ArcGIS Online Tutorial

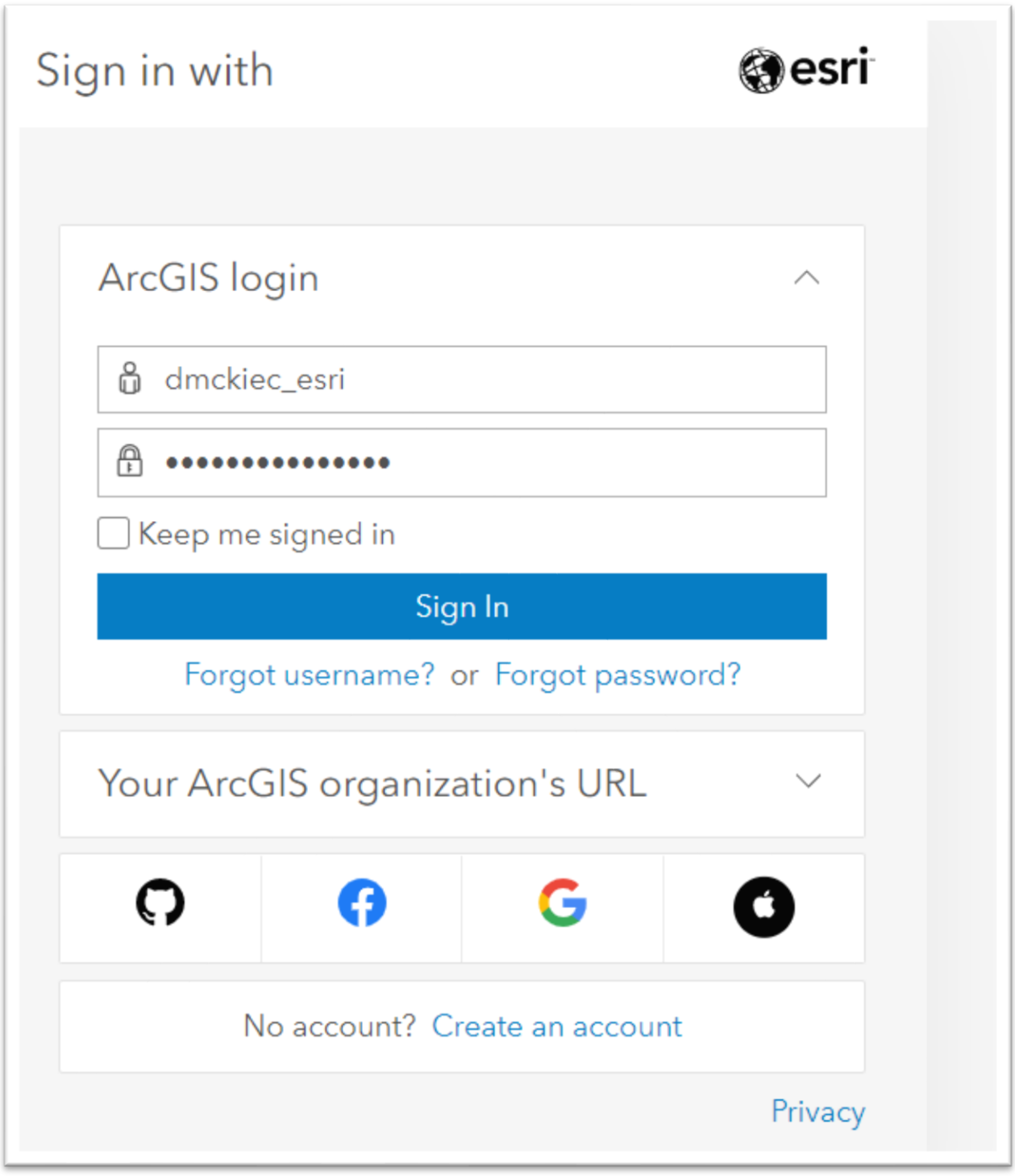
ArcGIS Online is a geospatial cloud platform where you can make, collaborate and share maps.

What we will learn

1. How to get started
2. How to find and upload a shape file

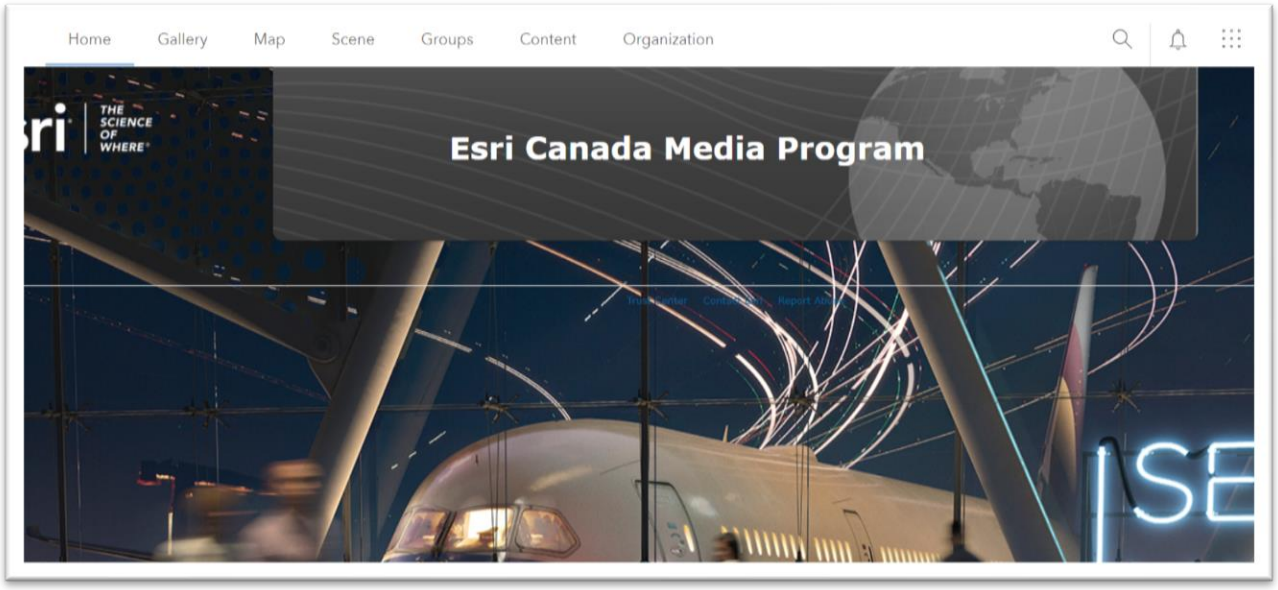
How to get started

To get started, type ArcGIS Online as a Google search and click the first link and navigate to the sign-in button.

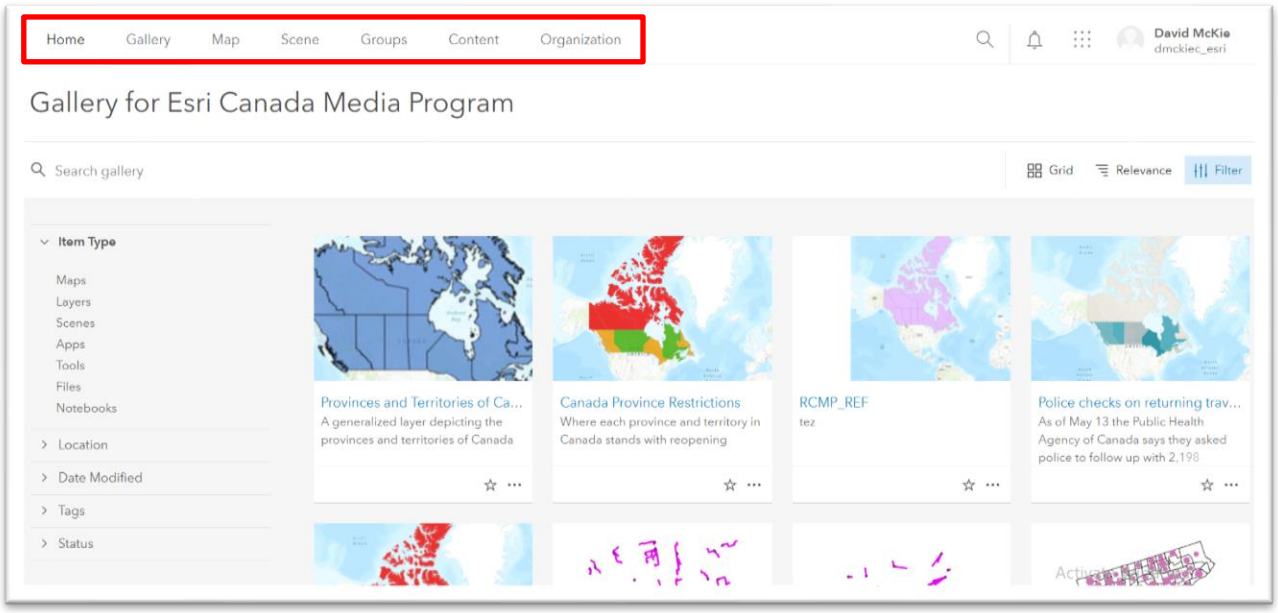


Sign in with your credentials

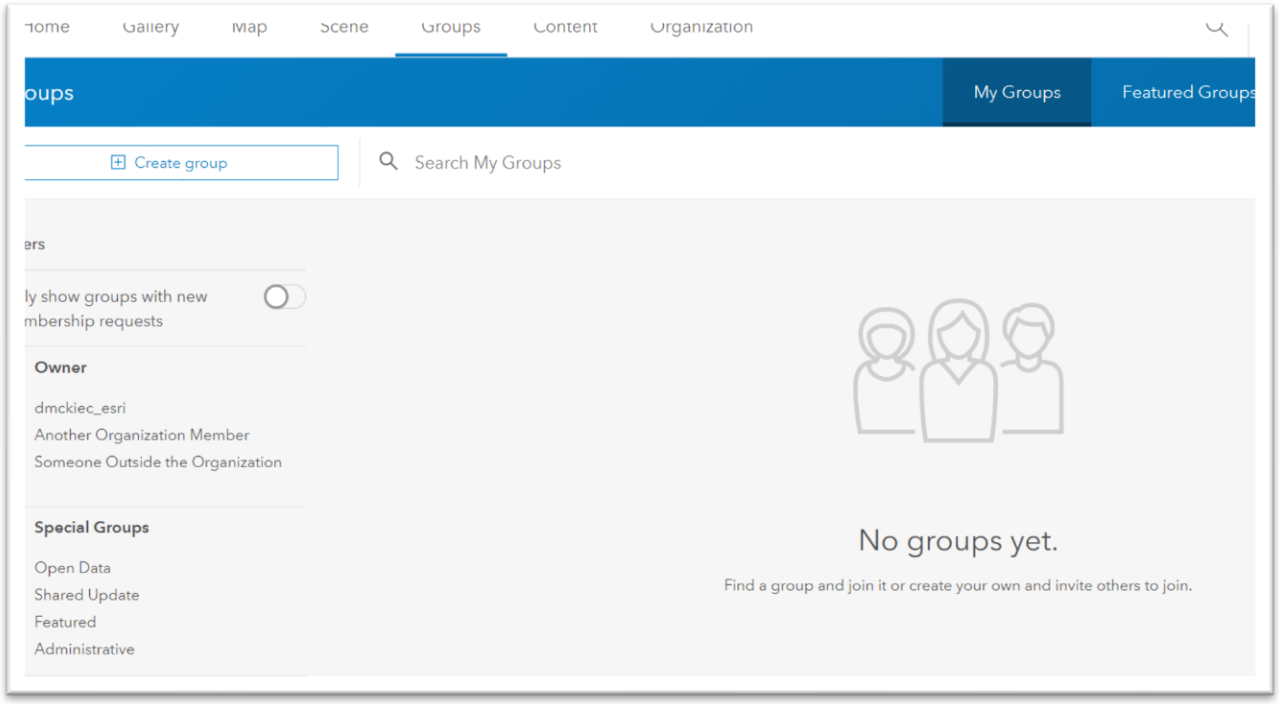
Once you are signed in, you'll arrive at the home page.



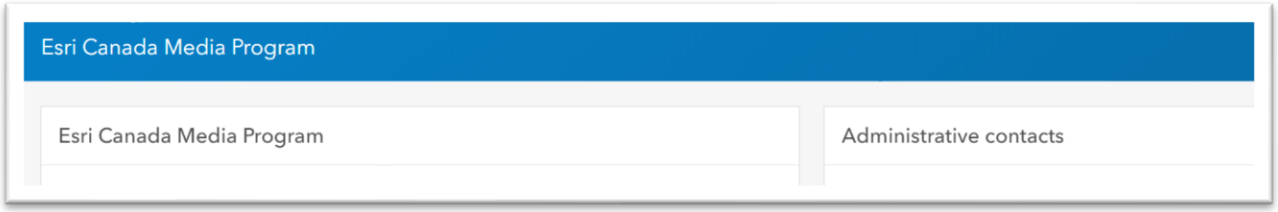
The white bar across the top contains pages you can visit in ArcGIS Online.



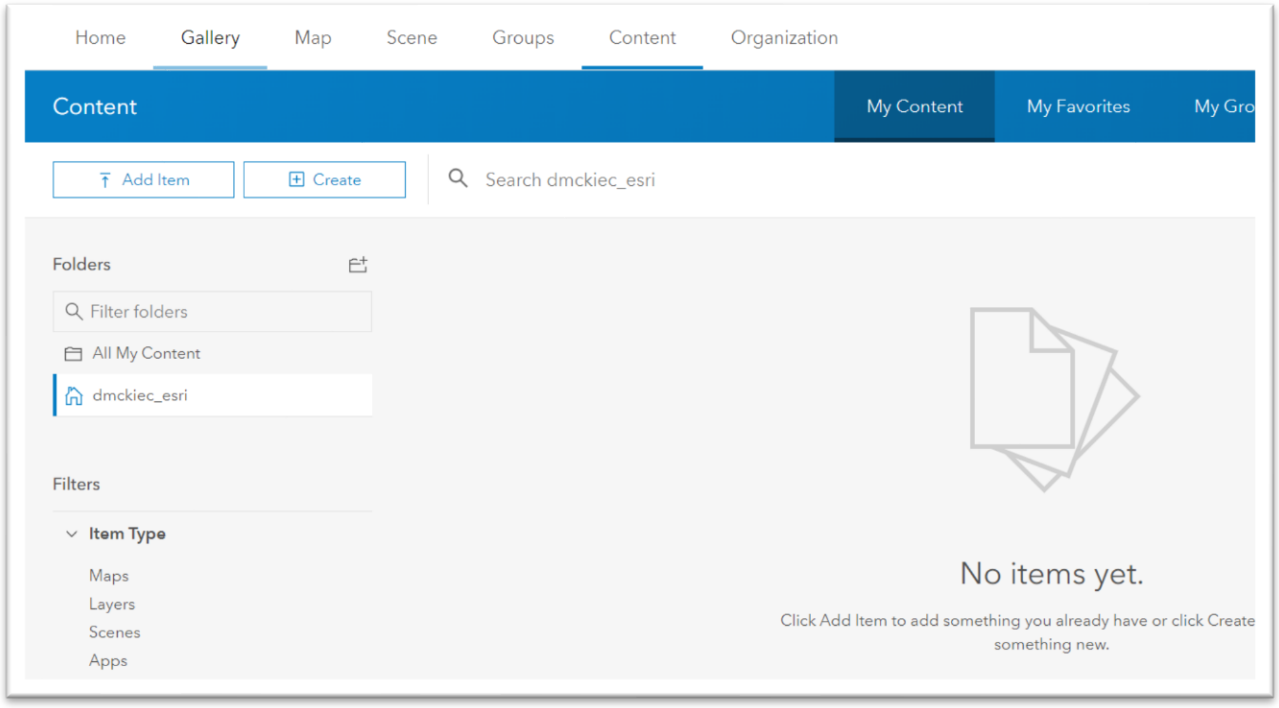
The "Gallery" page is for a person who works in an organization and wants access to the various maps and applications created by her colleagues.



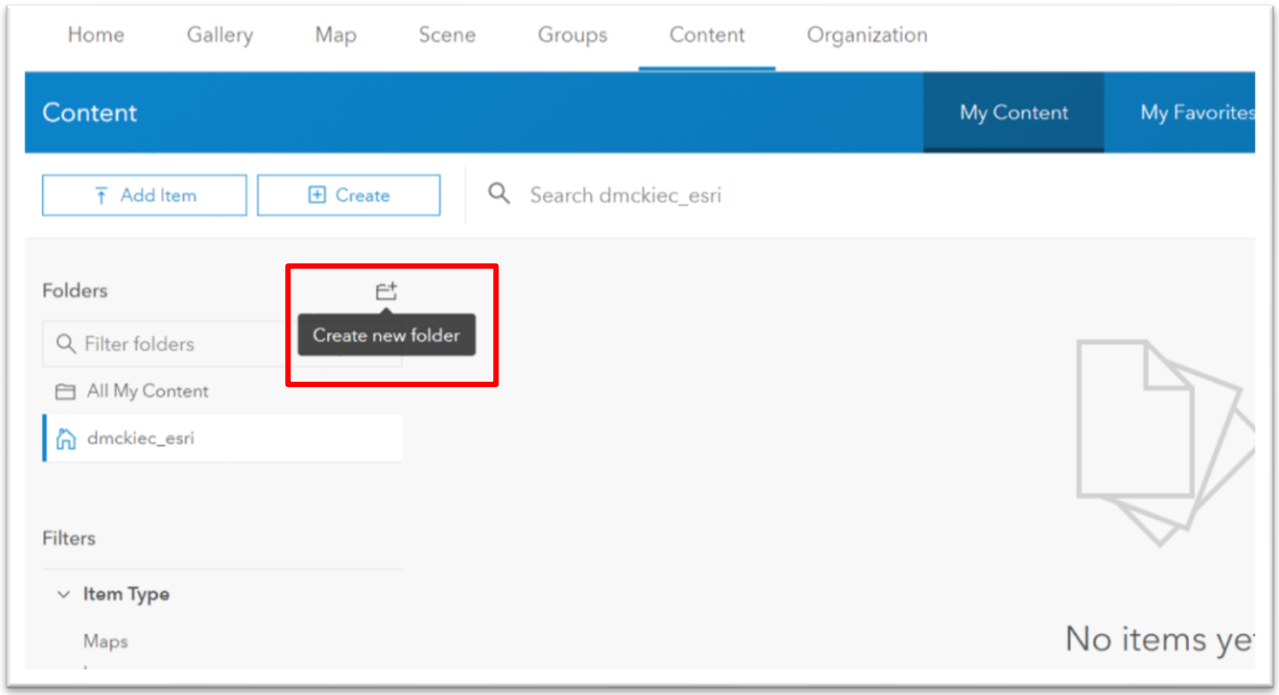
“Group” allows collaboration. For instance, if a data analyst uploads Excel files with COVID-19 data, and a geographic information system specialist uploads shape files with neighbourhood boundaries, a third colleague could use the data and shape file to recreate a colour map with the darker hues representing neighborhoods the highest number of deaths.



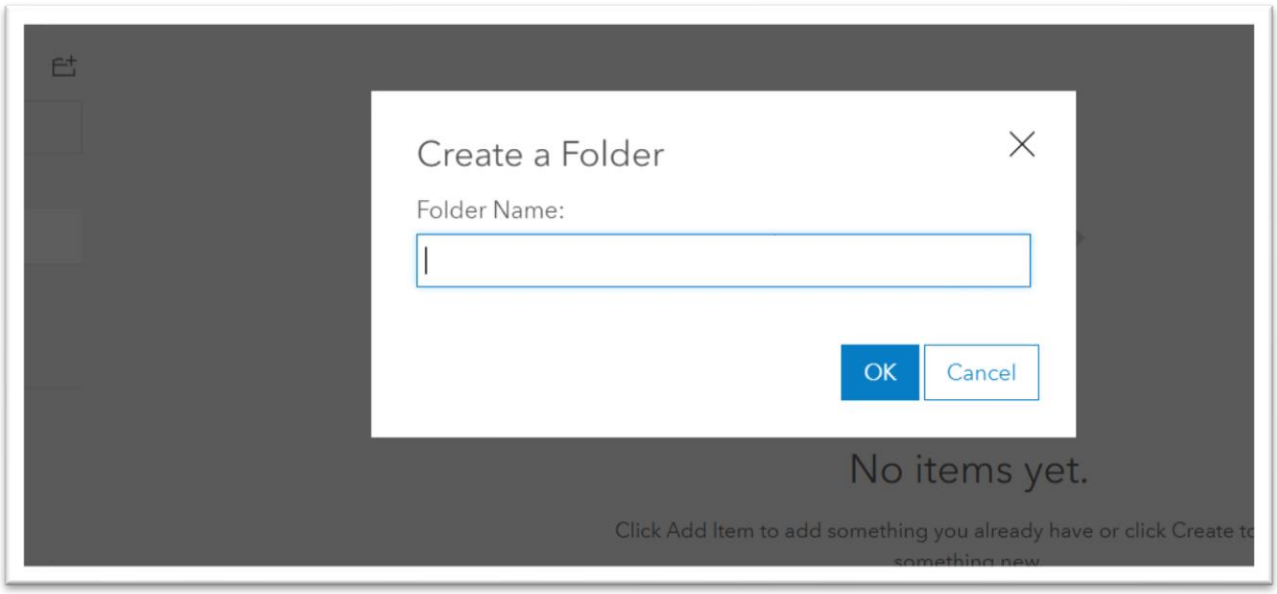
“Organization” is the general information about your account. For instance, the contacts for your account administrator, the individual you can contact with questions.



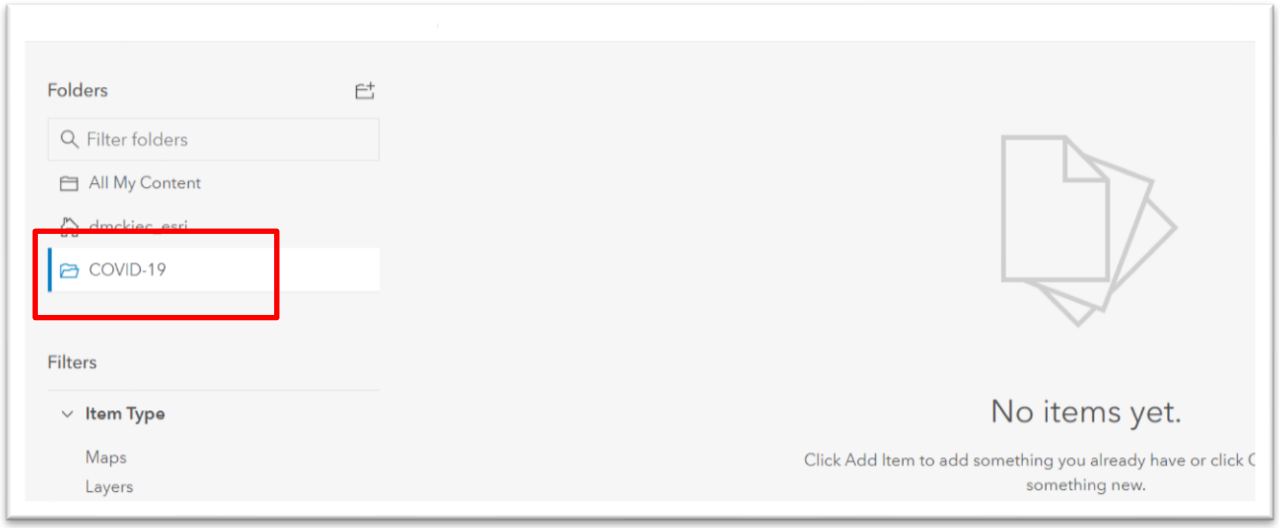
The “Content” page is where you can access your data, maps and applications. Within content, it’s advisable to create folders, just like you’ve been doing for the various projects in pervious exercises.



Once you have clicked the icon that looks like a folder, you'll be allowed to create a folder.



