

How to create an interactive data portal

Part 2: ArcGIS Online

This tutorial will teach you how to take time-series data from many field sites and create a shareable online map, where clicking on a field location brings you to a page with interactive graph(s). **Part 2 covers how to link data pages to an interactive map with ArcGIS Online.**

How to cite:

Beganskas, S. (2020). *Tutorial: How to use Google Data Studio and ArcGIS Online to create an interactive data portal*, HydroShare, DOI: 10.4211/hs.9edae0ef99224e0b85303c6d45797d56



What you need to get started



Whether you are working with your own data or the example dataset, for Part 2 you will need:

1. Links to web pages with data, preferably with a distinct page for each field site (generated in Part 1 of this tutorial)
2. Latitude and longitude for each field site (ExampleMapData.xlsx)
3. A Google account and an ArcGIS Online account. If ArcGIS is available through your organization, you likely have an account (see next slide)

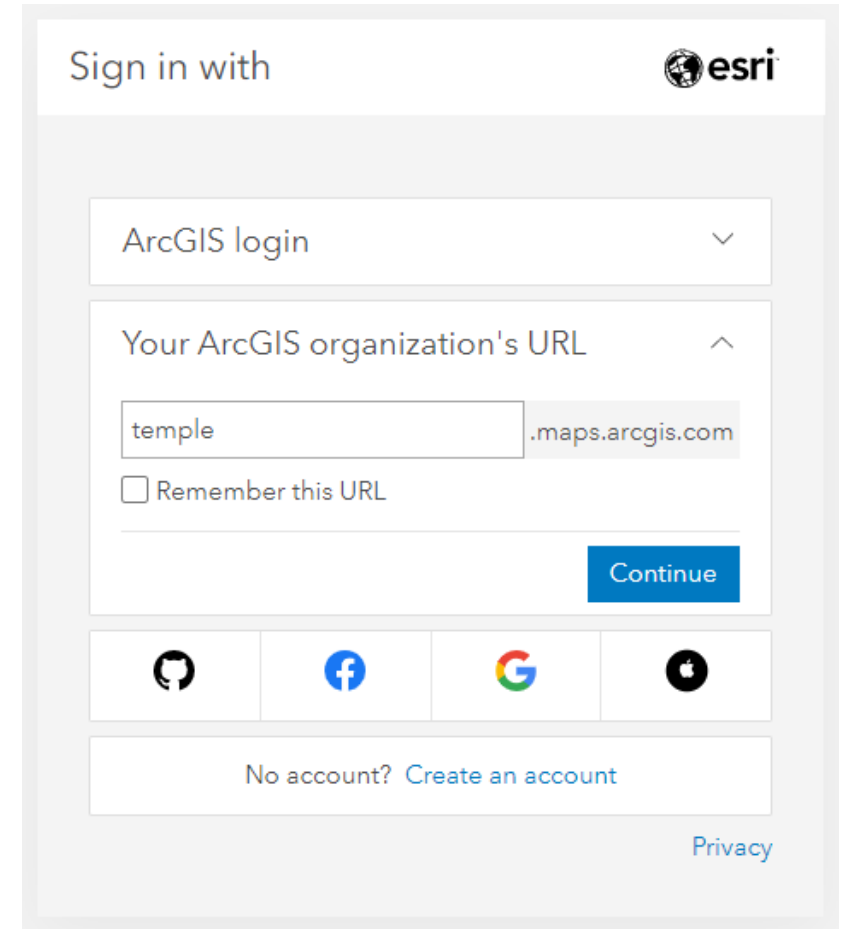
Step 1: Sign into your ArcGIS Online account

Go to arcgis.com and click Sign in.

Choose “Your ArcGIS organization’s URL”.

Type the name of your organization.
e.g., temple for Temple University

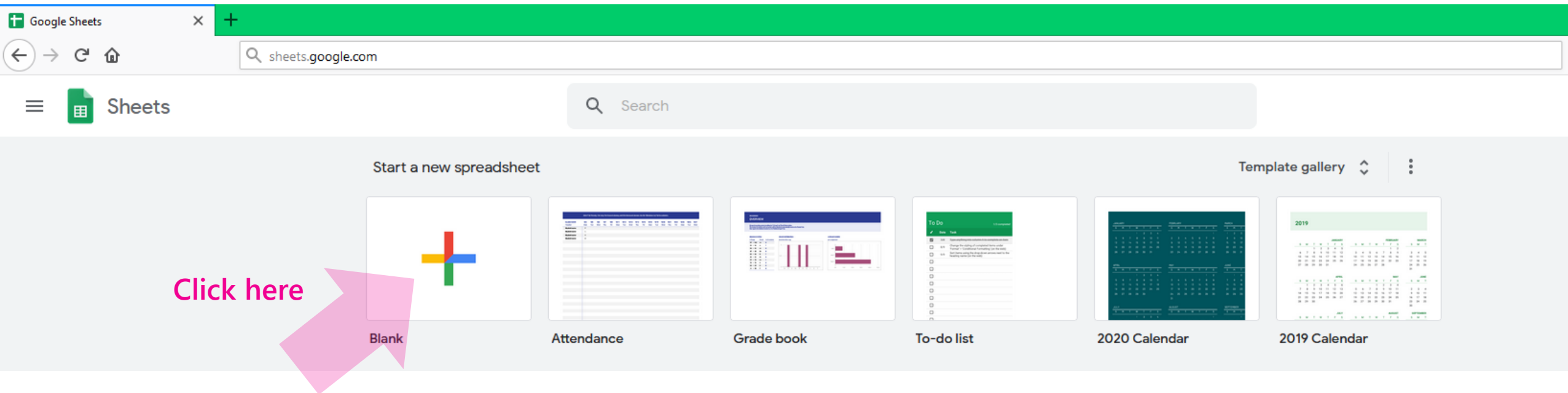
Click Continue and sign in using your credentials.



