GIS I: Organizing Principles
Working with Spatial Data

*** Files needed for exercise: **UtahHospitals.ppkx, ExerciseData.gdb (contains UT_county_2017**)
You will need to have ArcGIS Pro installed on the machine used for this exercise.
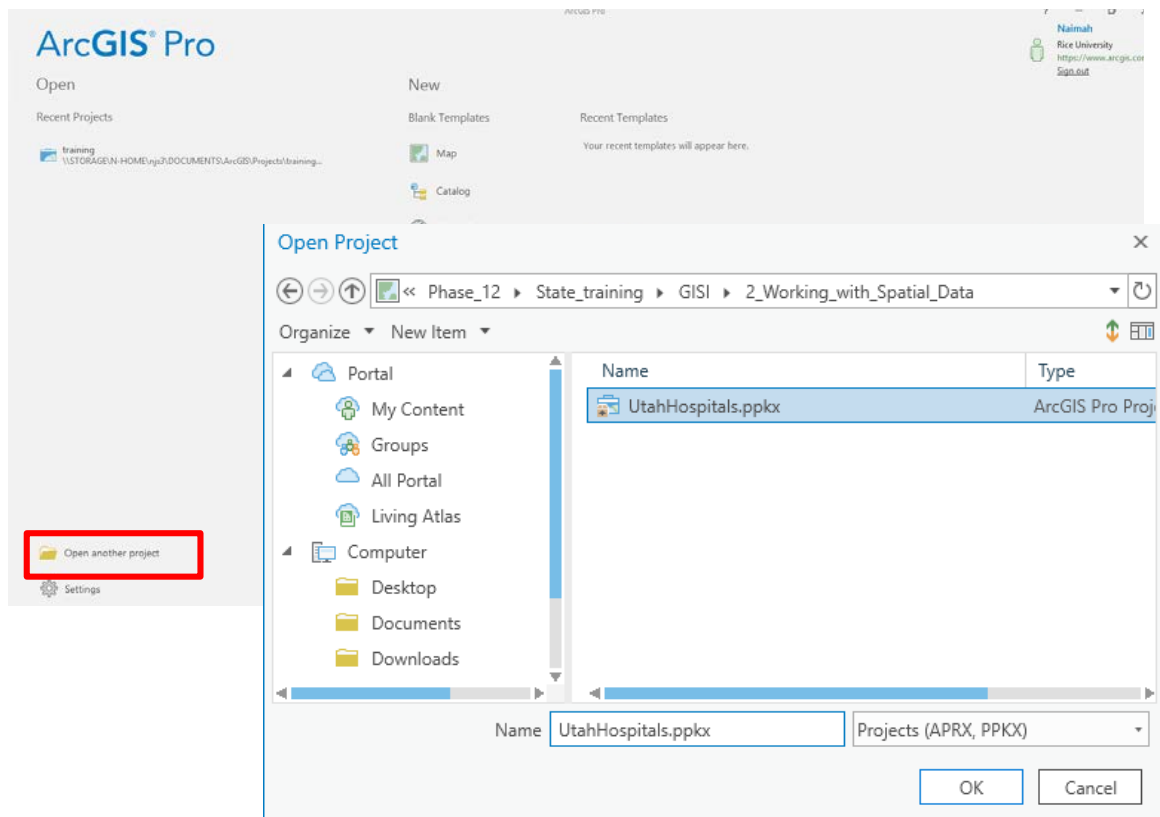
Goals:

Our goal for this exercise is to explore an existing ArcGIS Pro project of Utah hospitals and add in county boundaries to the map.

Skills:

After completing this exercise, you should be comfortable navigating around an ArcGIS Pro project, viewing and exploring geographic data in a map, and adding new data to a map.

