



Help Document

Introduction

This document is meant to be used alongside the materials and instructions for the 2017 Florida GIS Competition. It provides more detailed steps and explanations for the processes needed to complete a map project. To follow along, make sure that you have ArcGIS Online open and you are logged into your account. For more information about that initial set-up, you can refer to the conest website at:

www.flgiscompetition.com/florida-gogreen.

For further help, feel free to contact flgiscompetition@ispa.fsu.edu

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1 Data Management and ArcGIS Online Tips

ArcGIS Online does not have an Auto-Save feature so it is important that you save early and often to your account to ensure that you do not lose any work. When you are adding data you should also think about who “Owns” the data and how you are able to edit it.

At the beginning of the activity, you will open a starter map to use. From here, you should “Save As” to “Your Content” so that you can keep track of your edits.

2 Prepared Data Sets Available

Throughout the activity, you will be asked to use different data sets. We have prepared all of the data for you in a manageable format. Many of the large data sets have been cut into count-by-county pieces to limit confusion. Feel free to use other data sets if you want to add another dimension to your project and suggested analysis. You will need to find these data sets on your own, but we are willing to help if you get stuck adding or finding other data sets. The following data sets are available publicly online and can be found by searching for the tag “Florida Go Green”

- Florida Wildlife Corridor
- ESRI Green Infrastructure Cores
- County Boundaries
- Highways
- Major Rivers
- Satellite Imagery

3 Project Set-Up

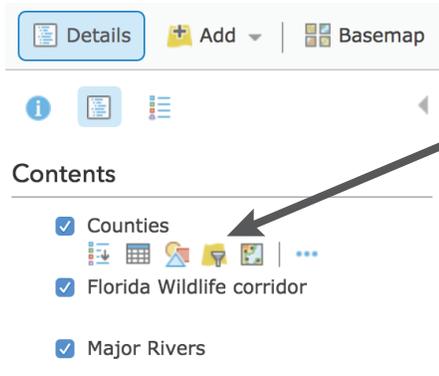
To begin work on this project, you need to locate the “FL Go Green Starter Map” which is available via a search. If you need help with searching for resources, refer to Page 6. From there, all the necessary data layers should be loaded and you can simply do a “Save As” to get your own copy to your account so your edits won’t be lost. Once the map is saved to your account, follow the instructions on the Instruction Story Map to begin making your map!

There is also a link to this starter map and other resources in Section 7 of this document.

4 Spatial Analysis Steps

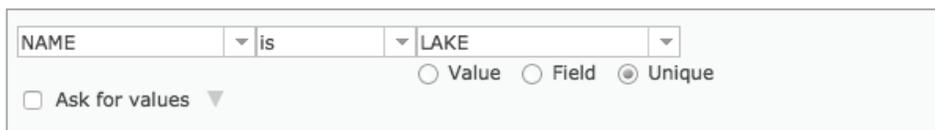
Isolate Your County

Navigate to the left panel and make sure Details > Content is selected. This panel contains your data layers and gives the ability to conduct analysis. Hovering over the “Counties” layer displays the many tools available. We are looking for the Filter tool. This will allow us to only display the attributes most relevant to us.



This is the filter tool and will bring up a dialog box when clicked.

In this example we are interested in Lake County. Using the drop-down box, we will select the column we are interested in. If you pick the “Unique” radio button then you will be presented with a list that you can pick from.

A screenshot of a filter query dialog box. It contains three dropdown menus: 'NAME', 'is', and 'LAKE'. Below the dropdowns are three radio buttons: 'Value', 'Field', and 'Unique'. The 'Unique' radio button is selected. There is also a checkbox labeled 'Ask for values' which is unchecked.

Here is how your filter query should look

Once this filter is created, we will just be left with Lake county being visible in the Counties layer. This process can be completed on any other county by simply replacing “Lake” with the county of your choosing.

Green Corridor

This step is to analyze whether your selected county contain any parts of the Florida Wildlife Corridor. One of the easiest ways to see is to isolate the two layers we are interested in. On the left panel we can go back to the Content tab and simply uncheck/check the layers we wish to see until the “Counties” and “Florida Wildlife Corridor” are the only one’s visible.