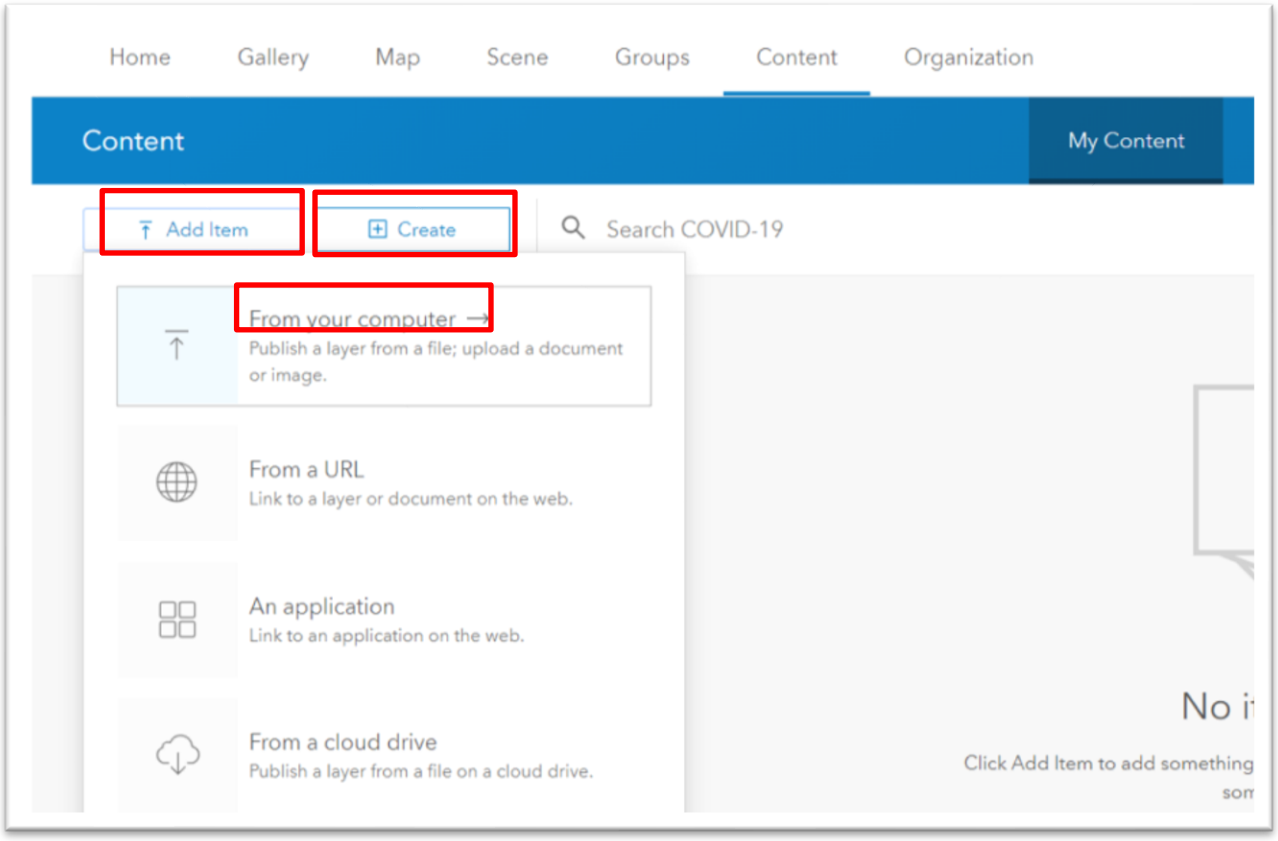
Call it COVID-19.



Once you begin creating projects, the area on the right will begin to fill up with the layers, maps and applications for each project. There's also a setting that allows for sharing each map or layer.

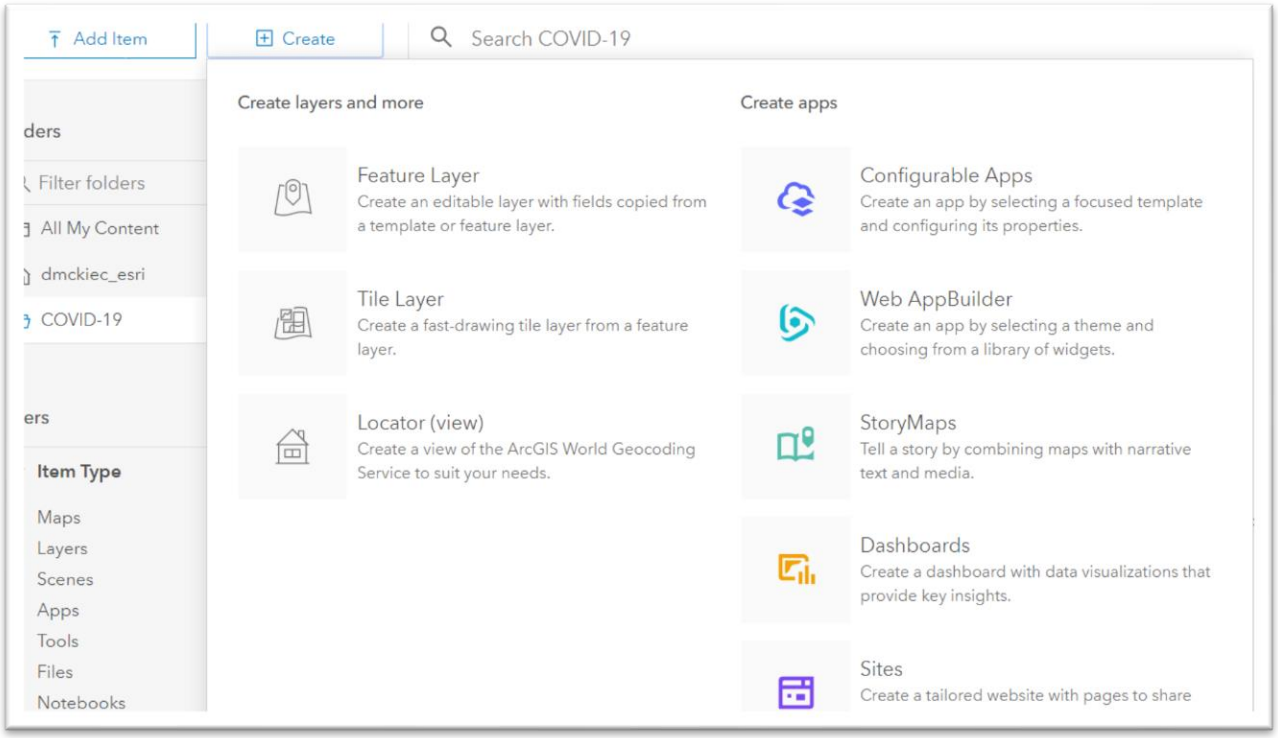
Now if we want to add files from your hard drive.

Click the “Add Item” tab ….



… and then “From your computer.”

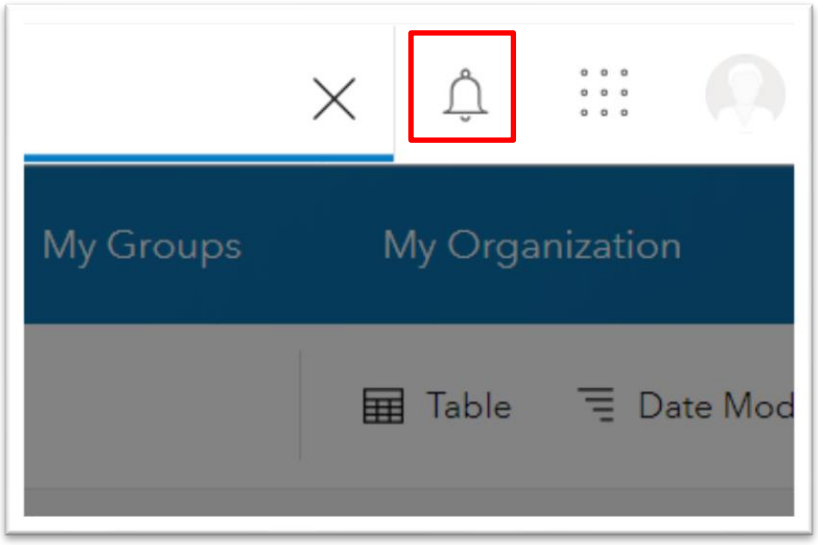
You can also create a layer by selecting the “Create” tab next to “Add Item.”



Here you can create layers or applications.

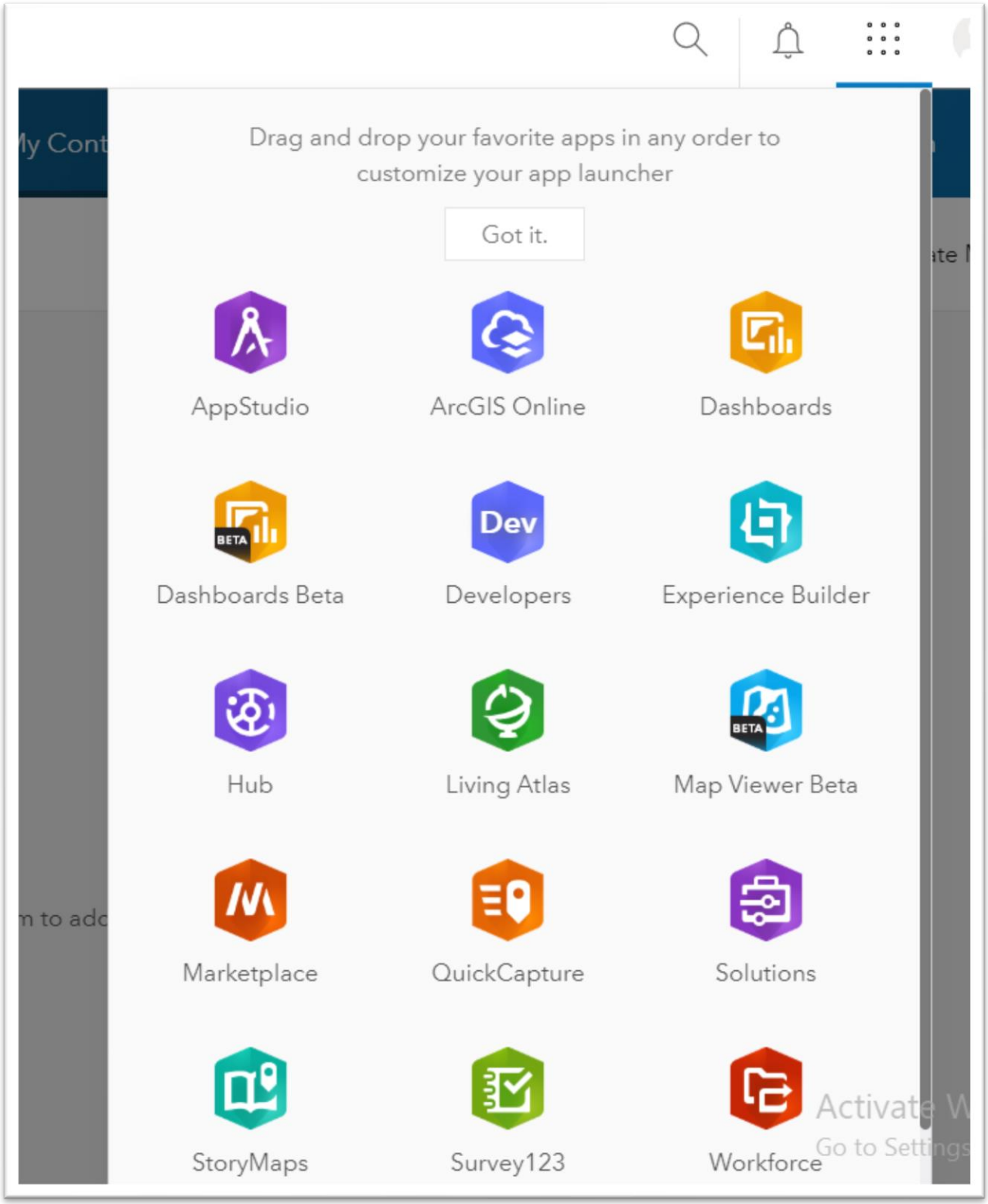
You can also search for other layers that you or other individuals may have created.

To the right of the search icon, is a notification button.

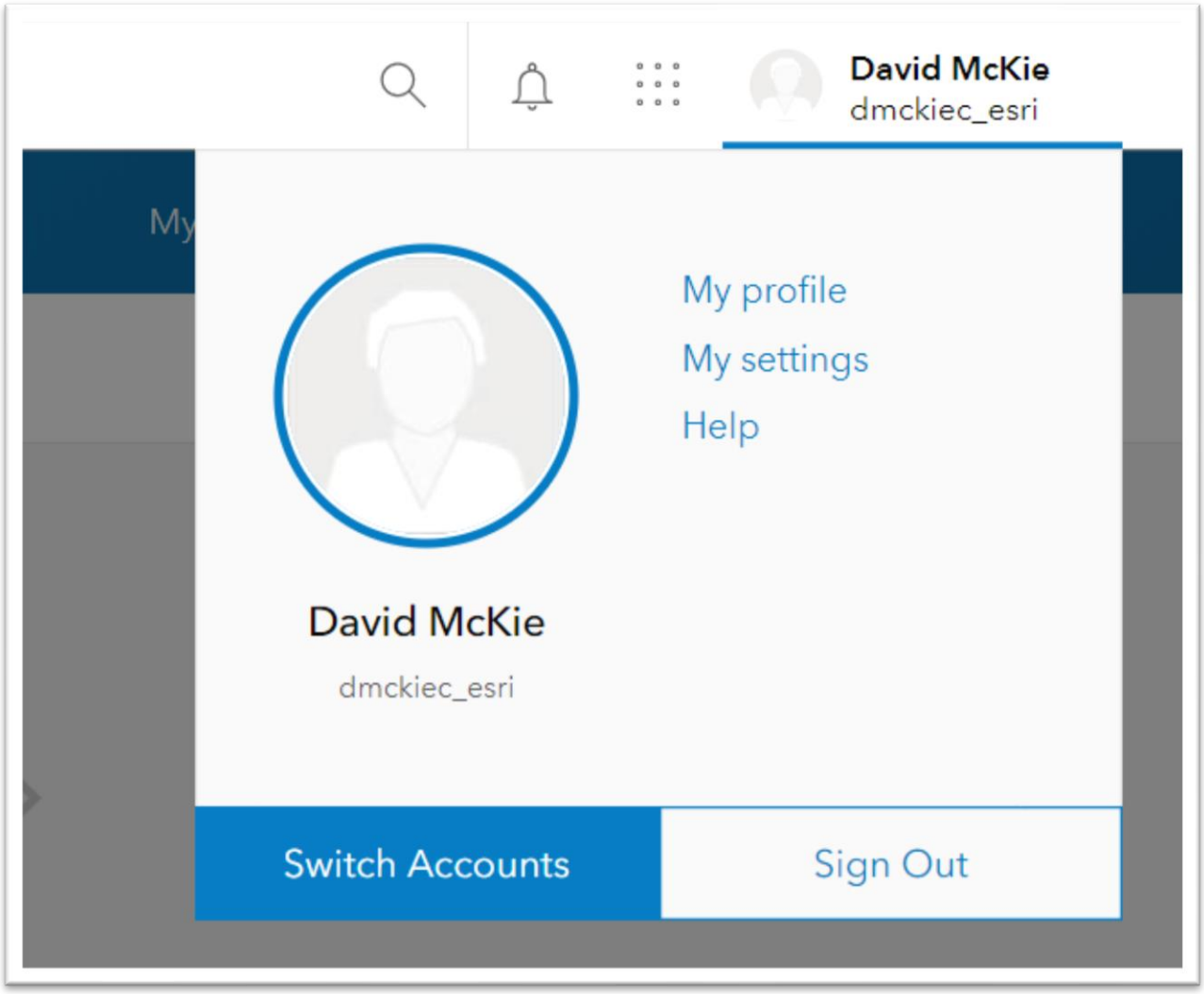


The notification button lets you know when you've been invited to a group. To the right of the notification icon is icon the produces the various applications you can

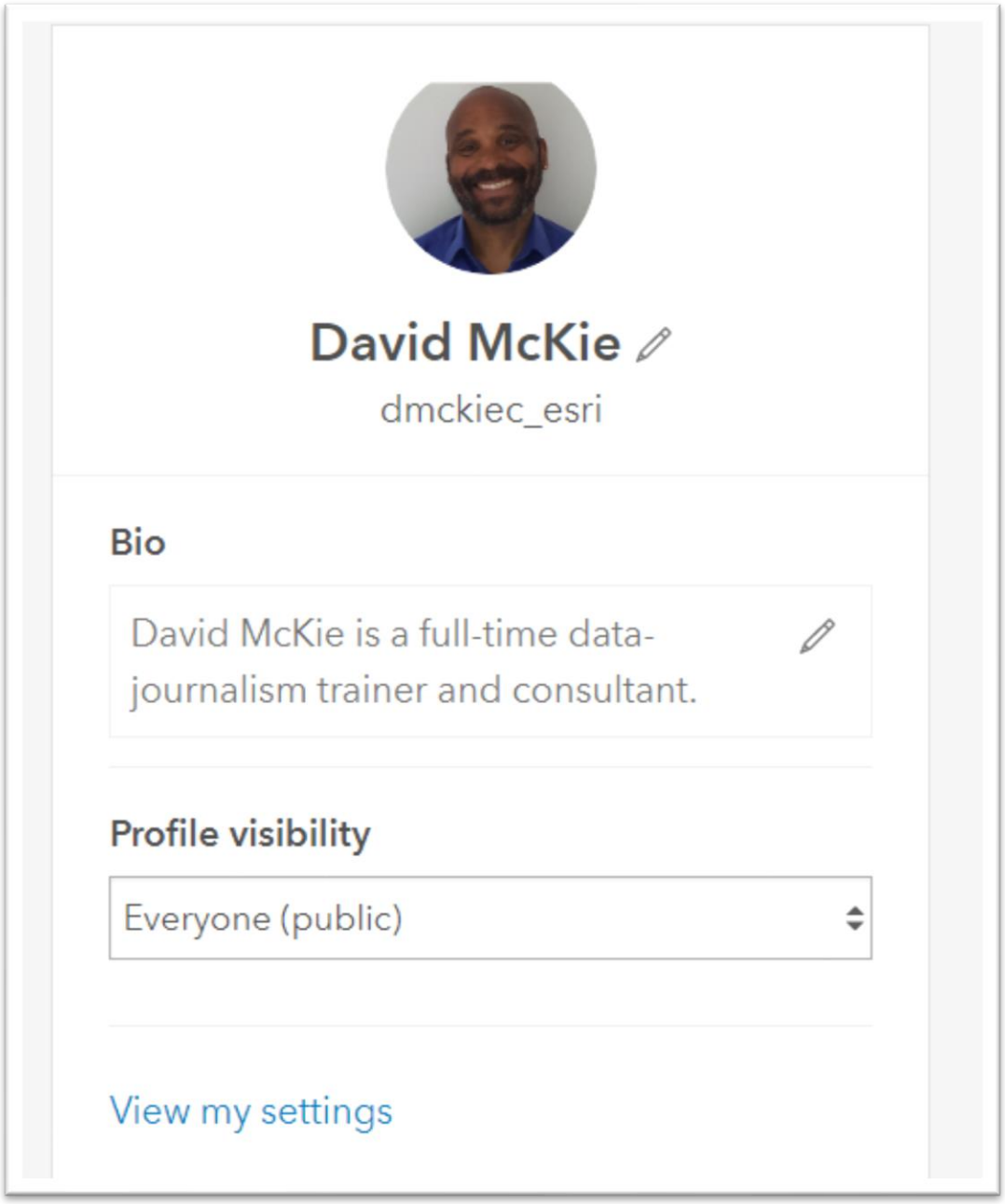
use, depending on the type of license you have.



Finally, by clicking your name, you can fill in the details for your profile.



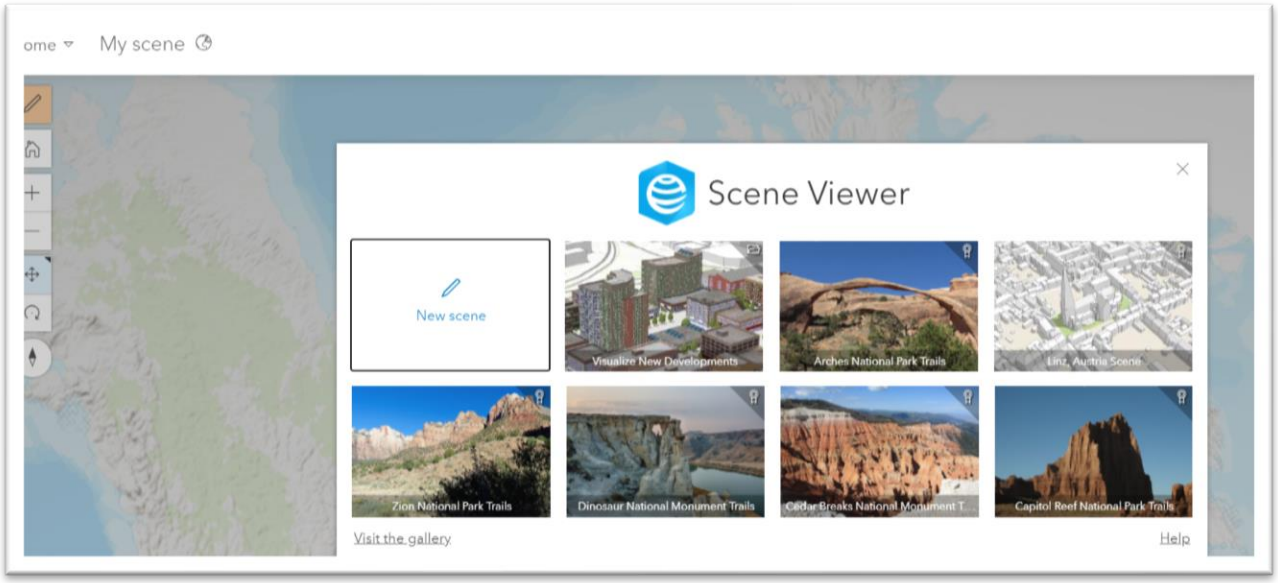
Also be sure to set your profile visibility to everybody.



A visible profile allows colleagues to invite you to take part in a project.

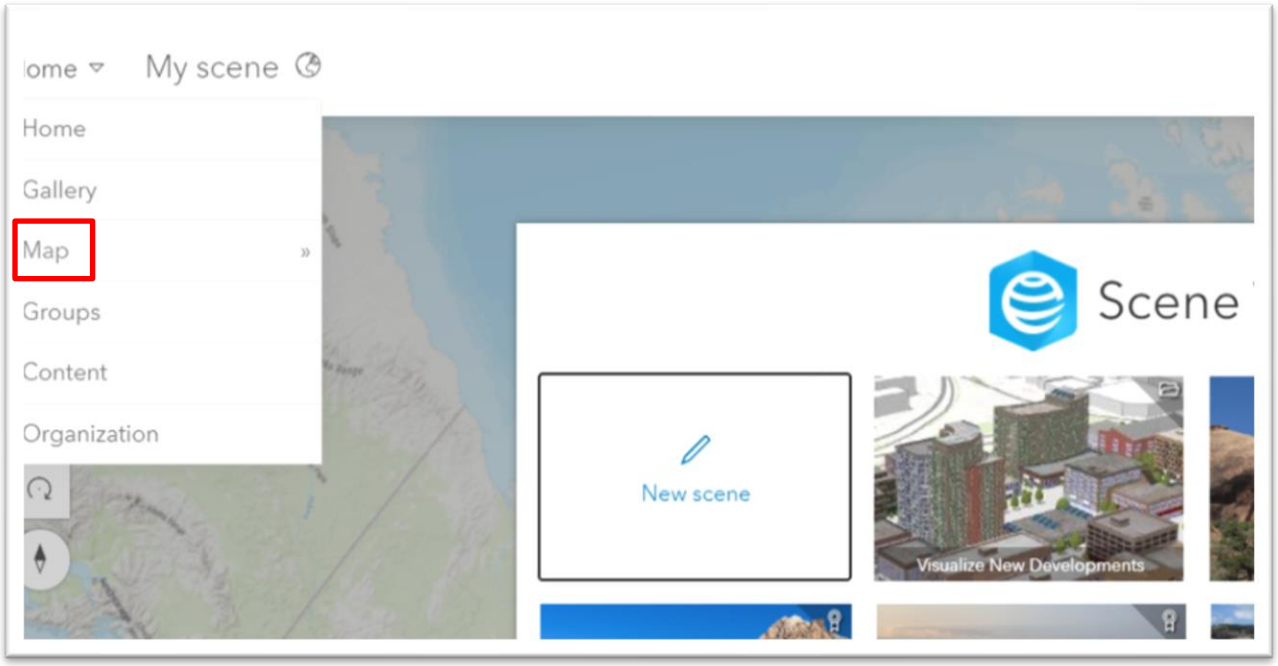
Let’s return to the remaining two pages.