Opening ArcGIS Pro and a Project Package

1. Open ArcGIS Pro (Start -> All Programs -> ArcGIS ->ArcGIS Pro). Sign in with your ArcGIS account, if necessary.

2. From the introductory dialog box, choose to **Open another project**. Navigate to this module's exercise folder and open "UtahHospitals". This is a project package containing all the maps, layouts, toolboxes, data, etc. related to this map project.
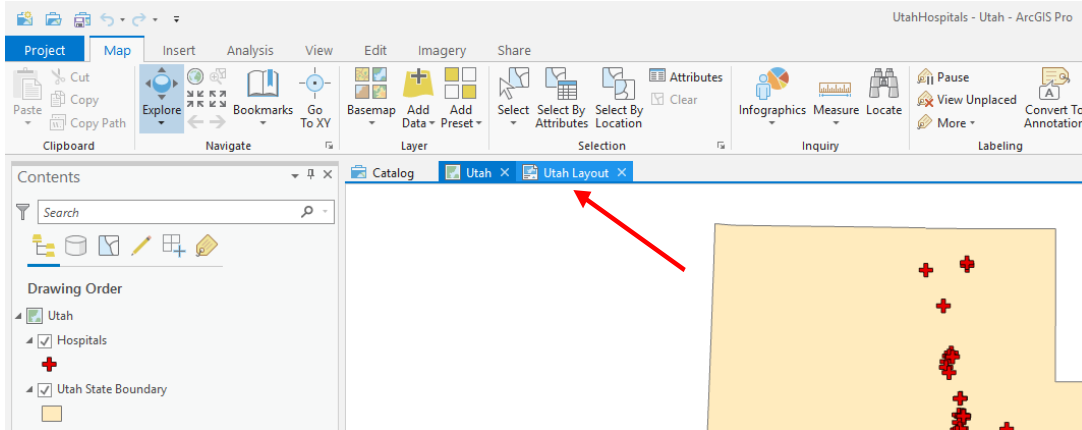
3. You should now see a map showing hospital locations within the state boundary of Utah.
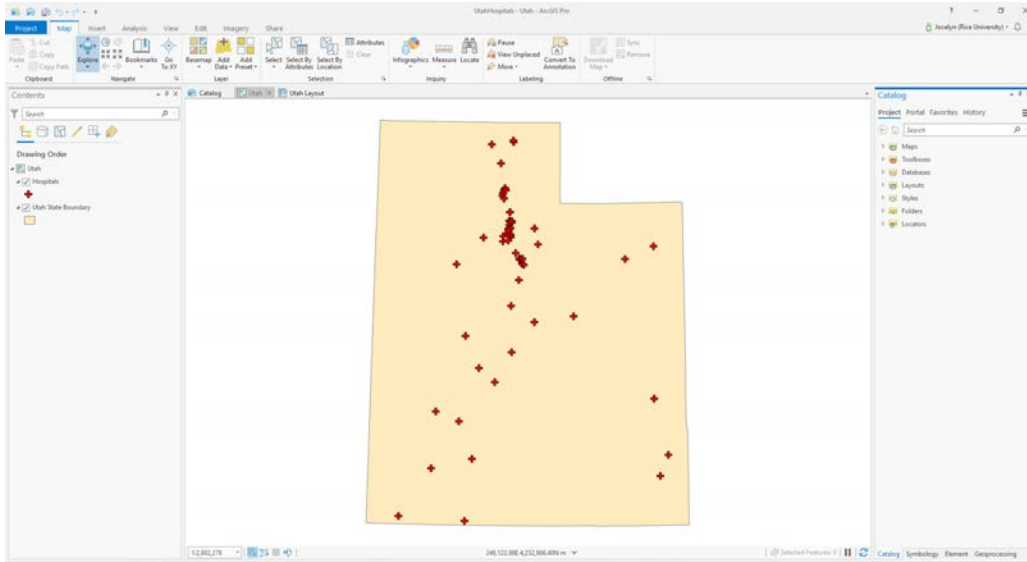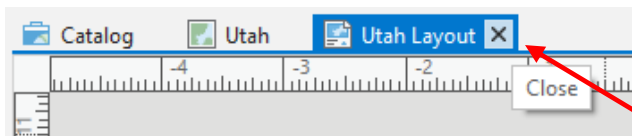

Changing Views

1. The main window should be the active map view of Utah. Change the active view by clicking on the tab named Utah Layout at the top of a view window. This displays the layout view.

