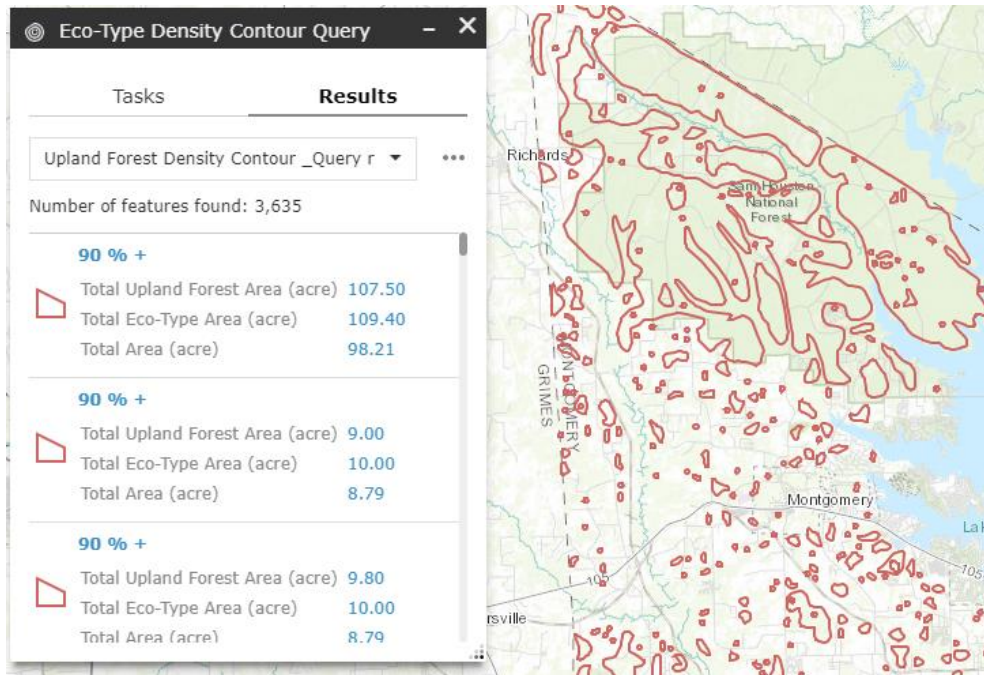
To make a new query, click the "**Tasks**" tab then the back arrow to start the query process over again.

5. **Red Flag Report**

Click **Red Flag Report**   to discover if any infrastructure, water resources, mineral exploration, hazmat concerns, ecological information, or cultural resources are within a determined buffer area of a point, line, or polygon.

When you open the **Red Flag Report**, you'll notice that you need to draw on the map. Select either a point, line, extent, or polygon.

After drawing on the map, enter a buffer distance greater than zero. Once you enter a number, the application will zoom to the shape you drew.

When you click "**Report**", the widget will search for any Red Flag feature that is within the buffer distance. While the widget is searching for Red Flag features, the map will turn on all the layers considered to be a Red Flag.