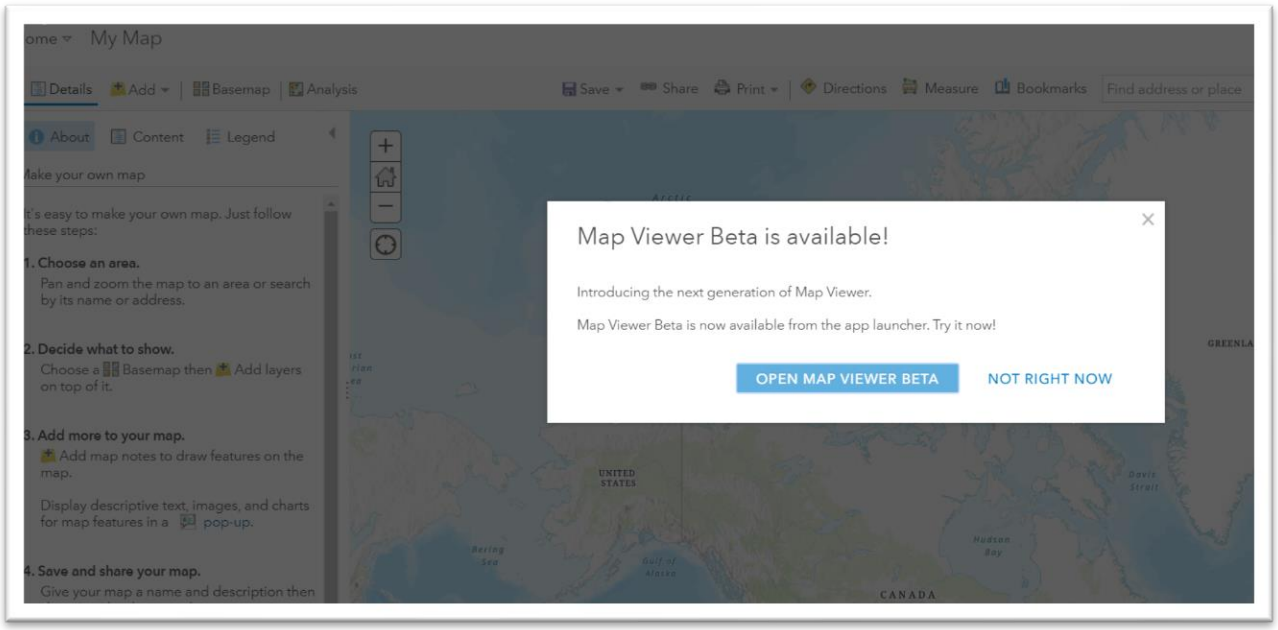
“Scene” allows you to create 3-D maps.



Our focus is two-dimensional maps, but this is a handy tool to be aware of.

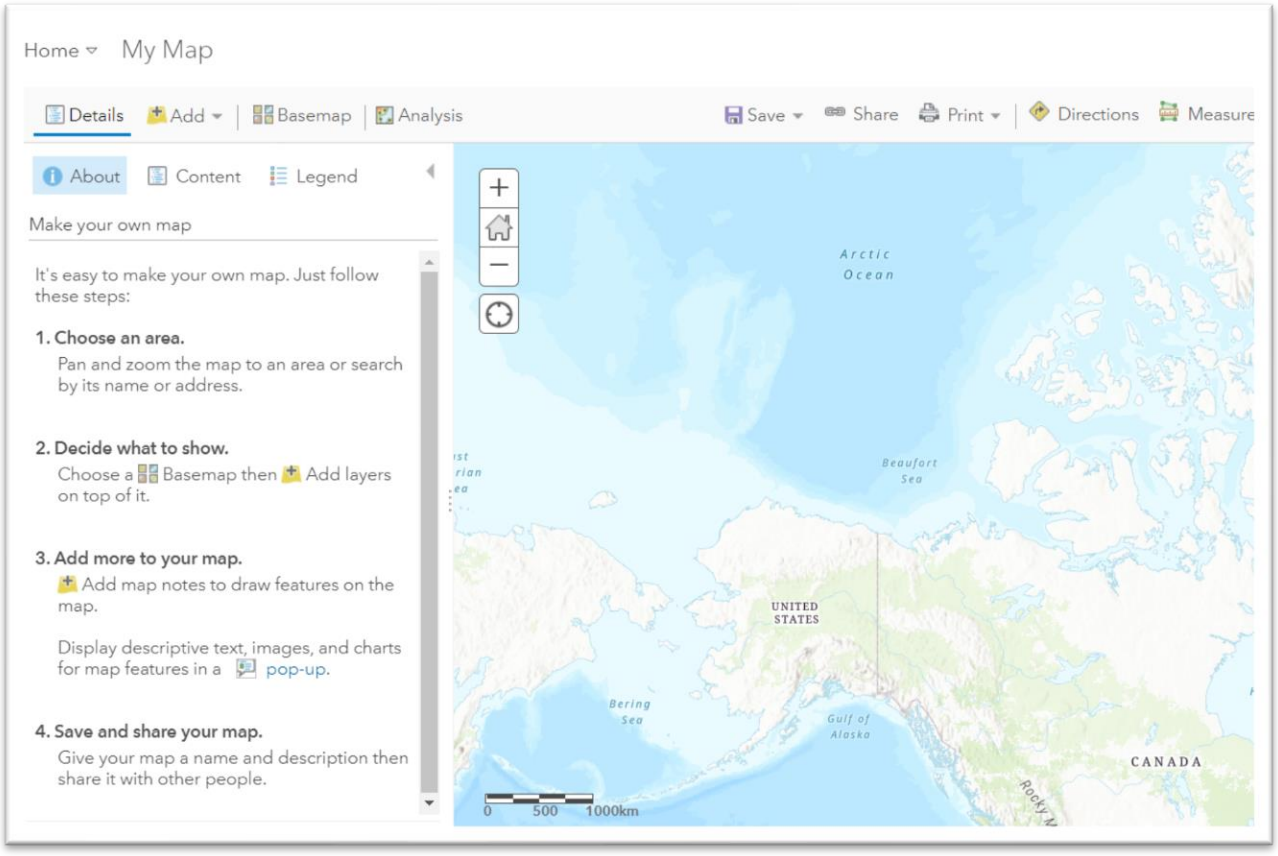
We will focus on creating a map.



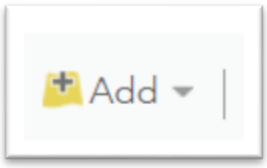


While the folks at ESRI assure us that the “Open Map Viewer Beta” is an exciting option, we won’t worry about it for now.

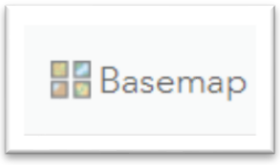
Select “Not Right Now.”



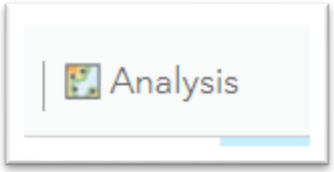
This is the interface where you'll be doing most of your work. You can add data.



Change the background or your map, or base map.



Perform analysis.

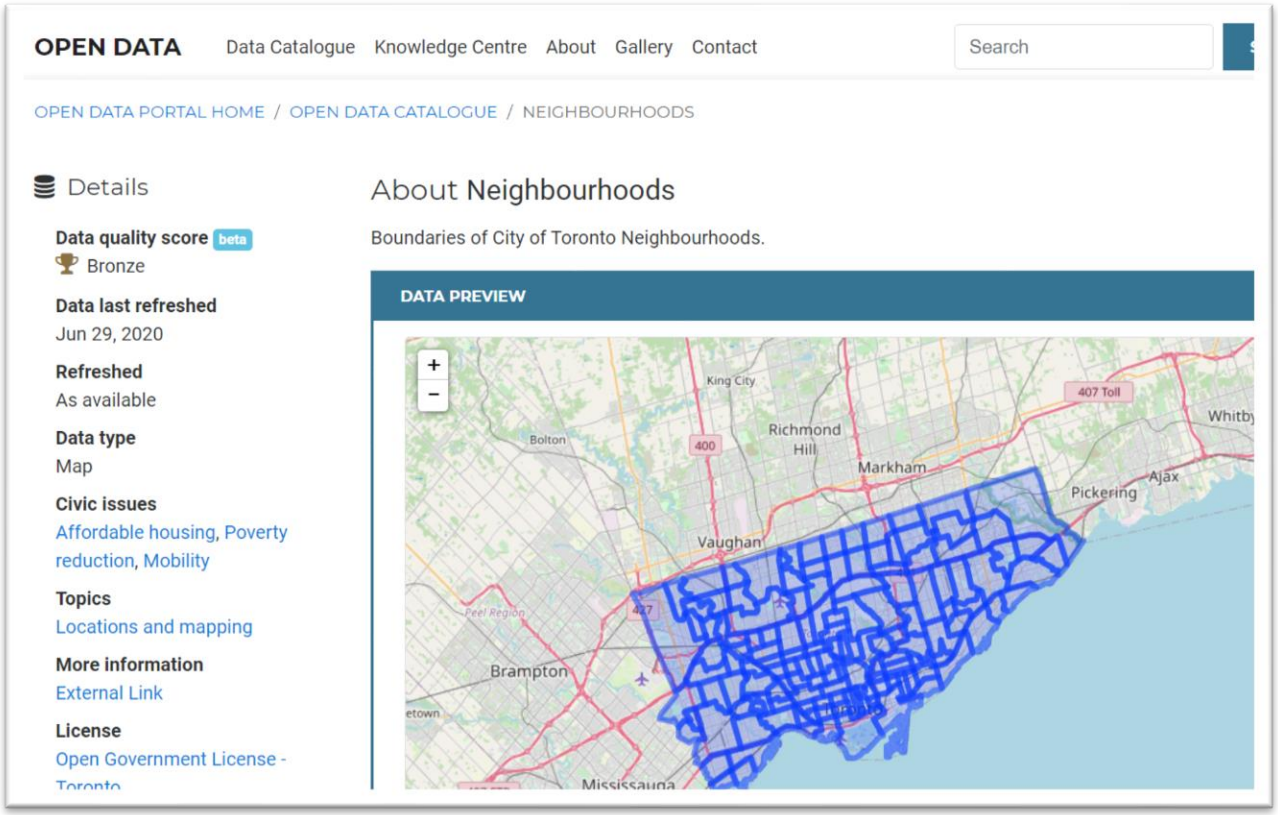


Now it’s time to locate data

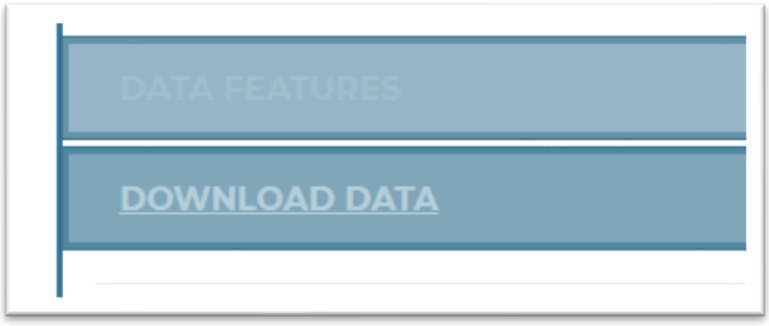
How to find and upload a shape file

In previous tutorials, we have been focusing on COVID-19 sites. For this tutorial, we want to see how the virus is playing out in the city of Toronto.

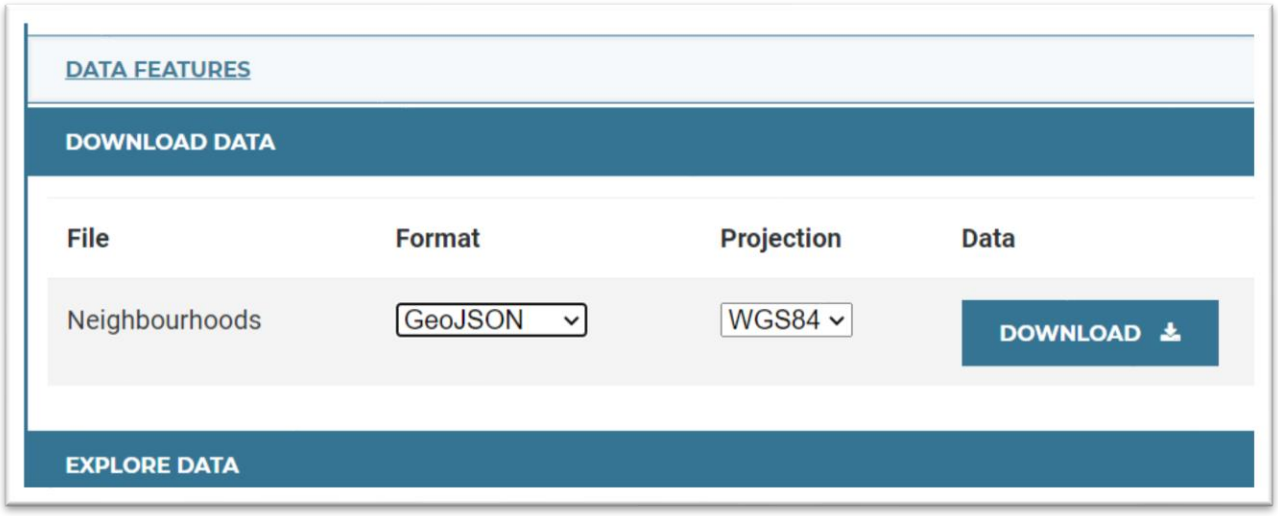
Let’s visit the city’s open-data site that contains a file with Toronto neighbourhoods.
https://open.toronto.ca/dataset/neighbourhoods/



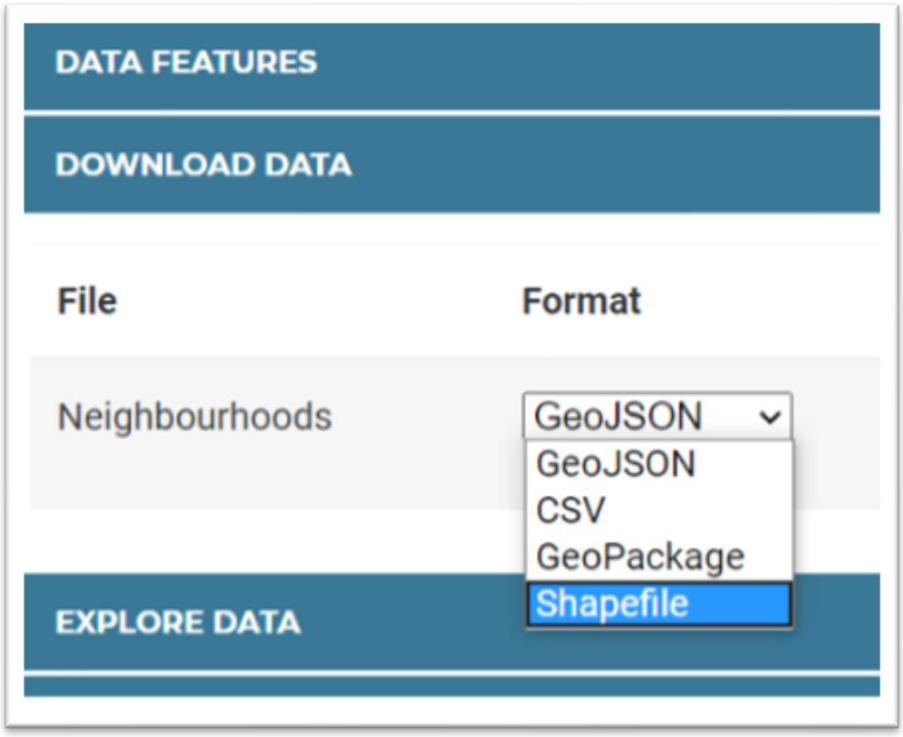
Scroll down to the “’Download Data” tab.



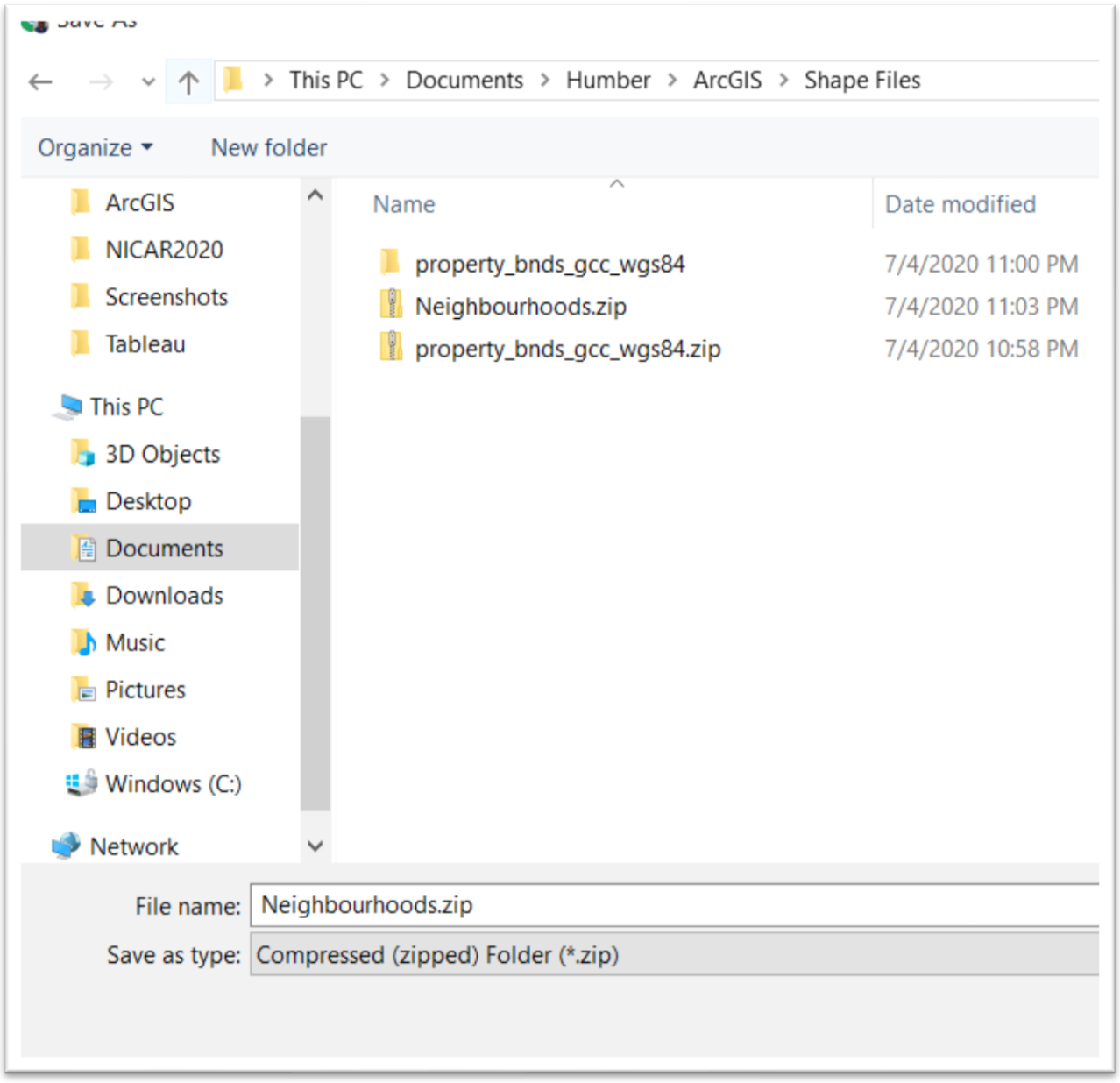
You should see an interface that looks like this.



Click the caret to the left of “GeoJSON”.



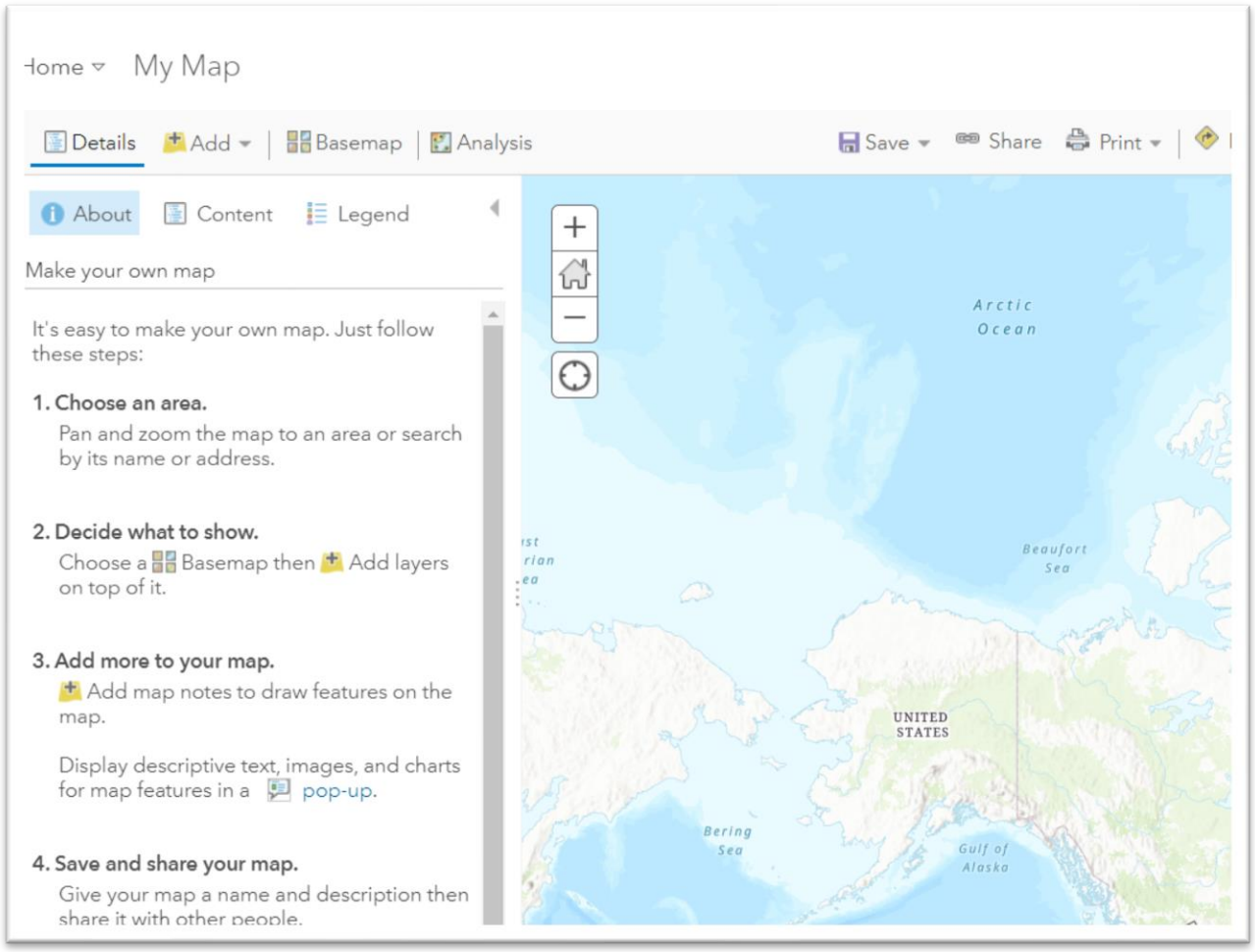
Select “Shapefile.” Save the zipped folder to the folder you’ve created for this tutorial.