2. Click the **X** on the tab to close the Layout view. This removes the view but does not delete it from your project.
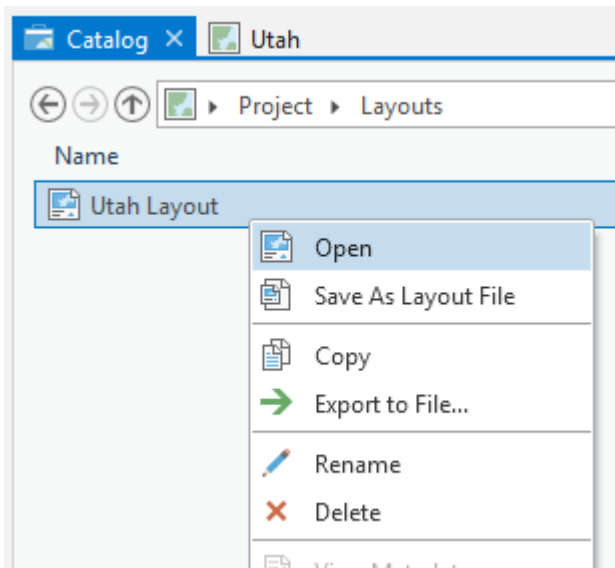

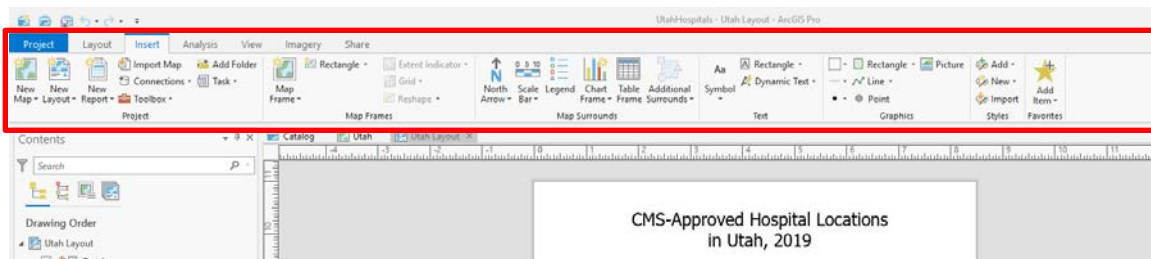3. Click on the **Catalog** view tab to view your project items.

4. Navigate to Layouts->Utah Layout. Right click and choose **Open** to add the layout back to your open project views.
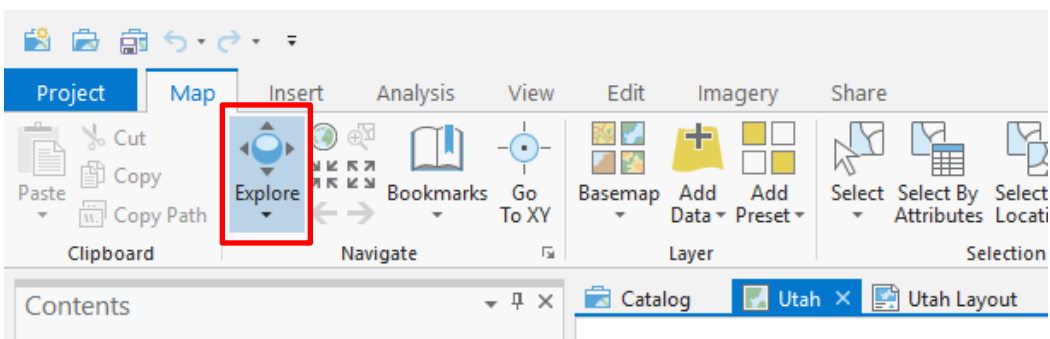

Exploring a Map

1. Notice the ribbon at the top of the application window. Its tabs, groups, and tools will change depending on the active view. Change the active view back to the Utah map view.

2. Under the Map tab in the ribbon, find the **Explore** tool. The **Explore** tool is the default map navigation tool and should automatically be selected/highlighted.
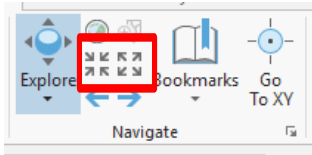

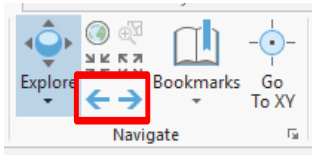3. Click and drag to pan around the map.

4. Use the scroll wheel to zoom in and out of your map. You can also use the "fixed zoom in" and "fixed zoom out" tools next to the Explore tool in the ribbon.

5. If you make a mistake and zoom in (or out) too far, you can easily return to the previous zoom level and scope using the "previous extent" tool.