Any Red Flag features within the buffer distance will be listed in the widget under the category they fall into and list the number of features from each category.
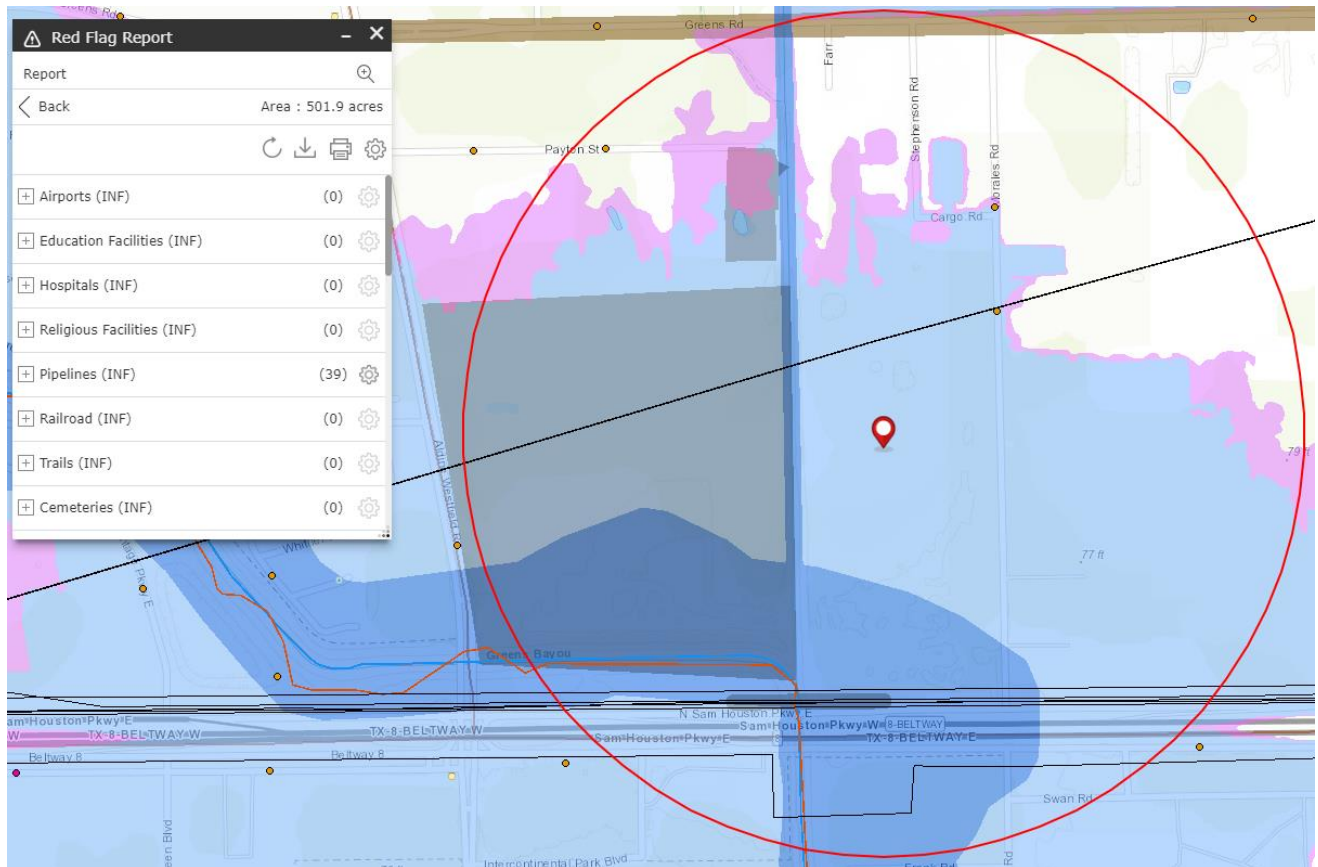
Click ⬇ to download the Red Flag features into a CSV file.

Click 🖨 to create a report of the Red Flag features. The report will include a map of the area, a summary of each category, and a detailed list of features from each category that fall within the buffer distance.

6. **Eco-Type Acre Query**

Click **Eco-Type Acre Query** to create a query based on acreage of Upland Forest, Bottomland Forest, Prairies, Tidal Prairies, Grasslands, Wetlands, Tidal Wetlands, and All Eco-Types.