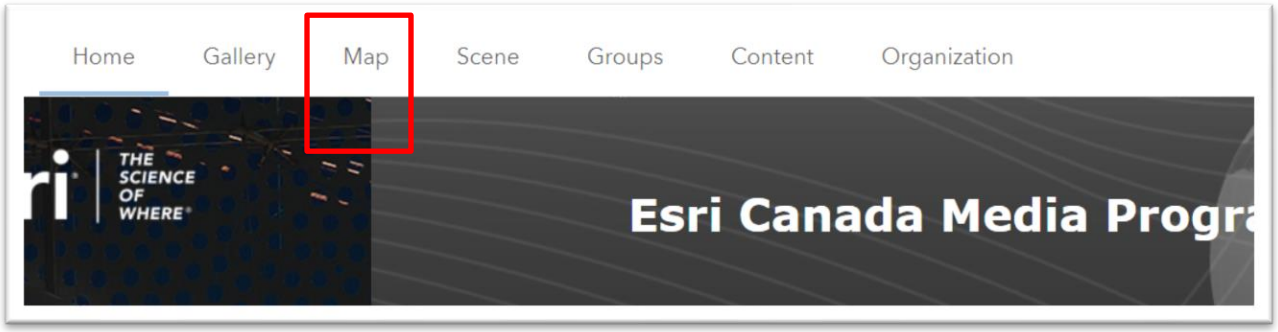
Before we go much further, a quick word about a shape file. As we explain on page 121 of The Data Journalist, a Shape file is a map file format developed by Esri, and it is made up of several files, including the ones with the extensions .shp, .shx and .dbf. The .shp file contains the geographical data; the .shx the index and the .dbf, the tabular data. A shape file MUST contain these and the other formats if

it is display the boundaries on a map. Therefore, all the files are contained in a zip folder, which will be uploaded to our map on ArcGIS Online.

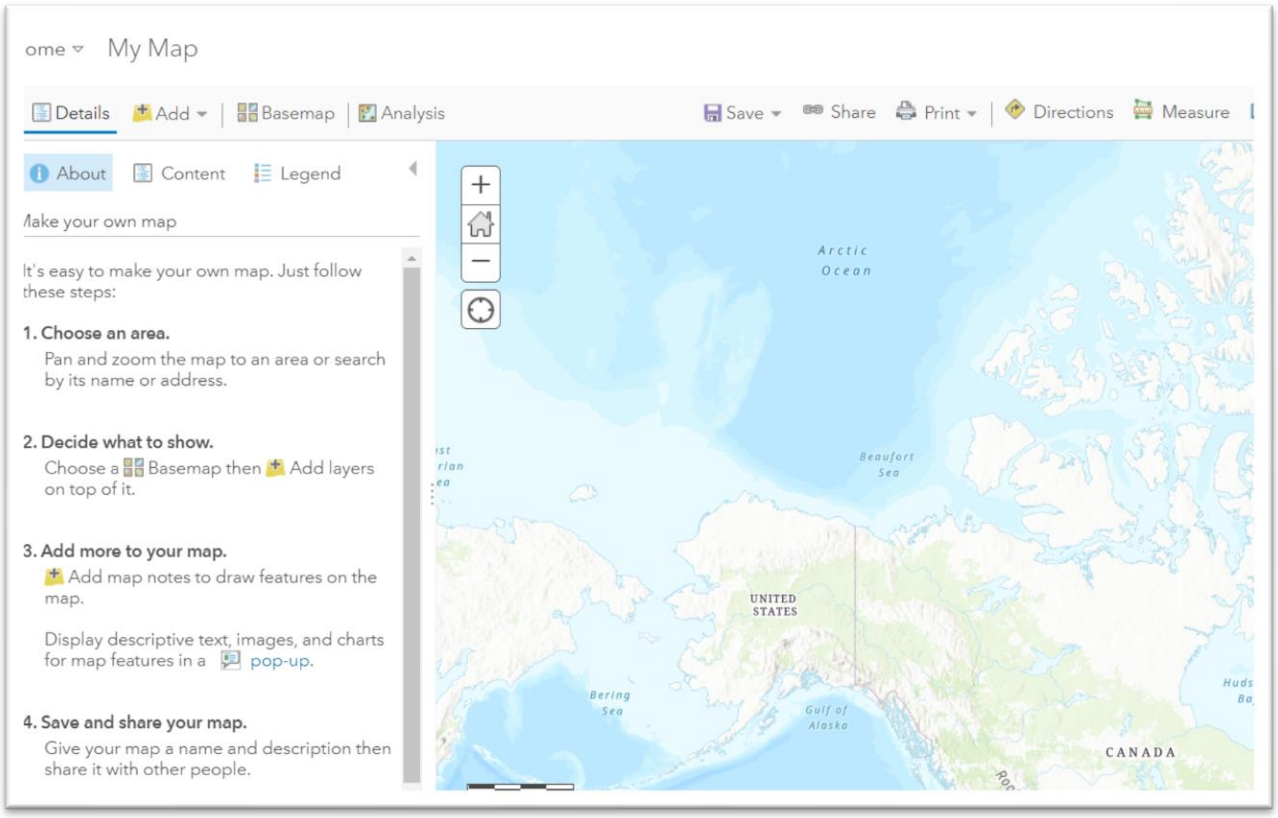
Once you've downloaded, return to the ArcGIS Online page. If you're still in the map view section. Stay there.



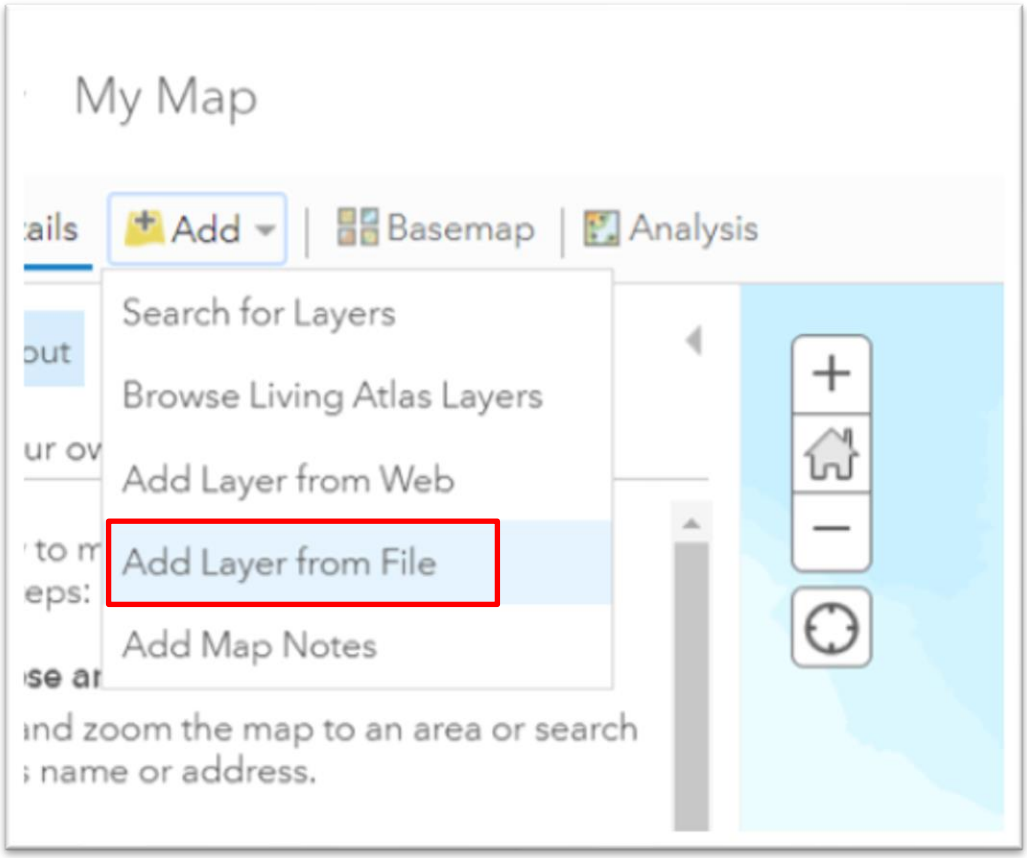
If you are not in the section pictured above, return to the home page, and select the Map option.

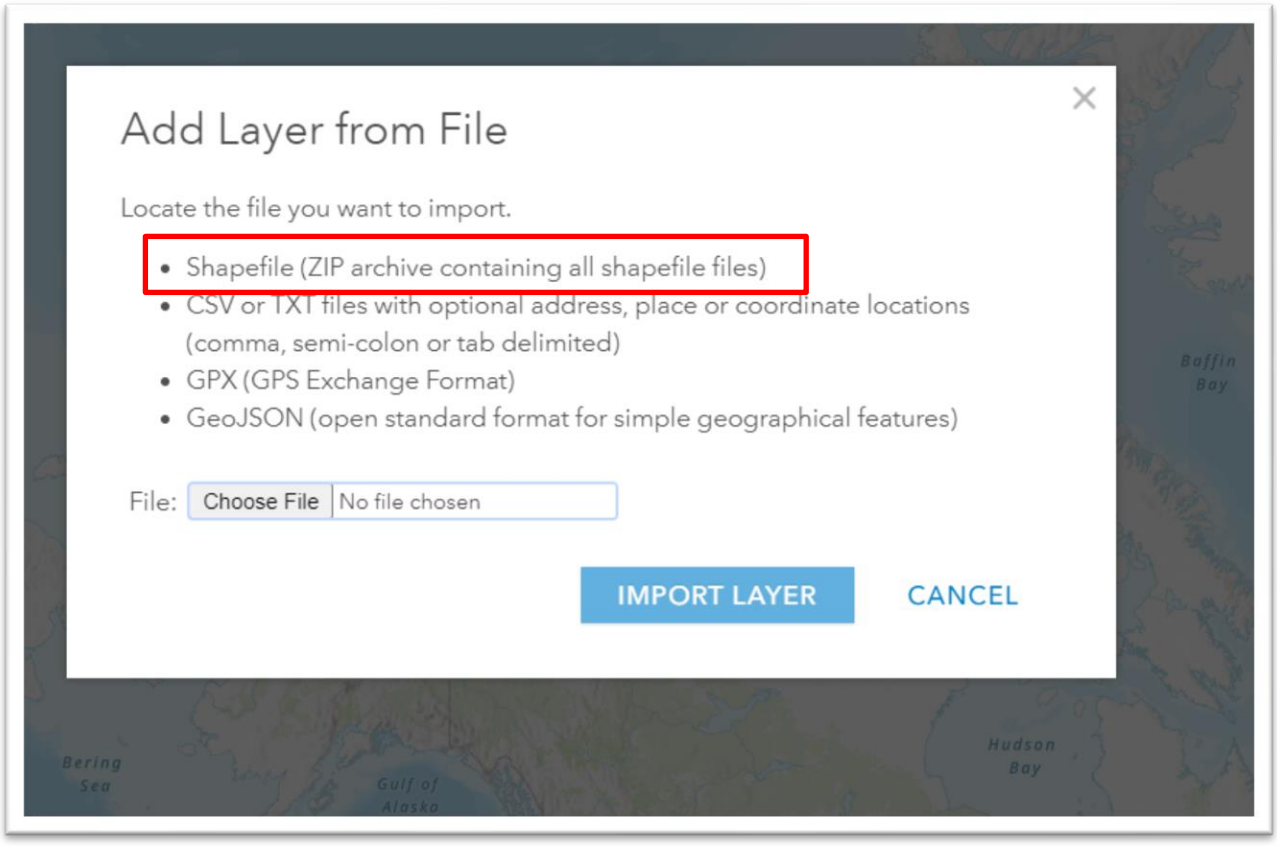


This will return you to the map viewer section.



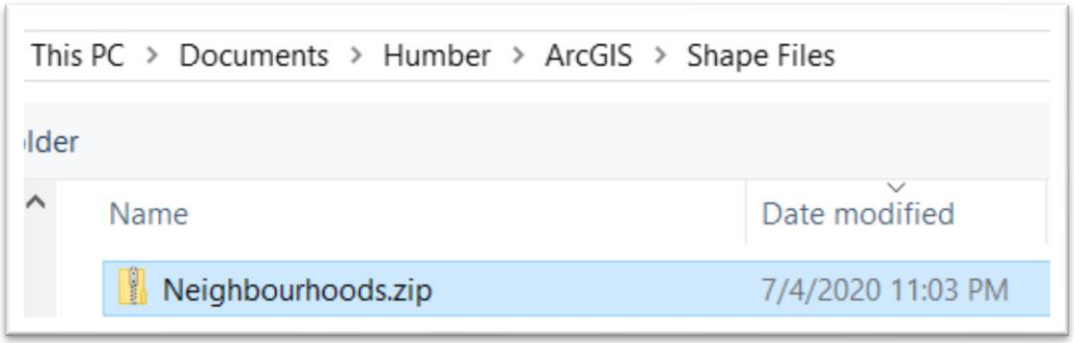
To import the City of Toronto shape file contained in that zip folder, click the "Add" icon and select the "Add Layer from File" option.

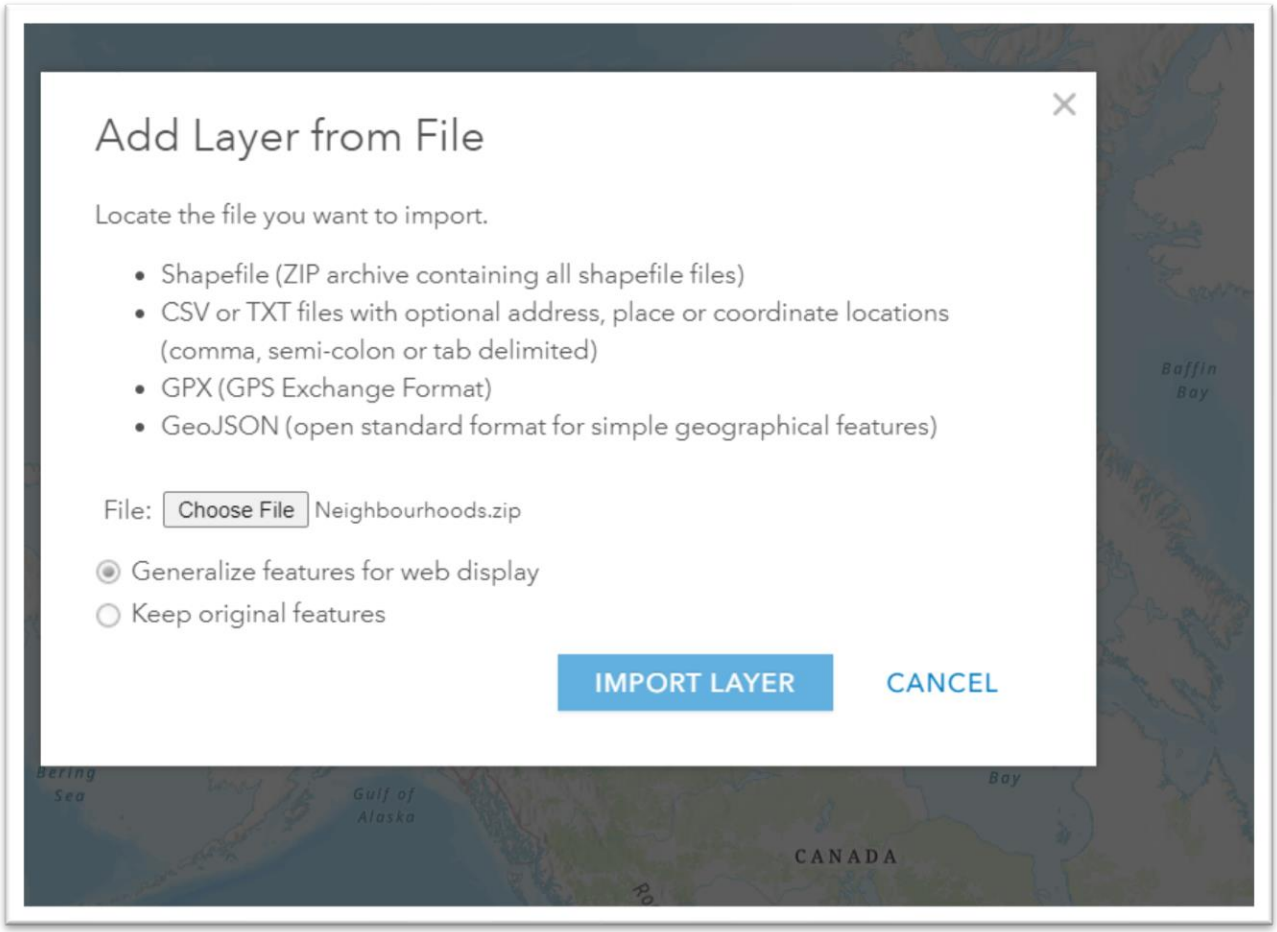

My Map
ails
Add
Basemap
Analysis
Search for Layers
Browse Living Atlas Layers
Add Layer from Web
Add Layer from File
Add Map Notes
ut
ur ov
to m
eps:
se ar
nd zoom the map to an area or search
name or address.



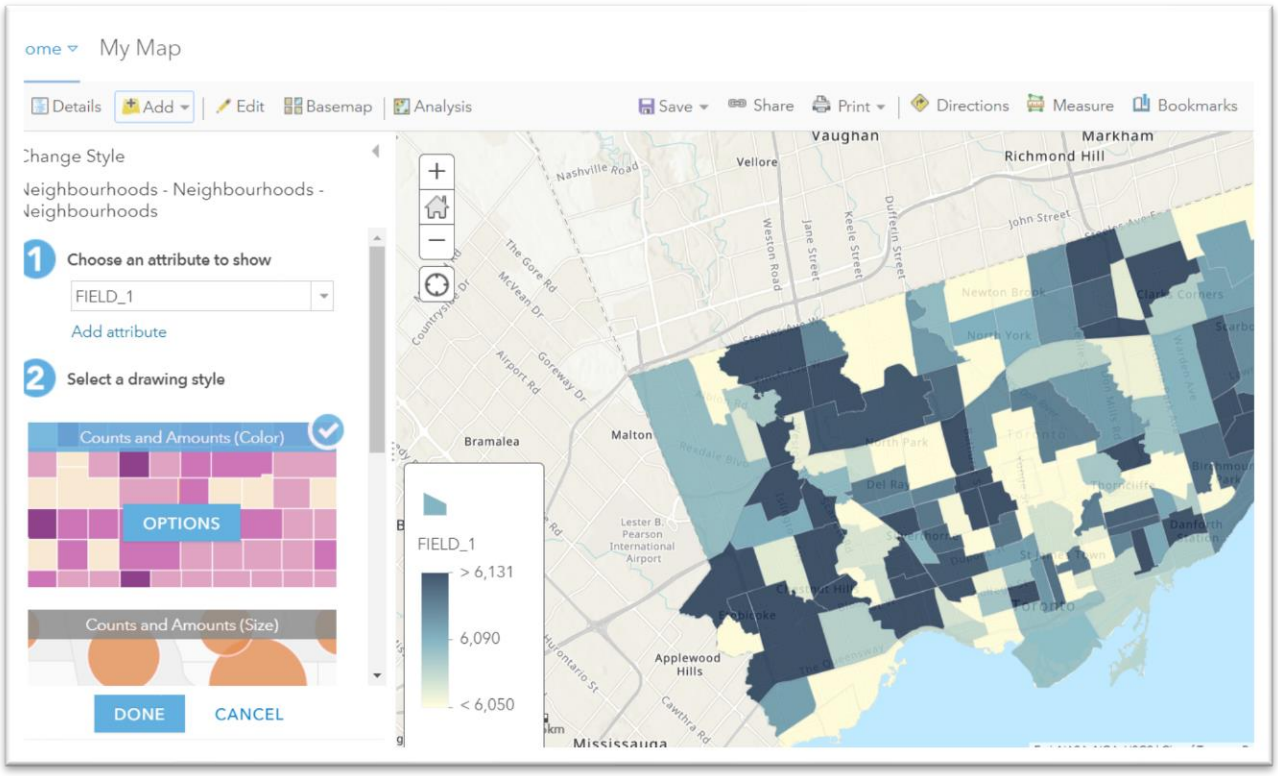
In the first option, you can see that the shape file will be accepted, only if it is a zip file. This is for the reasons we just explained.

Select the “Choose File” tab to browse for our zip folder.



