

UA Libraries Data Cooperative Unit's

GIS TUTORIALS

CREATING BASIC MAPS

NONE

SOFTWARE USED

3

TUTORIAL NUMBER



DIFFICULTY LEVEL



LEVEL OF STOKE



HARDWARE NEEDED:

desktop or laptop computer
internet connection

SOFTWARE NEEDED:

none



INTRODUCTION

3

The purpose of this tutorial is to teach you how to create basic print and online maps in ArcGIS Online. Generally the type of map that you will create will be based on where your final map will be used (e.g. publication, in a report, embedded in a website, etc...) and this tutorial will serve as a basic guide to get you familiar with creating maps in a general context.

Please note: This tutorial is a continuation of the previous two tutorials, please refer to these tutorials in order to follow this tutorial in its entirety.

Upon completion of this tutorial, you should be comfortable:

1. Working with symbology and popups on digital maps.
2. Designing an online map.
3. Gaining an understanding of how to export or share online maps.

REOPENING A PREVIOUS MAP

Log in to your ArcGIS Online account and navigate to the project folder that you created in the previous tutorials.

1. Within your project folder click on the Web map that you created in previous tutorials.
2. In your Web map's Overview tab click on Open in Map Viewer.

The screenshot shows the ArcGIS Online Content page. The user is logged in as Garrett R Smith. The navigation bar includes Home, Gallery, Map, Scene, Groups, Content (selected), Organization, and a search bar. Below the navigation is a sub-navigation bar with My content, My favorites, My groups, My organization, and Living Atlas. The main content area displays a list of 12 items under the 'Content' tab. The list includes various layers and maps, such as 'Tucson Basin Dams', 'ArcGIS Online Introduction Map', 'Tucson Major Rivers', etc. Each item has a preview button and more options button. A red number '1' is overlaid at the bottom center of the list.

The screenshot shows the ArcGIS Online item overview page for the 'ArcGIS Online Introduction Map'. The top navigation bar is identical to the previous screenshot. The main content area shows the title 'ArcGIS Online Introduction Map' and a thumbnail image of a map featuring a blue polygon. Below the thumbnail is a description: 'This map is meant to serve as an introduction to working in ArcGIS Online.' There is a 'Web map' button, an 'Edit' button, and a date updated: 'Jul 25, 2025'. To the right, there are sections for 'Overview', 'Usage', and 'Settings'. Under 'Overview', there are buttons for 'Open in Map Viewer', 'Open in Field Maps Designer', and 'Share'. Below these are sections for 'Owner' (Garrett R Smith) and 'Details' (View count: 4, Size: 15.847 KB, Item ID: 596eaa509c944e3fb50e5a153...). At the bottom, there is a 'Layers' section with a single entry: 'Tucson Basin Dams Feature layer'. A red number '2' is overlaid at the bottom center of the page.

PREPARING TO MAP - STYLES

For this project you are interested in differentiating the dams in the Tucson water basin based on their Federal Hazard classifications.

Note: Your Hosted Feature Layer names may be different than the names in this tutorial.

1. Click on your Tucson dam Hosted Feature Layer.

The Settings Toolbar pane on the right-hand side of the page will automatically expand.

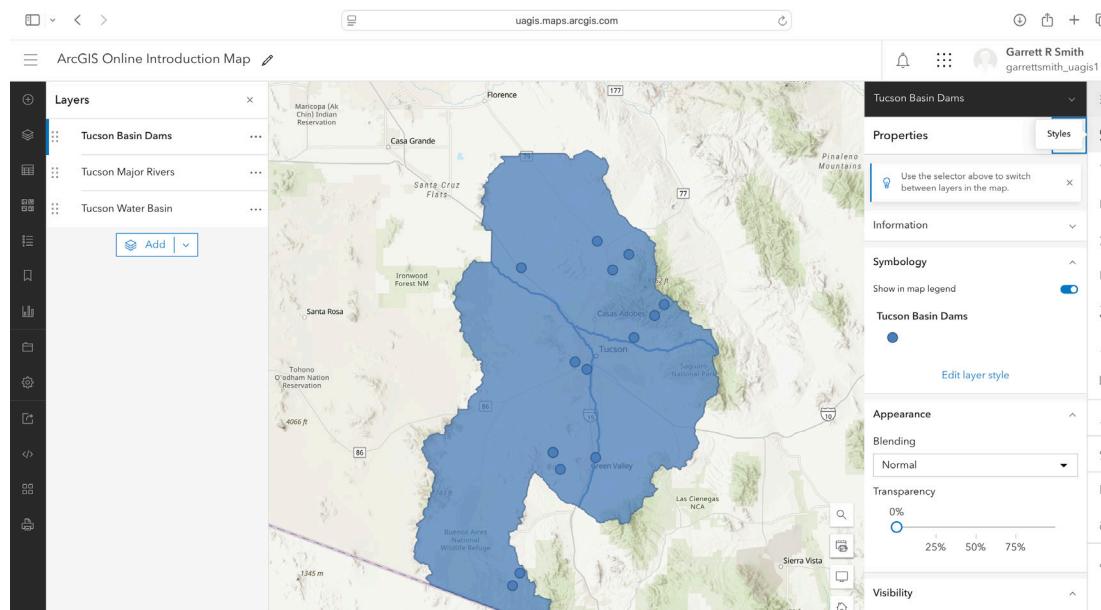
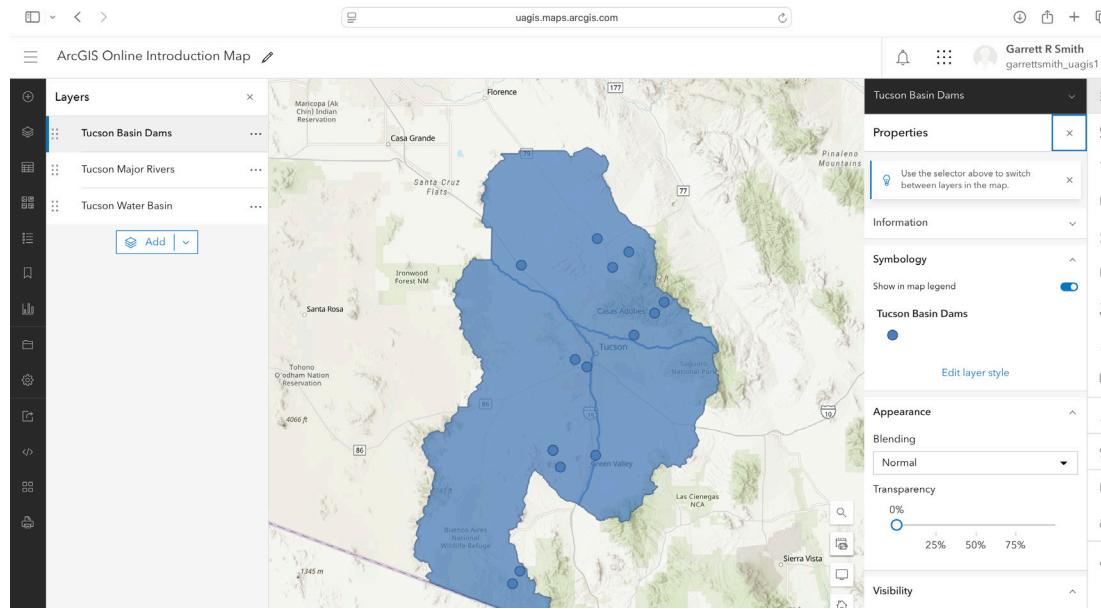
2. In the Settings Toolbar click on Styles.