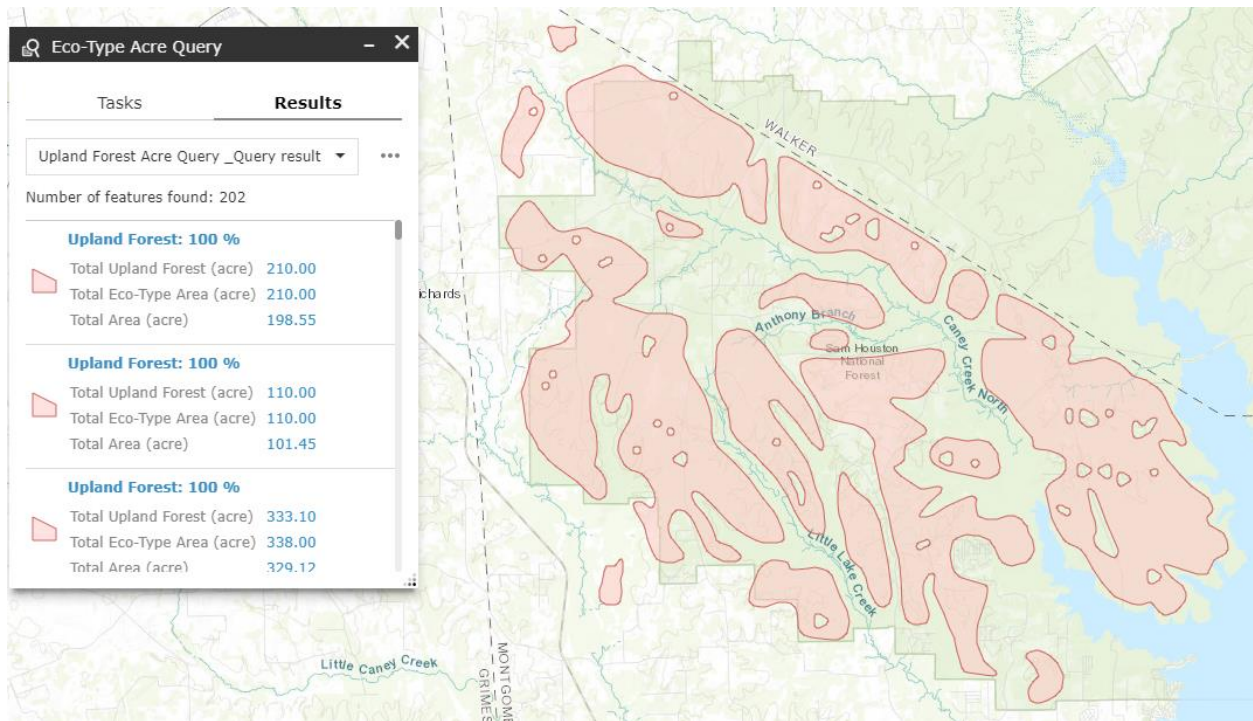Select the Eco-Type you want to query

Enter an acre value where you want to see areas that are greater than the number entered

Once you've entered a value, click "**Apply**"

After the query has finished, the results will display on the map and widget will display the results in a tabular fashion. The results are also included in the Layer List widget.