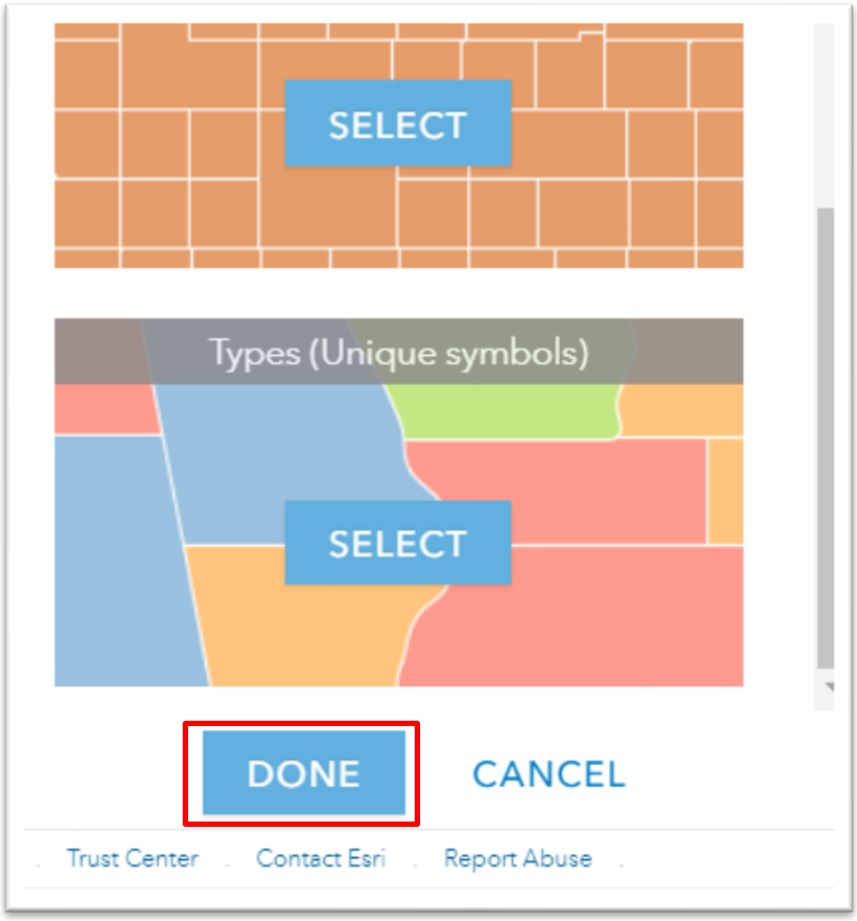

Add Layer from File
Locate the file you want to import.
Shapefile (ZIP archive containing all shapefile files)
CSV or TXT files with optional address, place or coordinate locations (comma, semi-colon or tab delimited)
GPX (GPS Exchange Format)
GeoJSON (open standard format for simple geographical features)
File:
Choose File
Neighbourhoods.zip
Generalize features for web display
Keep original features
IMPORT LAYER
CANCEL
Baffin Bay
Bering Sea
Gulf of Alaska
Bay
CANADA

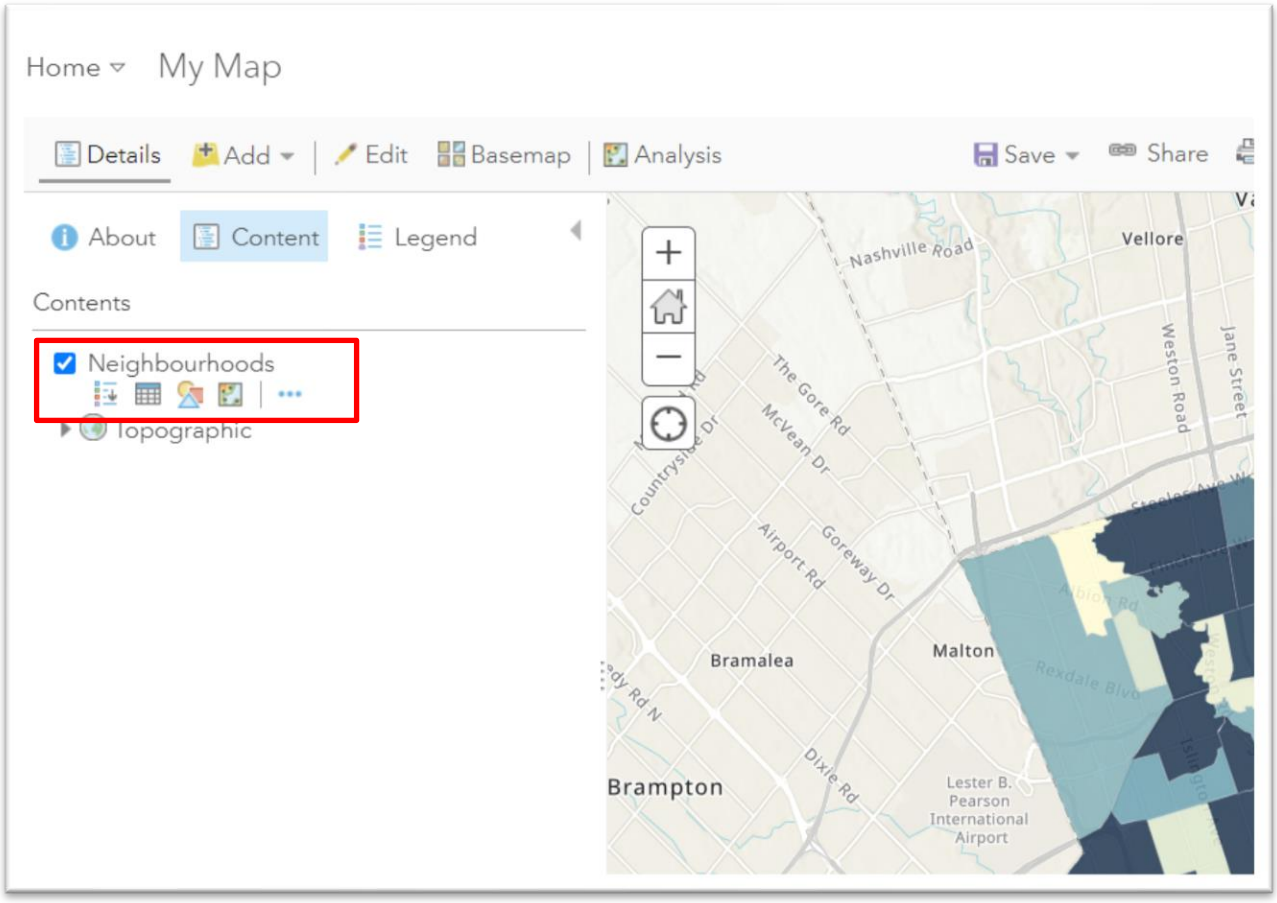
Select the defaulted option, “Generalized features for web display”, because it allows for a quicker display of your map.



Importing the data takes you to a styling panel on the left. The default option is the one we want because it uses shades of shades on a colour ramp to identify neighborhoods with the higher numbers. The darker the number, the higher the concentration. For now, leave it as it is.

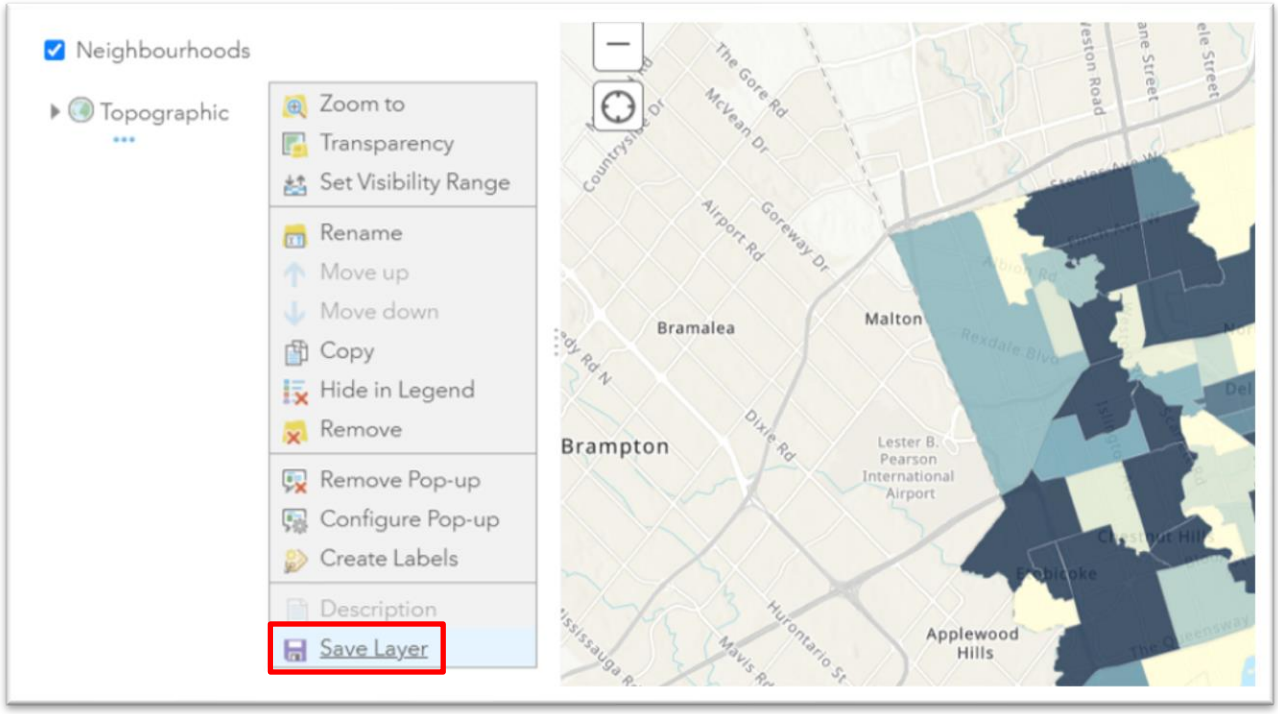
Select the “Done” tab at the bottom of your panel to the left.





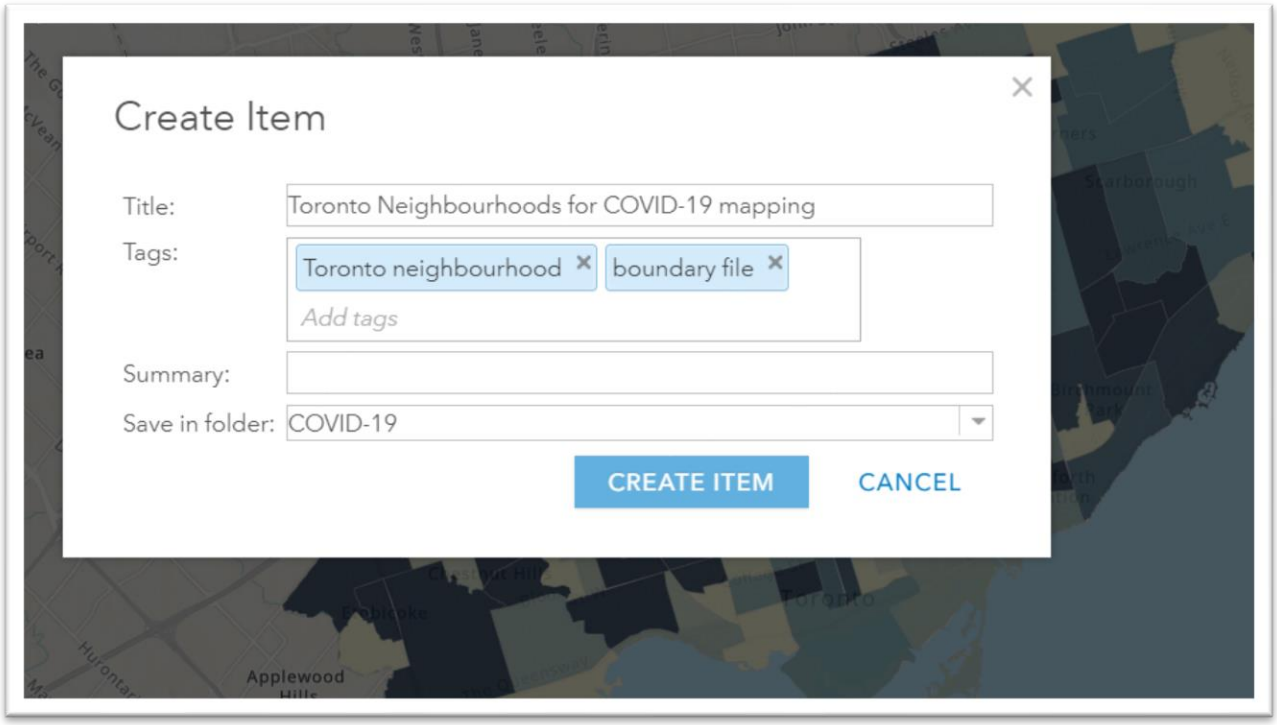
This temporary layer called “Neighbourhoods” is displayed on the map to the right. Layers are what make maps very powerful. Good maps display multiple layers, which is why they are more powerful than data visualization tools.

To save this layer to your ArcGIS account, click the three dots.



You can create a layer name and tags like the ones you see in the screen grab below. You may even want to add your initials at the end of the title, which comes in handy if you're part of a project. And be sure to save it in the folder you created

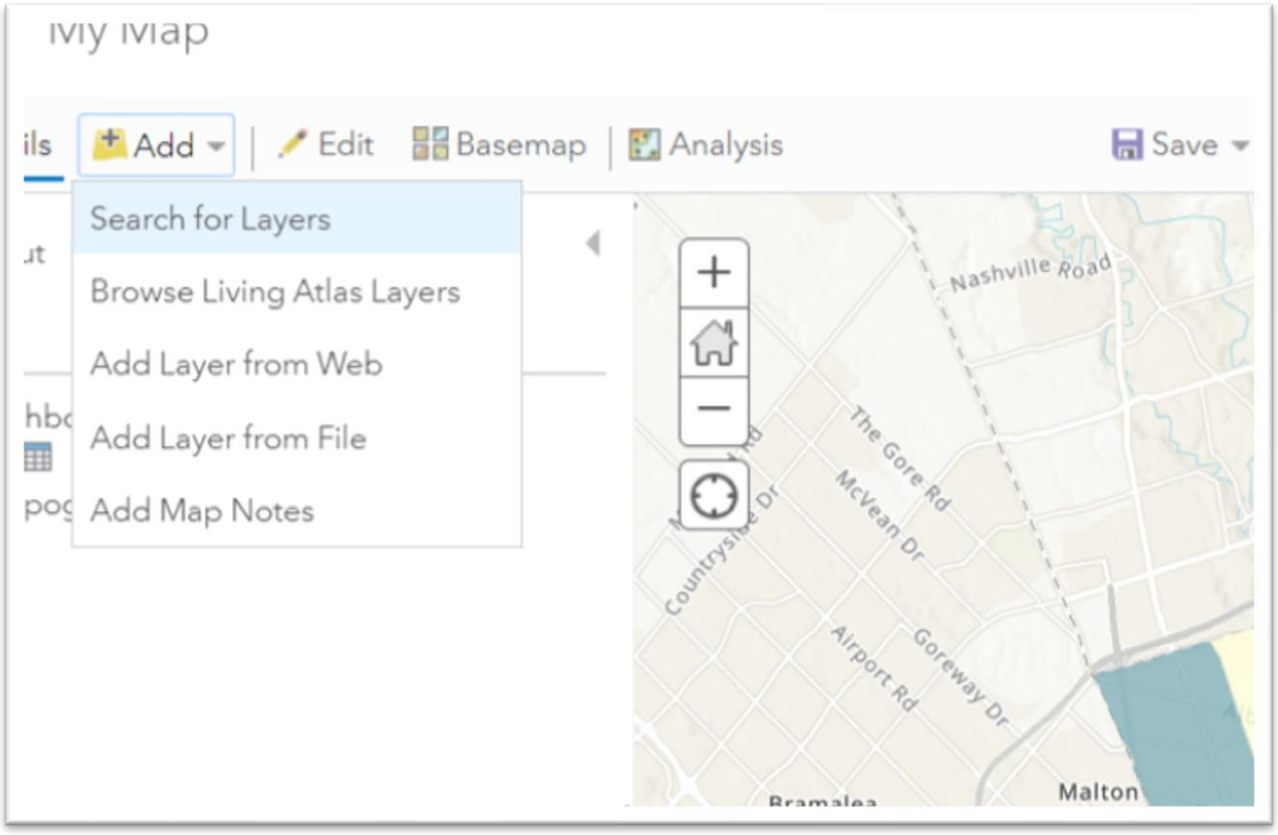
for this project, a step described in the first part of this tutorial.



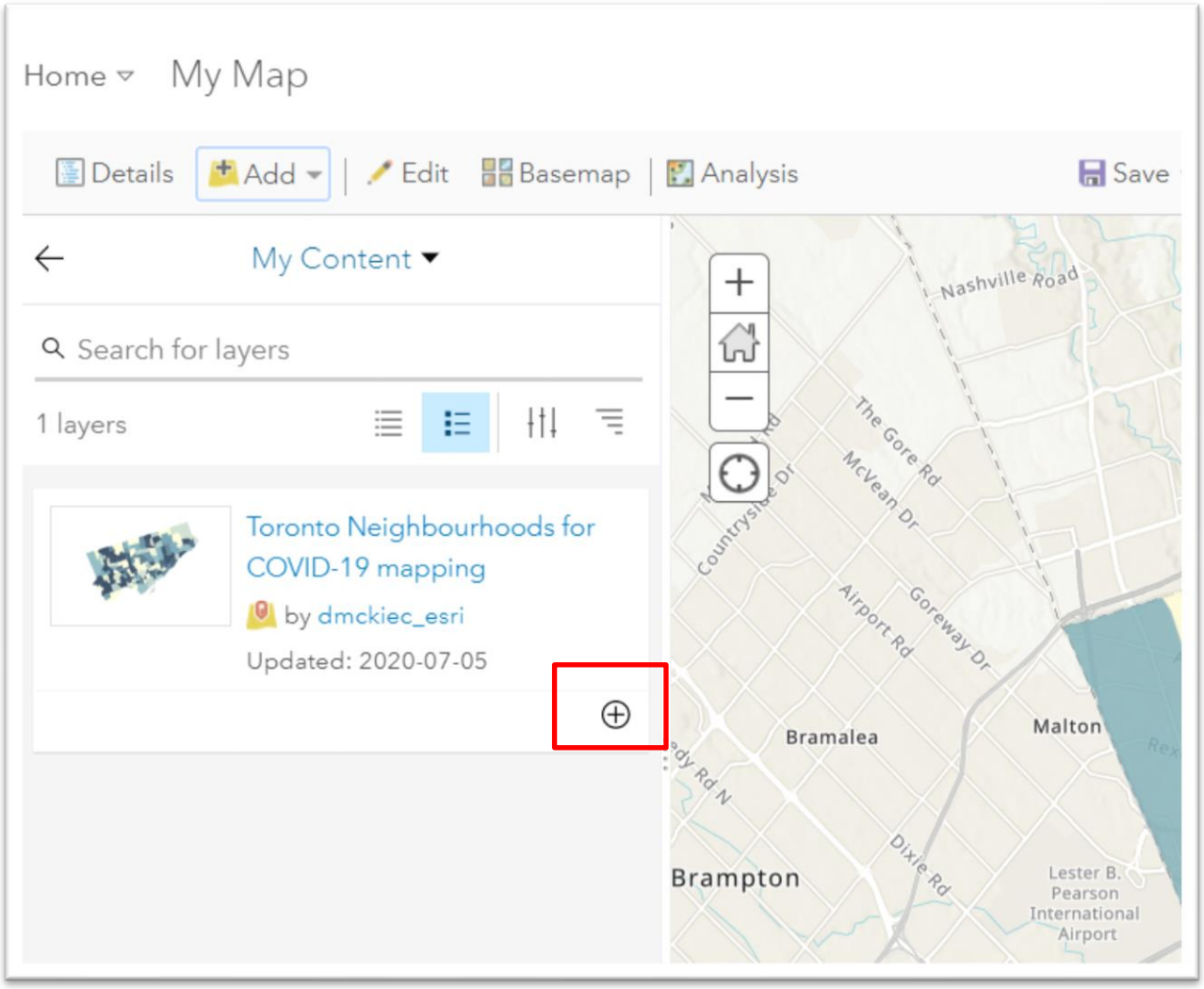
Select Create Item.

Now we can import this layer.

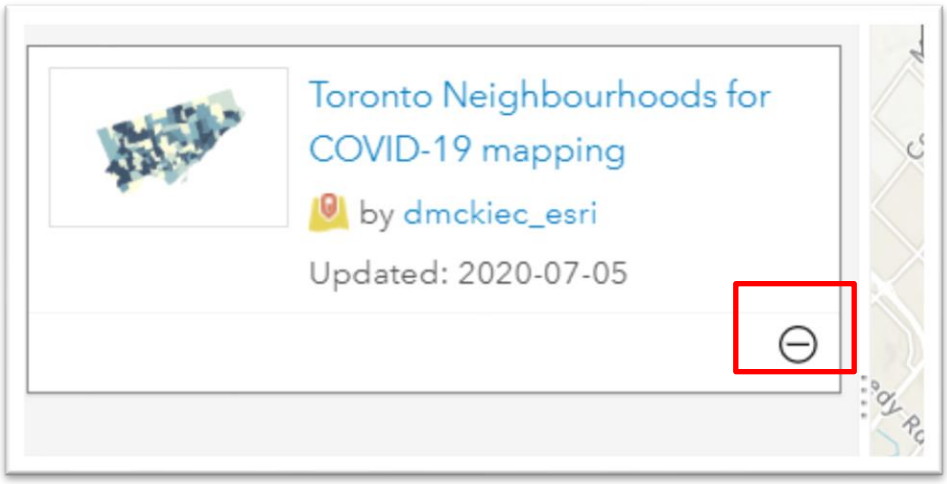
Return to the add button.



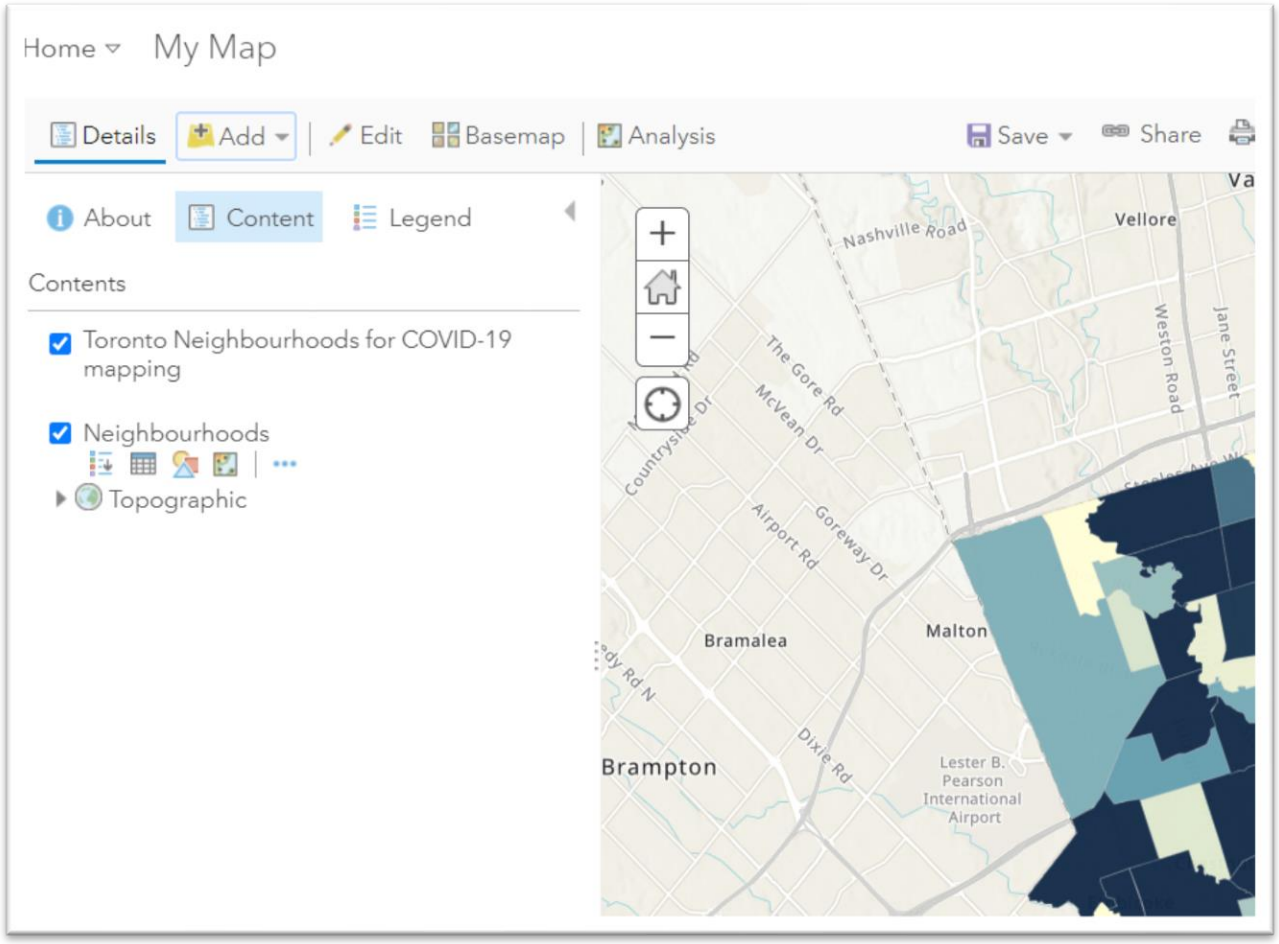
Your layer will appear as the first or most recent one.



Select the add “+” sign to the bottom left.