6. You can also use the "full extent" tool. This tool zooms in (or out) so that the whole map fits in the view window.
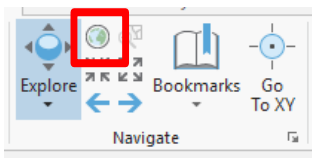
7. Click a feature, such as one of the hospitals, on the map to activate its pop-up. The pop-up will contain a list of the feature's attributes.

8. Practice panning around the map and zooming in to look at specific features.

Making changes to a map

1. In the left pane of your ArcGIS Pro window, you should see the **Contents** for the current map. This tells us about the data that are present on the map and how they are displayed. For example, the state of Utah is represented by a tan color.
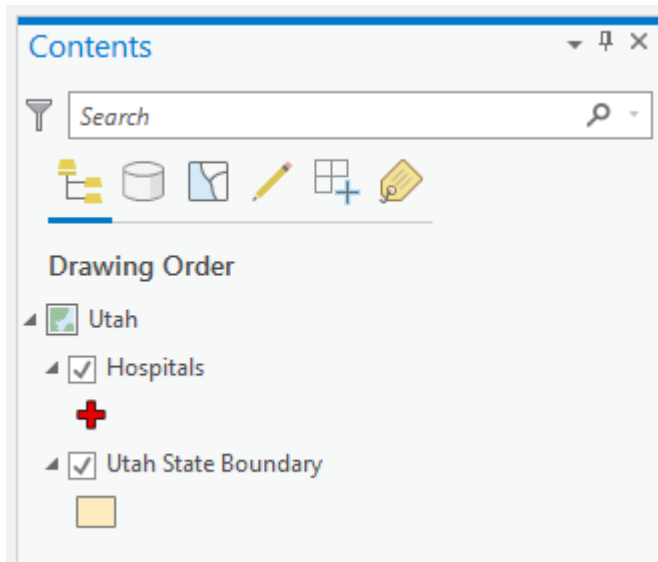
2. Click the check box to the left of the word "Utah" to turn off the display of this layer. Check the box again so the state is present on the map.
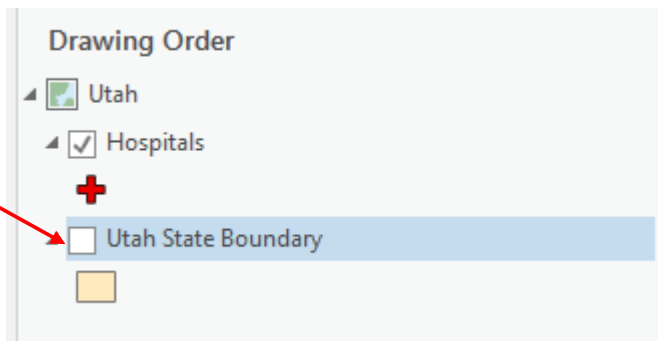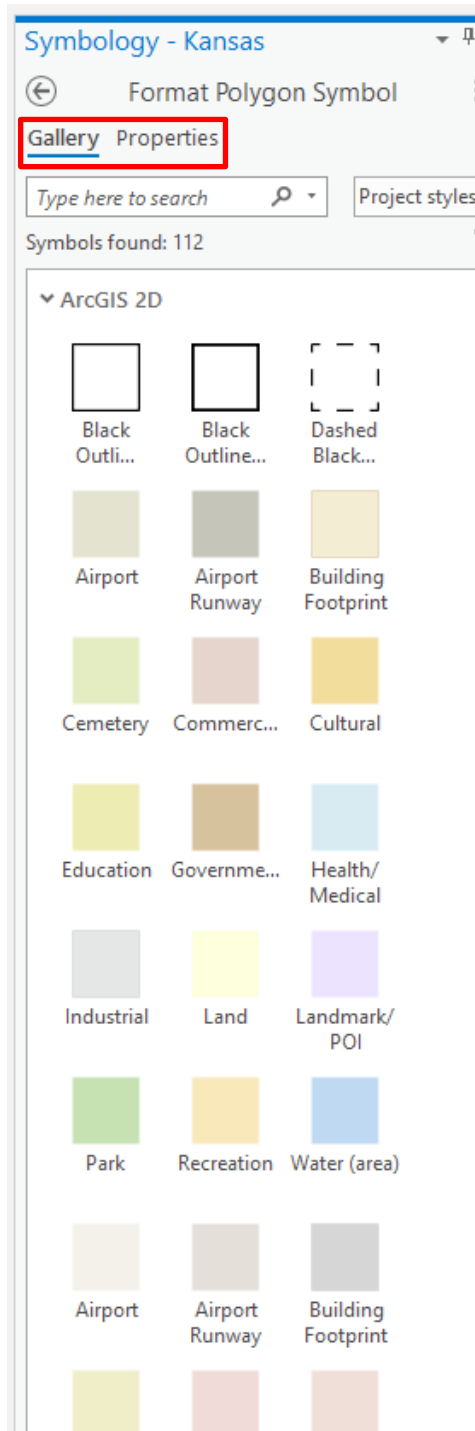