The screenshot shows the ArcGIS Online sign-in page. At the top, it says "Sign in with" next to the Esri logo. Below this is a dropdown menu labeled "ArcGIS login". Underneath is a section titled "Your ArcGIS organization's URL" with an upward arrow. Inside this section, there is a text input field containing "temple" and a dropdown menu showing ".maps.arcgis.com". Below the input field is a checkbox labeled "Remember this URL". A blue "Continue" button is located at the bottom right of this section. Below the "Continue" button are four social media icons: GitHub, Facebook, Google, and Apple. At the bottom of the page, there is a link that says "No account? [Create an account](#)". In the bottom right corner, there is a link for "Privacy".

Step 2: Create a Sheet with data for all sites

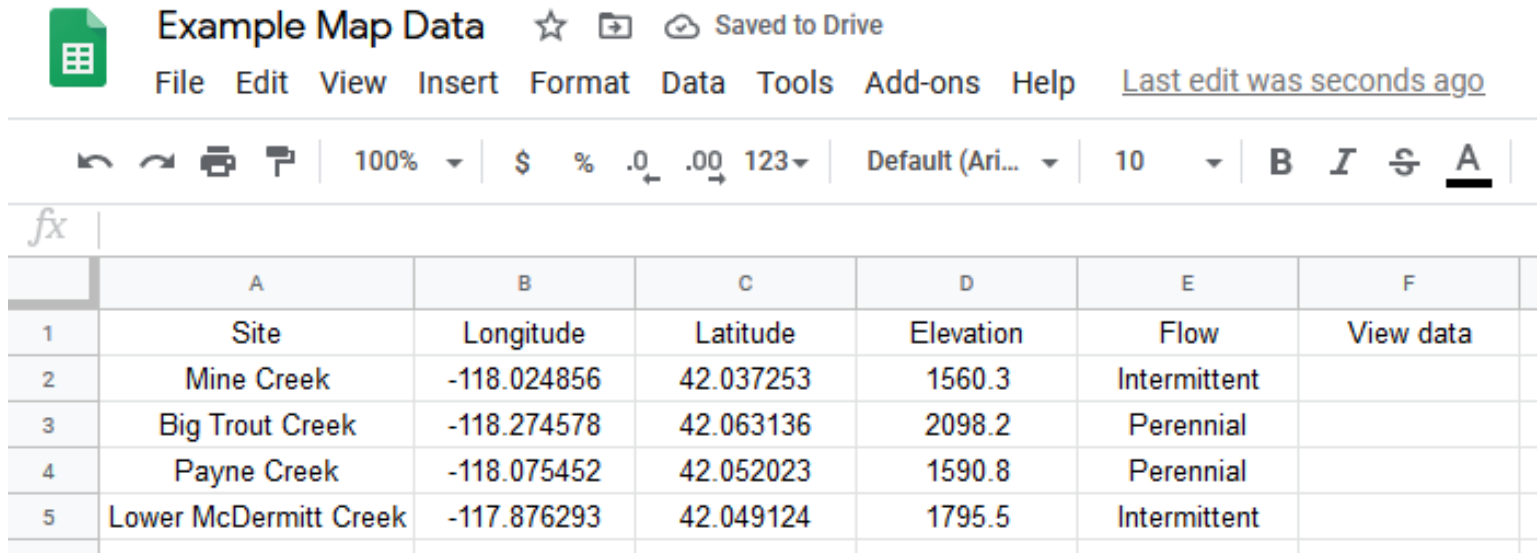
Go to sheets.google.com and create a new Google Sheets document.



Step 2: Create a Sheet with data for all sites

Give the Sheet a name. For this tutorial, you can **directly copy and paste data from ExampleMapData.xlsx** into the new Sheets document.

If you are using your own data, enter each site's name, longitude, and latitude. Then include any other data, followed by an empty column titled View data.



The screenshot shows a Google Sheets interface. At the top, the title bar reads 'Example Map Data' with a star icon, a folder icon, and a cloud icon labeled 'Saved to Drive'. Below the title bar is a menu bar with 'File', 'Edit', 'View', 'Insert', 'Format', 'Data', 'Tools', 'Add-ons', and 'Help'. A status bar at the bottom of the menu indicates 'Last edit was seconds ago'. Below the menu bar is a toolbar with icons for undo, redo, print, and copy, followed by a zoom dropdown set to '100%', a currency dropdown set to '\$', a decimal dropdown set to '.0', a thousands separator dropdown set to ',00', a text color dropdown set to '123', a font family dropdown set to 'Default (Ari...', a font size dropdown set to '10', and bold, italic, and underline icons. The main area shows a spreadsheet with a formula bar containing 'fx'. The spreadsheet has columns A through F. Column A is labeled 'Site', B is 'Longitude', C is 'Latitude', D is 'Elevation', E is 'Flow', and F is 'View data'. The data rows are as follows:

	A	B	C	D	E	F
1	Site	Longitude	Latitude	Elevation	Flow	View data
2	Mine Creek	-118.024856	42.037253	1560.3	Intermittent	
3	Big Trout Creek	-118.274578	42.063136	2098.2	Perennial	
4	Payne Creek	-118.075452	42.052023	1590.8	Perennial	
5	Lower McDermitt Creek	-117.876293	42.049124	1795.5	Intermittent	

Step 2: Create a Sheet with data for all sites

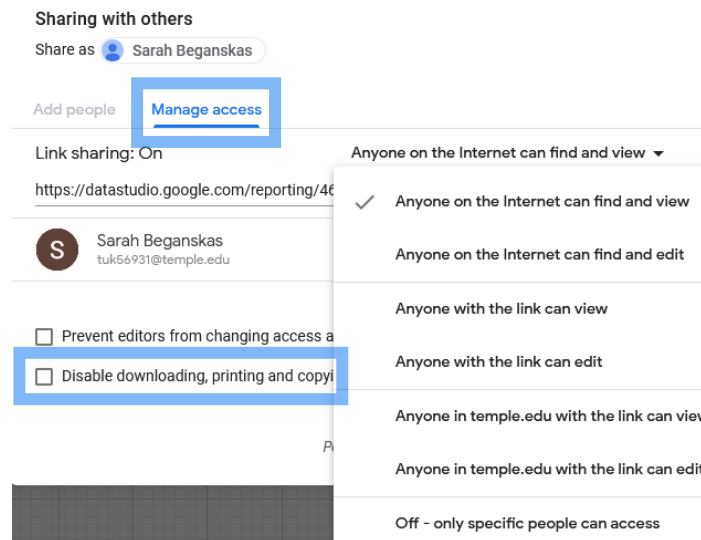
If you are using Google Data Studio reports, **set sharing settings and copy the link for each site.**

1. Click Share in the upper right.



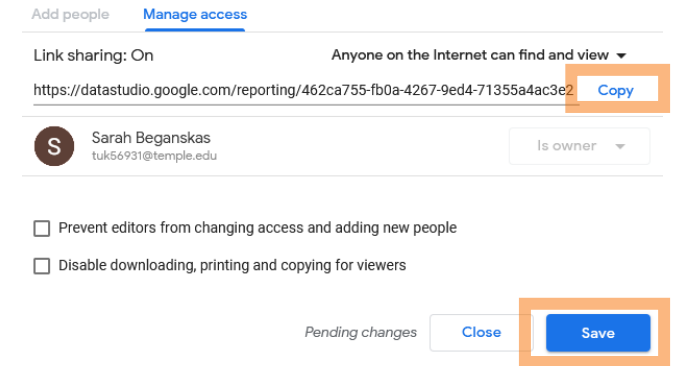
2. Click **Manage access**.
Then choose the most appropriate sharing settings.

Check the Disable downloading... box to prevent others from downloading your data.



3. Click **Copy** and then **Save**.

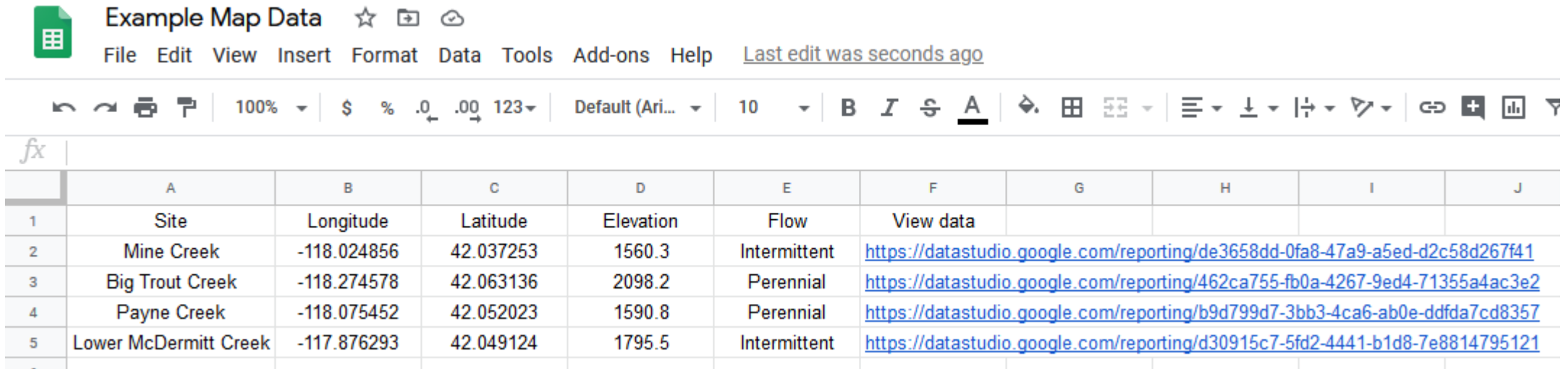
If you do not click Save, the sharing settings will not take effect.



4. **Paste this link** into the "View data" column for this site. Repeat for every site.