SETTINGS TOOLBAR:

Contains options to work with individual layers and the map itself.

STYLES:

The Styles pane allows you to change how Hosted Feature Layers are visualized on your map. You can choose different color ramps, line weights, transparency, symbols, and other graphic elements with changes being automatically reflected on the map.



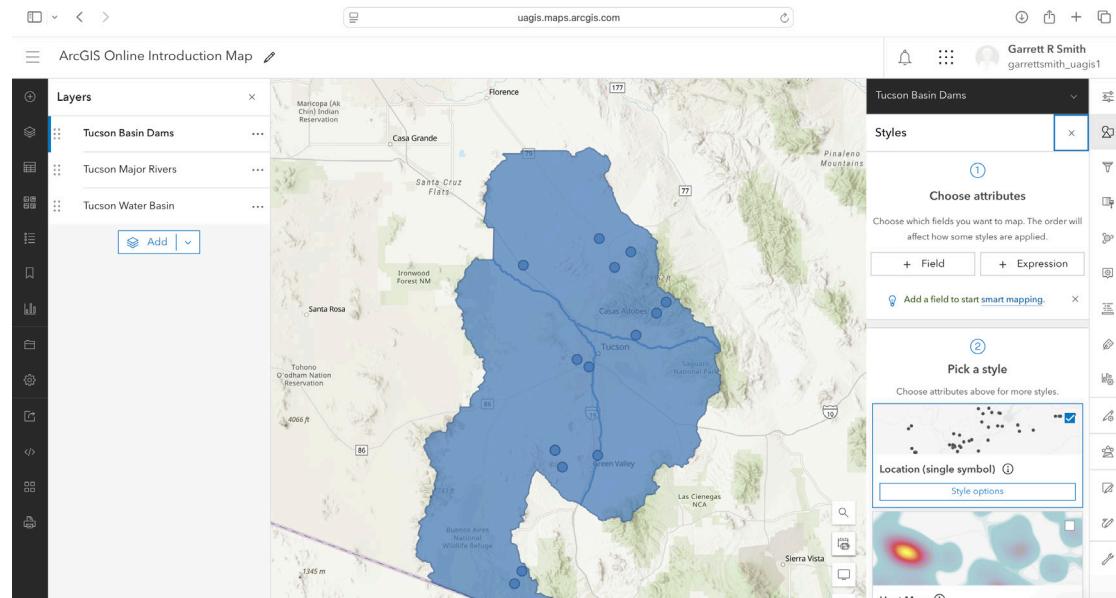
3. In the Styles pane under Choos attributes click on the Field button.

4. In the Select fields pane place a check mark next to HAZARD.

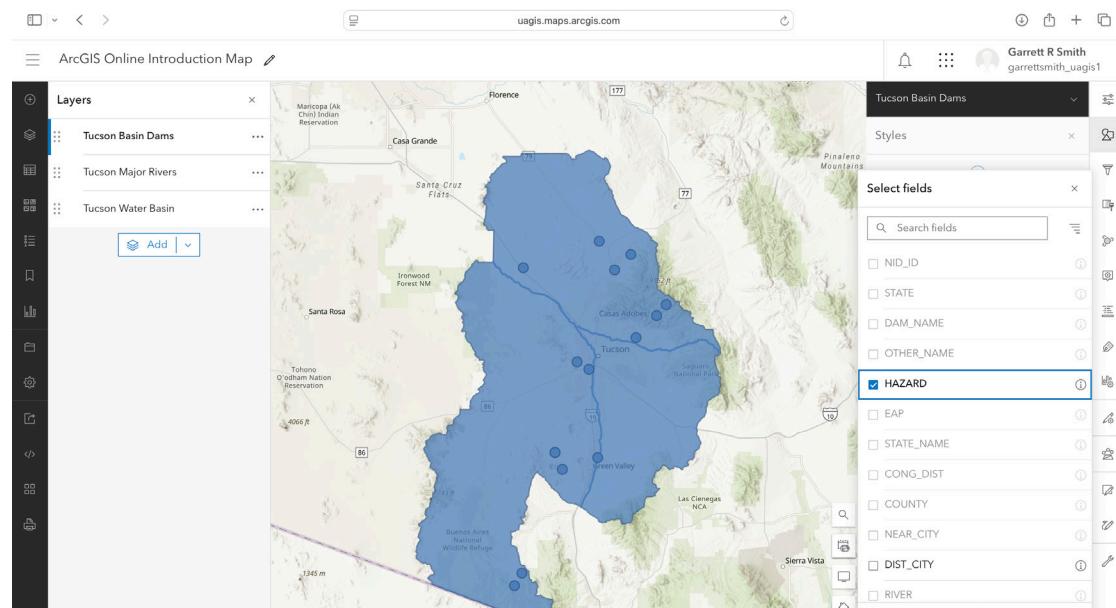
Scroll down and click on ADD.

CHOOSE ATTRIBUTES:

The style options that you can apply to Hosted Feature Layers are based on the attribute table that are affiliated with them. You can use an attribute field to display the Hosted Feature Layer, which is particularly useful if you have an attribute field that has unique categories.



3



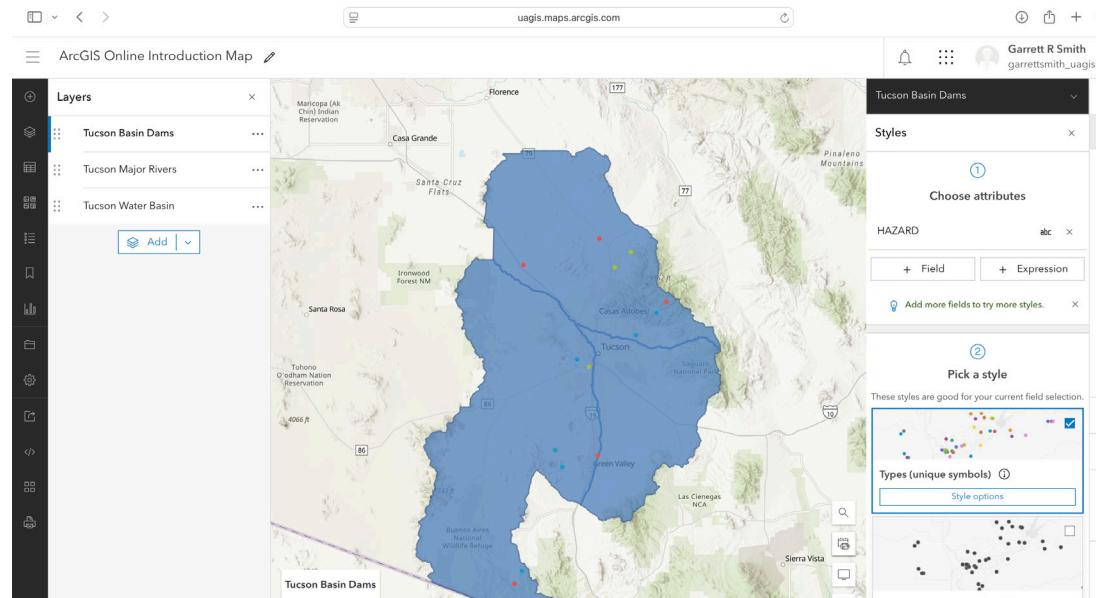
4

5. In the Styles pane under Pick a style click on Types (unique symbols).
6. In the Types (Unique symbols) pane under HAZARD click and drag the HAZARD levels to match the following:

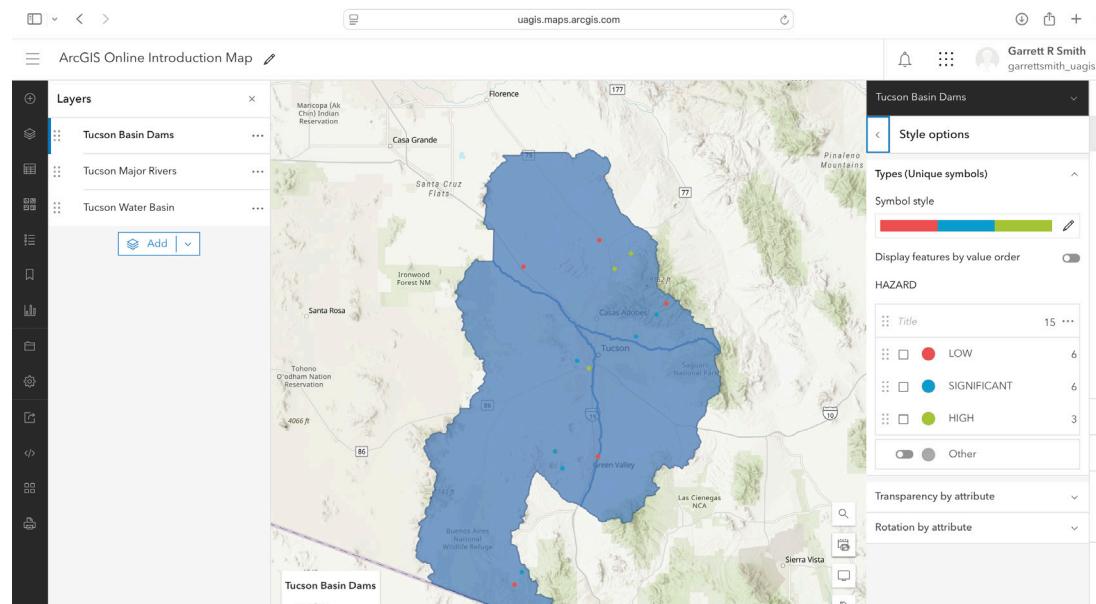
LOW
SIGNIFICANT
HIGH

Turn off the button next to Other.

Click on the color ramp under Symbol style.



5



6

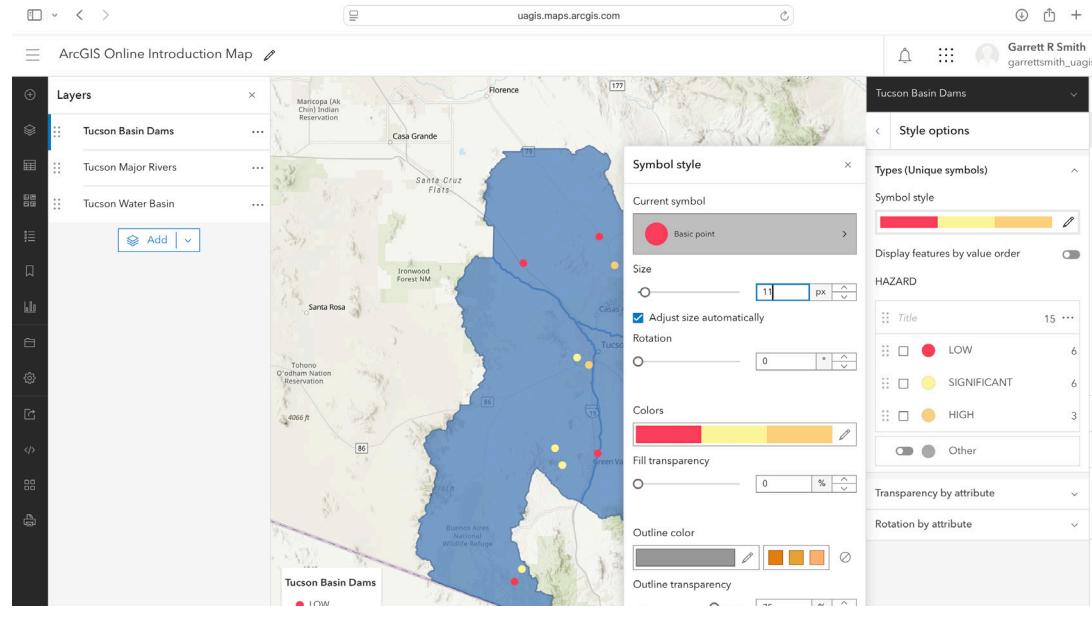
7. In the Symbol style pane choose an appropriate color ramp by clicking on the color ramp below Colors.

Adjust the Size of the points using the Size slider as you feel appropriate..

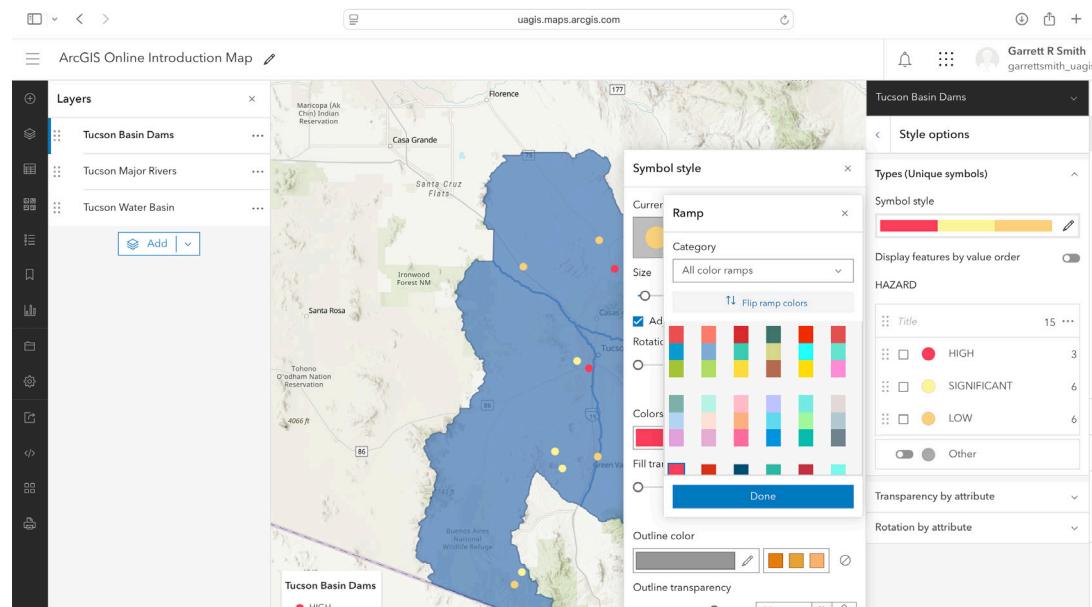
8. If you would like to reverse the order of the color ramp so that the HAZARD levels range in color proportion from LOW (lightest) to HIGH (darkest) open the Colors pane and click on Flip ramp colors.

HELPFUL HINT:

The color ramp that you will choose will be based on the phenomenon that you are displaying on the map.