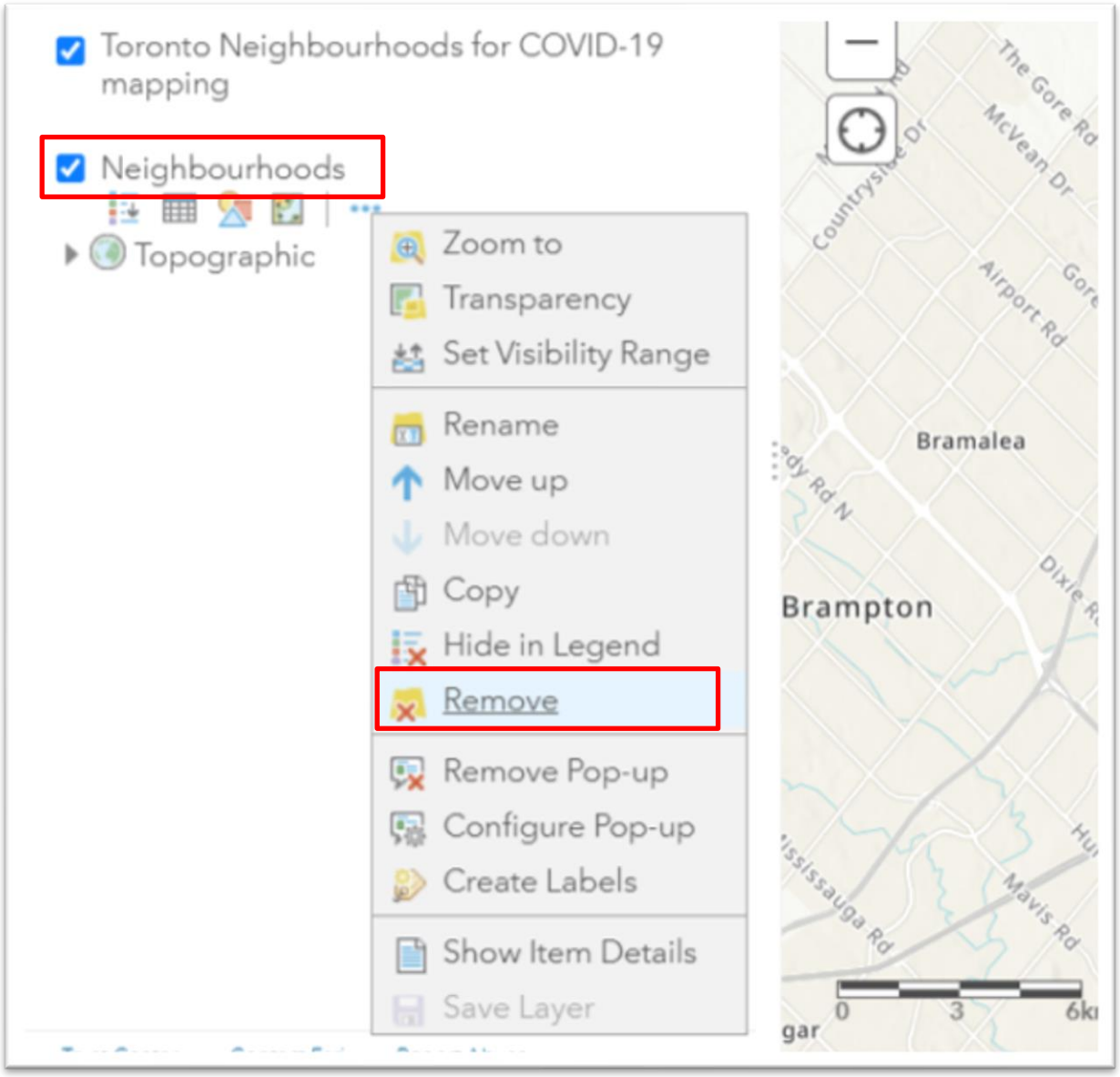


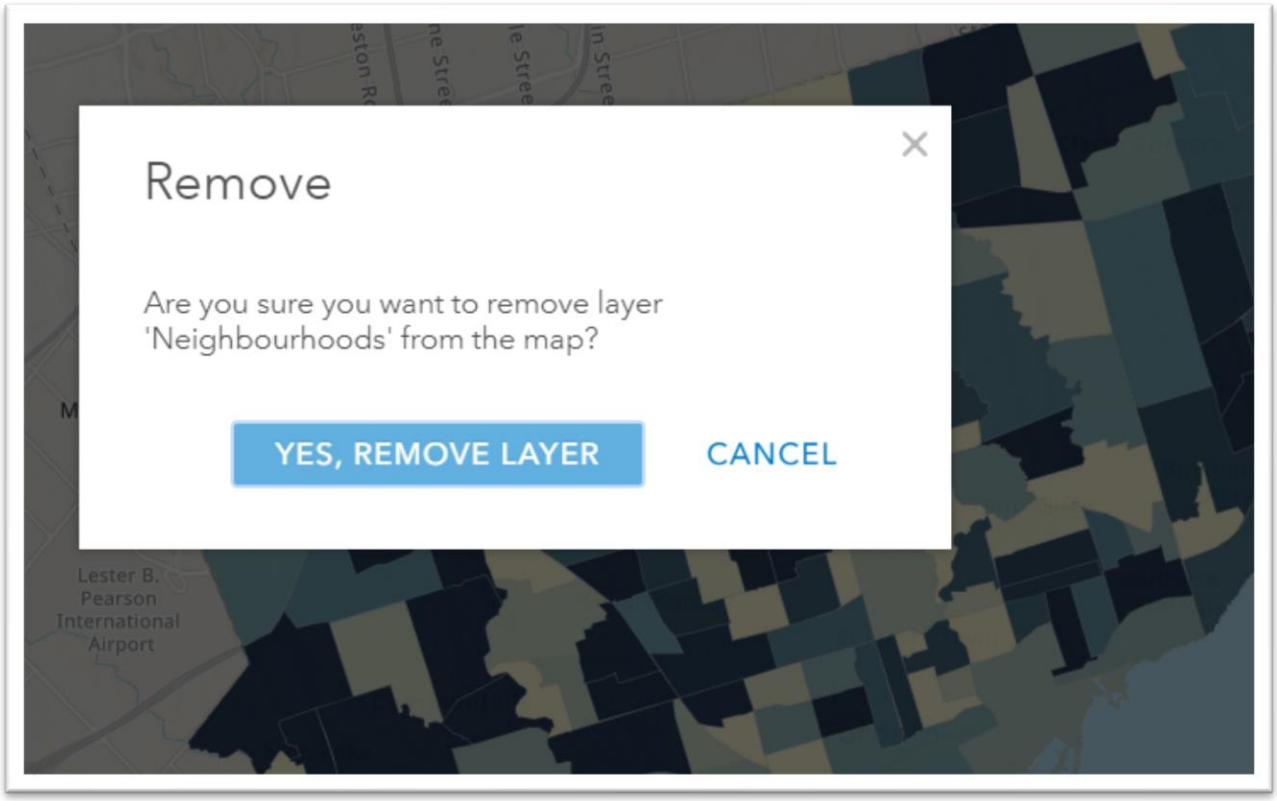
Return to your layer section to see the new layer.

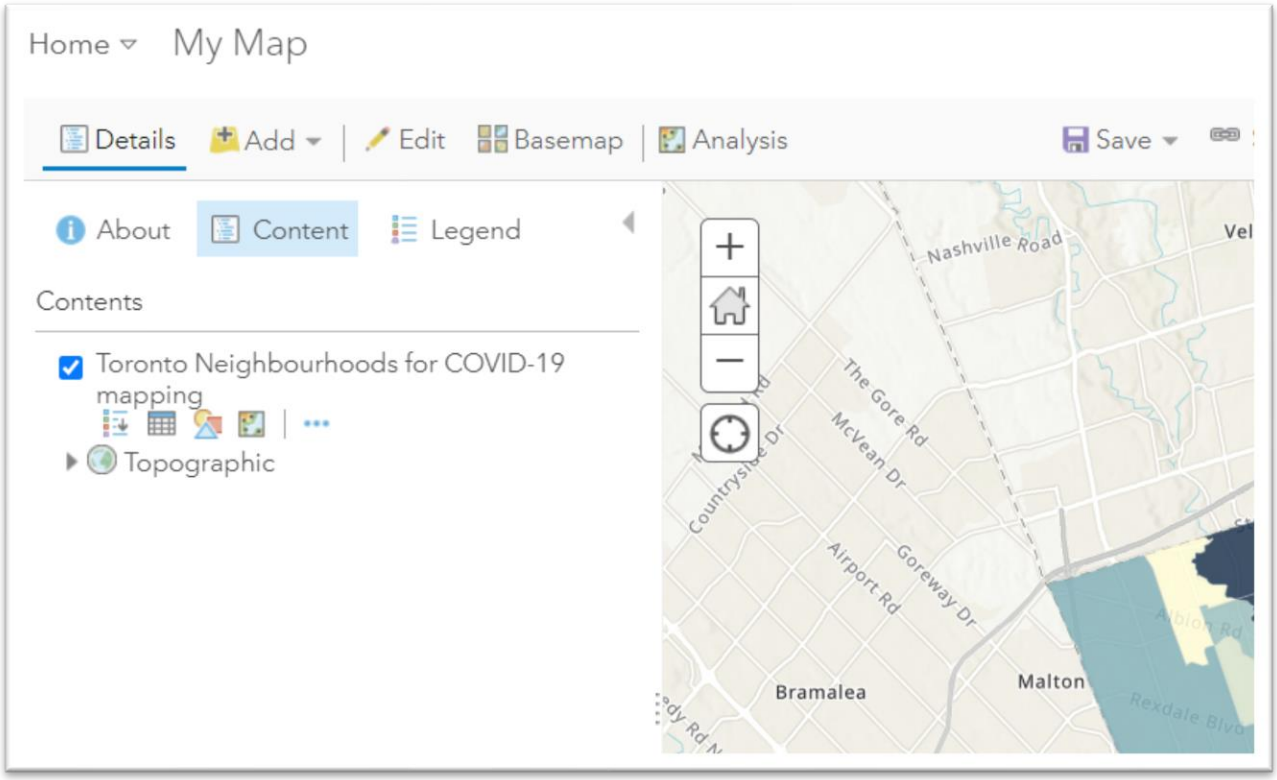


You can see the new layer.

Remove the temporary neighbourhood layer.

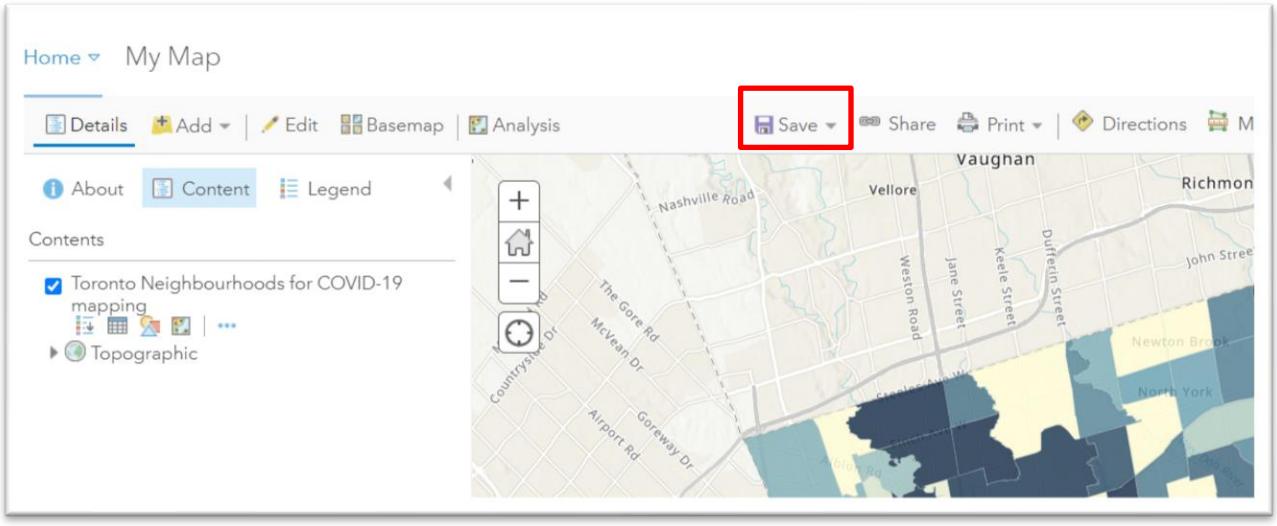


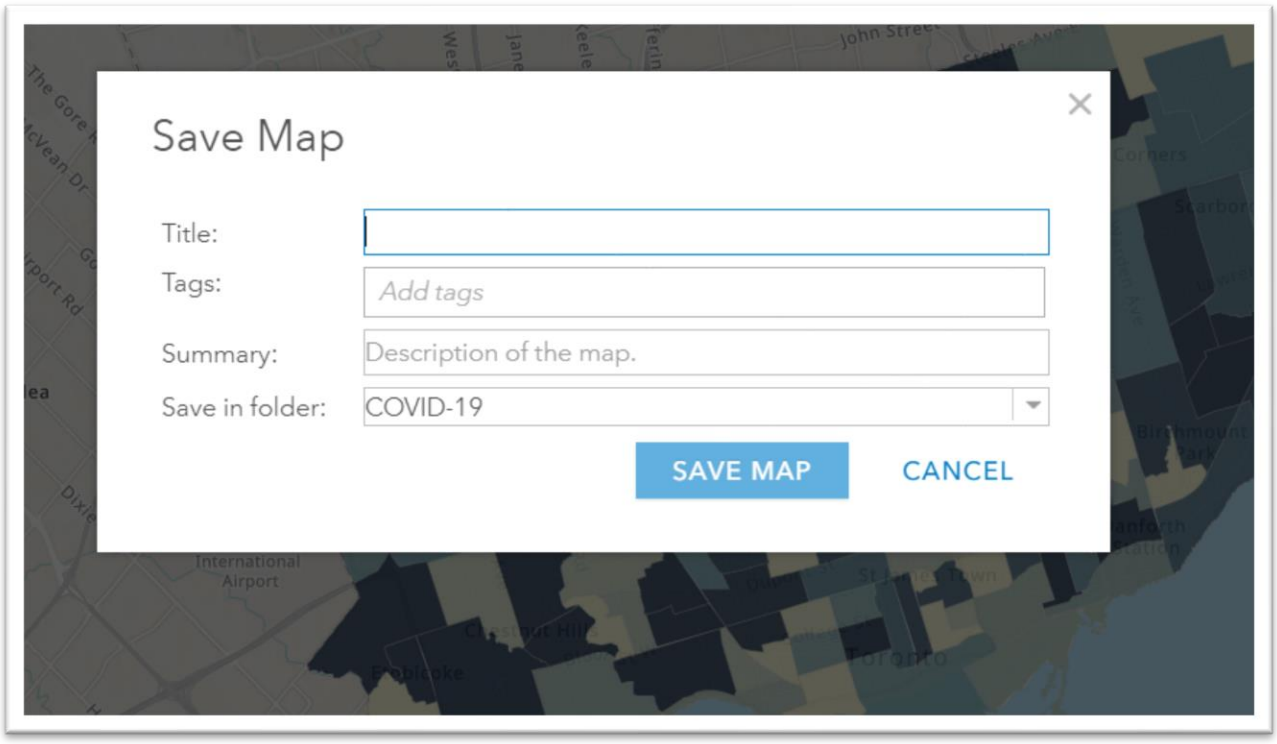




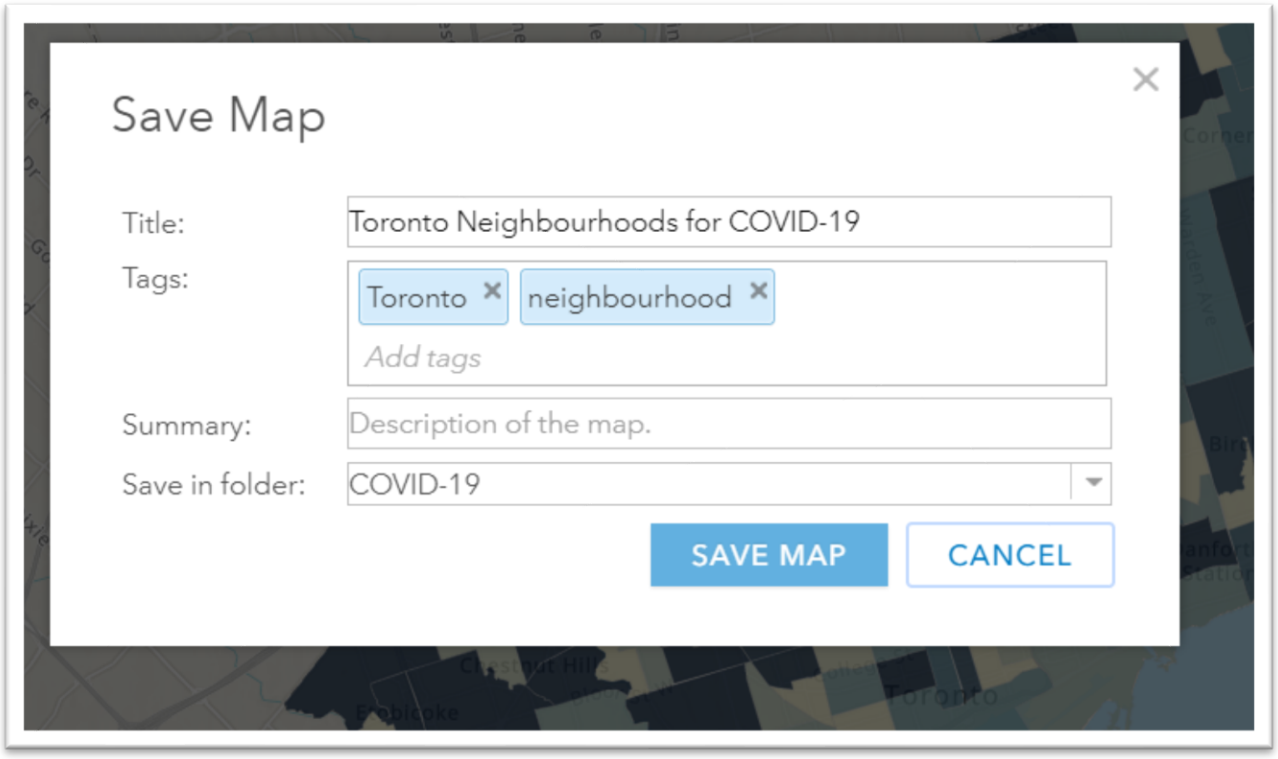
Now it’s time to save the map.

Select the save icon in the menu above the map.



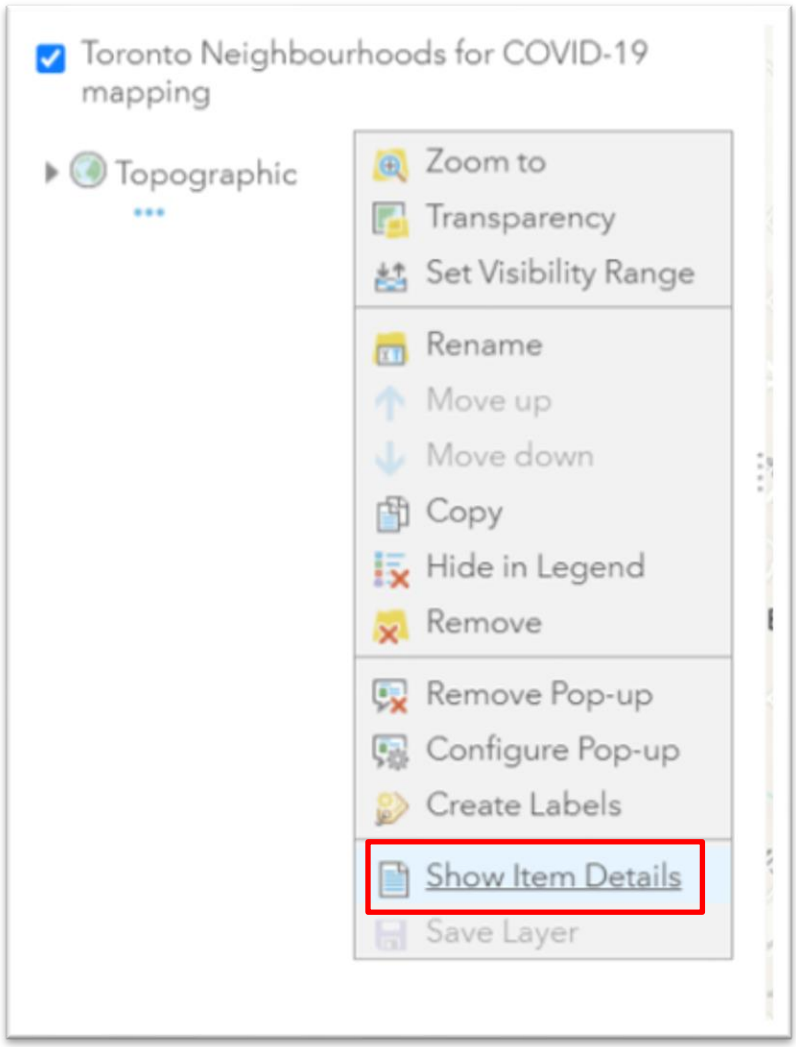


Give it a name, tags and make sure the proper project folder is selected.

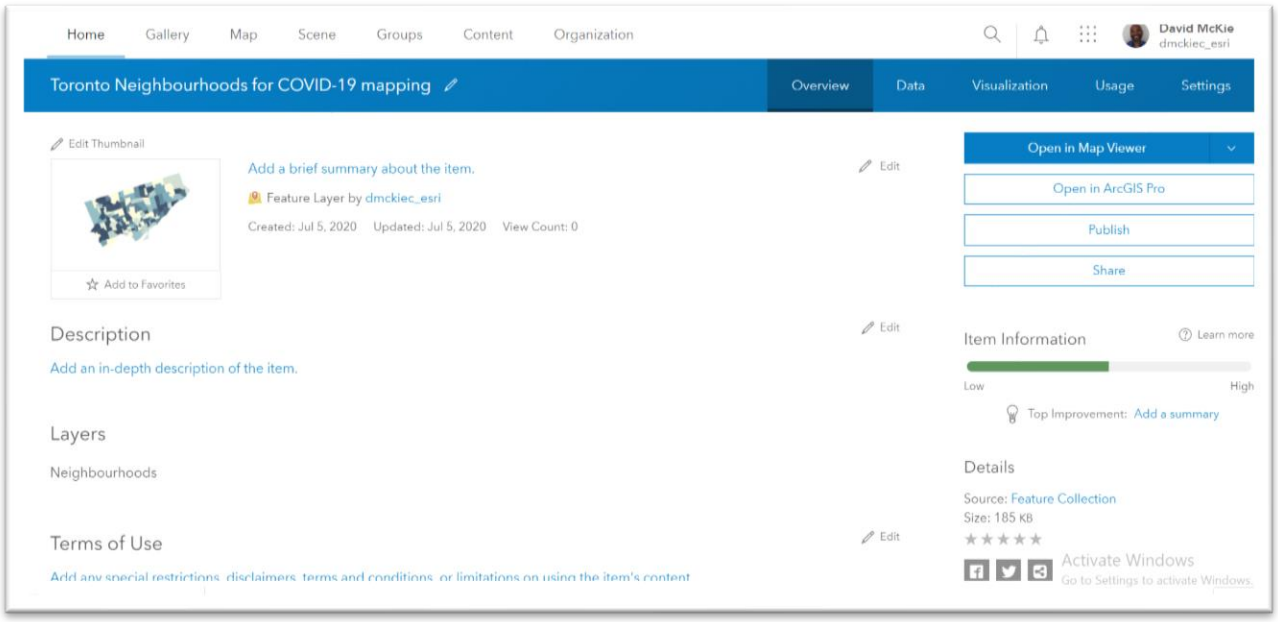


I neglected to provide details in the summary section. No problem. Return to the layer.

Hover your cursor over the layer until more options button (the three dots) appears, select the “Show Item Details” option.



This will take you to the neighbourhood layer's item page which opens in a new tab.



Description

Add an in-depth description of the item.

Edit Description

Edit Thumbnail

☆ Add to Favorites

Add a brief summary about the item.