Step 2: Create a Sheet with data for all sites

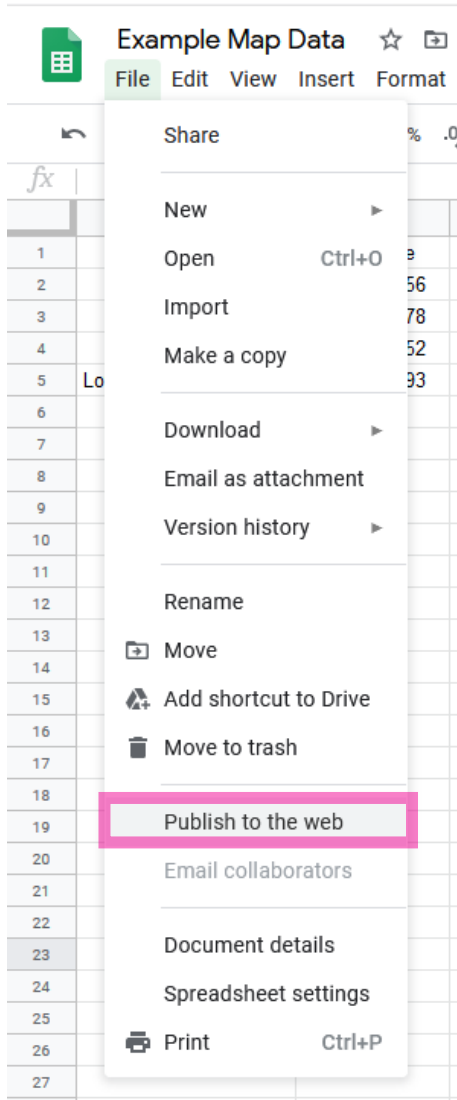
Now your Sheet should look something like this:



The screenshot shows a Google Sheet interface. At the top, the title is "Example Map Data" with icons for star, share, and cloud. Below the title is a menu bar with "File", "Edit", "View", "Insert", "Format", "Data", "Tools", "Add-ons", and "Help". A status bar indicates "Last edit was seconds ago". Below the menu bar is a toolbar with various icons for undo, redo, copy, paste, zoom, currency, percentage, decimal, thousand separator, font color, background color, text color, bold, italic, underline, strikethrough, link, unlink, insert link, insert image, and insert video. Below the toolbar is a formula bar with "fx" and a dropdown arrow. The main area is a table with 11 columns (A-J) and 6 rows (1-6). The first row is a header with labels: Site, Longitude, Latitude, Elevation, Flow, View data, and empty cells for G-J. The next five rows contain data for Mine Creek, Big Trout Creek, Payne Creek, and Lower McDermitt Creek, each with a corresponding Data Studio report link in column F.

	A	B	C	D	E	F	G	H	I	J
1	Site	Longitude	Latitude	Elevation	Flow	View data				
2	Mine Creek	-118.024856	42.037253	1560.3	Intermittent	https://datastudio.google.com/reporting/de3658dd-0fa8-47a9-a5ed-d2c58d267f41				
3	Big Trout Creek	-118.274578	42.063136	2098.2	Perennial	https://datastudio.google.com/reporting/462ca755-fb0a-4267-9ed4-71355a4ac3e2				
4	Payne Creek	-118.075452	42.052023	1590.8	Perennial	https://datastudio.google.com/reporting/b9d799d7-3bb3-4ca6-ab0e-ddfda7cd8357				
5	Lower McDermitt Creek	-117.876293	42.049124	1795.5	Intermittent	https://datastudio.google.com/reporting/d30915c7-5fd2-4441-b1d8-7e8814795121				

Step 3: Link the Sheet to a map interface



Click on File -> **Publish to the web**

Publish to the web

This document is not published to the web.

Make your content visible to anyone by publishing it to the web. You can link to or embed your document. [Learn more](#)

Link

Embed

Entire Document

Comma-separated values (.csv)

Publish

Under the Link tab, select **Comma-separated values (.csv)**. Then click Publish and OK.

Publish to the web

This document is published to the web.

Make your content visible to anyone by publishing it to the web. You can link to or embed your document. [Learn more](#)




Link

Embed

Entire Document

Comma-separated values (.csv)

<https://docs.google.com/spreadsheets/d/e/2PACX-1vSF8-2BtXBFchsm31FEV>

Or share this link using:   