7



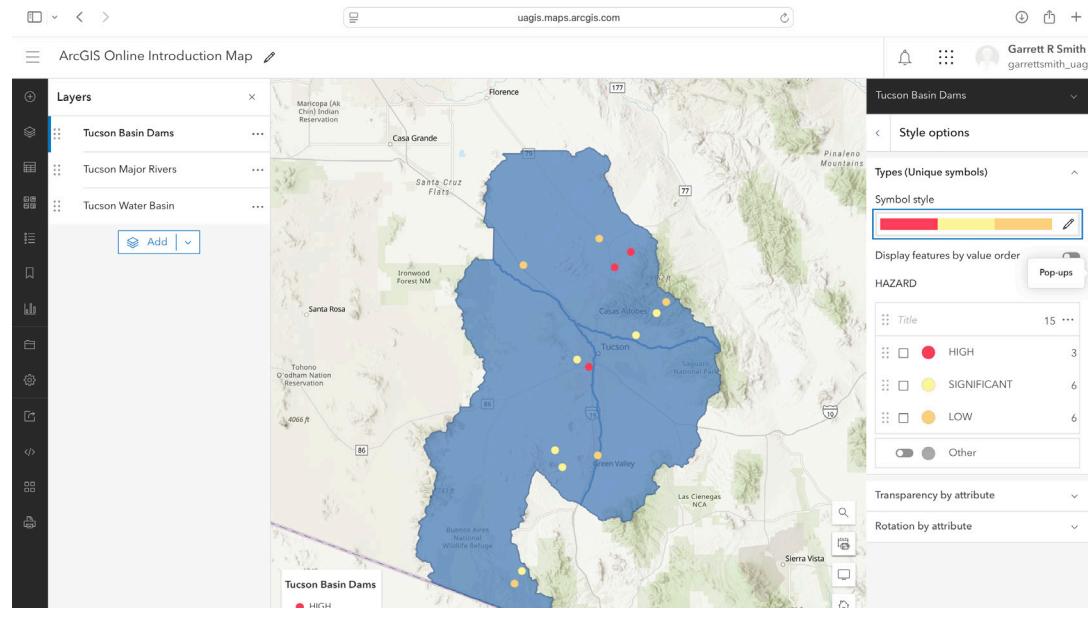
8

PREPARING TO MAP - POP-UPS

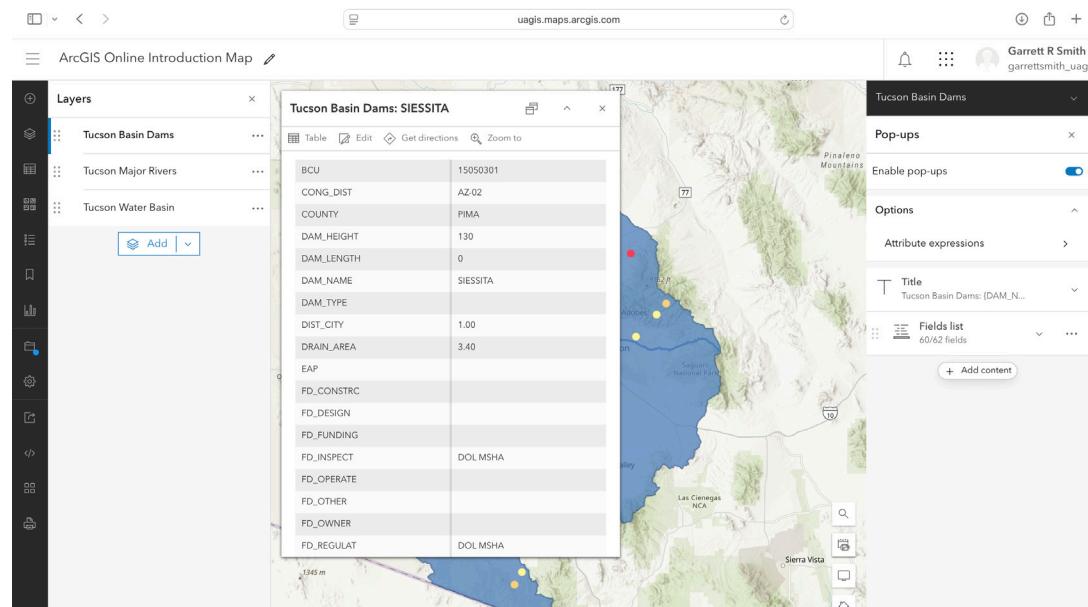
1. In the Settings Toolbar click on Pop-ups.
2. In the Pop-ups pane under Options click on Fields list.

POP-UPS:

Pop-ups allow people to interact with individual features in a Hosted Feature Layer. When an individual layer is clicked on within the map the pop-up window appears. The default pop-up window gets its values from the Hosted Feature Layer's attribute (data) table. It is a good idea to edit the pop-ups down to only the necessary fields that are relevant for your project, this is particularly true for attribute tables that contain a lot of blank (NULL) values.