To make a new query, click the "**Tasks**" tab then the back arrow to start the query process over again.
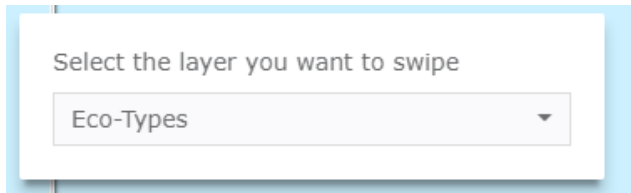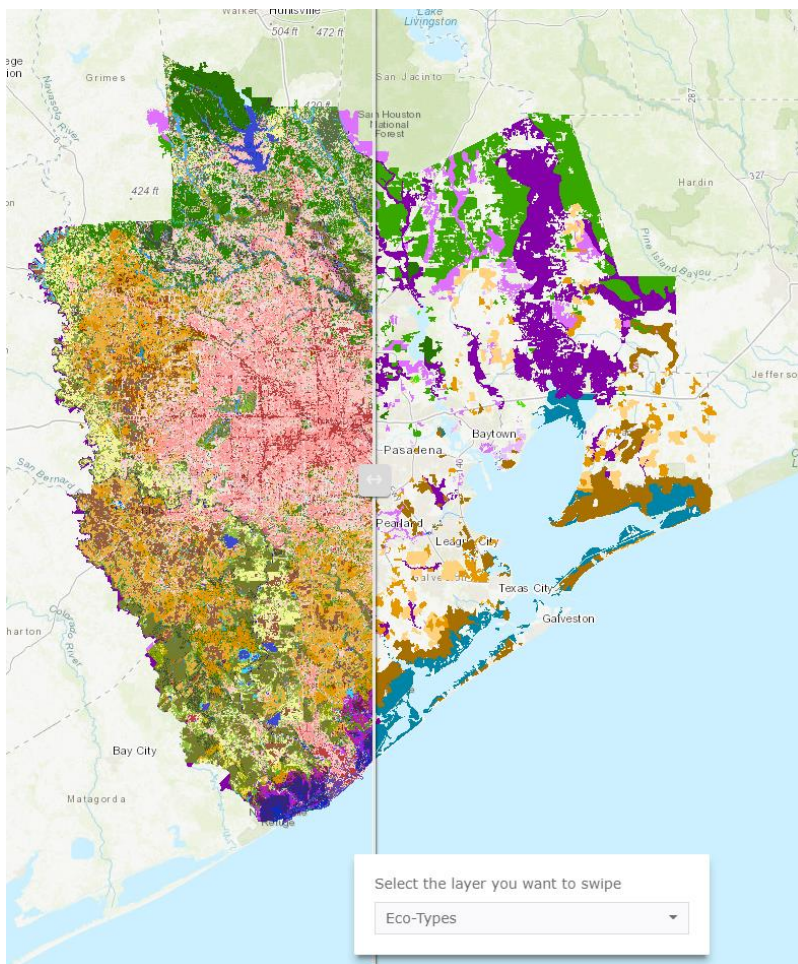
7. **Eco-Type Comparison**

Click **Eco-Type Comparison** to compare the current Eco-Type layer to the 2010 Eco-Type layer.

Select the layer to swipe by clicking the dropdown arrow

The layer that you choose to swipe will appear on the left side of the vertical bar.

Drag the vertical bar back and forth to compare the different Eco-Type layers.
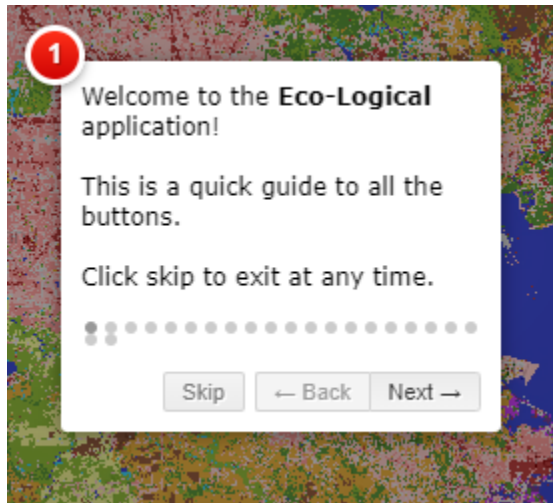
8. **Application Help**

Click **Application Help** to open the help popup window.

When viewing the popup window, you'll see dots under the help description. These dots allow you to skip ahead in the help window. If you don't want to skip ahead just click "**Next**" to move on to the next dot. If you want to exit the help window, click "**Skip**" and the window will close.

After you click "**Next**", the help window will move to the button that it is giving information about.
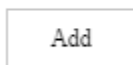
9. **Bookmark**

Click **Bookmark** to stores a collection of map view extents displayed in the application. You can create and add your map view extent which will be saved to the application when you return using the same computer and browser.

To create a new bookmark, you must have the map view at the extent that you want to save for later. Open the widget and click "**Add**".