3. To change the color of the state, click on the corresponding sample symbol under its name.
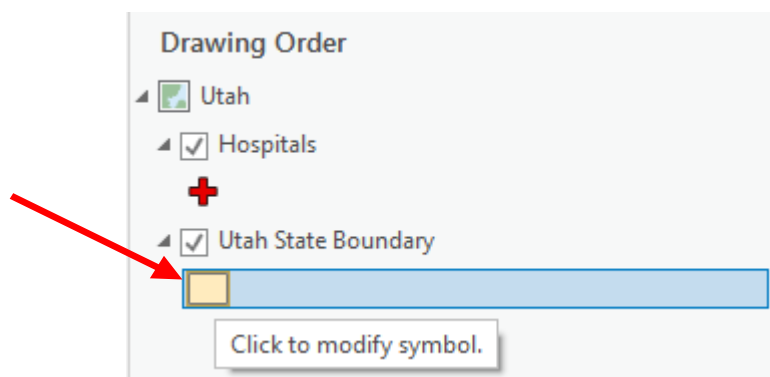
4. A new Symbology pane should appear on the right side of the application window. Notice the option to change between the Gallery and Properties tabs. Many settings are nested within tabs in the Symbology pane. We will explore how to adjust settings and make changes to Symbology in "Displaying Spatial Data".
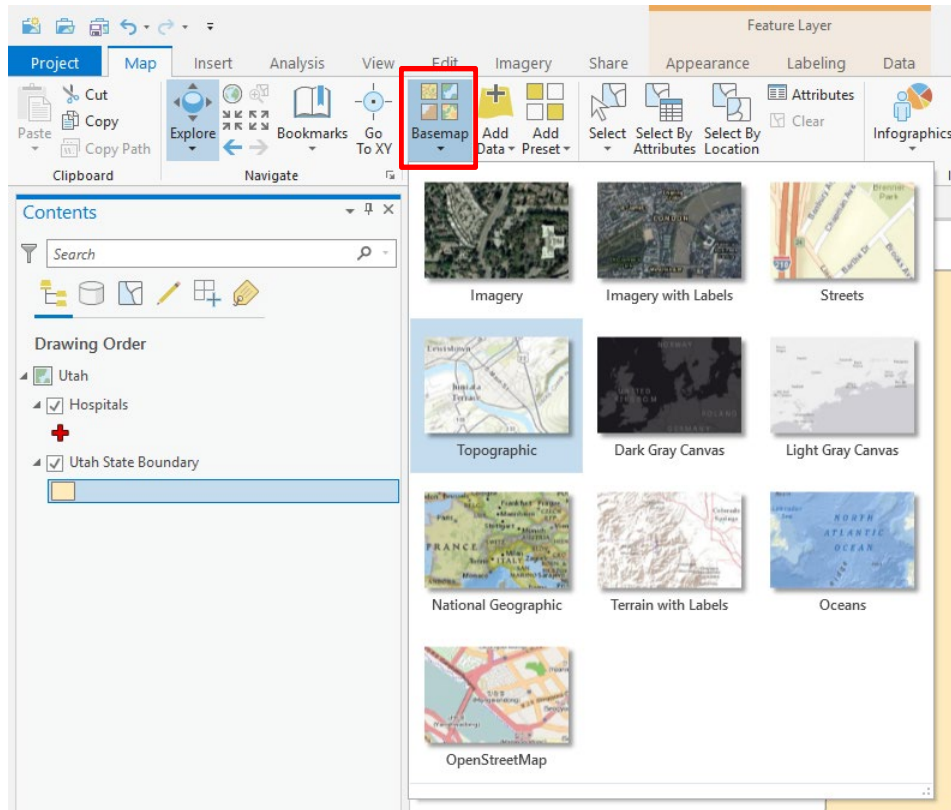
Adding data to a map