1

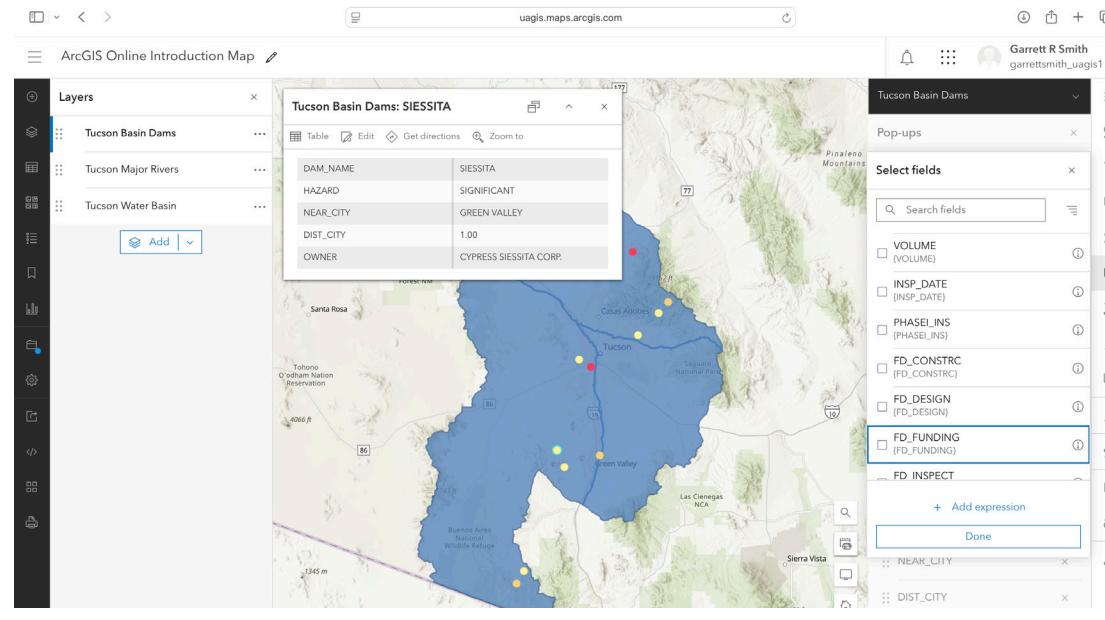


2

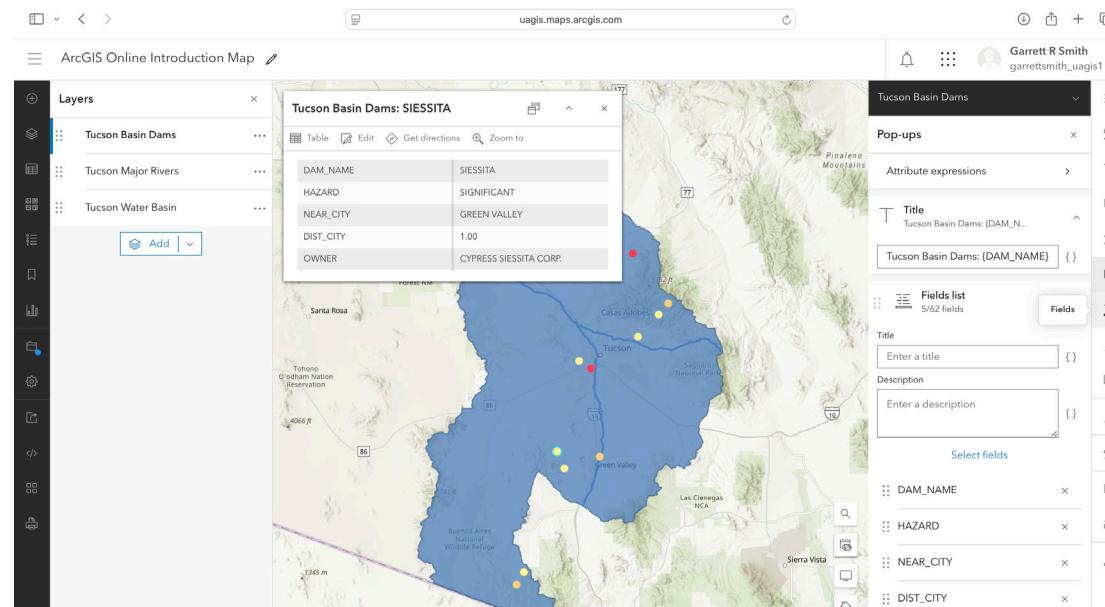
- 3.** In the Select fields pane select the fields that you would like to appear in your pop-up window.

Once you have selected all of your appropriate fields click on Done.

- 4.** In the Settings Toolbar click on Fields.



3



4

5. In the Fields pane click on one of the Fiel to open the Manage field pane.

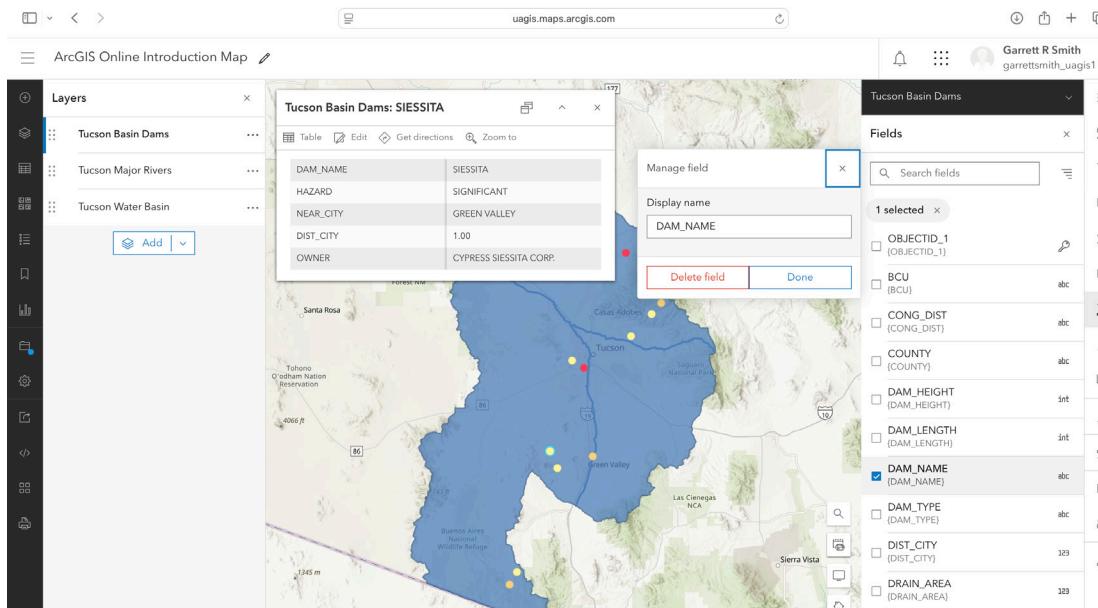
In the Manage field pane change the Display name and click on Done.

6. Repeat the same process in the previous step for all of your fields.

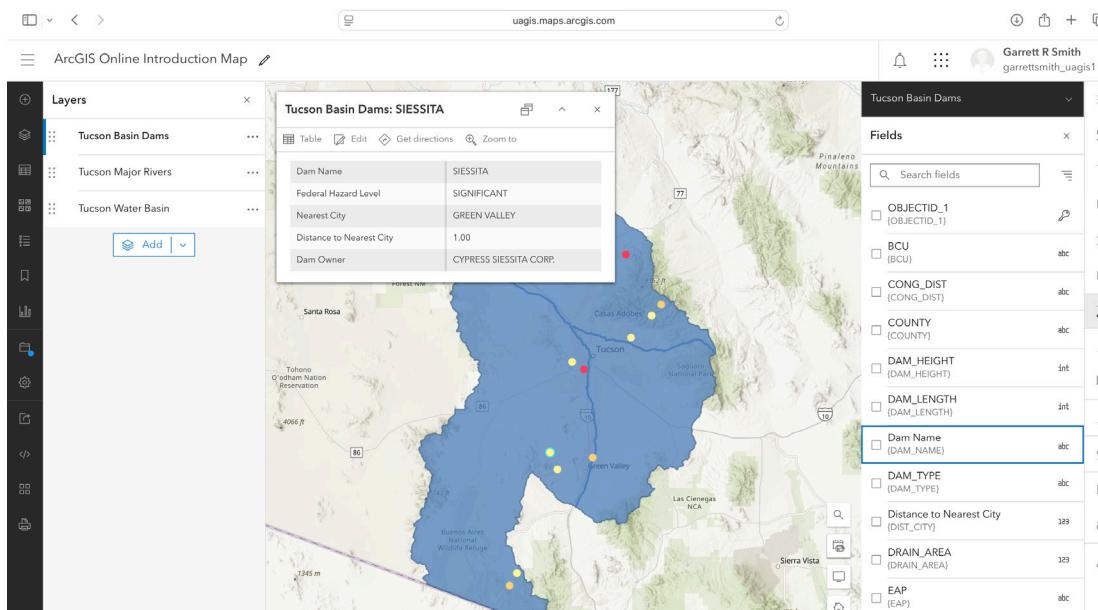
You can also repeat all of the processes contained in the last two sections for your other Hosted Feature Layers.

HELPFUL HINT:

By default the Field display names are based on the column names found in the attribute (data) table. When displaying Field names in the pop-up window you do not want the viewer of the map to be confused about what they are looking at and it is a good habit to get into to change the Display name to something that is short but descriptive enough to provide context for the attribute fields' values.