Contents

- Counties
- Florida Wildlife corridor
- Major Rivers
- Highways
- ▶ Esri Green Infrastructure Cores
- ▶ Imagery
...

This is what your Contents should look like

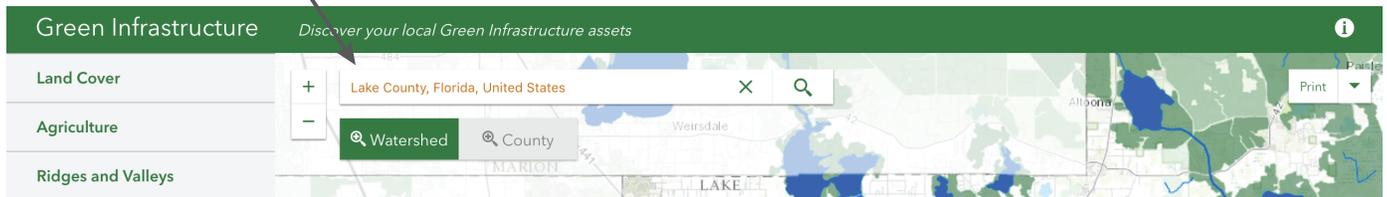
Look at the overlap between the county boundaries and the Wildlife Corridor. If your county does contain the corridor, can you see any patterns as to why it exists where it does? How close is it to your school? Have any of the students been to those areas or can possibly say what is there?

What parts of you county are not included in the Wildlife Corridor? Why do you think this is?

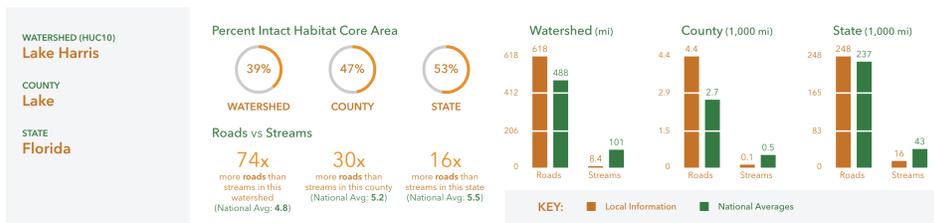
You can practice exploring different data layers by checking/unchecking the highways and major river layers to see how they interact with the Wildlife Corridor.

Green Infrastructure

We will be exploring the Green Infrastructure Map that ESRI has developed. These cores that have been developed are areas deemed to have the characteristics to support more than one individual of a species. Follow the link to their web app and search for your county in the search bar at the top.



After the map zooms to your county, a series of graphs and information will appear for that location's Green Infrastructure Core status. The largest watershed will be the one initially selected and the statistics that go along with it will show how your county compares at the state and national level.



This is an example of the graphs and charts for Lake County

Think about how your county compares and what environmental trends in your county confirm these results? Does your county have large swaths of forest or many lakes that have low development around them?

Record the values of the following measurements to include in your story map:

- _____ Name of watershed
- _____ Percentage of core habitats for county and watershed.
- _____ Number of roads in relationship to the number of streams.

Florida Parcel Map

We will be working with Florida Public Lands Inventory Data to see what lands are owned by the government and able to be preserved as a new addition to the wildlife corridor.

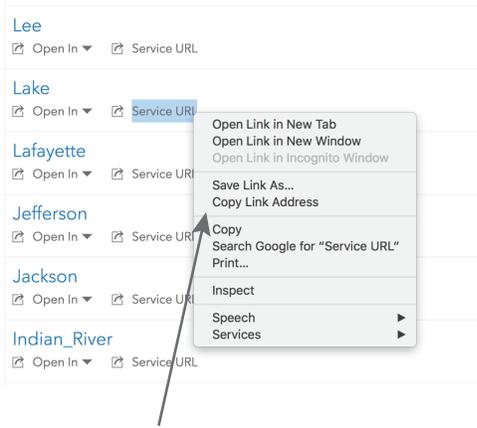
Start by opening a new tab with ArcGIS Online and going to your gallery tab. From here, you can search for “FL_K12_GIS PLI_County_Layers” and go to the Item page for that result.