1. The useful dataset to add to a map is a basemap. In the ribbon map tab, select the basemap icon to view a gallery of available basemaps. Click one, such as Topographic, to add it to the map.
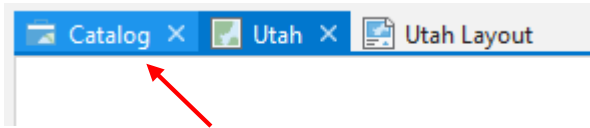

2. Basemaps are great for adding context to your data or highlighting your area of interest. They appear in the background, behind your main data. Zoom out to see more of the basemap.
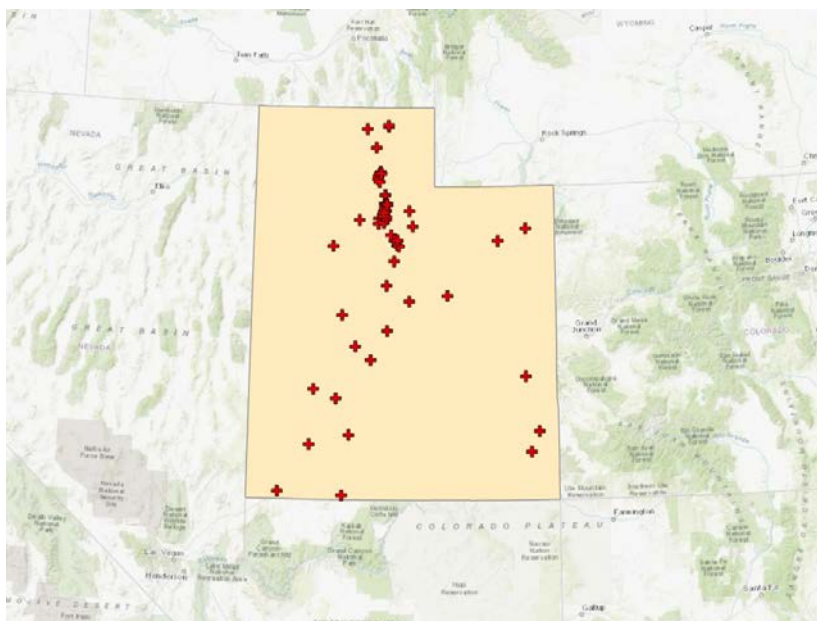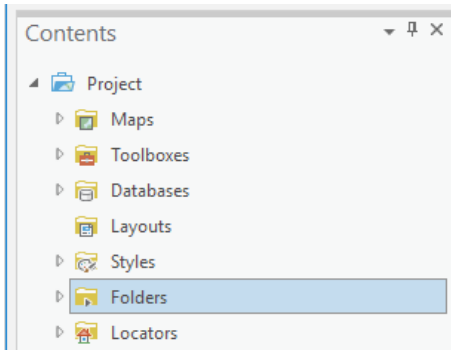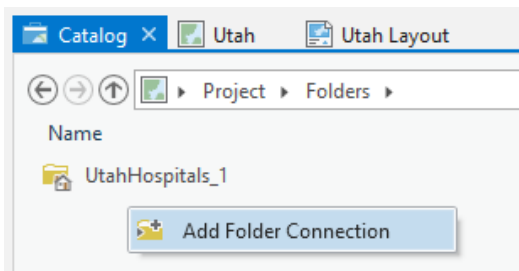
3. For additional context, let's add in county boundaries. To add data from a local source, we will first make a folder connection. First, switch to the **Catalog** view.
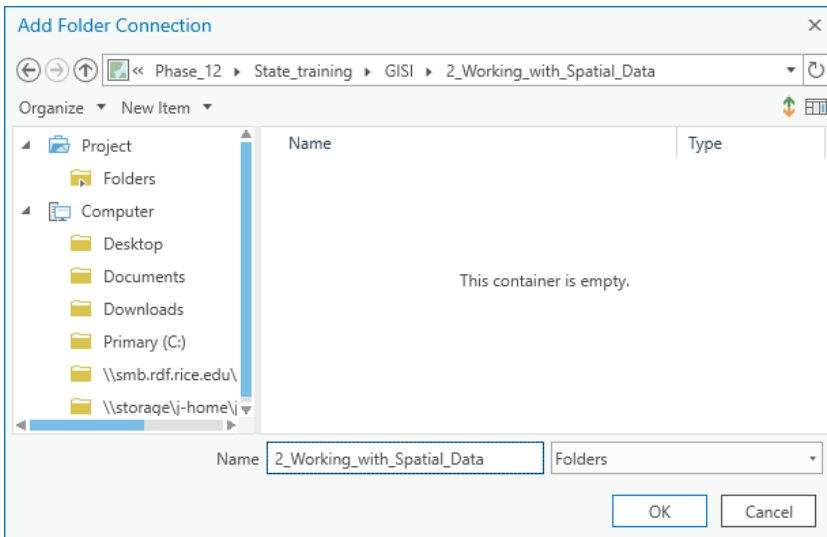