After clicking "**Add**", a thumbnail image will appear with the words bookmark highlighted under it. Give the bookmark a name that will help you remember the area then click anywhere in the widget to unselect the name. You can edit the thumbnail image as well.
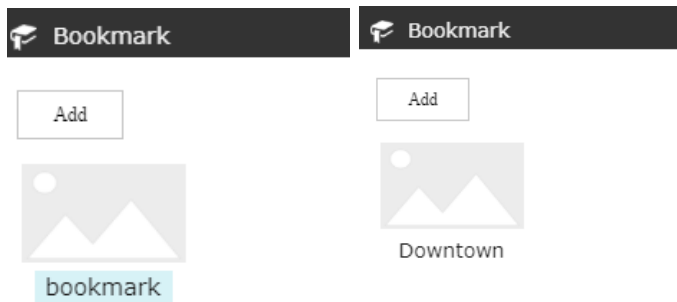
10. **Links**

Click **Links** to get links to the user guide and other helpful websites that H-GAC provides.
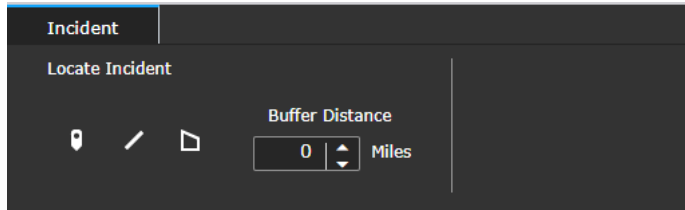

Several helpful links:

Eco Logical User Guide
Eco Logical Homepage
Contact Us
Request Eco Logical Data
Other H-GAC Mapping Applications

11. **Location Analysis**

Click **Location Analysis** to get detailed information for an extact area you want.

An analysis control panel appears at the bottom of the application.

There are three different methods to locate your area: **Draw Point** , **Draw Line** , and

Draw Polygon

Example of Drawing a Point:

- Click the point icon.
- Click the mouse at the location you want to add a point.
- Adjust the buffer distance by clicking the arrow bar or type a specific number. (The buffer distance is 0 by default and nothing will draw until you change the distance to any other number.)
- The results will be displayed in the tabs located on top of the panel. The information will show Eco-Type (in acres and percentage), Announced Development, Land Use (current and in 2045), and TAX 5217. If a tab is grayed out, then there were no results for that tab.

- You can create a report of the results by clicking

- You can create a CSV of either all the tabs or for each tab by clicking

Incident	Eco-Type (acre)	Eco-Type (%)	Announced Developm...	Land Use (Current)	Land Use (2045)	TAZ 5217
	Total Area (acre)	Total Eco-Type Area (acre)	Upland Forest (acre)	Bottomland Forest (acre)	Prairies (acre)	
	2,300.0	1.4	0.0	0.3	0.6	

12. **Add Data**

Click **Add Data** to add data to the map by searching for layers in ArcGIS Online, entering URLs, or uploading local files. The type of local files acceptable are shapefiles in a zipped folder, CSV, GPX, and GeoJSON. The data that is added to the map are temporarily.

On the Search tab, type the layer you want to search and click "**Add**" on the item you want to add to the map. The added layer will also appear in the Layer List.
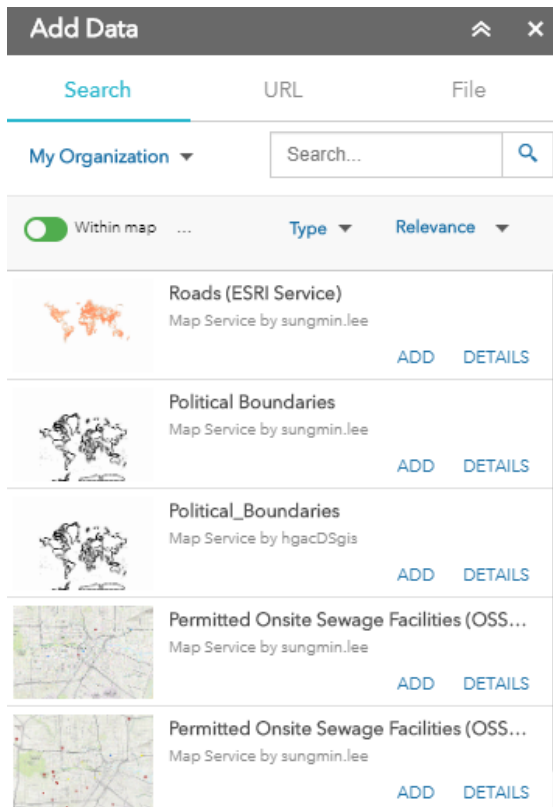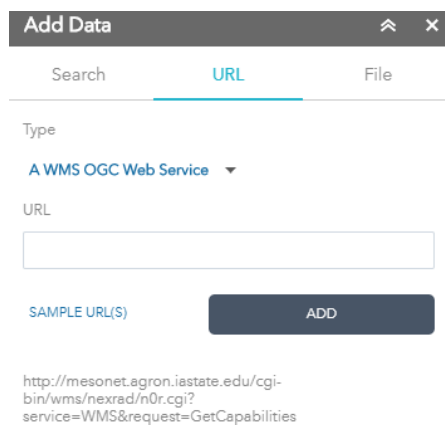