The screenshot shows the ArcGIS Online search results page. At the top, there is a navigation bar with links for Home, Gallery, Map, Scene, Groups, My Content, and My Organization. A search bar contains the text 'FL_K12_GIS PLI'. Below the search bar, the page displays 'Search Results' with a blue header. On the left side, there is a sidebar with various filters and options, including 'Layers', 'Scenes', 'Apps', 'Tools', 'Files', 'All Layers', and 'Show ArcGIS Desktop Content'. The main content area shows one search result for 'FL_K12_GIS PLI_County_Layers'. The result includes the title, owner (benjaminwthornton_FLK12GIS), last modified date (April 3, 2017), and a rating of 0 stars. A 'Details' link is visible next to the result. On the right side, there is a 'More Information' section with links for 'What types of items can I find here?', 'Advanced search options', and 'Finding layer packages and other ArcGIS desktop content.' Two arrows point from the text below to the 'Details' link and the 'Only search in Teachers Teaching Teachers GIS' checkbox.

When the right listing shows up, select details to navigate to the Item's page.

If there are no results, make sure the “Only Search in *Your Org*” is not selected and the right layer should show.

Scroll down the list of counties until you locate the county you wish to use. Then right click on the “Service URL” and “Copy Link Address”. From here, we can return back to our map and  is new layer. We then select “Add layer from web” And simply paste in the URL we copied into the dialog box and wait for our new County PLI data to load into the map. This process is used so that we only load in one county to our map and don't need to worry about the entire state.



This is how you can obtain the URL to the specific county layer that you need. It might look slightly different across browsers and Operating Systems but you should see a “Copy Link” choice

Add Layer from Web

What type of data are you referencing?

An ArcGIS Server Web Service

URL: 05.ispa.fsu.edu:6443/arcgis/rest/services/PLI/PLI_County_Layers/FeatureServer/36

Use as Basemap

ADD LAYER

CANCEL

After you have copied the URL, simply go to the **Add** button and select “Add Layer from Web”. Then paste the URL into the field and ADD LAYER

Congrats! You now have the Public Land Inventory data for your county added to the map. Feel free to change the color of the polygons in order to get better contrast with other elements on your map.

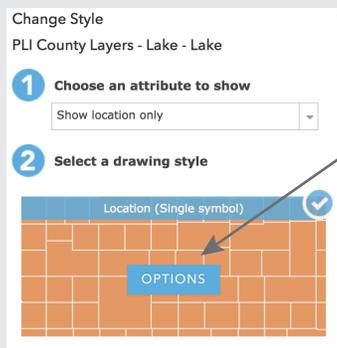
Tutorial on Symbology

This is a short tutorial on how to edit the colors of layers in a map. This can be applied to many parts of the project.

1 Select the Symbology option



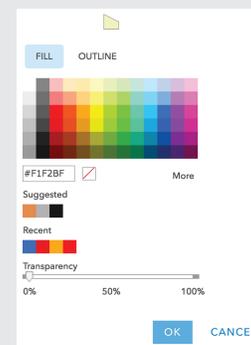
2 Select Options while leaving the other field as the default.



3 Select Symbols



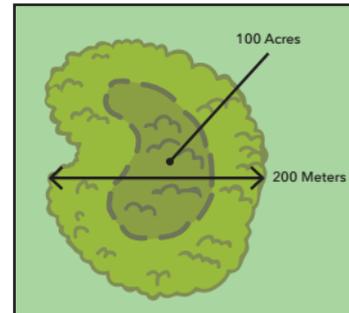
4 From this tab, you can edit the Fill, Outline, and Transparency



5 To make your changes display on the map, press “Ok” and “Done” on the menus.

At this point, we can continue with finding a new suitable land area to add to the preservation list and the Florida Wildlife Corridor.