5



6

PREPARING TO MAP - BASEMAPS

1. In the Contents Toolbar click on Basemap.
2. In the Basemap pane select a basemap that you believe is appropriate.

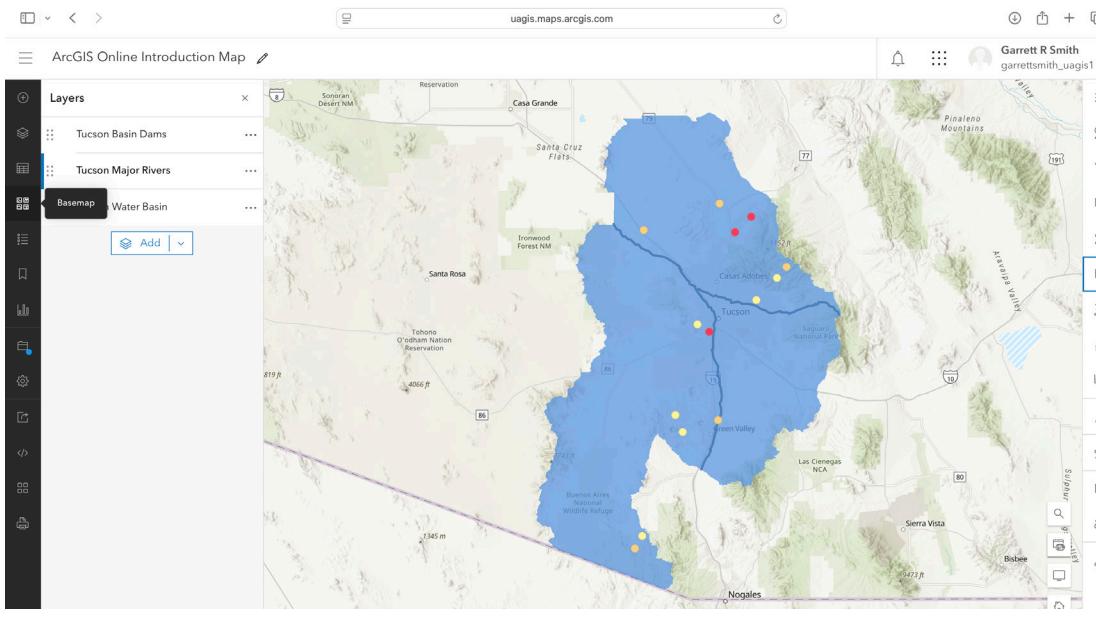
Additional basemaps are available by scrolling down to the bottom of the Basemap pane and clicking on Living Atlas.

BASEMAPS:

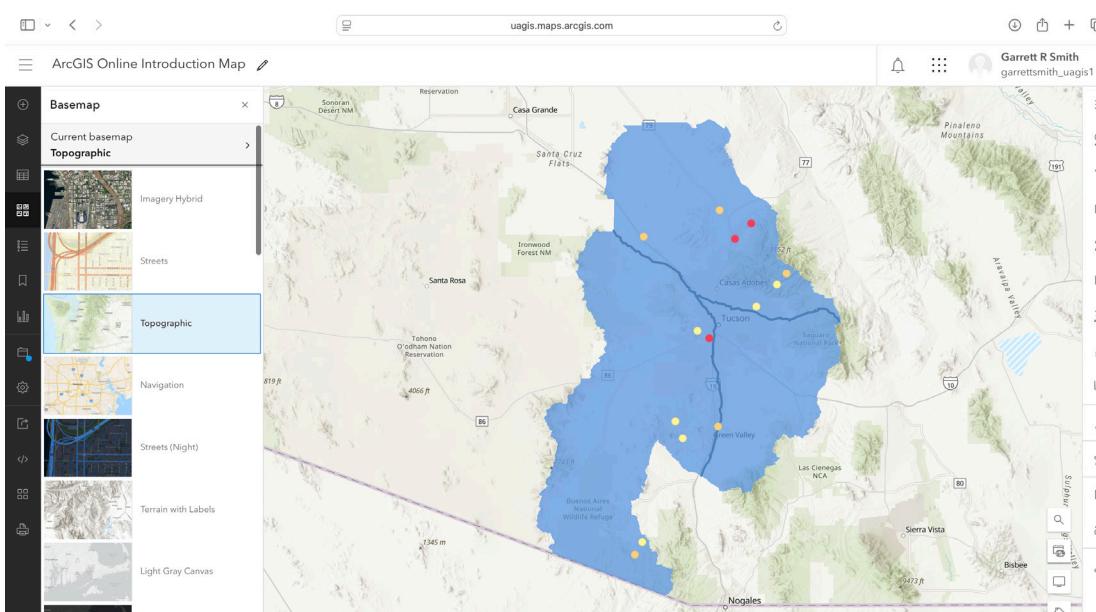
Basemaps provide a background (base) geographical context for your map display. There are a number of basemaps that are available for display and the choice of the basemap that you want to use will generally be dependent on the type of GIS project that you are working on.

LIVING ATLAS:

Living Atlas contains a collection of geographic information submitted by users from around the world. In addition to basemaps, the Living Atlas also contains maps, apps, and data layers that you can use in your own personal projects.



1



2

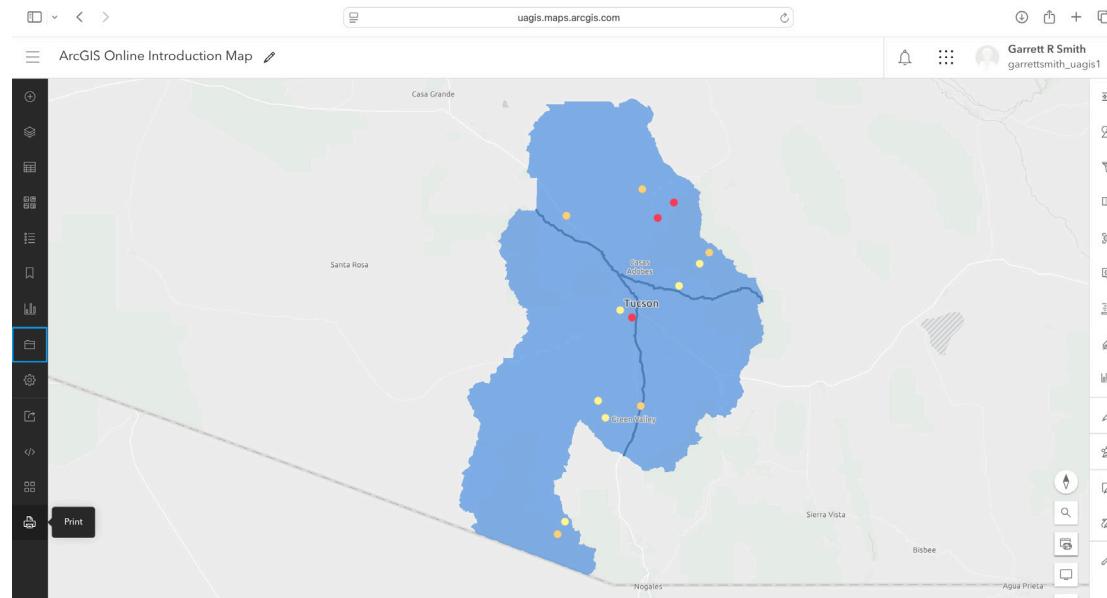
MAP CREATION - EXPORT

Depending on how your map will be used there may be times when you have to export a map from ArcGIS Online.