4. Navigate back to Project then to Folders. Or select Folders in the Contents Pane.

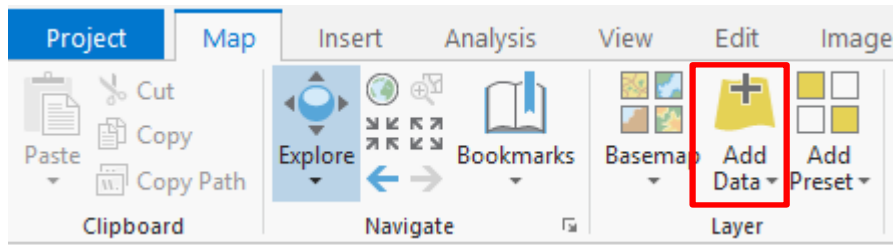5. Right click in the view and select **Add Folder Connection**.

6. Browse to this module's folder and select the <u>folder.</u> Click **OK**. Note: since you are only adding a folder connection, you will not see any datasets while browsing. We will use this folder connection in the next step.
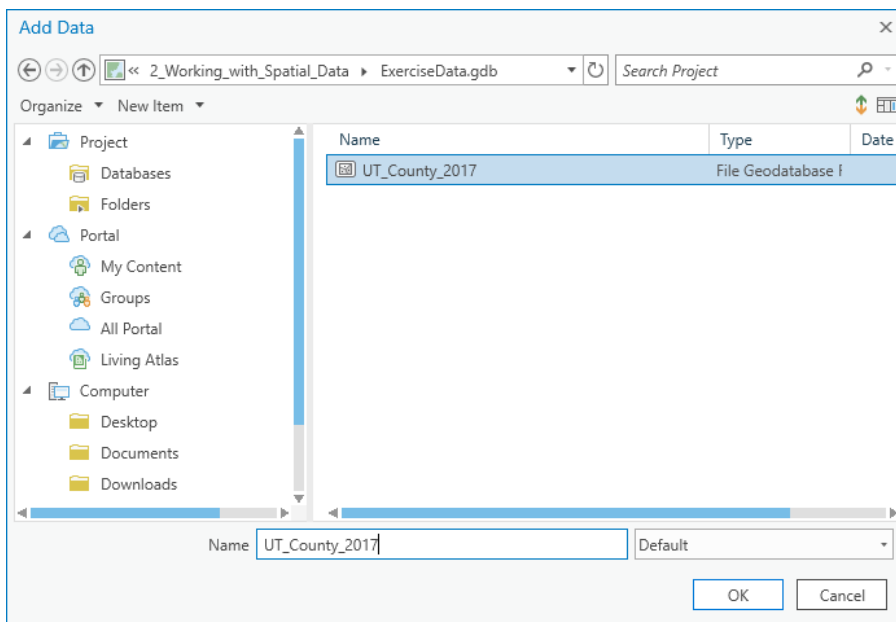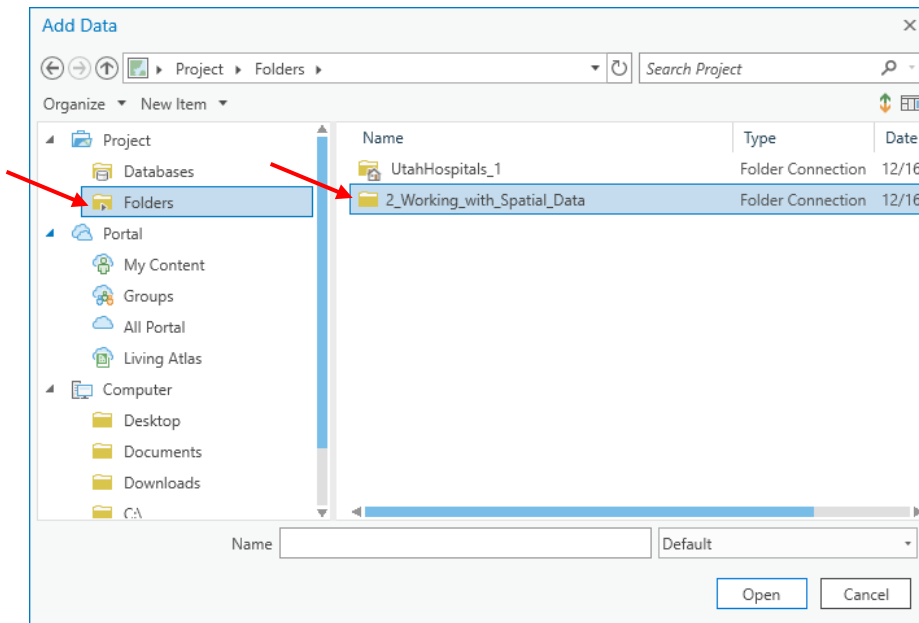