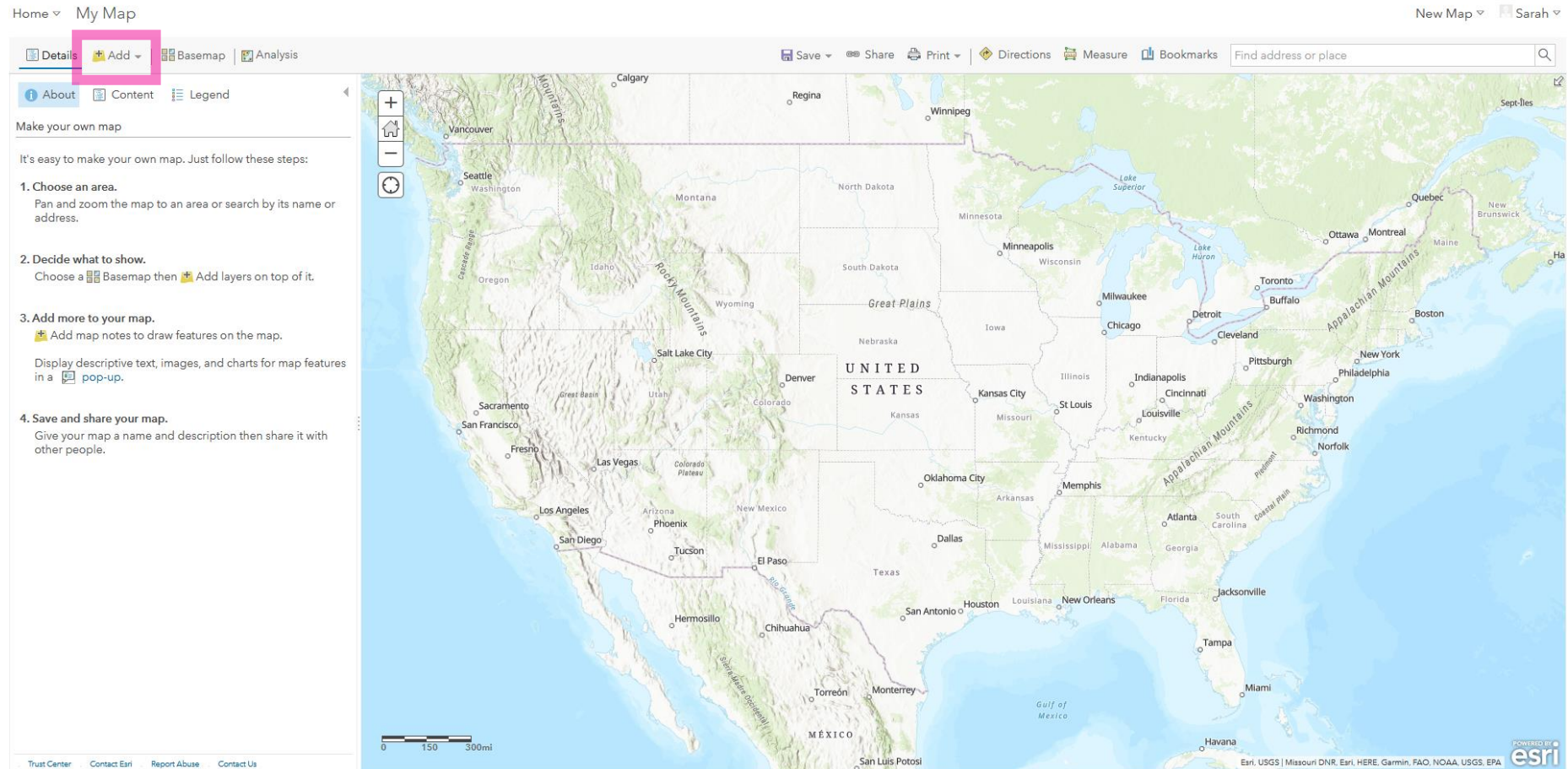
Note: Viewers may be able to access the underlying data for published charts. [Learn more](#)

Published

Copy and save the link, we'll need it in a minute!

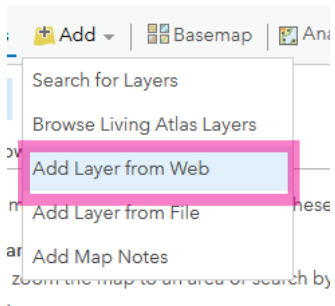
Step 3: Link the Sheet to a map interface

In ArcGIS Online, click Map on the top of the page to create a new map. Click **Add**.



Step 3: Link the Sheet to a map interface

1. Choose **Add Layer from Web**.



2. **Select CSV file** from the drop-down menu. Then paste the link you saved from a few slides back. Click Add Layer.

Add Layer from Web

What type of data are you referencing?

A CSV File

URL: 1FEvN9hduugfdhFv822J_mJrDtHar0d6ytVao1i-3S-MJQfOsCLpxDSUqPAVI5F/pub?output=csv

Having trouble displaying your CSV file? Help us improve this site by sending us the URL via the Contact Esri link.