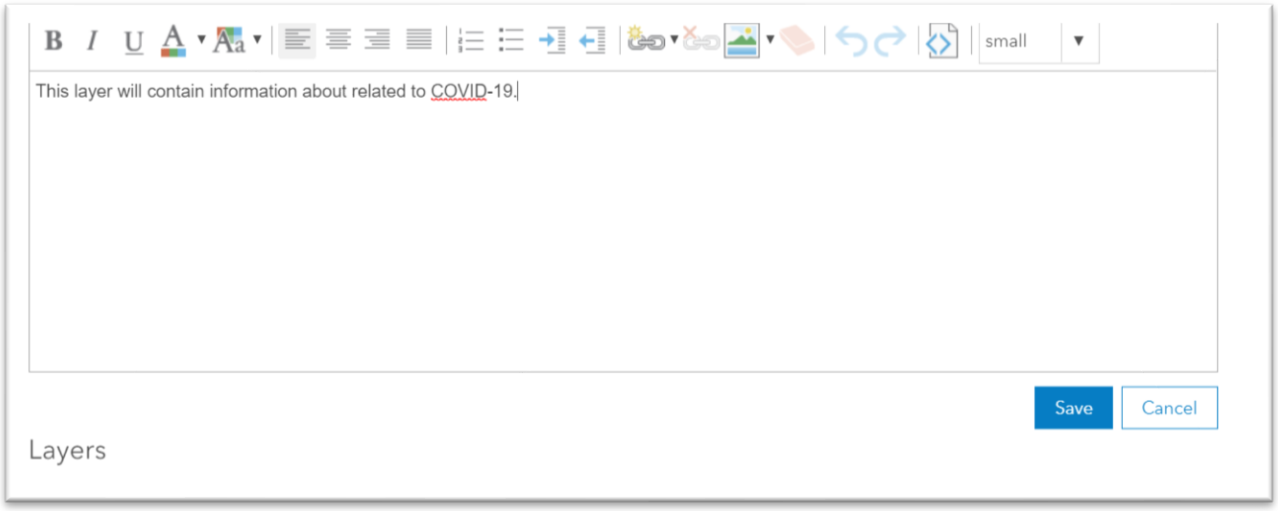
Feature Layer by dmckiec_esri

Created: Jul 5, 2020 Updated: Jul 5, 2020 View Count: 2

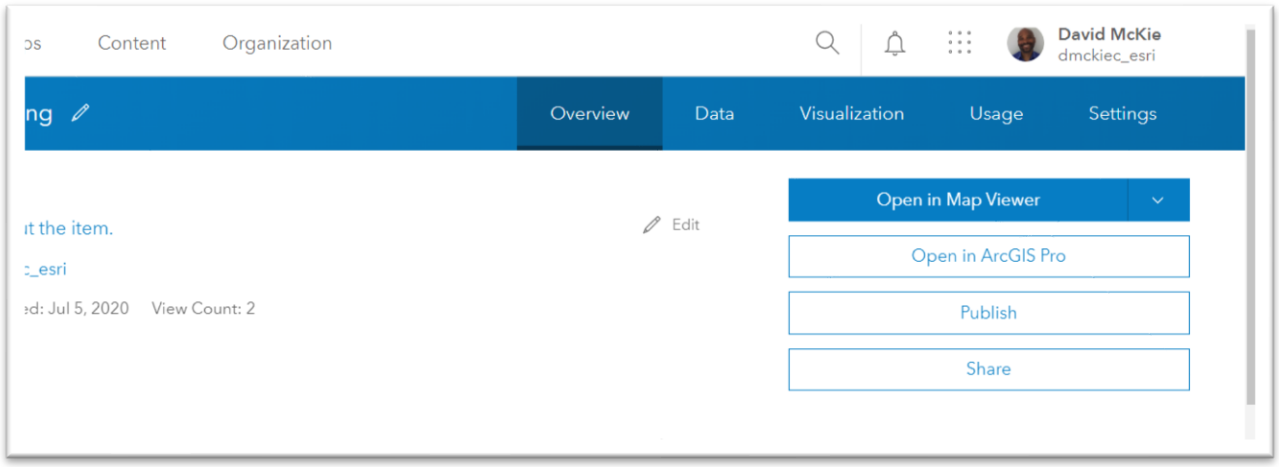
Edit Description

This layer will contain information about related to COVID-19.

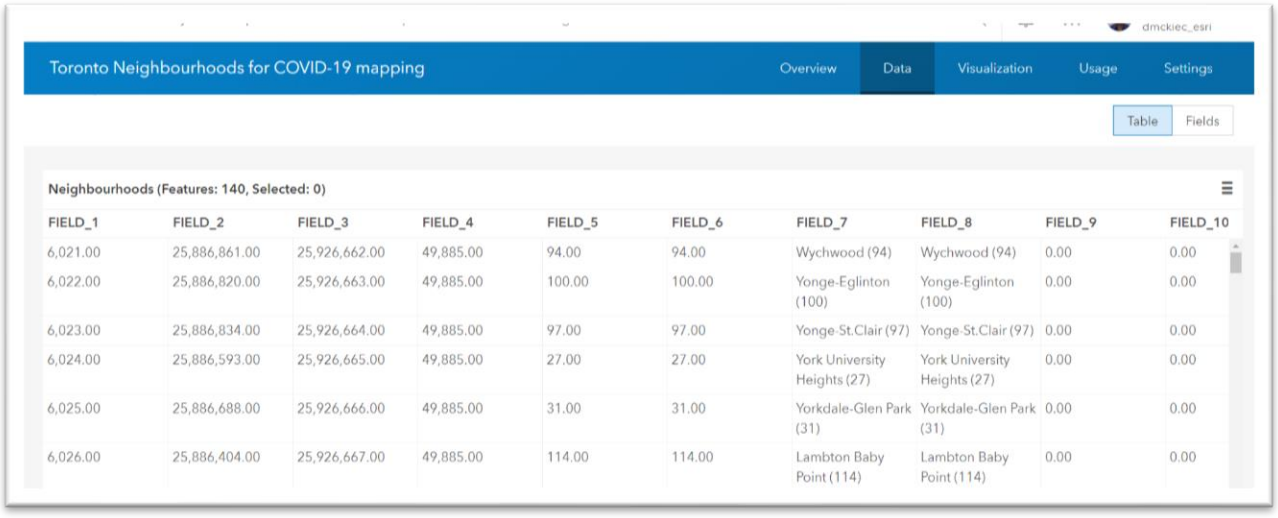
Save the addition.



Once we have saved, scrolled back to the top and check out the different options for viewing the data.

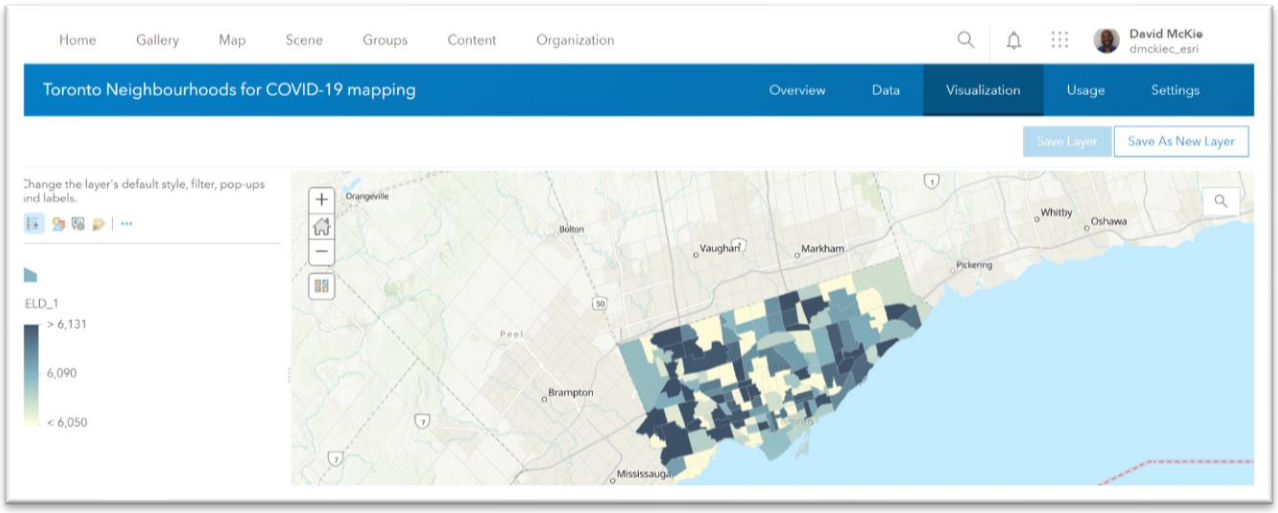


“Data” allows for a tabular view of data, that is, the data contained in the .dbf file.

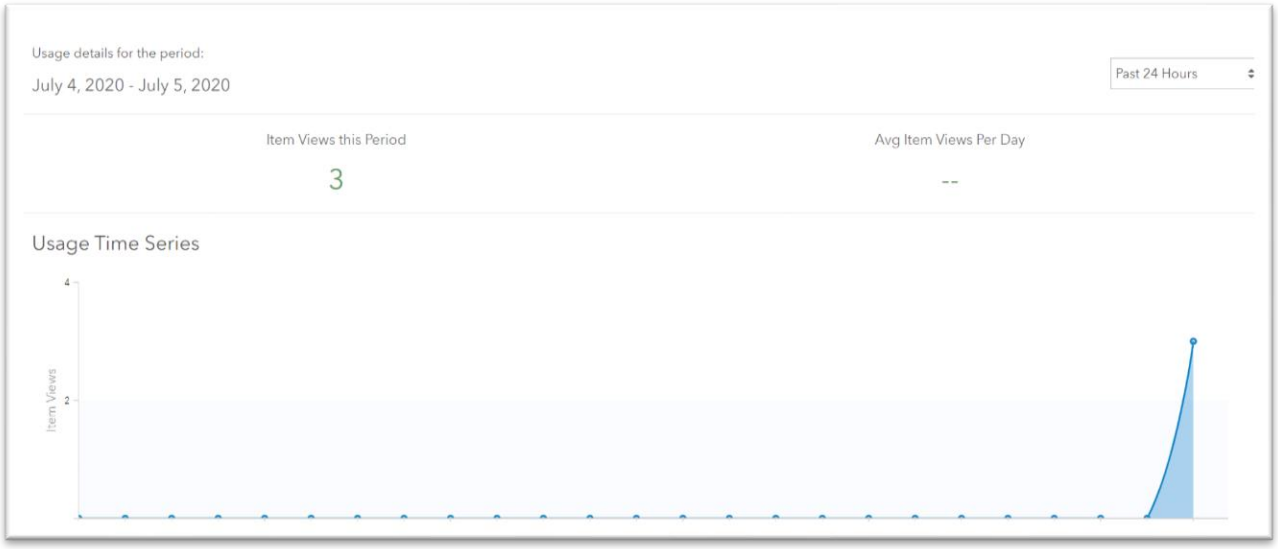


FIELD_1	FIELD_2	FIELD_3	FIELD_4	FIELD_5	FIELD_6	FIELD_7	FIELD_8	FIELD_9	FIELD_10
6,021.00	25,886,861.00	25,926,662.00	49,885.00	94.00	94.00	Wychwood (94)	Wychwood (94)	0.00	0.00
6,022.00	25,886,820.00	25,926,663.00	49,885.00	100.00	100.00	Yonge-Eglinton (100)	Yonge-Eglinton (100)	0.00	0.00
6,023.00	25,886,834.00	25,926,664.00	49,885.00	97.00	97.00	Yonge-St.Clair (97)	Yonge-St.Clair (97)	0.00	0.00
6,024.00	25,886,593.00	25,926,665.00	49,885.00	27.00	27.00	York University Heights (27)	York University Heights (27)	0.00	0.00
6,025.00	25,886,688.00	25,926,666.00	49,885.00	31.00	31.00	Yorkdale-Glen Park (31)	Yorkdale-Glen Park (31)	0.00	0.00
6,026.00	25,886,404.00	25,926,667.00	49,885.00	114.00	114.00	Lambton Baby Point (114)	Lambton Baby Point (114)	0.00	0.00

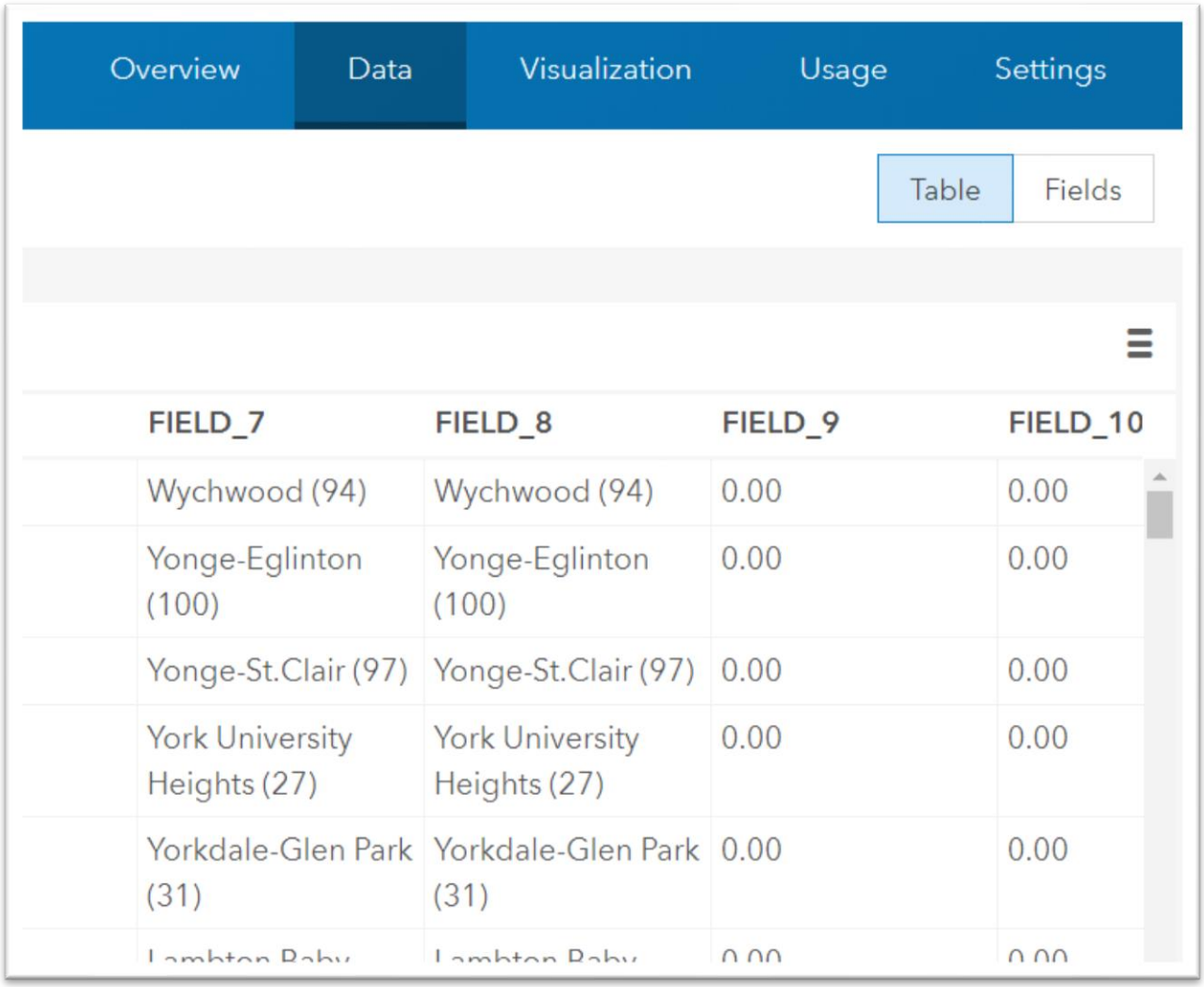
Visualization allows us to see the map.



Usage reveals the number of people who have seen the layer.

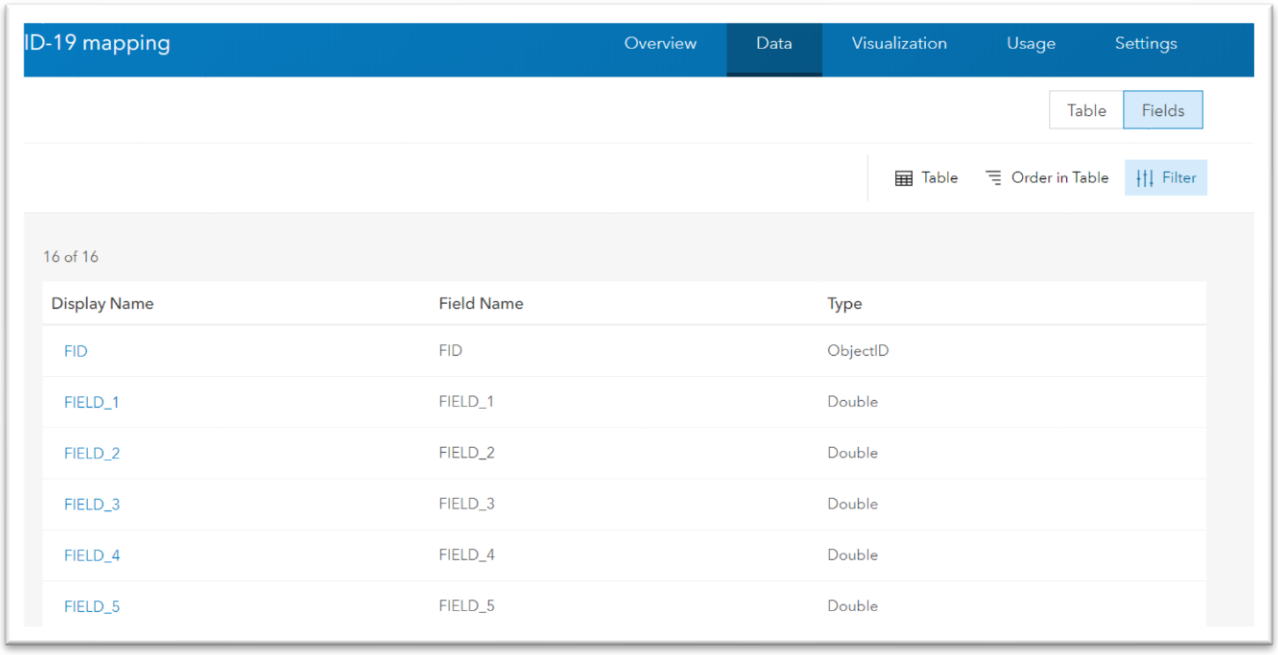


Let’s return to the data tab to replace the generic column titles with better names.

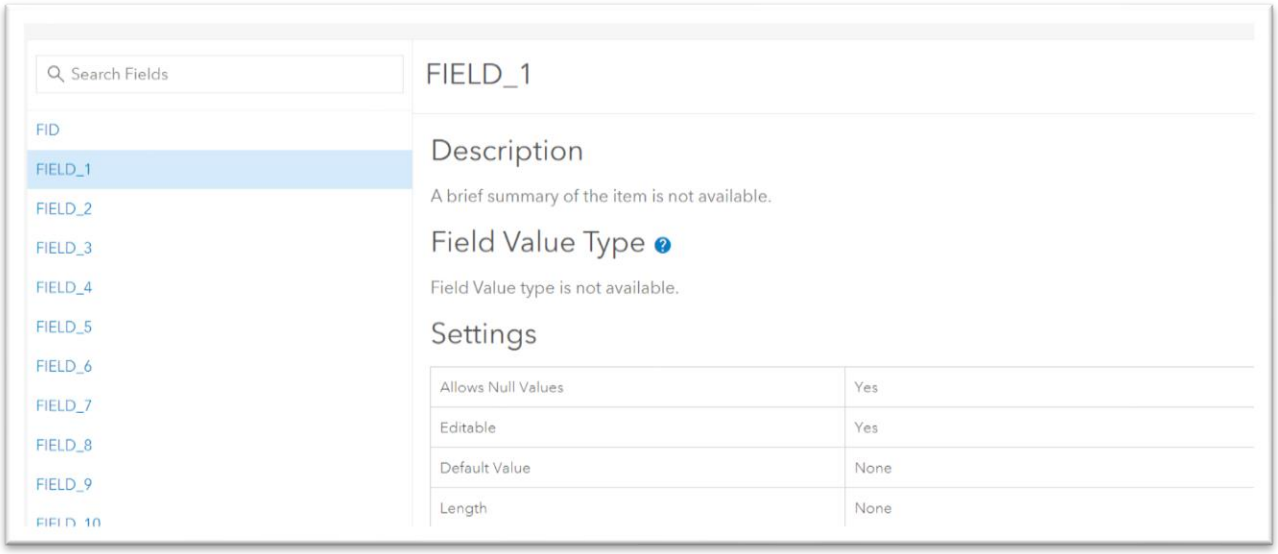


	FIELD_7	FIELD_8	FIELD_9	FIELD_10
	Wychwood (94)	Wychwood (94)	0.00	0.00
	Yonge-Eglinton (100)	Yonge-Eglinton (100)	0.00	0.00
	Yonge-St.Clair (97)	Yonge-St.Clair (97)	0.00	0.00
	York University Heights (27)	York University Heights (27)	0.00	0.00
	Yorkdale-Glen Park (31)	Yorkdale-Glen Park (31)	0.00	0.00
	Lambton Baby	Lambton Baby	0.00	0.00

Select the “Fields” tab.

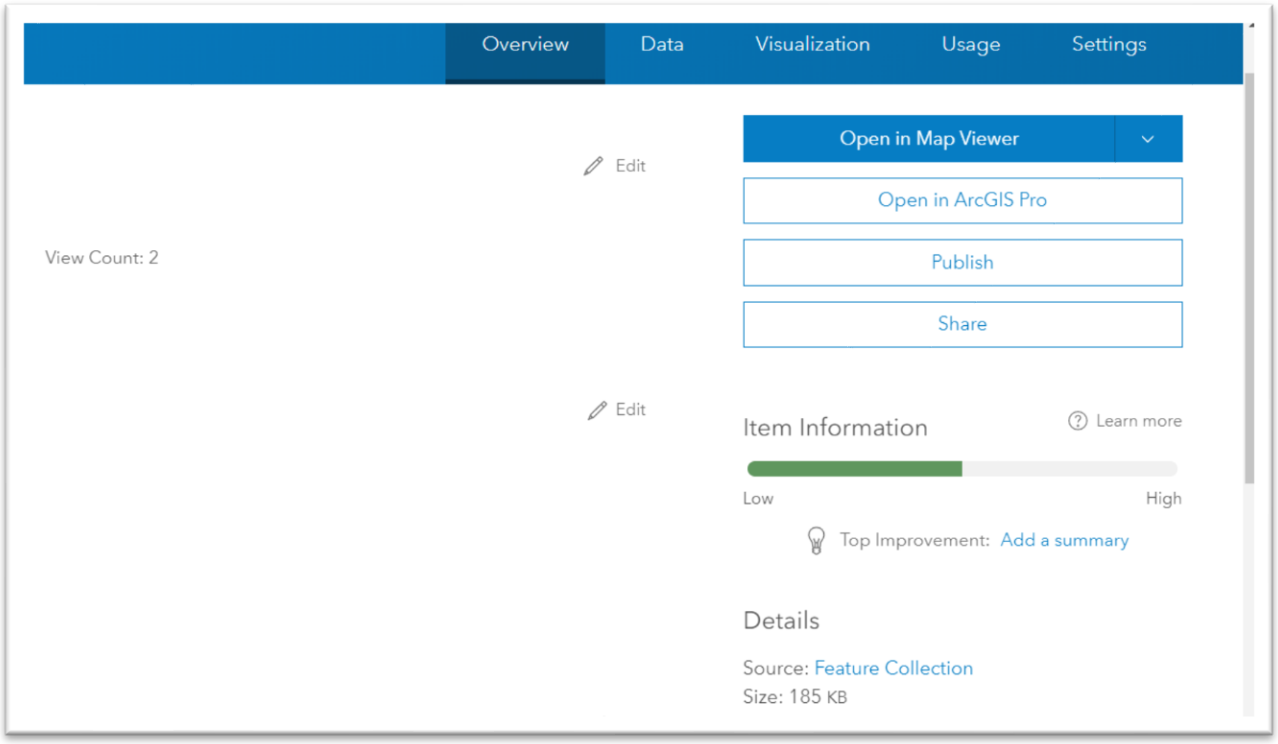


Click a column or field name, in this case “FIELD_1”.