Click "**Remove**" to remove the layer from the map. Click "**Details**" to get more information about a layer.

By default, the search tab only searches for layers that are within the current extent of the map, but you can click to search all layers that are hosted on ArcGIS Online.

- Click "**Type**" to search based on map service, feature service, image service, vector tile service, KML, or WMS.

- Click "**Relevance**" to sort items by relevance, title, owner, rating, views, or date

To add layers by URL, click the "**URL**" tab next to the Search tab. Choose a type and enter the URL. Click "**Add**" to add the data to the map. The added layer will appear in the Layer List. The following types are supported through entering an URL:

- ArcGIS Server Web Service
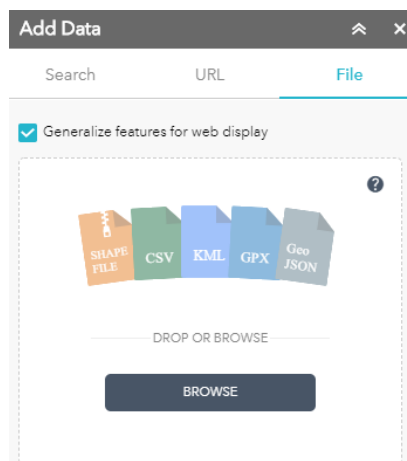
- WMS OGC Web Service

- KML

- GeoRSS

- CSV

By clicking on Sample URL(s), you can see how the URL should be formatted for the different types.

Click "**File**" tab to upload local files. You can either drag and drop the files or you can browse to the files. As mentioned before, the supported files are zipped shapefiles, CSV, GPX, and GeoJSON. **There is a limit of 1,000 features in any supported file type.**
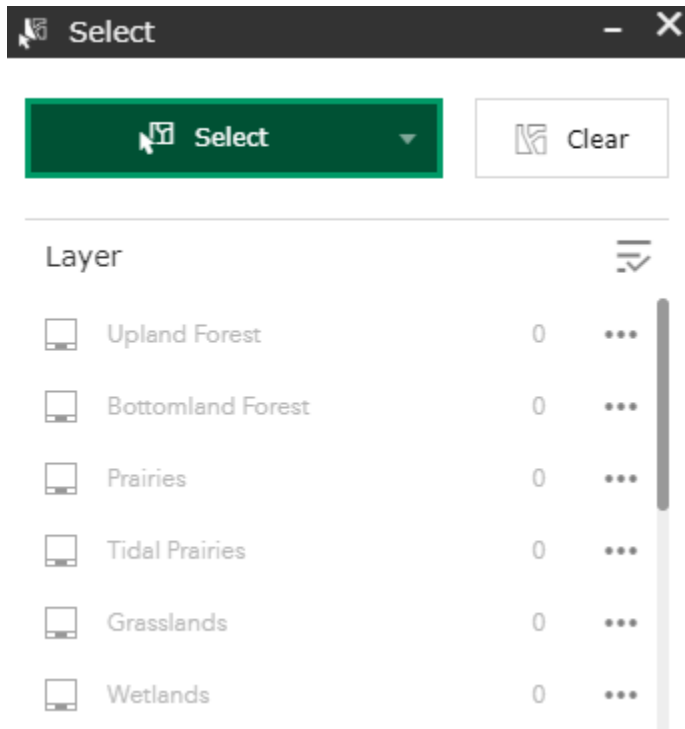
13. **Select**

Click **Select** to select features from layers in the map.