ADD LAYER

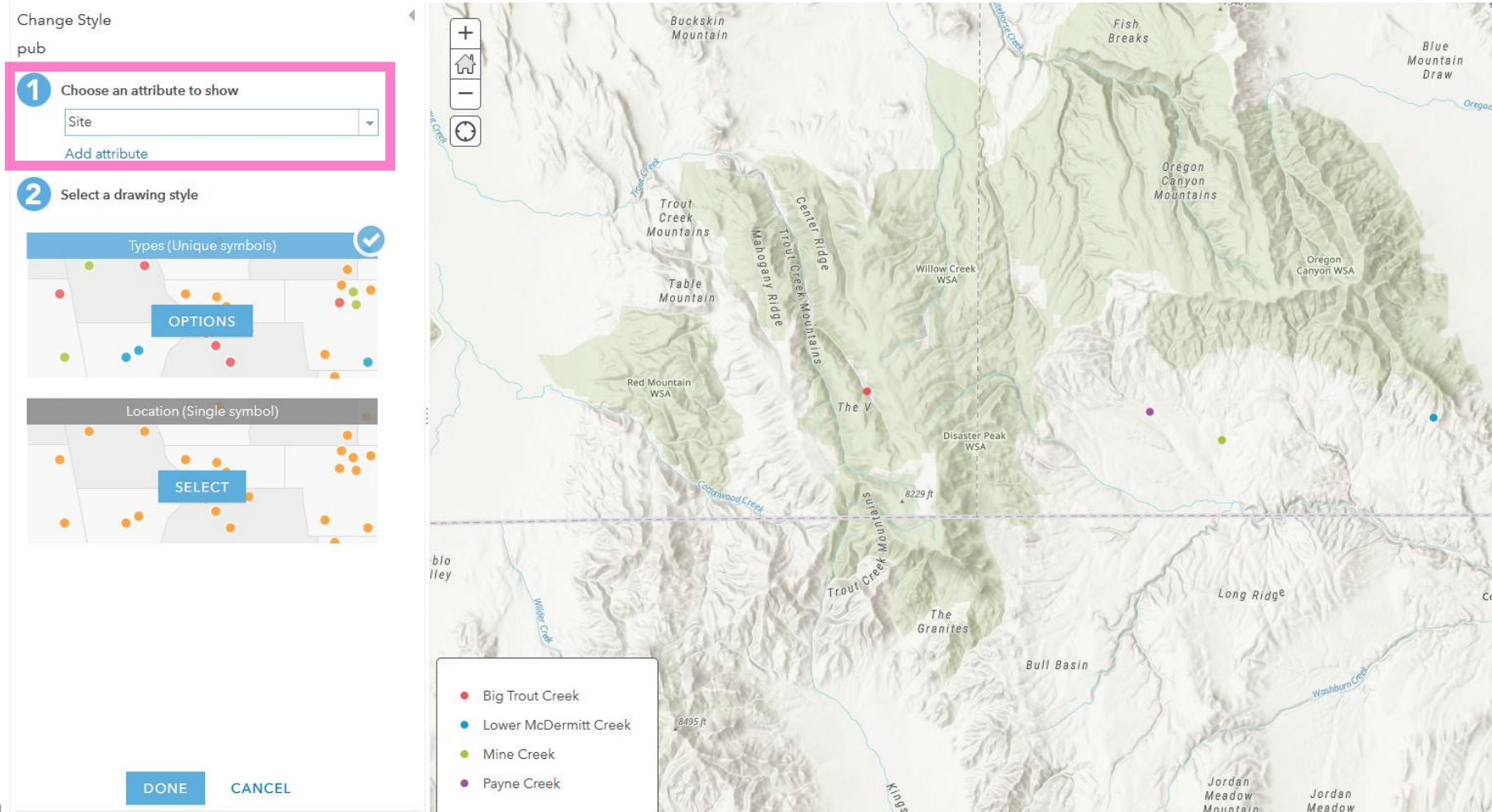
CANCEL

3. Save the map by clicking **Save**.

Home ▾ My Map



Step 4: Format the map

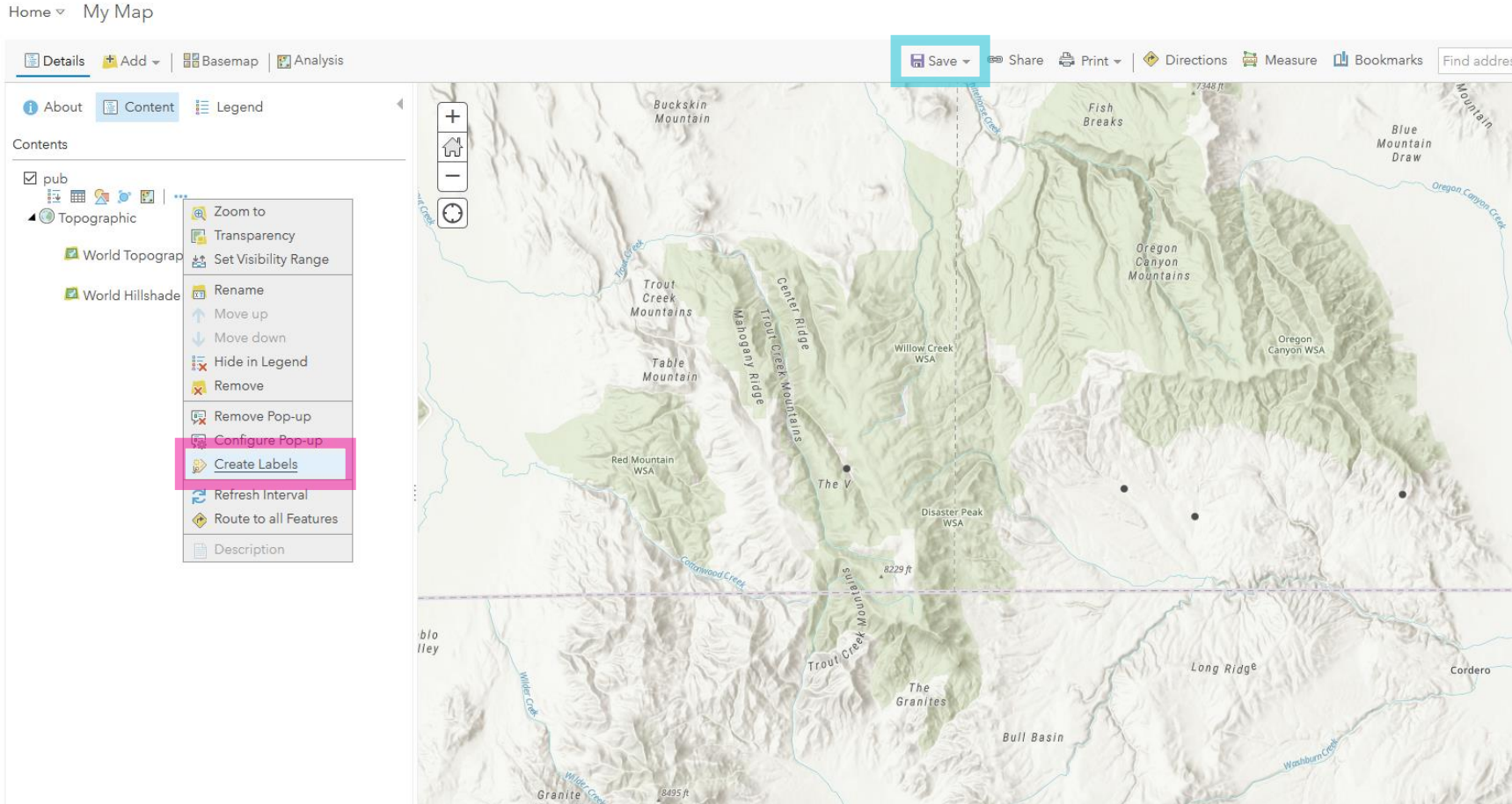


Under Change Style on the Left, **select Site** as the attribute to show.