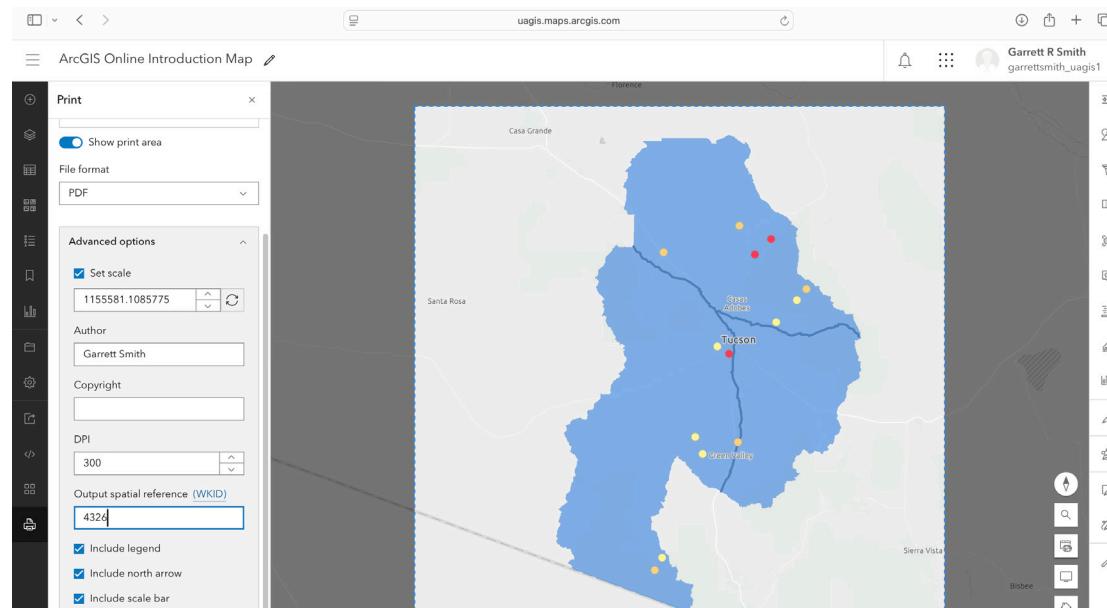
To export a map layout from ArcGIS Online use the following instructions.

1. In the Contents Toolbar click on Print.
2. In the Print pane choose the setting that you are appropriate for your project.

Click on Export.



1

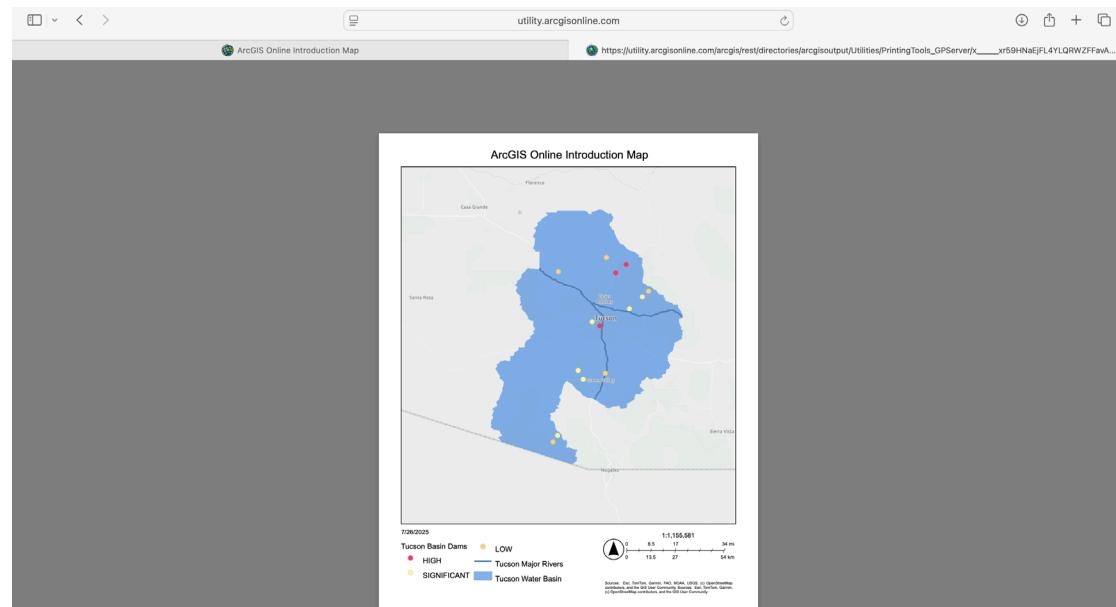


2

3. After the map layout has exported you can click on it to preview it in another browser window.

HELPFUL HINT:

Exporting maps directly from ArcGIS Online does not provide you with a lot of control of how the finished map layout will look and oftentimes result in non-visually appealing map designs. If you need more compelling map designs you can work with your online map in ArcGIS Pro or export the map as an AIX file and open it in Adobe Illustrator for additional editing capabilities.



3

MAP CREATION - ONLINE

Generally, when working in ArcGIS Online, you will create an online map that you can share with people. Online maps allow users to more readily interact with the map's content when compared to exported maps.

To share an online map from ArcGIS Online use the following instructions.

1. Return to your Web map's Overview page.

If you are in Map Viewer click on the three dashes on the top left-hand corner of the page and select Contents.

On the contents page find your Web map and click on it to open the Overview page.

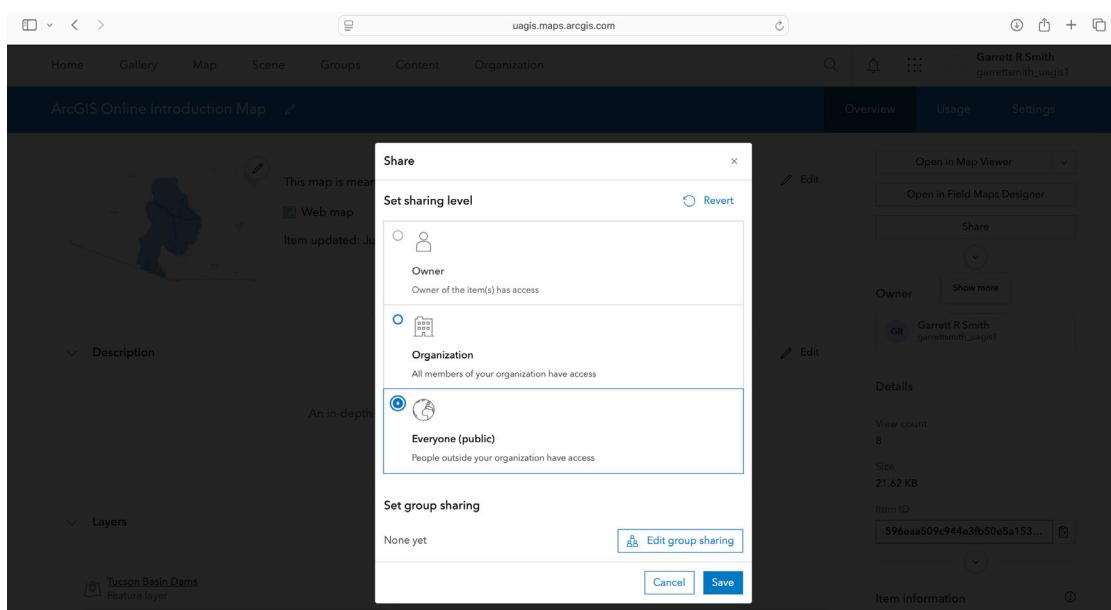
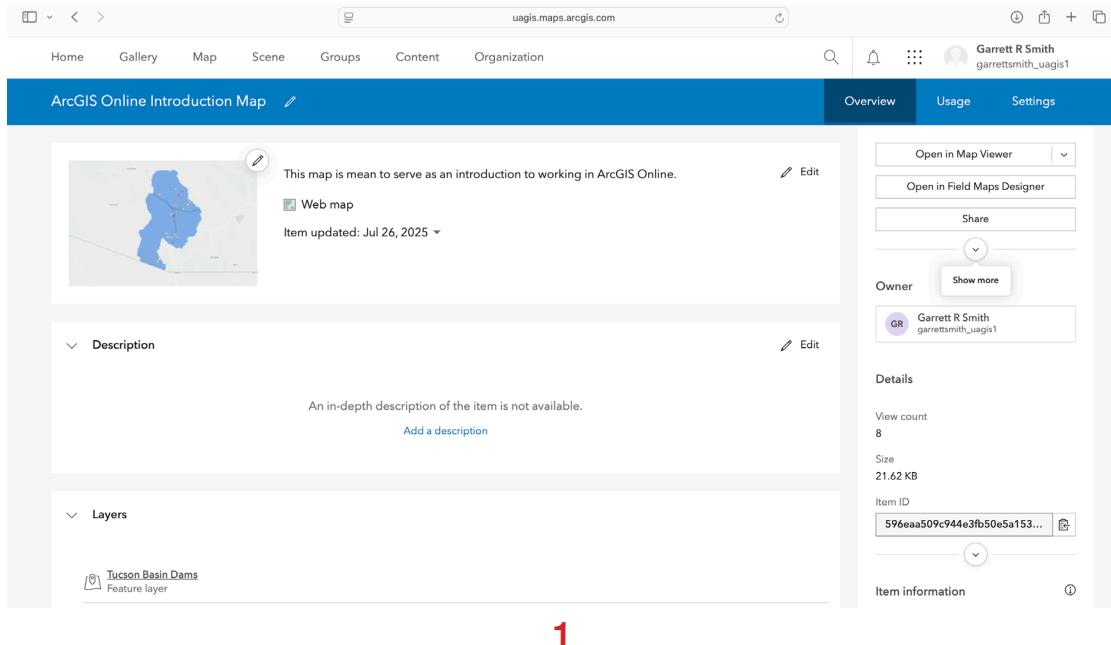
Click on the Share button.