Click the checkbox of the layer you want to select. If you see this then you need to turn the layer on from the Layer List widget.

If you click the Select dropdown arrow, you can change how you select features. Select by rectangle is the default option, but the other choices include Select by point, Select by polygon, Selecty by circle, Select by line, and Select by lasso.
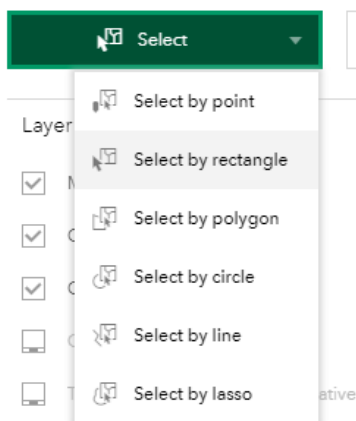
How to Draw a Project and Open Red Flag Report or Eco-Type Summary

1. Click to open the Project Location widget.

2. Click to draw a line on the map.

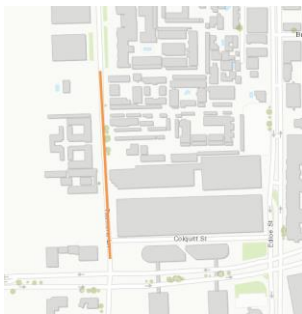3. (Optional) Change the name of the drawing and give a description.
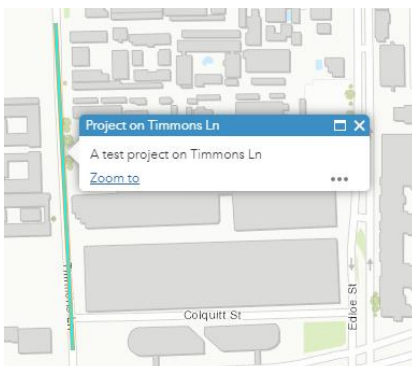

4. (Optional) Change the color and thickness of the line if desired.

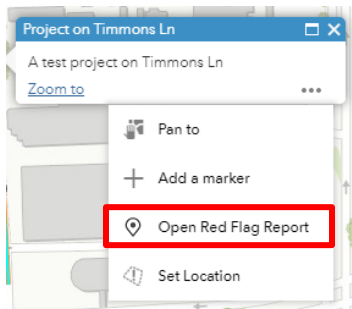5. Click and drag the mouse to the desired length of the project.

6. Click the newly drawn project to open the popup window.

7. In the lower right-hand corner of the popup window, click ••• to expand options for the project.

8. To create a Red Flag Report using the drawn project, click "**Open Red Flag Report**".

9. Enter a buffer distance and hit Enter on the keyboard before clicking "**Report**". Refer to the Red Flag Report section in the User Guide to determine what you can do with the results of the report.
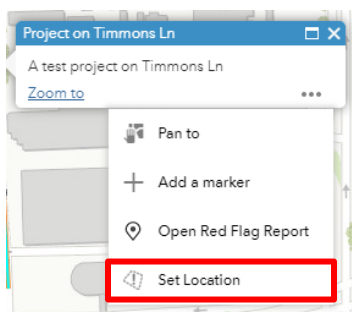 NOTE: If you don't hit Enter on the keyboard before clicking "**Report**" then the Red Flag Report might not work properly.

10. Click "**Set Location**" to use the drawn project within the Location Analysis widget.

11. Enter a buffer distance and hit Enter on the keyboard then click on a tab to view the results. If a tab is grayed out, then there are no results for that tab. Refer to the Location Analysis widget to determine what you can do with the results.