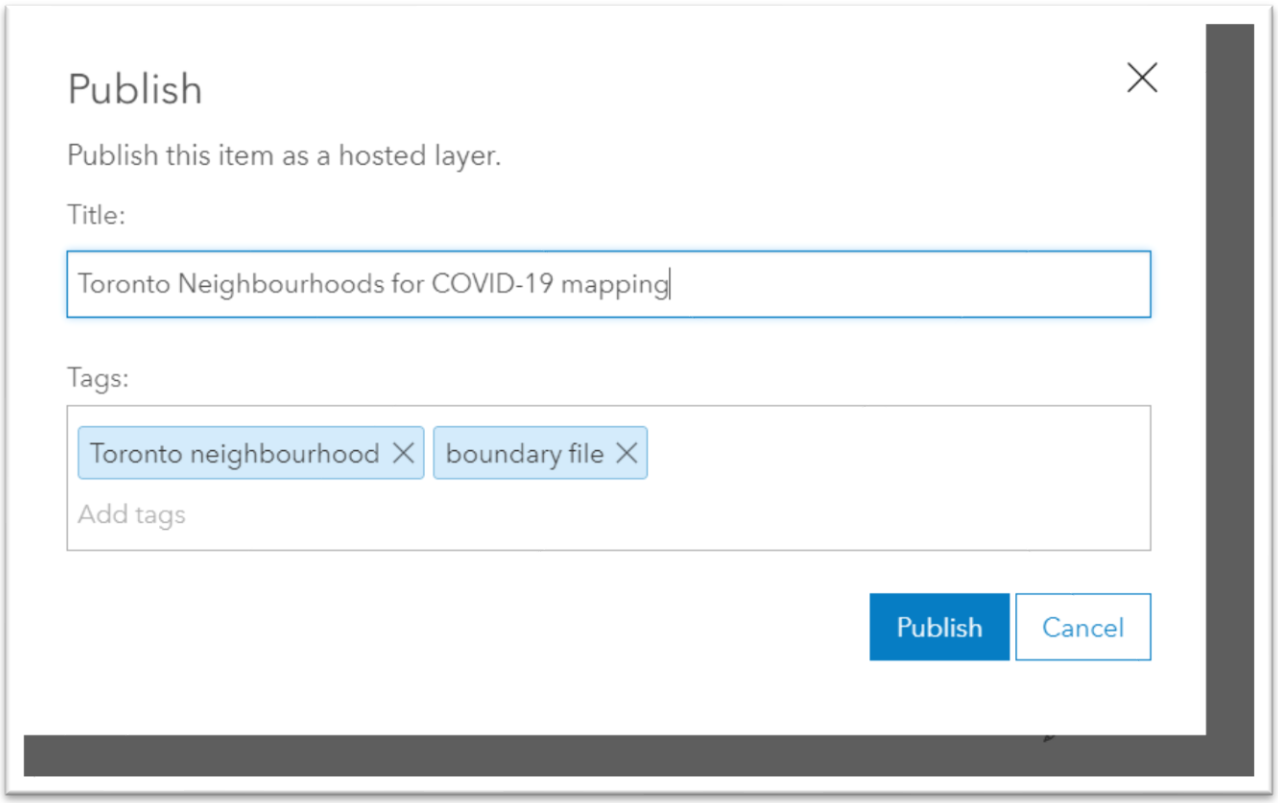


To edit, we must first publish the layer.

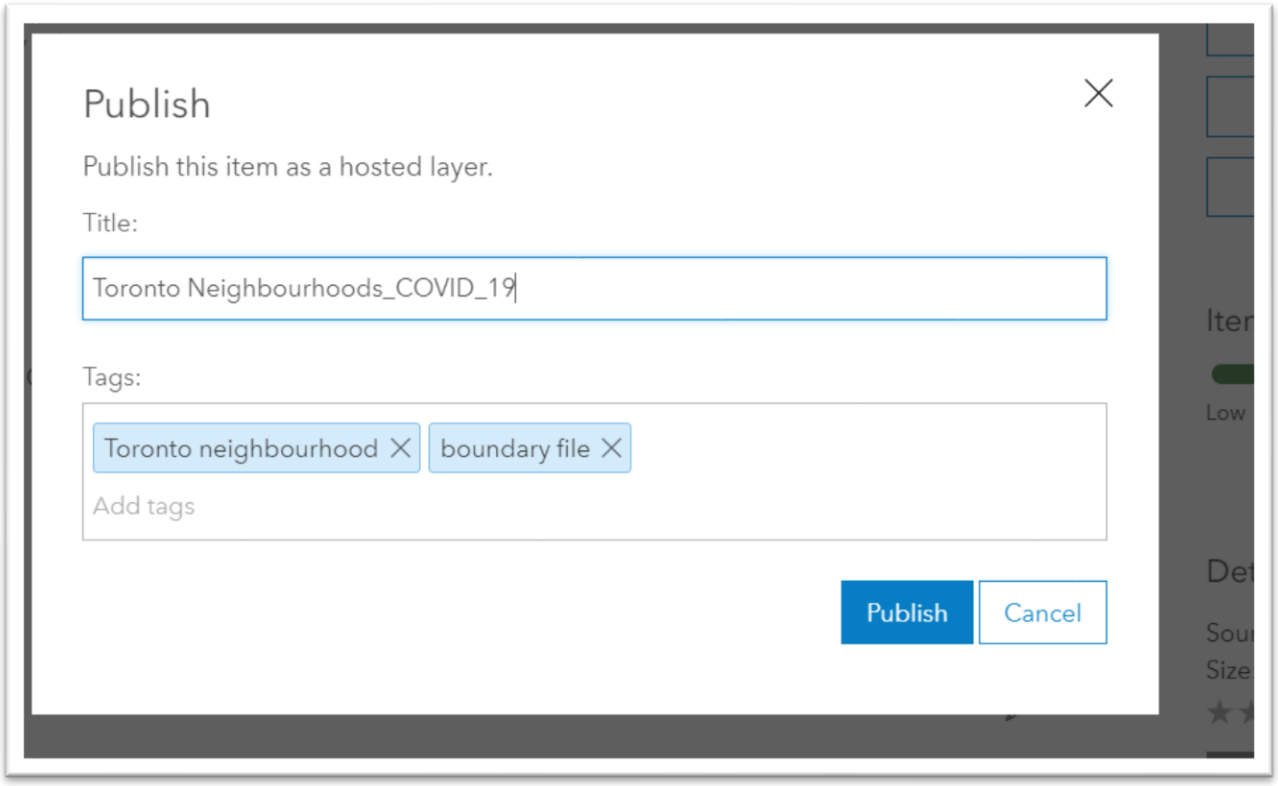
Select “Overview.”



Click “Publish.”

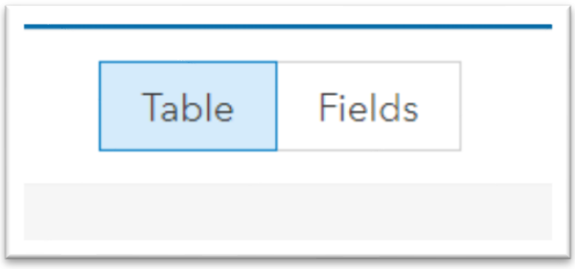


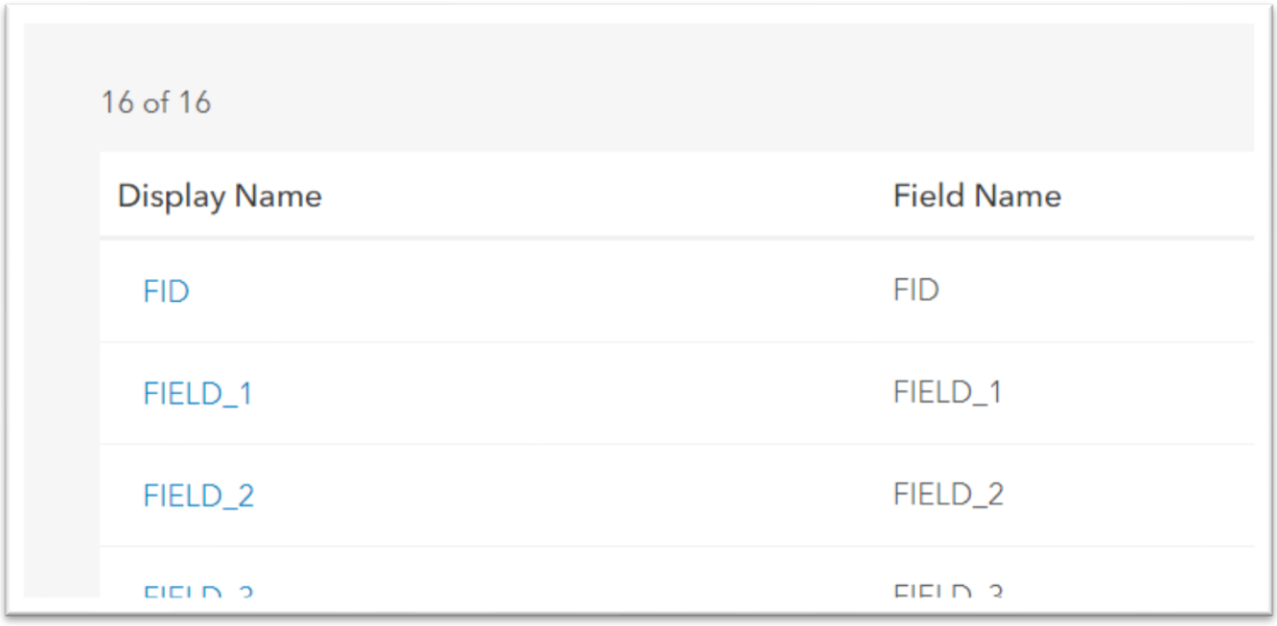
If your title is too long, you may have to shorten it.

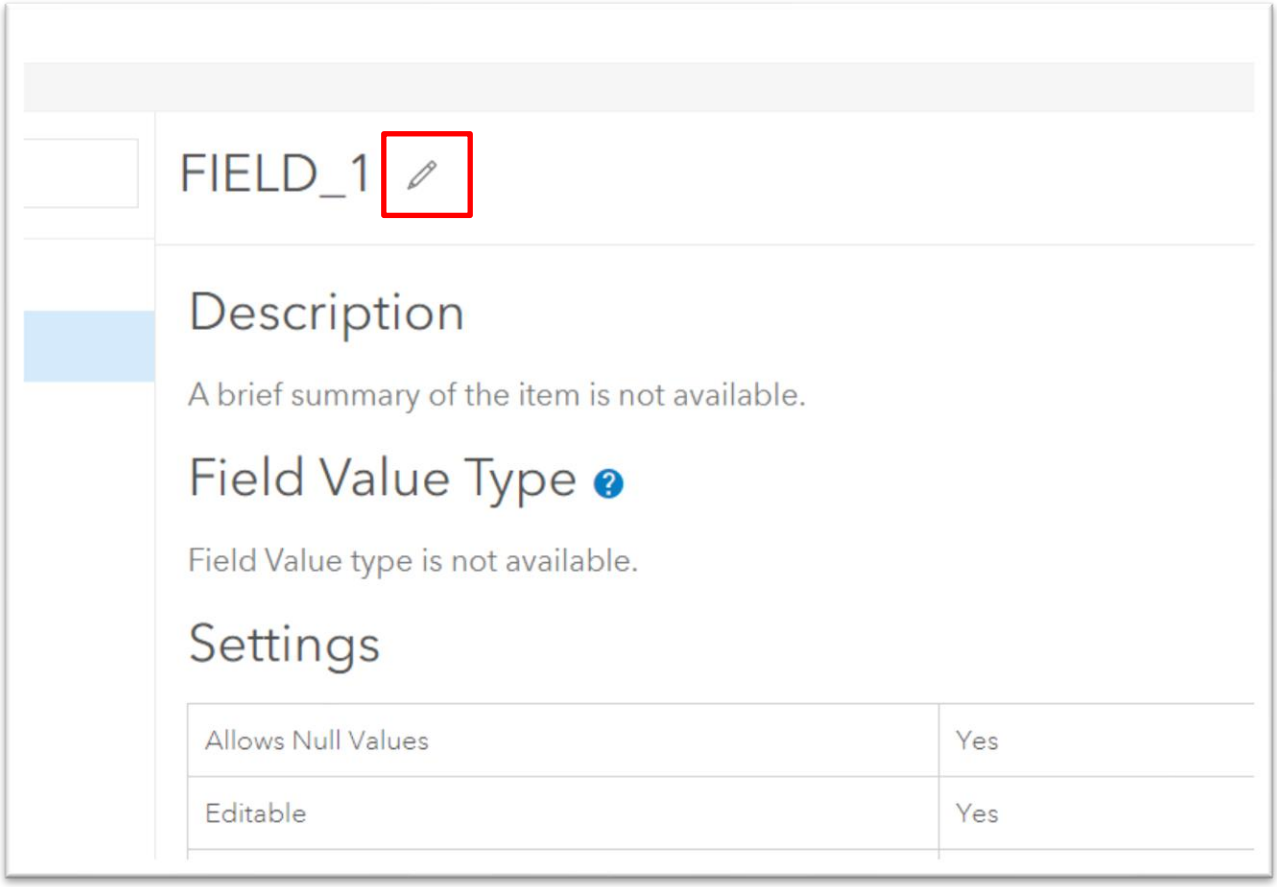


Publishing means authorizing the data on the cloud

Now we can return to the data page, and to “Fields.”

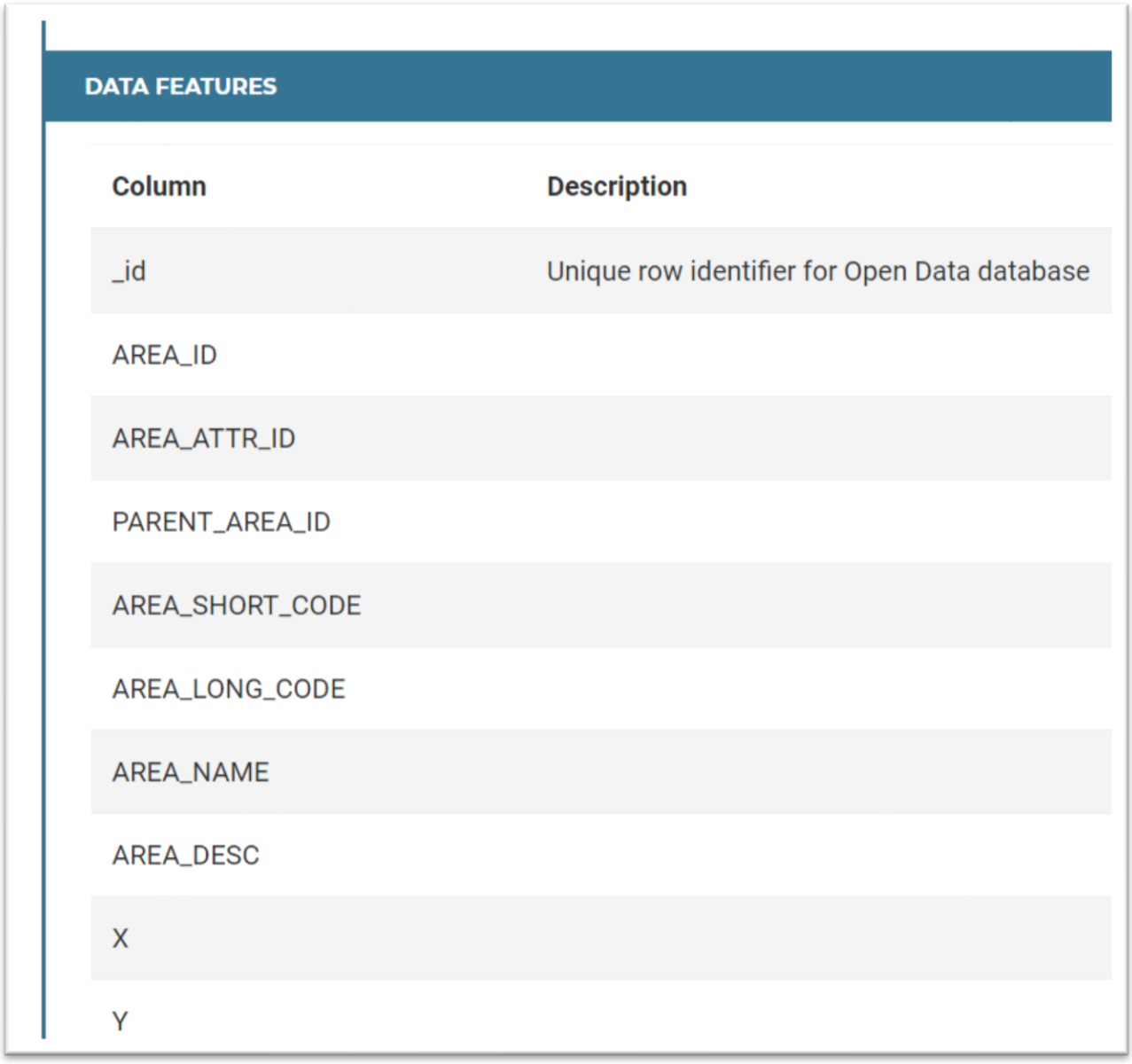






The pencil icon means you can edit the generic name by inserting a new one.

Because I don’t know the names of the fields. I have to return to the City of Toronto website that contains the neighbourhood data and copy and paste the names, a much easier task with two screens.



DATA FEATURES

Column	Description
_id	Unique row identifier for Open Data database
AREA_ID	
AREA_ATTR_ID	
PARENT_AREA_ID	
AREA_SHORT_CODE	
AREA_LONG_CODE	
AREA_NAME	
AREA_DESC	
X	
Y	

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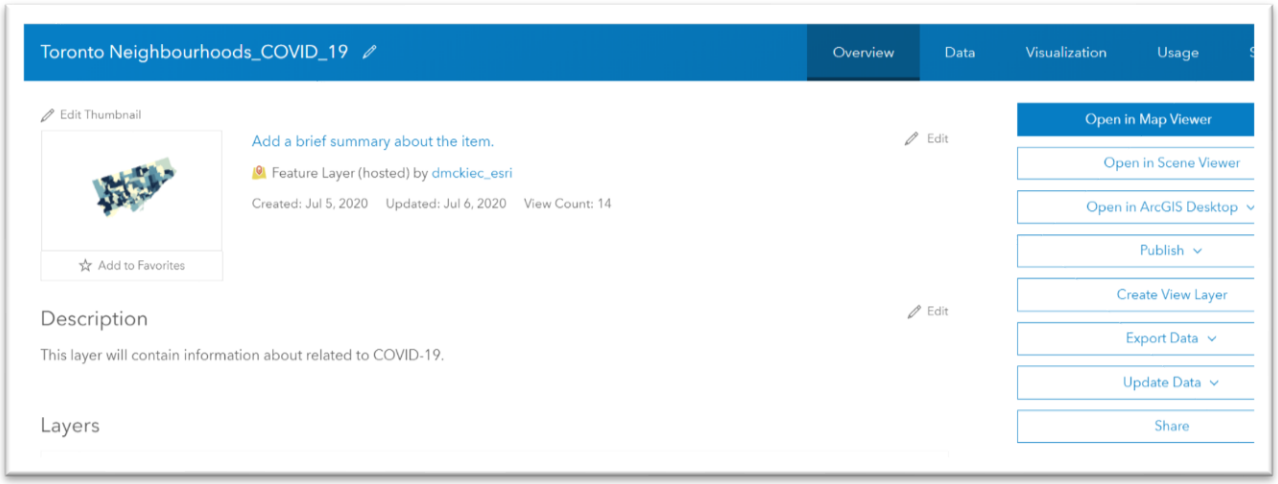
I: 0)

D_4	FIELD_5	FIELD_6	AREA-NAME	FIELD_8	FIELD_9	FIELD
85.00	94.00	94.00	Wychwood (94)	Wychwood (94)	0.00	0.00
85.00	100.00	100.00	Yonge-Eglinton (100)	Yonge-Eglinton (100)	0.00	0.00
85.00	97.00	97.00	Yonge-St.Clair (97)	Yonge-St.Clair (97)	0.00	0.00
85.00	27.00	27.00	York University Heights (27)	York University Heights (27)	0.00	0.00
85.00	31.00	31.00	Yorkdale-Glen Park (31)	Yorkdale-Glen Park (31)	0.00	0.00
85.00	114.00	114.00	Lambton Baby	Lambton Baby	0.00	0.00

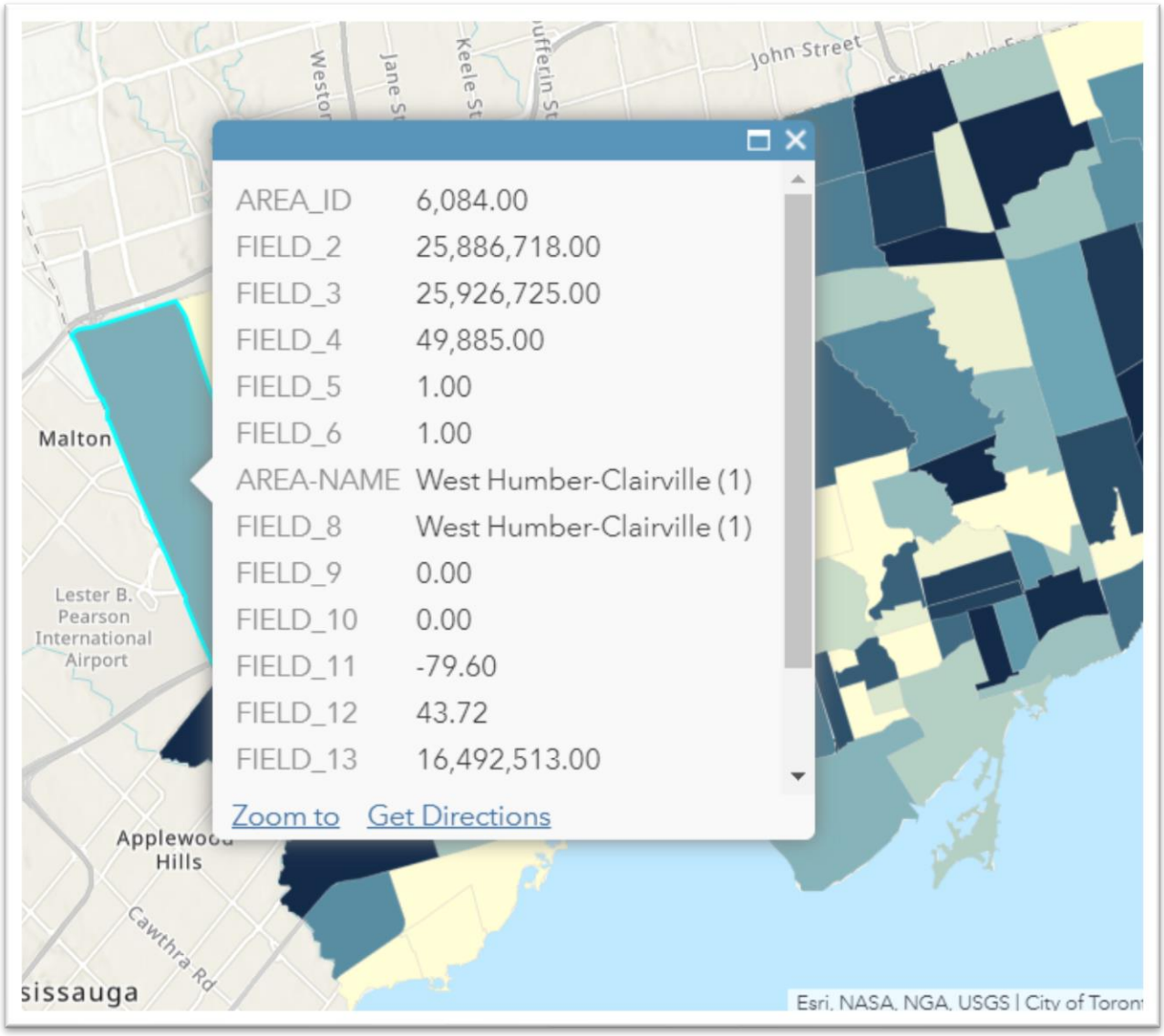
For the purposes of this tutorial, I have been a little selective, in labeling one of the most meaningful columns – the one with the neibhourhood names.

You can now add this lawyer to your map by clicking the Map tab at the top left.



Once you have opened the map, save it again with a new title and tags.

Click a neighbourhood to obtain a pop-up box with the new column titles.



In the follow up tutorial, we will use techniques to population these neighourhoods with data.