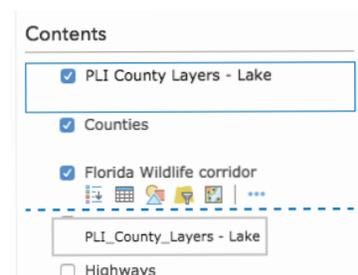
Following the ESRI Green Infrastructure criteria for a potentially good addition in protected lands, we will need to filter the PLI layer looking for parcels that have an area of at least 200 acres. To complete this, we use the filter tool again and create the following query:



size is at least 200
 Value Field Unique
 Ask for values

This is what our query looks like to find Green Infrastructure Cores, we use “Is at Least” and can leave it as “Value” because we are inputting a value of 200 rather than choosing from a list.

Now we are able to work with choices that have large land sizes that promote biodiversity and core habitat. Moving the “County Name”_PLI data layer underneath the Green Corridor layer will allow you to see lands that are already not included in the corridor and from here you can see choices for possible additions to extend the Corridor.



How to move layers “under” each other



Examples of how moving the PLI data layer underneath the Wildlife Corridor affects the visibility of good new candidates. Before (Left) and After (Right).

If the basemap is not currently set to satellite, then you can turn that on to notice the types of land that each parcel is. In many cases, with so many lakes in Florida, the parcels end up being lakes and so the species available for biodiversity is limited to aquatic related species. Think about other factors that can lend to choosing a feasible parcel in your county to extend the Florida Wildlife Corridor.

From here, you should be able to identify a parcel somewhere that would be a good addition to the Florida Wildlife Corridor. Once we have completed this map, it will be simple to add this completed map to a custom story map that you fill with information that led you to pick that specific parcel.

5 Story Maps

If you visit <http://storymaps.arcgis.com/en/app-list/> you can start the process of making a story map and include the map you just made.

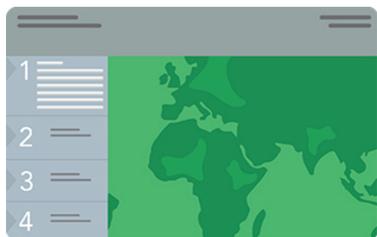
Story maps are a great way to lead a map reader through your thought process of you map and lead them to a certain conclusion. In this case, your conclusion would be the suggested parcel to be added to the Florida Wildlife Corridor.

Depending on the narrative you want to tell, you can choose a story map layout that will best match your storytelling flow.



Story Map Tour

Present a set of photos or videos along with captions, linked to an interactive map.



Story Map Series - Side Accordion Layout

Present a series of maps, and accompanying text and other content for each map, in an expandable panel. Clicking a title selects the map and expands the panel to reveal the text.



Story Map Journal

Create an in-depth narrative organized into sections presented in a scrolling side panel. As users scroll through the sections in your Map Journal they see the content associated with each section.

Best of all, be creative with your story map! There are a bounty of resources available online through ESRI that are linked on the final page of this document that can help you stand out and tell a great story.

6 Glossary

Basemap	the map layer (usually on the bottom) that forms a base for other data
Florida Wildlife Corridor	a natural, continuous swath of lands or waters that wildlife, including the Florida Black Bear and the Florida Panther, travel to access different habitats or for parts of their life cycle.
Green Infrastructure Core	a core is an area or patch of relatively intact habitat that is sufficiently large to support more than one individual of a species”
Parcel	a distinct, continuous portion or tract of land.
Satellite Imagery	an group of areal pictures that are put together over a map

7 Important Links

Description	Name	URL
Starter Map	FL Go Green Starter Map	https://arcg.is/105G9D
Instructions	Florida Green Infrastructure	http://arcg.is/2iBvcUh
ArcGIS Online Help		http://arcg.is/1qljbR0
Green Infrastructure		http://arcg.is/2a8NctI
Story Maps		
	Main Overview	http://arcg.is/1jfLTQX
	Map Tour tutorial	http://arcg.is/1dWdggX
	Map Series tutorial	http://arcg.is/2ovTs0C
	Map Journal tutorial	http://arcg.is/2ow2mej