2. In the Share window select Everyone (public).

SHARING LEVELS:

All Content found within your ArcGIS Online account is only available to you unless you change the sharing levels. If you share your map at an Organization level all University of Arizona Esri users will have access to the view the files. Sharing with Everyone opens your map to be viewed by anyone, no matter if they have an Esri account or not.

It should be noted that the Share options only impacts who can view your map. No matter the sharing level people will not be able to edit your map.

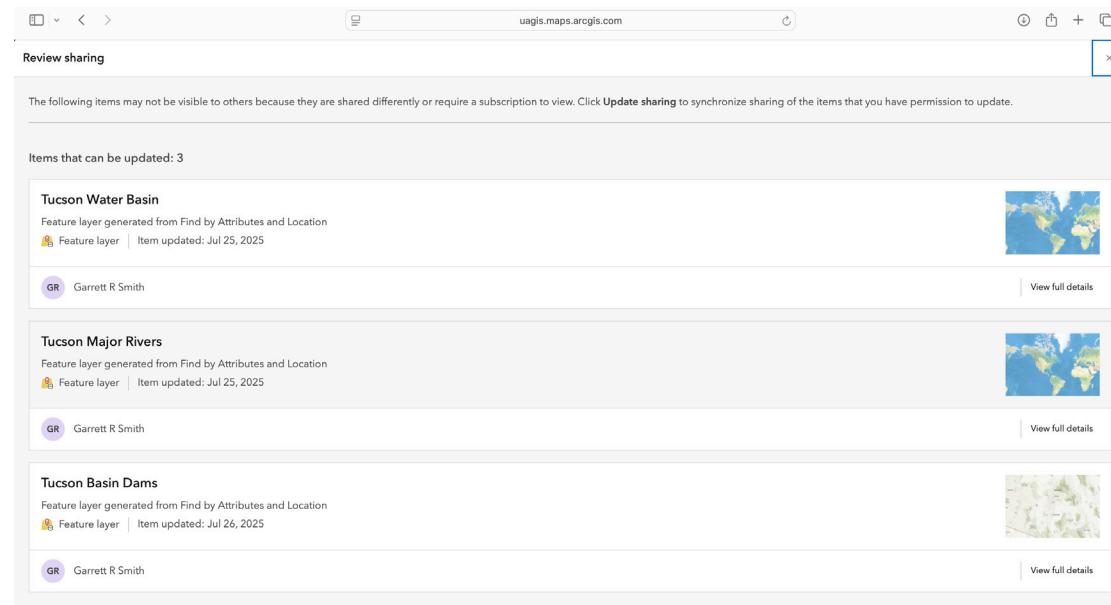


3. In the Review sharing window scroll down to the bottom and click on Update sharing.
4. Open your Web map in Map Viewer and copy the full url link.

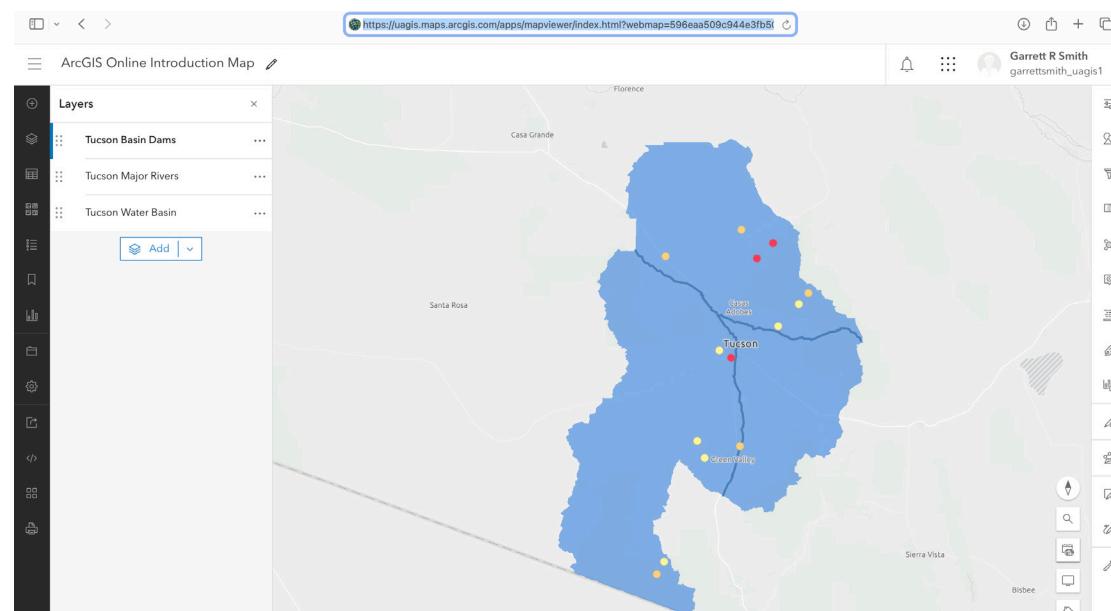
Share the online map by providing people with the url that you copied.

UPDATE SHARING:

In addition to the actual map all the Hosted Feature Layers that are used in the map's design have to be shared at the same level as the map. Like the map, people will not be able to edit the Hosted Feature Layers. In addition, they will not be able to download it for their own use unless you allow them to do so.



3



4

END