Up to you if you want the same or different symbols for each site.

Then click Done.

Step 4: Format the map



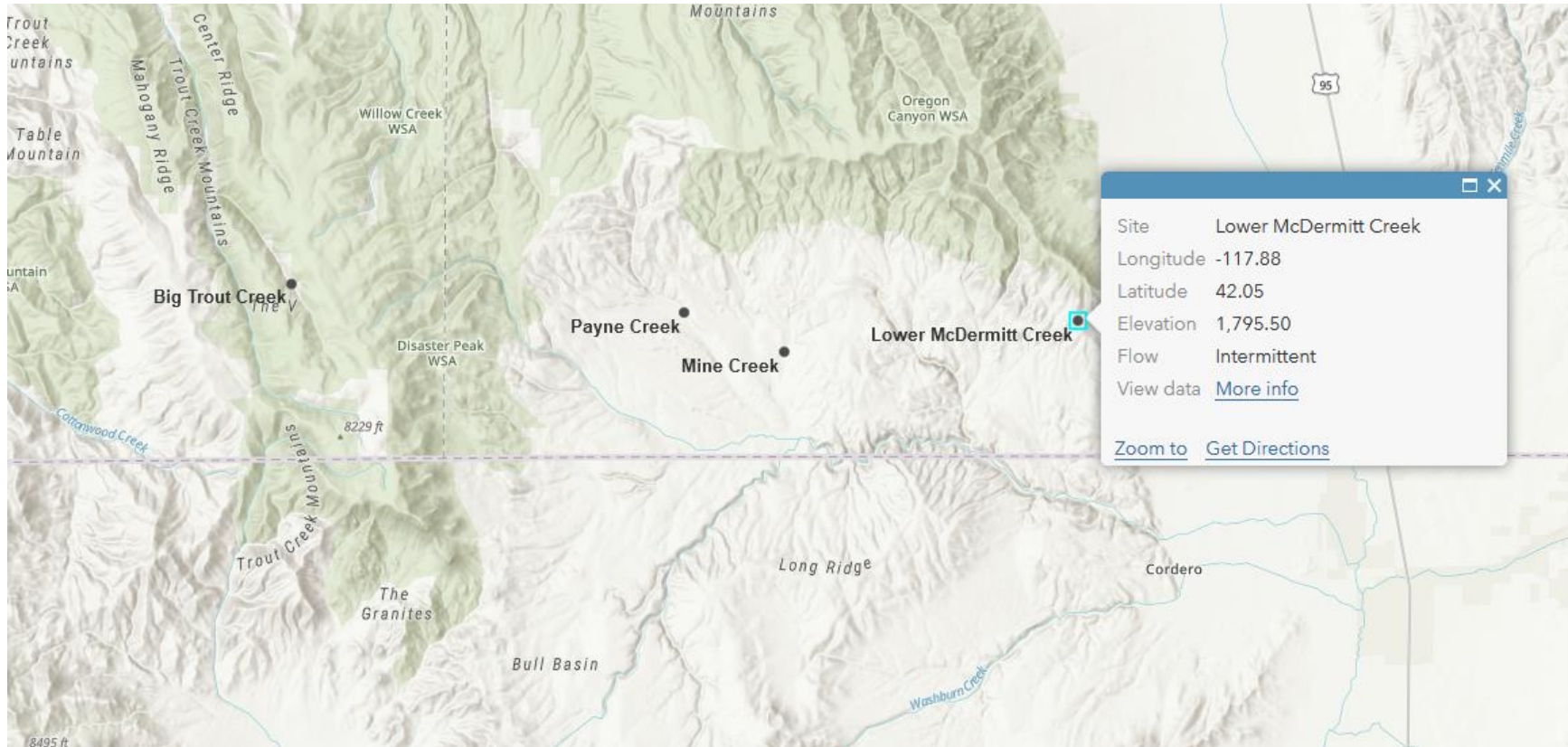
Add site name labels to each point:

Click the three dots under layer pub. The click **Create Labels**.