7. Return to the Utah map view. This time, under the ribbon map tab, click the **Add Data** button.
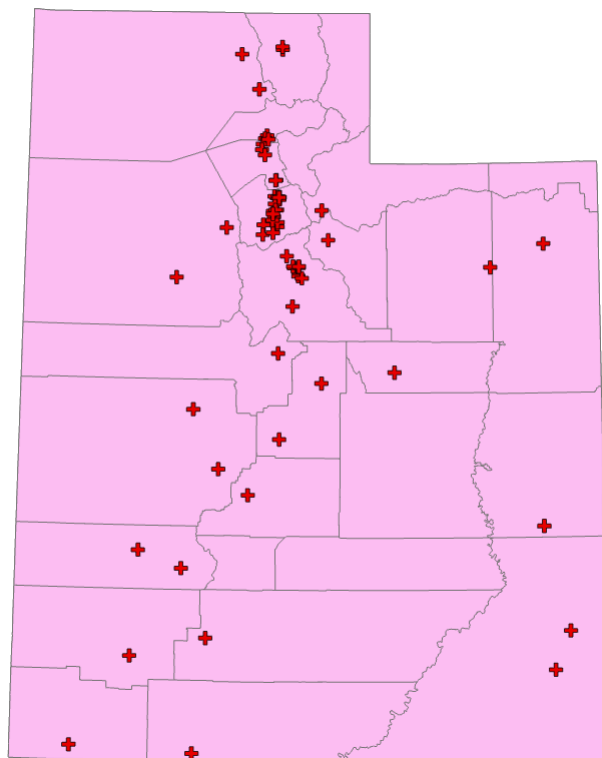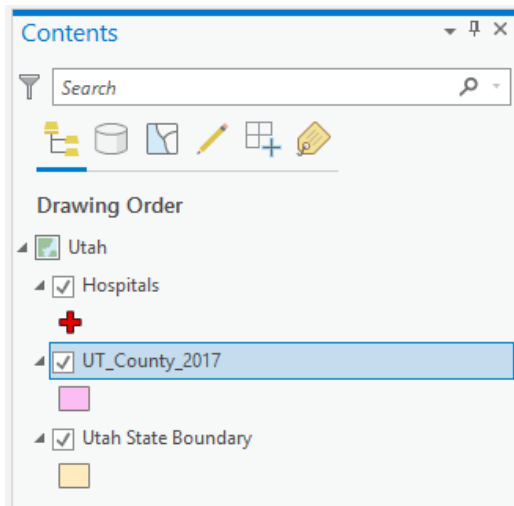

8. Navigate to the folder you just connected to and open up the ExerciseData.gdb. Select the county boundaries data, UT_County_2017. Click **OK** to add it to your map.

9. Check that it has been added to both your map and the **Contents** pane. Note: the counties may be represented with a different color than below.

10. **Save** your project using the quick access toolbar in the top left of the application window.