There are many other display options to play with. You can also add other shapefiles by clicking Add -> Add layer from File.

Don't forget to **Save**!

Step 4: Format the map



Note that when you click on a point, a pop-up window appears. Clicking on the [More info](#) link will bring you to the page you created for that site.

Step 5: Share the map

Home ▾ My Map



Share

Choose who can view this map.

Your map is currently shared with these people.

☒ Everyone (public)

☒ Temple University

Link to this map

https://arcg.is/1zKauH0

Facebook

Twitter

☒ Share current map extent

Embed this map

EMBED IN WEBSITE

CREATE A WEB APP

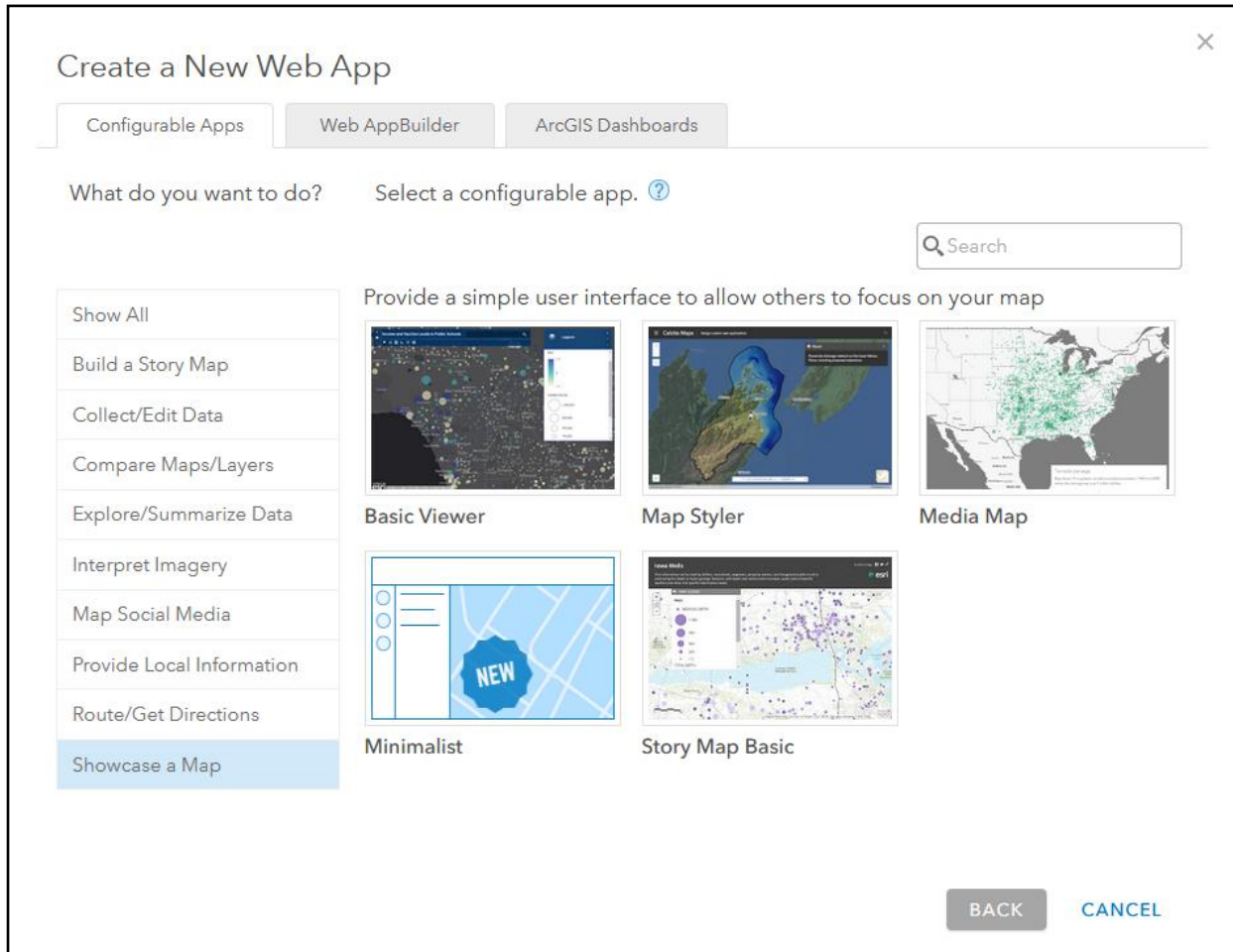
DONE

When you are happy with how the map looks, click **Share**.

In the Share window, check the appropriate boxes to decide who can view the map.

From here, you can share the map using the link provided here, by embedding it in a website, or by creating a Web App.

Step 5: Share the map



Creating a Web App is easy and a great way to share your map and data.

After you Click Create a Web App from the Sharing window:

Click Showcase a Map, then Basic Viewer, then Create Web Map, then Done.

Share the Web App by copying the link at the top of the page.



Wrapping up

This tutorial just covers the basics! Google Data Studio and ArcGIS Online have many additional capabilities, and there are resources available online for how to use specific tools not covered here.

For an example interactive map and data portal for a citizen science project, go to <https://tinyurl.com/yyjno4pg> or click the button below:

Example data portal

This project is led by Temple University and funded by the William Penn Foundation.